



**MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING
IMPLEMENTED BY FARIDABAD FOREST DIVISION (T) AND COMMUNITY
FOREST DIVISION IN FARIDABAD DISTRICT OF HARYANA**

Prepared by the Consultant in 2013-14

Draft Final Report

Submitted to

**OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANAVAN
BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA**

February, 2015

Conducted by

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**Compensatory Afforestation Fund Management and Planning
Authority (CAMPA)**

**Ministry of Environment & Forests (MOEF)
Government of India, New Delhi**

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Faridabad Forest Division (T) in Faridabad District of Haryana (2013-14)" was successfully completed. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal, and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram and office staff Mr. D.P. Tyagi for reposing faith and awarding the work of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Faridabad Forest Division (T), Ms Renjitha along with RFOs of Faridabad and Ballabgarh ranges and other forest staffs. My interaction with them helped me in understanding different aspects of CAMPA implementation and its progress during 2013-14.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS retd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.



Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, February, 2015

Preface

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates.....a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana of Faridabad forest division by PCCF office on professional terms and conditions. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2013-14 a total 70 RKM forestland was treated by adopting CA (40 RKM) and NPV (30 RKM) plantation schemes. It was implemented in both the ranges of Faridabad forest division i.e. Faridabad (39RKM) and Ballabgarh (31RKM). Total expenditure incurred in the entire project during 2013-14 was Rs 30.92 lakh against the target of Rs. 32.92 lakh. Altogether thirteen (13) assets were created in the project such as plantation work at twelve (12) places and construction of forest guard quarter at one place.

As discussed above a total of 70 RKM forestland as well as government land was treated at twelve sites in the division by adopting CA/Tall Plant and NPV/Ridge Plantation schemes. 0.25 lakh plant species of *Alstonia*, *Ajun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pikhan*, *Pipal*, were, etc. adopted in the project. Average height of plantation was 7 feet. Average grading awarded after thorough evaluation of CAMPA programme was 6.5 (on 1 to 10 scale), which was very good.

Members of evaluation team interacted with a number of field level forest staff and local community in the process of field inspection and evaluation of the programme. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of fund was smooth as reported by the project authority. There was lack of awareness and not ready to own responsibility on public related issues among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

February, 2015



Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Faridabad Division (T)	Faridabad Forest Division Territorial
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

LOCAL NAME AND BOTANICAL NAME OF PLANT SPECIES

SL No.	Common Name	Botanical Name
1.	Alstonia	Indian Mallow/ Devil Tree
2.	Arjun	Terminalia arjuna
3.	Bakain	Melia azedarach
4.	Blam Kheera	Kigelia pinnata
5.	Gular	Ficus glomerata
6.	Gulmohar	Delonix regia
7.	Karanj	Pongamia pinnata
8.	Kachnar	Bauhinia variegate
9.	Kikar	Acacia Arabica
10.	Neem	Azadirachta indica
11.	Papri	Holoptelea integrifolia
12.	Pilkhan	Ficus virens
13.	Pipal	Ficus religiosa
14.	Shisham	Dalbergia sissoo

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2013-14****Faridabad Forest Division in Faridabad District of Haryana**

Average Grading on a Scale of 1 to 10		
Item	Project Components	Value
Quantitative Aspects	Physical	10
	Financial	8
Qualitative Aspects	Survival	5
	Health of Plantation	5
	Maintenance	5
	Sustainability	5
JFM	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.6

Executive Summary**1.0 INTRODUCTION**

- Monitoring and evaluation of State CAMPA, Haryana of Faridabad Forest Division (T) in Faridabad district was conducted in the month of January 11-14, 2015 by **Locus Research & Consultants Pvt. Ltd.**, a Delhi based professional agency. During 2013-14, a total of **70.0 RKM** forestland was treated by adopting NPV (30.0 RKM) and CA (40.0 RKM) plantation schemes at 12 places along with creation of asset at one place. There was 100% coverage of project areas and assets during field visit and analysis. Summary of findings of the study is given below.

2.0 CAMPA: AN OVERVIEW

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 OBJECTIVES OF THE NAP

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION / AREA OF MONITORING & EVALUATION

- It covers Faridabad Forest Division (Territorial) in Faridabad district of Haryana.

5.0 REFERENCE PERIOD

- ❖ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2013-14.

6.0 NEED OF THE STUDY

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ❖ To assess physical and financial targets and achievements
 - ❖ To evaluate performance of the programme
 - ❖ To estimate of survival percentage of plant species adopted in the project.
 - ❖ To analyze factors impacting survival of plantation and suggest remedial measures.
 - ❖ To assess peoples' participation and assets created
 - ❖ To assess the direct and indirect benefits and impact of the programme.
 - ❖ To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ❖ There was cent percent (100%) coverage area (70 RKM) and project activities carried out by CAMPA at Faridabad during 2013-14. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, row counting of plants was adopted.

9.0 PROFILE OF THE STUDY AREA

- ❖ The state of Haryana comprises 21 districts, 45 sub-tehsils, 47 subdivisions, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ❖ As per India State of Forest Report-2011, Faridabad district has 4.32% area under forest cover.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ❖ During 2013-14, a total of 70 RKM forestland treated by adopting NPV (30.0 RKM) and CA (40 RKM) schemes of plantation with a total expenditure of Rs 30.96 lakh against the target of same amount.
- ❖ A total of 0.25 lakh plant species of *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, etc. were planted in the project.
- ❖ Average survival percentage of seedlings estimated was 69%. It was highest at R.F Alipur site/VFC (84%) while it was lowest at Harchandrapur forestland site (61%). Average height of plantation was 7 feet. Growth and health of plantation was good.
- ❖ A two room forest guard hut/quarters with toilet cum bathroom, kitchen and overhead water tank (500 liters) was constructed at Pratapgarh Forest Complex of Ballabgarh forest range in the division.

- ❖ Important registers maintained in the project were work register, cashbook, sketch map, etc. Plantation journal was not available but the DFO assured us that plantation journal would be prepared very soon.
- ❖ The system of Monitoring and Evaluation (M & E) of CAMPA is conducted by a separate wing called M & E Wing. It is conducted either once or twice a year as reported by the project.
- ❖ In 2013, an agency named Agricultural Finance Corporation Ltd. of Delhi carried out last evaluation of CAMPA work of the duration of 2010-11 and 2011-12. Overall finding of the study was satisfactory.
- ❖ Bank account of CAMPA Programme of Faridabad forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Faridabad Branch along with two ranges.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Main factors led the selection of species were nature of topography, soil type, climate, rainfall, suitability of species in the area, economic value of plant species, preference shown by local community, etc.
- ❖ There was significant improvement in soil moisture conservation where plantation carried out under CAMPA programme.
- ❖ Estimated survival percentage of plantation carried out during 2013-14 was 69%. It was highest at R.F Alipur (84%) while it was lowest at Harchandrapur (61%).
- ❖ Overall quality of work especially plantation and creation of assets in the programme was found in good shape at majority locations as observed during field inspection.
- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.
- ❖ Mostly barbed wire and bush fencing was found at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions were also adopted along with barbed wire in this regard.
- ❖ There was low participation of local community in the Implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. Modern tools of mass media should be adopted for awareness and motivation of community.
- ❖ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2013-14 of CAMPA programme implementation.
- ❖ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It impacted quality and outcome of the programme adversely.
- ❖ Due to high rate of urbanization and industrialization in most part of the project area, there was high demand of labour force and hence the forest department had to face shortage of labour.
- ❖ Range offices were facing shortage of necessary vehicle and infrastructure as reported. It impacted performance and quality of work as well as outcome of project.

- ❖ Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. Impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Long term measures should be adopted to check grazing problem. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- ❖ The project authority should make necessary provision of protection and maintenance of plantation by adopting multi-pronged strategy. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community.
- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF and two DFOs.
- ❖ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad-natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- ❖ Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

CHAPTER-1

PROJECT CONCEPT, STRATEGY, OBJECTIVE AND METHODOLOGY

1.1 CAMPA : An Overview

- ❖ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ❖ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and Industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators.
- ❖ Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
- ❖ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
- ❖ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.

- ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
- ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Details of Establishment, State CAMPA

- ❖ The details of establishment of State CAMPA are summarized below :
 - a) The State Government may establish the Compensatory Afforestation Fund Management and Planning Authority (State CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ❖ Amount transferred to it by the ad-hoc CAMPA.
 - ❖ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ❖ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ❖ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ❖ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The State Government may also credit to the State CAMPA
 - ❖ Grants or aid received if any;
 - ❖ Any loan taken by the Authority or any borrowings made by it; and

- ♦ Any other sums received by the Authority by way of benefaction, gift or donations.
- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 Establishment of State CAMPA, Haryana

- ♦ On March 3, 2010, Haryana Government constituted the State Compensatory Afforestation Fund Management and Planning Authority (STATE CAMPA), Haryana for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.
- ♦ State CAMPA, Haryana will have three bodies, namely - a Governing Body, a Steering Committee and an Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ♦ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the State Government for a period of two years will be its Members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ♦ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ♦ "State Compensatory Afforestation Fund Management and Planning Authority"(CAMPA) is intended as an instrument to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ♦ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

- ♦ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife conservation and protection and other related activities and for matters connected therewith or incidental thereto.
- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of CAMPA Programme

- ♦ Conservation, protection, regeneration and management of existing natural forests;
- ♦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- ♦ Compensatory afforestation;
- ♦ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- ♦ Science, Research, Training and Capacity Building.
- ♦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location /Area of Monitoring & Evaluation

- ♦ The evaluation study covers Faridabad Forest Division (Territorial) in Faridabad district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ◆ The reference period of monitoring & evaluation CAMPA is one year, i.e. 2013-14.

1.7 Components of Project

- ◆ People's Participation
- ◆ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
- ◆ Monitoring and Evaluation of the programme
- ◆ Conservation and protection of forests, infrastructure development, wildlife conservation and protection and related activities.

1.8 Details of Project Implementing Agency and Proposed Activities of the Programme

- ◆ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Project Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
◆ District	: Faridabad
◆ Forest Division	: Faridabad
◆ Forest Circle	: Gurgaon Circle, Gurgaon
◆ State	: Haryana
Project Location	
◆ Watersheds/Sub-watersheds	: Harchandapur Distributary RD 12-20, Rampura Distributary RD 0-12, Sikari Distributary RD 0-12
◆ Development Blocks	: Faridabad, Bopani, Suraj Kund and Pali (Faridabad Range), Ballabgarh, Sikrauna, Dayalpur and Tigaon (Ballabgarh Range)
◆ Forest Ranges	: Faridabad and Ballabgarh
◆ Villages/Project Site	: 13 (Thirteen)
◆ Other Development Activities in the Project: Construction of Forest guard's hut/ quarters	
◆ Preparation of Micro-plan and Plantation Journal if any: Plantation journals were found but there micro plans were not available. It was not necessary in the CAMPA program as reported by project Authority.	
Project Duration, Area and Cost	
◆ Project Duration	: 2013-14
◆ Project Area	: Target: 70 RKM Achievement: 70 RKM
◆ Project Cost	: Target: Rs. 31.92 lakh, Achievement: Rs. 30.92 lakh
Proposed Strategies and Sallent Features of the Project	
◆ Plantation Schemes: NPV and CA	
◆ Important community assets created in the project: Construction of Forest guard hut / quarter at Pratapgarh Forest Complex in Ballabgarh range of the division.	

1.9 Need of the Study

- ◆ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ◆ Scope of study is confined to Faridabad Forest Division (T) in Faridabad district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ◆ Main objectives of the monitoring & evaluation are as follows:

- ◆ To assess physical and financial targets and achievements
- ◆ To evaluate performance of the programme
- ◆ To estimate of survival percentage of plant species adopted in the project.
- ◆ To analyze factors impacting plantation survival and suggest remedial measures.
- ◆ To assess peoples' participation and assets created
- ◆ To assess the direct and indirect benefits and impact of the programme.
- ◆ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure

- ◆ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ◆ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.

1.13 Sample Selection, Size and Distribution

- ◆ Cent percent coverage of plantation area and other project assets was made during field visit in the process of evaluation of CAMPA programme during 2013-14. A total 70 RKM forestland was treated by adopting two schemes of plantation namely Net Present Value (30.0 RKM) and Compensatory Afforestation (40.0 RKM) at 12 places. Besides, there was construction of forest guard hut at one place. The project activity was spread over both the forest ranges of the division namely Faridabad and Ballabgarh.
- ◆ To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50mx50m) was adopted for counting them at random locations in the plantation area.

1.14 Chapter-wise organization of Report

- ◆ The report is divided into six chapters. It is as follows:
 - ◆ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ◆ Chapter-2 gives the Profile of the Project Area and its Location
 - ◆ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ◆ Chapter-4 gives Qualitative Analysis and Findings.
 - ◆ Chapter-5 deals with Limitations and Constraints of the Project.
 - ◆ Chapter-6 provides Suggestions and Recommendations for Improvement.

1.15 Limitations of the Evaluation Study

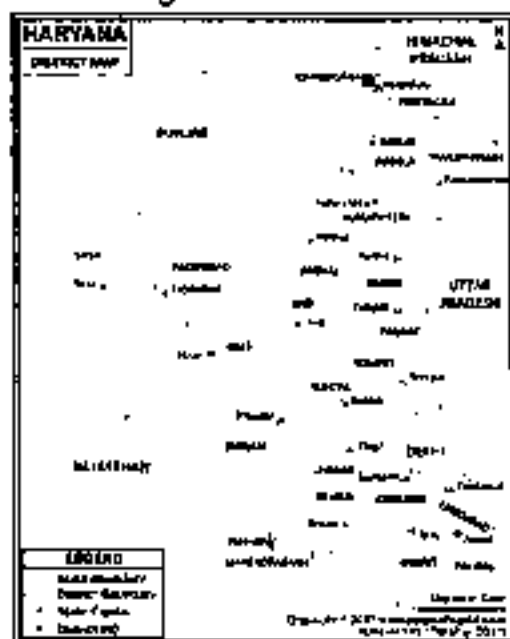
- ◆ It hard to find respondents at both rural and urban areas of project implementation. It impacted collection necessary information.
- ◆ Lack of necessary awareness among community about details of CAMPA also impacted collection of necessary information. However, adequate efforts were made by members of evaluation team to minimize these limitations.

CHAPTER-2

PROFILE OF PROJECT AREA

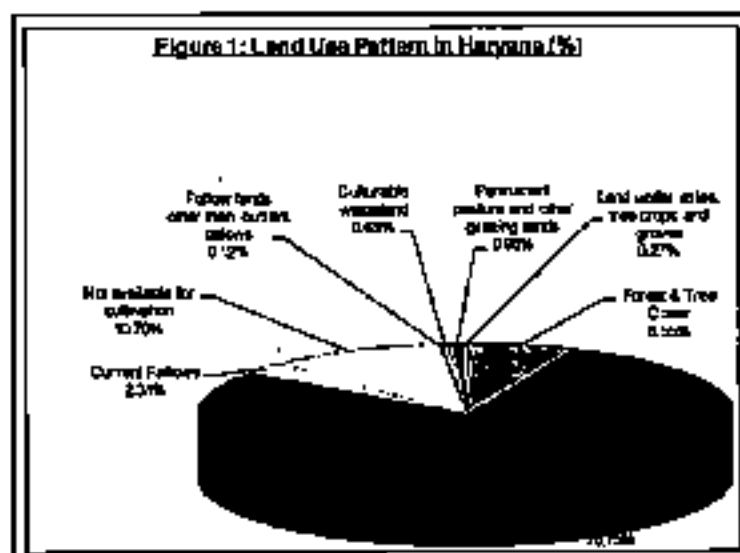
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ❖ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ❖ Gurgaon Division has six (6) districts namely Palwal, Faridabad, Mahendragarh, Gurgaon, Rewari, and Mewat districts in its jurisdiction.
- ❖ While Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ And Rohtak Division has also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat districts in its jurisdiction.



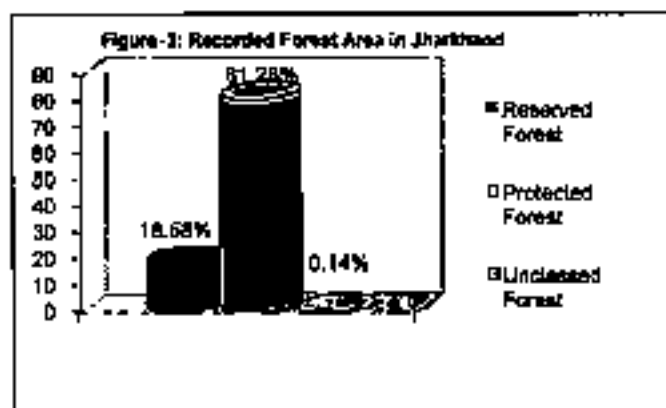
2.1.1 Land Use Pattern of Haryana

- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ❖ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands (0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. *Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun).*



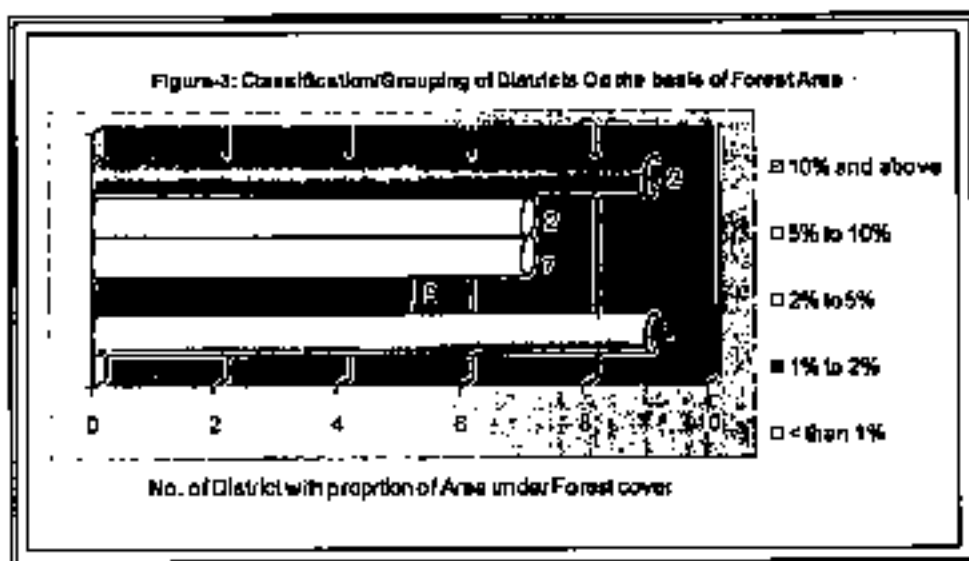
2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. See Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

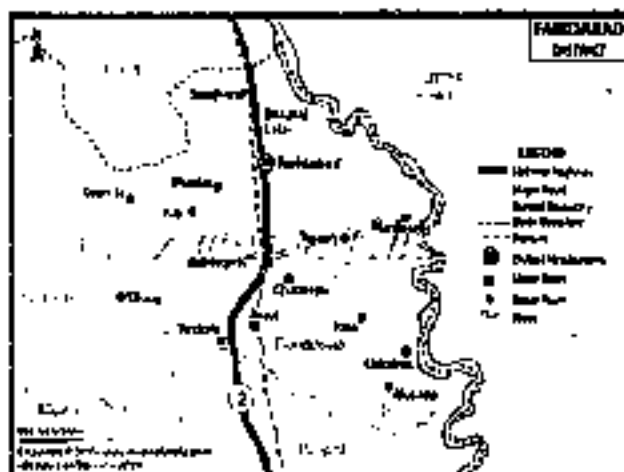
- ♦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. Group-1: Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ♦ Group-2: two districts namely Gurgaon (8.35%) and Mewat (8.35%) fall in the category of 5% to 10% forest cover.
- ♦ Group-3: It followed seven districts namely Faridabad (4.32%), Palwal, Bhiwani, Ambala, Rewari, Mahendragarh and Kaithal fall in the category of 2% to 5% forest cover.
- ♦ Group-4: On the other hand 9 districts namely Hisar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat have 1% to 2% geographical area under forest cover.
- ♦ Group-5: Fatehabad is the only district which has less than 1% area under forest cover. Refer Figure-3 for pictorial understanding.



2.2 Profile of Faridabad District

- ♦ History: Faridabad District came into existence on 15 August 1979 as the 12th district of the state. It was carved out from erstwhile Gurgaon district. Faridabad, the south-eastern district in the state of Haryana, was founded in 1607 AD by Farid, the treasurer of Jahangir, with the object of protecting the Grand Trunk Road (now National Highway 2), which passed through the town. Sheikh Farid built a fort, a tank and a mosque, which are now in ruins. Later on, it became the headquarters of a Pargana, which was held in jagir by Ballabgarh ruler.

- ◆ **Geography:** Faridabad is located at 28.43°N 77.32° E longitude. It has an average elevation of 198 metres (649 ft). City is located on the plains of river Yamuna . It is bordered by the Yamuna to the east and Aravali hills towards the west and southwest. Today, virtually all of the land has been developing with residential housing as the population of the city swelled during the mid-1990s. Much like the rest of India, the people of Faridabad rely on the ground water for their basic needs, which is the gift of good monsoon season. Unlike Gurgaon, which is prone to direct hot summer winds coming from Jaipur (in Rajasthan), Faridabad is blessed because of Aravali Range Mountains between Gurgaon and Faridabad blocking hot summer winds to enter its geographical space. Faridabad is the largest city in the north Indian state of Haryana, in Faridabad district. It is a leading industrial center and situated in the National Capital Region (India) near the Indian capital New Delhi. It is located between Delhi, Noida, Greater Noida and Gurgaon. It is surrounded by Delhi to its North, Noida to its North East, Greater Noida to its East and Gurgaon to its West. Faridabad enjoys a prime location both geographically and politically. The river Yamuna forms the eastern district boundary with Uttar Pradesh. Faridabad is also a major industrial hub of Haryana. About 50% of the income tax collected in Haryana is from Faridabad and Gurgaon.



Faridabad is the largest city in the north Indian state of Haryana, in Faridabad district. It is a leading industrial center and situated in the National Capital Region (India) near the Indian capital New Delhi. It is located between Delhi, Noida, Greater Noida and Gurgaon. It is surrounded by Delhi to its North, Noida to its North East, Greater Noida to its East and Gurgaon to its West. Faridabad enjoys a prime location both geographically and politically. The river Yamuna forms the eastern district boundary with Uttar Pradesh. Faridabad is also a major industrial hub of Haryana. About 50% of the income tax collected in Haryana is from Faridabad and Gurgaon.

- ◆ **Climate:** The climate of Faridabad district can be classified as tropical steppe, hot semi-arid (Köppen BSh) which is mainly characterized by the extreme dryness of the air except during monsoon months. During three months of south west monsoon from last week of June to September, the moist air of oceanic penetrate into the district and causes high humidity, cloudiness and monsoon rainfall. The period from October to December constitutes post monsoon season. The cold weather season prevails from January to the beginning of March and followed by the hot weather or summer season which prevails up to the last week of June. The normal annual rainfall in Faridabad district is about 542 mm (21.3 in) spread over 27 days. The south west monsoon sets in the last week of June and withdraws towards the end of September and contributes about 85% of the annual rainfall. July and August are the wettest months 15% of the annual rainfall occurs during the non-monsoon months in the wake of thunder storms and western disturbances.
- ◆ **Population:** As per provisional data of 2011 census Faridabad had a population of 1,404,653, out of which males were 750,446 and females were 654,207. The literacy rate was 84.88 per cent.

2.3 Forest Cover in Faridabad District

- ◆ As per India State of Forest Report-2011, Faridabad district has 4.32% area under forest cover against 3.64% (6.80% both forest & tree cover) of state average. Main plant species adopted under CAMPA programme in the district are *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, etc.

CHAPTER-3

QUANTITATIVE EVALUATION AND FINDINGS

3.1 Classification of Area Covered/Treated

- ✦ Altogether 70 RKM forestland was treated under CAMPA by adopting Compensatory Afforestation (40 RKM) and Net Present Value (30 RKM) plantation schemes. It was implemented in both the ranges of the division i.e. Faridabad (39RKM) and Ballabgarh (31RKM). Under CA scheme mostly tall plants were planted while under NPV scheme ridge plantation method was adopted. Refer table-3.1 as given below for detailed information.

Table 3.1 Area Covered/Treated Under CAMPA

Sl No	Range	Plantation/Project Site	Land Category	Scheme of Plantation	Area in RKM	Year of Plantation
1	Faridabad	R.F. Alipur	Forestland	NPV /Ridge Plantation	19	2013-14
2	Faridabad	Faridabad Bye Pass Road	Forestland	CA Tall Plantation/Gap Planting	20	
Sub Total					39	
3	Ballabgarh	Dhoj Bundh 0 to tall	Forestland	NPV (Ridge Plantation)	2	
4	Ballabgarh	B/garh Pali Sohna road 9-20 L&R	Forestland	NPV (Ridge Plantation)	9	
Sub Total					11	
5	Ballabgarh	Alampur Tikri Khara Road 0-2	Forestland	CA (Tall Plantation)	1.5	
6	Ballabgarh	Sirohi Jakopur Firojpur 0-5	Forestland	CA (Tall Plantation)	4	
7	Ballabgarh	Dhoj Fatehpur Tega Road 0-4	Forestland	CA (Tall Plantation)	3	
8	Ballabgarh	Sikri Distributary RD 0-12	Forestland	CA (Tall Plantation)	3	
9	Ballabgarh	Dhoj Crusher Zone Road 0-1	Forestland	CA (Tall Plantation)	0.5	
10	Ballabgarh	Sirohi Bijoipur Road 0-3	Forestland	CA (Tall Plantation)	2	
11	Ballabgarh	Harchandpur Distributary 12-20	Forestland	CA (Tall Plantation)	3	
12	Ballabgarh	Rampura Distributary 0-12	Forestland	CA (Tall Plantation)	3	
Sub Total					20	
Grand Total					70	
13	Ballabgarh	Forest Colony, Pratapgah	Forestland	Construction of Forest Guard Hut/Quarter		

3.2 Physical and Financial Target/Achievements

- ✦ Total expenditure incurred in the entire CAMPA project during 2013-14 was Rs 30.92 lakh against the target of Rs. 32.92 lakh. Altogether thirteen (13) assets were created in the project such as plantation work at twelve (12) places and construction of forest guard quarter at one place. Refer table 3.2 for detail information about expenditure.

Table-3.2: Physical and Financial Target and Achievements (2013-14)

Sl No.	Range	Plantation/Project Site	Physical (Area in ha)		Financial (Rs. in lakh)	
			Target	Achievement	Target	Achievement
1	Faridabad	R.F. Alipur	19 RKM	19 RKM	6.27	6.27
2	Faridabad	Faridabad Bye Pass Road	20 RKM	20 RKM	7.67	7.67
3	Ballabgarh	Dhoj Bundh 0 to Tall	2 RKM	2 RKM	0.66	0.66
4	Ballabgarh	Ballabgarh Pali Sohna road 9-20 L&R	9 RKM	9 RKM	2.97	2.97
5	Ballabgarh	Alampur Tikri Khara Road 0-2	1.5 RKM	1.5 RKM	0.57	0.57
6	Ballabgarh	Sirohi Jakopur Firojpur 0-5	4 RKM	4 RKM	1.53	1.53
7	Ballabgarh	Dhoj Fatehpur Tega Road 0-4	3 RKM	3 RKM	1.15	1.15
8	Ballabgarh	Sikri Distributary RD 0-12	3 RKM	3 RKM	1.15	1.15
9	Ballabgarh	Dhoj Crusher Zone Road 0-1	0.5 RKM	0.5 RKM	0.19	0.19

10	Ballabgarh	Sirohi Bijpur Road 0-3	2 RKM	2 RKM	0.76	0.76
11	Ballabgarh	Harchandpur Distributary 12-20	3 RKM	3 RKM	1.5	1.5
12	Ballabgarh	Rampura Distributary 0-12	3 RKM	3 RKM	1.5	1.5
Total			70	70	25.92	25.92
Other Activities/ Assets Created						
13	Ballabgarh	Construction of Forest Guard Hut/Quarters			6.0	5.0
Grand Total					31.92	30.92

3.3 Inventory/ List of Plantation

- As discussed above a total of 70 RKM forestland as well as government land was treated at twelve sites in the division by adopting CA/Tall Plant and NPV/Ridge Plantation schemes. 0.25 lakh plant species of *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, etc. adopted in the project. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table-3.3: Inventory /List of Plantation

Sl. No	Range	Plantation/Project Site	Scheme of Plantation	Area (RKM)	No. of plants	Name of Plant Species	Year of Plantation
1	Faridabad	R.F. Alipur	Ridge	19	9500	Papri, Alstonia, Shisham	2013-14
2	Faridabad	Faridabad Bye pass road	T.P.	20	5000	Papri, Alstonia, Gullar, Pilkhan	
3	Ballabgarh	Dhoj Bundh	Ridge	2	1000	Papri	
4	Ballabgarh	Ballabgarh Pali Sohna road	Ridge	9	4500	Papri	
5	Ballabgarh	Alampur Tikri Khara Road 0-2	T.P.	1.5	375	Papri	
6	Ballabgarh	Sirohi Jakopur Fwoipur 0-5	T.P.	4	1000	Papri, Alstonia, Bakain	
7	Ballabgarh	Dhoj Fatehpur Tega Road 0-4	T.P.	3	750	Papri	
8	Ballabgarh	Siri Distributary RD 0-12	T.P.	3	750	Papri	
9	Ballabgarh	Dhoj Crusher Zone Road 0-1	T.P.	0.5	125	Papri, Pipal	
10	Ballabgarh	Sirohi Bijpur Road 0-3	T.P.	2	500	Alstonia	
11	Ballabgarh	Harchandpur Distributary 12-20	T.P.	3	750	Papri	
12	Ballabgarh	Rampura Distributary D-12	T.P.	3	750	Papri	
Total				70	25000		

3.4 Analysis of Plantation and Survival Assessment

- The entire project area with 70 RKM of plantation at 12 places creation forest guard hut were covered in the process of monitoring and evaluation of the programme of Faridabad Forest Division. Nine plantation sites belonged to CA/Tall Plantation scheme while one plantation site belonged to NPV/ Ridge plantation scheme.
- Average survival percentage of seedlings estimated was 69%. The survival percentage was



highest at R.F. Alipur (84%) while it was lowest at Harchandarpur distributary (61%). Average height of plantation was 7 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.

Table 3.5 Analysis of Plantation and Project Assets and Survival Assessment

Sl. No.	Range	Plantation/Project Site	Scheme	Area RKM	No. of Plants	Plants Survived	Survival (%)	Year
1.	Faridabad	R.F. Alipur	Ridge	19	9500	8075	85	2013-14
2.	Faridabad	Faridabad Bye pass road	T.P.	20	5000	3550	71	
3.	Ballabgarh	Dhoj Bundh	Ridge	2	1000	740	74	
4.	Ballabgarh	Ballabgarh Pall Sohna road	Ridge	9	4500	2835	63	
5.	Ballabgarh	Alampur Tikri Khara Road 0-2	T.P.	1.5	375	248	66	
6.	Ballabgarh	Sirohi Jakopur Firojpur 0-5	T.P.	4	1000	690	69	
7.	Ballabgarh	Dhoj Fatehpur Tega Road 0-4	T.P.	3	750	503	67	
8.	Ballabgarh	Sikri Distributary RD 0-12	T.P.	3	750	518	69	
9.	Ballabgarh	Dhoj Crusher Zone Road 0-1	T.P.	0.5	125	81	65	
10.	Ballabgarh	Sirohi Bhopur Road 0-3	T.P.	2	500	330	66	
11.	Ballabgarh	Harchandpur Distributary 12-20	T.P.	3	750	458	61	
12.	Ballabgarh	Rampura Distributary 0-12	T.P.	3	750	510	68	
Total				70	25000	18536	69.00	

3.5 Analysis of Other Activities of the Project

- Construction of a two room forest guard hut/quarters with toilet cum bathroom, kitchen and overhead water tank (500 liters) was completed at Pratapgarh Forest Complex of Ballabgarh range in the division during 2013-14. Total expenditure incurred on it was Rs. 6 lakh. However, Rs. 1 lakh was spent during last financial year (2012-13). Refer table 3.5 as given above along with for detail information in this regard. Also see photograph of the pucca hut on the right side.



Table 3.5: Details of Assets Created through CAMPA (2013-2014)

Sl.	Forest Division	Range	Details of Asset Created	Financial (Rs.)	
				Target	Achievement
1.	Faridabad	Ballabgarh	Construction of Forest Guard Quarter	6 Lakh	5 Lakh
Total				6 Lakh	5 Lakh

3.6 Registers/Records Maintained in the Project

- Important registers maintained in CAMPA scheme were work register, cashbook, sketch map, etc. Plantation journal was found missing at all the plantation sites covered in the CAMPA project. However, the DFO of the division Ms Renjitha assured us that plantation journal would be prepared very soon for all the plantation sites of CAMPA.

3.7 Monitoring and Evaluation System Adopted in the Project

- The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana of Faridabad forest division was conducted in October 2014. The M & E wing consists of one conservator

of forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Kamal in Haryana quarters. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state.

3.8 Involvement of Independent Agency for Evaluation of CAMPA

- ❖ The project authority reported that an independent agency named Agricultural Finance Corporation Ltd. based in Delhi carried out last evaluation of CAMPA work for the duration of 2010-11 and 2011-12. It was conducted in 2013 and overall finding of the study was satisfactory.

3.9 Bank Account Details and Flow of Funds

- ❖ Bank account of CAMPA Programme of Faridabad forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Faridabad Branch. Apart from this there were two other bank accounts for ranges of the division namely Faridabad Range and Ballabgarh Range. These bank accounts were also with the same Corporation Bank at Faridabad branch. Flow of funds was smooth as reported and information gathered from the stakeholders.

CHAPTER-4

QUALITATIVE ANALYSIS AND FINDINGS

4.1 Preference and Basis of Species Selection

- ❖ Important factors in the selection of plant species were nature of topography, soil type, climate, rainfall, suitability of species in the area, economic value of plant species, preference shown by local community, etc. However, the project authority took final decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ❖ There was significant improvement in soil moisture conservation at all those places where plantation carried out under CAMPA programme. However, it was reported that due to limited provision of funds on this head of the programme did not provide much options for the project authority to carry forward additional work.

4.3 Assessment of Survival Percentage and Methodology

- ❖ After thorough evaluation of the programme the estimated survival percentage of plantation carried out during 2013-14, was 69%. It was highest at R.F Alipur (84%) while it was lowest at Harchandarpur Distributary (61%). Average height of plantation was 7 feet with average to good growth and health.
- ❖ A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, row counting of plants was adopted for survival assessment. Information gathered through interviews with various stakeholders of the project, observations and experiences of members of evaluation team, etc. were taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ❖ There was very little natural regeneration of plants in the CAMPA plantation as observed during field inspection. In most part of urban and suburban areas natural regeneration was negligible while on block forest and rural areas there were some glimpses of it due to presence of other species in and around the newly planted saplings.

4.5 Quality of work Observed During Field Visit

- ❖ Overall quality of work especially plantation and creation of assets in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.

4.7 Protection and Maintenance of Plantation and Project Assets

- ❖ There was barbed wire and bush fencing at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ Iron/wood gabions were also adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be provision of better care of plantation through elaborate fencing and protection as observed. The process of awareness raising and motivation of local community should be a regular phenomenon in the project.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ❖ All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Meetings and interactive programmes were organized from time to time on the initiatives of DFO to update and motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- ❖ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ❖ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- ❖ The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such Institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

5.0 Project Constraints and Limitations: There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ❖ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff During 2013-14 of Project Work

- ❖ Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ❖ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ❖ Due to high rate of urbanization and industrialization in most part of the project area, there was high demand of labour force and hence the forest department had to face shortage of labour. In industrial sector average wage rate per day was Rs. 400-500 while it was Rs. 213 in forest department.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ❖ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ❖ Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

- 6.1 Suggestions and Recommendations for Improvement:** On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:
- 6.1.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals**
- ❖ As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- 6.1.2 Make Proper Arrangement of Protection and Maintenance of Plantation**
- ❖ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.
- 6.1.3 Vacant Posts of Frontline Staff Should be Filled on Time**
- ❖ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was felt during 2013-14 of project work.
- 6.1.4 Provision of Fine/Punishment be Made Against Wrong Doing with Forest Resources**
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.
- 6.1.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills**
- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.
- 6.1.6 Make Four Years of Protection and Maintenance Funding**
- ❖ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.1.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF and two DFOs. Its head office is located at Karnal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.1.8 Intensive Awareness Campaign to Motivate Local Community

- ❖ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.1.9 Organize Exposure Visit for Staff Member and Local Community

- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.1.10 Introduce Practice and Concept of Earning Carbon Credits

- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- ❖ Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.2 Interview with Project Authority/DFO

- ♣ Summary of interviews held with DFO, Ms Renjitha is given below with contact detail. It is as follows:
 - a) Ms Renjitha (IFS), DFO, Faridabad Forest Division (T), Faridabad district, Haryana, Mobile No.:+91-8901558515, Landline No.: +91-1292286760.
- ♣ The evaluator conducted interaction (pre evaluation/field visit) and interviewed (post evaluation) with DFO, Faridabad (T), Ms Renjitha along with an RFO. A number of issues related to implementation, progress, management and outcome of CAMPA were discussed in great detail. She replied all the queries straight forward and satisfactorily.
- ♣ The DFO confidently expressed that overall outcome and progress of CAMPA programme carried out during 2013-14 under Faridabad Forest Division in Faridabad district of Haryana was very good.

- ♣ On selection and preference of plant species in the project, the DFO was of the opinion that important factors like topography, soil condition, local climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were taken into consideration. Most preferred plant species in the project were *Papri, Shisham, Kikar, Bakain Arjun, Alstonia, Pilkhan, Balan Khira*, etc.
- ♣ With reference to benefits accrued and impact of CAMPA programme, the project authority further said that it generated employment opportunity to members of households who worked and got opportunity to earn additional income. Plantation helped in improving ecology and environment of the area. Construction of forest guard hut/quarter at Pratapgarh forest colony under Ballabgarh forest range had significant impact on forest staff working in the field.
- ♣ For betterment in the project outcome, the DFO told that she maintained regular interaction with staff members, monitored their work records and past performance, fixed accountability on the basis of performance, etc. It helped in improving performance of staff and quality of work.
- ♣ The project authority also explained that important factors impacting growth and survival of plantation were grazing by domestic animal, illicit felling of plant, shortage of labour forces, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, low wage rate under forest department, etc.
- ♣ Finally the DFO assured the members of evaluation team that plantation journals, which were missing, would be prepared of all the plantation sites carried out under CAMPA during 2012-13.

6.3 Evaluator's Assessment

- ♣ After field inspection, meeting with DFO, other forest officials, local community and analysis and verification of official records / documents, it was concluded that above statements made by the DFO, Ms Renjitha was true to a great extent. The project authority did a commendable job in the programme at Faridabad forest division. Awareness raising campaigns should be conducted at regular interval by adopting modern tools of mass media for better impact. Monitoring and evaluation work of the programme should be streamlined and conducted effectively at regular interval.

Photographs: Plantation Area and Other Project Activities of Faridabad Division (2013-14)

Faridabad Range:- (Site-1: R/F Alipur-19 RKM, Site-2: Faridabad Bye Pass Road-20 RKM)

Ballaigarh Range:- (Site-3: Dhoj Bunder 2 RKM, Site-4: Ballaigarh Pali Sohna road: 9 RKM, Site-5: Alampur Tikri Khara Road 0-2: 1.5 RKM, Site-6: Sirahi Jakopur Fojpur 0-5: 4 RKM, Site-7: Dhoj Fatehpur Tega Road 0-4: 3 RKM, Site-8: Sikri Distributary RD 0-12: 3 RKM, Site-9: Dhoj Crusher Zone Road 0-1: 0.5 RKM, Site-10: Sirahi Biljopur Road 0-3: 2 RKM, Site-11: Harchandpur Distributary 12-20: 3 RKM, Site-12: Rampur Distributary 0-12: 3 RKM, Site-13: Construction of Forest Guard Hut/ Quamer, Forest Colony Pratapgarh).

Plant Species: *Albizia*, *Bakain*, *Buaya Khira*, *Gulab*, *Papri*, *Palkhan*, *Shisham* etc.



Final A.P.O. State CAMPA Scheme (2013-14) of Faridabad Forest Division (T) in Faridabad District of Haryana

Sl. No	Type of land	Name of Scheme	Name of Range	Name of Site	Khasra No. KM/RD	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Forestland	NPV/Ridge	Faridabad	R.F. Alipur	NA	July	NA	19	4x4	Papri, Alstonia, Shisham	9500	28°24'41.2"	077°26'57.9"
2.	Forestland	CA/T.P.	Faridabad	Faridabad Bye Pass Road	NA	July	NA	20	3x3	Papri, Alstonia, Gullar, Pilkhan	5000	28°23'22.7"	077°20'12.5"
3.	Forestland	NPV/Ridge	Ballabgarh	Dhoj Gundh 0 to Tall	NA	July	NA	2	4x4	Papri	1000	28°10'58.8"	077°12'22.9"
4.	Forestland	NPV/Ridge	Ballabgarh	Ballabgarh Pala Sohna road 9-20 L&R	NA	July	NA	9	4x4	Papri	4500	28°22'15.8"	077°13'42.5"
5.	Forestland	CA/T.P.	Ballabgarh	Alampur Tkn. Khara Road 0-2	NA	July	NA	1.5	3x3	Papri	375	28°19'47.1"	077°11'35.7"
6.	Forestland	CA/T.P.	Ballabgarh	Sirohi Jakopur Firapur 0-5	NA	July	NA	4	3x3	Papri, Alstonia, Bakain	1000	28°19'1.8"	077°11'06.8"
7.	Forestland	CA/T.P.	Ballabgarh	Dhoj Fatehpur Tega Road 0-4	NA	July	NA	3	3x3	Papri	750	28°20'20.2"	077°12'30.0"
8.	Forestland	CA/T.P.	Ballabgarh	Sikri Distributary RD 0-12	NA	July	NA	3	3x3	Papri	750	28°20'00.1"	077°17'48.1"
9.	Forestland	CA/T.P.	Ballabgarh	Dhoj Crusher Zone Road 0-1	NA	July	NA	0.5	3x3	Papri, Pipal	125	NA	NA
10.	Forestland	CA/T.P.	Ballabgarh	Sirohi Bijapur Road 0-3	NA	July	NA	2	3x3	Alstonia	500	28°18'53.3"	077°11'2.7"
11.	Forestland	CA/T.P.	Ballabgarh	Herchandpur Distributary 12-20	NA	July	NA	3	3x3	Papri	750	NA	NA
12.	Forestland	CA/T.P.	Ballabgarh	Rampura Distributary 0-12	NA	July	NA	3	3x3	Papri	750	NA	NA
Total		--	--	--	--	--	--	70	--	--	25000	--	--

Final A.P.O. State CAMPA Scheme (2013-14) of Faridabad Forest Division (T) in Faridabad District of Haryana

Sl. No.	Item of Work	Sanctioned Amount (Rs. in lakh)	Actual Expenditure			Deviation if Any
			Amount (Rs. in lakh)	Quantity	Location/Remark	
1.	Construction of Forest Guard Hut/Quarter at Pratapgarh in Ballabgarh range	5.0	5.0	1	At Pratapgarh forest colony in Ballabgarh range	Completed in 2014
Total		5.0	5.0	1	--	--

COMPENSATORY AFFORESTATION FUND MANAGEMENT AND PLANNING AUTHORITY (CAMPA)

Ministry of Environment & Forests (MOEF)
Government of India, New Delhi



Monitoring and Evaluation of State Campa, Haryana Implemented By
Gurgaon Forest Division (T) and DWLO in Gurgaon District Of Haryana

Duration of Evaluation: 2013-14

Final Draft Report

Submitted to

OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANAVAN
BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

IMPACT

February, 2015

Conducted by

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Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)
Government of India, New Delhi

MONITORING AND EVALUATION OF STATE CAMPA, HARYANA BEING
IMPLEMENTED BY GURGAON FOREST DIVISION (T) AND WILDLIFE FOREST
DIVISION IN GURGAON DISTRICT OF HARYANA

Duration of Evaluation: 2013-14

Final Draft Report

OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANAVAN
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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being Implemented by Gurgaon Forest Division (T) and DWLO, Gurgaon in Gurgaon District of Haryana (2013-14)" was successfully completed. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal, and other officials placed at PCCF office especially DCF, Mr. Garg, Mr. Hembram and Mr. DP Tyagi for reposing faith and awarding the honorable task of evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency. My brief interaction with PCCF uplifted my spirit as he took final decision deftly in little after taking stock of the situation.

My Interaction with DFO, Ms Vasvi Tyagi (Territorial Division) and DFO, Mr. Kulvinder Singh (DWLO Division), RFOs along with other officials of both forest divisions helped me in understanding various aspects of CAMPA implementation and its progress during 2013-14.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.





Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, January, 2015

Preface

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates.....a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character. State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana at Gurgaon by PCOF office on professional terms and conditions. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2013-14 of CAMPA programme, a total 13 RKM forestland was treated along with creation of boundary wall, repair and reinstallation of diesel pump set and tube well at Sultanpur National Park, and purchase of rescue vehicle at DWLO division office, Gurgaon with a total expenditure incurred on different activities of CAMPA was Rs. 45.04 lakh against the target of Rs. 53.25 lakh. A total of 3250 plant species of *Allanthurus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Bar*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pikhan*, *Pipal*, *Shisham*, *Siras*, etc. were planted.

Average survival % of plantation estimated was 66%. It was 68% at Ghata Bundh while it was 63% at Gurgaon Pataudi Road Km. 3-13 L&R. Average height of plantation was 5 feet. Average grading awarded to the programme was 6.4 (on a scale of 1 to 10), which was very good.

Members of evaluation team interacted with JFMC local community and forest officials in the process of field inspection of project area. At most places local people were happy with the efforts made by forest department. A Plantation journal was missing but other project related records were recorded and kept well. Selection of species was made in accordance with local factors and needs of the community. Flow of fund was smooth as reported by the project authority. There was lack of awareness and low sense of responsibility on public and environmental issues among the local people. Overall outcome of the programme was satisfactory.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

January, 2015



Dinesh K. Singh
Dinesh K. Singh

Director
Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Tranch
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forsts	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Gurgaon Division (T)	Gurgaon Forest Division Territorial
Ha	Hectare
JPMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

LOCAL NAME AND BOTANICAL NAME OF PLANT SPECIES

SL No.	Common Name	Botanical Name
1.	Ailanthus/Mahanimb/Maharukh	Ailanthus Excelsa
2.	Amaltas	Cassia fistula
3.	Arjun	Terminalia arjuna
4.	Bakain	Melia azedarach
5.	Ber	Ziziphus mauritiana
6.	Chakrasia/Indian Redwood	Chukrasia tabularis
7.	Champa	Magnolia champaca
8.	Gulmohar	Delonix regia
9.	Indian Mallow/ Devil Tree	Alstonia
10.	Jamun	Syzygium cumini
11.	Kachnar	Bauhinia variegata
12.	Khair	Acacia catechu
13.	Kikar	Acacia Arabica
14.	Lasoda	Cordia Dichotoma
15.	Neem	Azadirachta indica
16.	Papri	Holoptelea integrifolia
17.	Pilkhan	Ficus virens
19.	Pipal	Ficus religiosa
20.	Shisham	Dalbergia sissoo
21.	Siras	Albizia lebbeck

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana****Gurgaon Forest Division and DWLO Division, Gurgaon in Gurgaon District of Haryana**

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	9
Qualitative Aspects	Survival	6
	Health of Plantation	6
	Maintenance	6
	Sustainability	5
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.4

Executive Summary**1.0 Introduction**

- ♦ The field visit for monitoring and evaluation of State CAMPA, Haryana at Gurgaon Forest Division (T) and DWLO division Gurgaon was conducted in the month of January 7-10, 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency. A total 13 RKM forestland with CA plantation schemes at 2 places treated during 2013-14 along with creation of three assets three places. The entire (100%) project sites/areas and assets were covered in the process of field visit and analysis. Summary of findings of the study is given below.

2.0 CAMPA: An Overview

- ♦ CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ♦ State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 Objectives of the NAP

- ♦ Important objectives of CAMPA are as follows:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.

4.0 Geographic Location /Area of Monitoring & Evaluation

- ♦ It covers Gurgaon Forest Division (Territorial) and DWLO Division, Gurgaon in Gurgaon district of Haryana.

5.0 Reference Period

- ♦ The reference period of monitoring & evaluation CAMPA is one year, i.e. 2013-14.

6.0 Need of the Study

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any in from the stated guidelines, etc.

7.0 Objectives of the Study

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting plantation survival and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

8.0 Methodology and Sample selection

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted as per need and interviewing forest officials and community leader, etc. There was cent percent (100%) coverage area and project activities carried out during 2013-14.

9.0 Profile of the Study Area

- ♦ The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 57 tehsils/towns and 115 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state. As per India State of Forest Report-2011, Gurgaon district has 8.35% area under forest cover.

10.0 Main Findings of the Study

10.1 Quantitative Findings

- ♦ During 2013-14, a total of 13 RKM land forestland was treated under CAMPA programme by adopting CA schema at Gurgaon range in Gurgaon forest division (FD). Besides plantation three assets were created namely boundary wall, repair and reinstallation of diesel pump set and tube well at Sultanpur National Park, Bird Sanctuary and purchase of rescue vehicle at DWLO division office, Gurgaon.
- ♦ Total expenditure incurred on different activities of CAMPA was Rs. 45.04 lakh against the target of Rs. 53.25 lakh during 2013-14.
- ♦ Ghata Bundh (8 RKM) and Gurgaon Pataudi Road Km 3-13 R&L (5 RKM) belonged to Gurgaon range. A total of 3250 plant species of *Ailanthus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Bar*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pikhan*, *Pipal*, *Shisham*, *Siras*, etc. were planted at both the sites.
- ♦ Average survival rate of plantation estimated was 66%. It was 68% at Ghata Bundh while it was 63% at Gurgaon Pataudi Road Km. 3-13 L&R. Average height of plantation was 5 feet. Growth and health of plantation was good. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random locations to estimate survival percentage. For row /linear plantation, row

counting of plants was followed. Feedbacks through interviews with various stakeholders of project, observations and experiences of members of evaluation team were also considered to validate and estimate survival percentage.

- ❖ Work register, Cash book, Maps, etc. were Importance registers maintained by the project authority. Plantation journal was missing but project authority assured us that it would be introduced soon.
- ❖ Monitoring and Evaluation (M & E) wing conducts monitoring of CAMPA for once or twice a year on average basis. Last evaluation of CAMPA was carried out in October 2014 for the entire four years of project activity (2010-11 to 2013-14). The headquarters of M & E wing is located at Karnal in Haryana.
- ❖ Flow of funds was smooth at all levels as reported by the project authority.

10.2 Qualitative Findings

- ❖ Type of soil, climate and natural factors, survival factor and suitability in the area, demand/choice put by local community, etc. were main factors in the selection of species.
- ❖ CAMPA plantation accrued benefits in conserving soil moisture. The project authority reported that there was no provision of additional funds for soil moisture conservation work.
- ❖ Natural regeneration of plantation in the CAMPA was negligible. In block forest region there were some glimpses of it due to presence of other species in and around the newly planted saplings.
- ❖ Overall quality of work was found satisfactory at majority locations as observed during field visit.
- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.
- ❖ For protection of plantation Barbed wire fencing was very common at all sites along with a few brick/iron/wood gabions in urban and sub-urban areas. Foresters and forest guards were responsible for making regular rounds of plantation area in this regard.
- ❖ The project authority was of the view that meetings and Interactive programmes were organized at certain intervals on the initiatives of DFO to acquaint, update and motivate forest staffs with necessary information on forestry programmes and CAMPA related issues.
- ❖ There was average to low participation of local community in the implementation and protection of the programme.
- ❖ CAMPA programme accrued both direct and indirect benefits. It helped in improving quality of ecology and environment benefitting all kinds of flora and fauna. Wage employment during project activity and plantation season also accrued benefits to local people in earning additional income.

11.0 Constraints and Limitations of the Project

- ❖ Grazing by domestic animals had adverse impacted survival and growth of plantation. It caused far reaching damage to plantations as animals' feet loosen the soil, and has a cascading detrimental effect on all saplings planted in the area.
- ❖ There was shortage of foresters and forest guards in the division during 2013-14. The programme had adverse impact on quality and outcome due to this during 2013-14.
- ❖ Average wage rate of forest department was Rs. 213 per day, which was much low as compared to local industrial establishments and urban areas (Rs. 400-500 per day) causing hardship and limitation in finding labour force during peak plantation season and project work.
- ❖ Due to high rate of urbanization and industrialization, there was high demand of labour force and hence the forest department had to face shortage of labour. In industrial sector average wage rate per day was Rs. 400-500 while it was Rs. 213 in forest department and hence the forest.

- ❖ Range level offices were facing shortage of necessary vehicles for day to day activities as reported by the project authority. It impacts the performance of staff and quality and outcome of project work.
- ❖ Main factors impacting growth and survival of plantation were damage caused by wild animals like, rabbits, blue bulls and porcupines, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperatures in summer low in winter), erratic monsoon rain, rapid urbanization, etc.

12.0 Suggestions and Recommendations

- ❖ A viable strategy should be adopted to minimize the menace of grazing by domestic animals in most part of the project area. Wild animals like blue bulls and rabbits also caused damage to plantation. Local community should be motivated to adopt stall feeding to their animals.
- ❖ A multi-pronged strategy should be adopted for protection and maintenance of plantation. It was observed that barbed wire fencing was very common at most plantation sites. It is suggested that in urban and suburban areas the project authority should adopt gablons of iron, brick or wood for better survival and higher outcome.
- ❖ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure on existing staff.
- ❖ A provision of fine /punishment or both should be levied against all persons involved in unprotected grazing and deliberate damage to plantation.
- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs along with some willing local community to impart skill enhancement and better knowledge.
- ❖ There should be regular funding provision for four consecutive years for protection and maintenance of plantation for better outcome.
- ❖ Monitoring and evaluation system is critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). The project authority should pay a better attention in this regard to increase its effectiveness.
- ❖ Mass media communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad nataks*, slogan shouting, rallies, advertisement in local newspapers, etc. should be adopted for awareness for better and long lasting impact among local community.
- ❖ Exposure visit and tour programme should be organized for forest staffs to advance nursery and plantation areas within the state and outside for better understanding and learning new ideas and knowledge. These are important methods of development process.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures in new ways, and it should forthwith be introduced in our country at the village level of environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

CHAPTER-1

PROJECT CONCEPT, STRATEGY, OBJECTIVE AND METHODOLOGY

1.1 CAMPA : An Overview

- ◆ **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ◆ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators.
- ◆ Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ◆ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
- ◆ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
- ◆ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.

- ◆ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ◆ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
- ◆ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Details of Establishment State CAMPA

- ◆ The details of establishment of State CAMPA are summarized below :
 - a) The State Government may establish the Compensatory Afforestation Fund Management and Planning Authority (State CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ◆ Amount transferred to it by the ad-hoc CAMPA.
 - ◆ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ◆ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ◆ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ◆ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The State Government may also credit to the State CAMPA
 - ◆ Grants or aid received if any;
 - ◆ Any loan taken by the Authority or any borrowings made by it; and
 - ◆ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 Establishment of State CAMPA, Haryana

- ❖ On March 3, 2010, Haryana Government constituted the State Compensatory Afforestation Fund Management and Planning Authority (STATE CAMPA), Haryana for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.
- ❖ State CAMPA, Haryana will have three bodies, namely - a Governing Body, a Steering Committee and an Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ❖ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the State Government for a period of two years will be its Members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ❖ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ❖ "State Compensatory Afforestation Fund Management and Planning Authority"(CAMPA) is intended as an instrument to accelerate activities for preservation of natural forests, management of wildlife, Infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ❖ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ❖ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, Infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of CAMPA

- ♦ Conservation, protection, regeneration and management of existing natural forests;
- ♦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- ♦ Compensatory afforestation;
- ♦ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- ♦ Science, Research, Training and Capacity Building.
- ♦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location /Area of Monitoring & Evaluation

- ♦ The evaluation study covers Gurgaon Forest Division (Territorial) and DWLO Division, Gurgaon in Gurgaon district of Haryana. The Jurisdiction of Gurgaon Forest Division (Territorial) is spread over whole of Gurgaon district while the DWLO Division is spread over six districts namely Gurgaon, Mewat, Faridabad, Palwal, Rewari and Mahendragarh. However, in the present study only Gurgaon district has been cover to analyze the CAMPA project activities.

1.6 Reference Period of Monitoring & Evaluation

- ❖ The reference period of monitoring & evaluation CAMPA is one year, i.e. 2013-14.

1.7 Components of Project

- ❖ People's Participation
- ❖ Afforestation work under through Compensatory Afforestation (CA) and also funds collected through Net Present value (NPV)
- ❖ Monitoring and Evaluation of the programme
- ❖ Conservation and protection of forests, infrastructure development, wildlife conservation and protection and related activities.

1.8 Details of Project Implementing Agency and Proposed Activities

- ❖ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Project Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
❖ District	: Gurgaon
❖ Forest Division	: Gurgaon (T) and DWLO, Gurgaon
❖ Forest Circle	: South Circle, Gurgaon, DWLO, Gurgaon
❖ State	: Haryana
Project Location	
❖ Watersheds/Sub-watersheds	: Ghata Bundh
❖ Development Blocks (9)	: Gurgaon, Farukhnagar, Manesar, Sohna, Damdama, Badrhalpur, Hailey Mandi, Inchapuri and Bhorkalan
❖ Forest Ranges(4)	: Gurgaon, Sohna and Hailey Mandi of Gurgaon Division and Sultanpur National Park Bird sanctuary of DWLO, Gurgaon
❖ Villages/VFCs	: Five (5)
Other Development Activities in the Project Area	
❖ At most of the project sites there was not any other afforestation scheme during 2013-14. In urban areas some other plantation scheme like urban plantation was implemented. However, developmental activities of line departments were implemented in most part of the CAMPA programme.	
Preparation of Micro-plan and Plantation Journal	
❖ There was no requirement of micro-plan as reported and hence not prepared. But plantation journal was also missing. Work register was available and used as plantation journal.	
Project Duration	: 2013-14
Project Area and assets created	: Target and achievements: 13 RKM Plantation and Other assets created were Boundary Wall, Repair and reinstallation of Tube well and Purchase of Rescue vehicle.
Project Cost	: Target: Rs. 53.25 lakh, Achievement/spent: Rs. 45.04 lakh
Proposed Strategies and Salient Features of the Project	
❖ <u>Plantation Schemes</u> : Compensatory Afforestation (CA) and Net Present value (NPV)	
❖ <u>Assets/Infrastructure created under CAMPA</u> : there was no provision for creation assets in the name of EPA in CAMPA as reported. However, apart from Plantation CAMPA programme has wide scope for the creation of a number of assets.	

1.9 Need of the Study

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any in from the stated guidelines, etc.

1.10 Scope of the Study

- ◆ Scope of study is confined to Gurgaon Forest Division (T) and DWLO division, Gurgaon in Gurgaon district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ◆ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements
 - ◆ To evaluate performance of the programme
 - ◆ To estimate of survival percentage of plant species adopted in the project.
 - ◆ To analyze factors impacting plantation survival and suggest remedial measures.
 - ◆ To assess peoples' participation and assets created
 - ◆ To assess the direct and indirect benefits and impact of the programme.
 - ◆ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure

- ◆ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ◆ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.

1.13 Sample Selection, Size and Distribution

- ◆ There was cent percent (100%) coverage area and project activities carried out during 2013-14. It comprised two plantation sites namely Ghata Bundh (8 RKM) and Gurgaon Pataudi Road KM 3-13 R&L (5 RKM) of Gurgaon range and creation of three assets i.e. boundary wall, repair and installation of tube well and purchase of rescue vehicle.

1.14 Chapter-wise organization of Report

- ◆ The report is divided into six chapters. It is as follows:
 - ◆ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ◆ Chapter-2 gives the Profile of the Project Area and its Location
 - ◆ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ◆ Chapter-4 gives Qualitative Analysis and Findings.
 - ◆ Chapter-5 deals with Limitations and Constraints of the Project.
 - ◆ Chapter-6 provides Suggestions and Recommendations for Improvement.

1.15 Limitations of the Evaluation Study

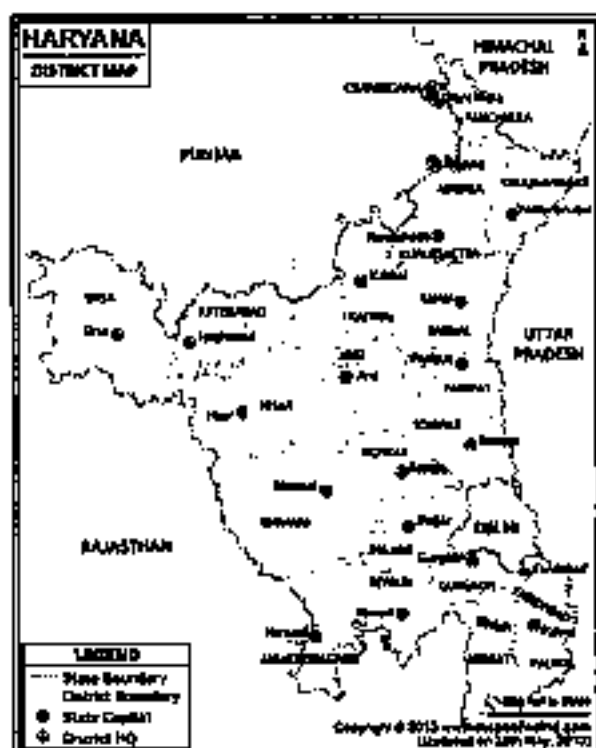
- ◆ It hard to find respondents at both rural and urban areas of project implementation. It impacted collection necessary information.
- ◆ Lack of necessary awareness among community about details of CAMPA also impacted collection of necessary information. However, adequate efforts were made by members of evaluation team to minimize these limitations.

CHAPTER-2

PROFILE OF PROJECT AREA

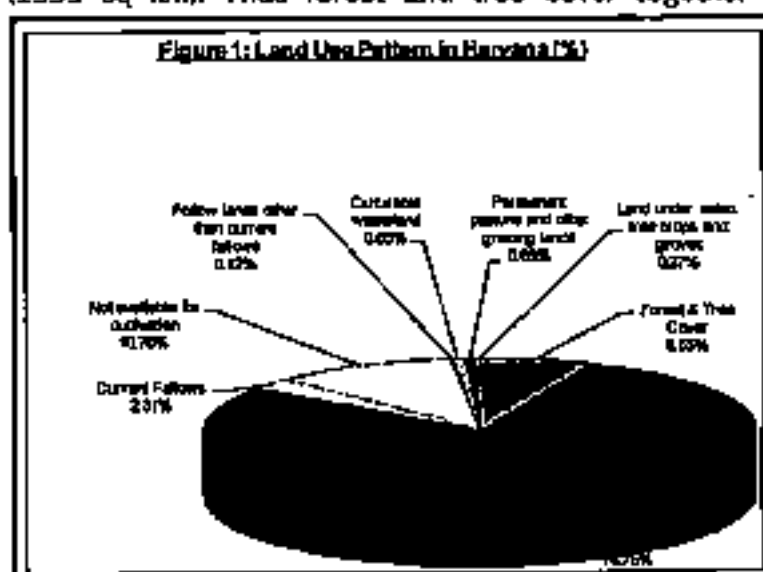
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ❖ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ❖ Gurgaon Division has six (6) districts namely Palwal, Faridabad, Mahendragarh, Gurgaon, Rewari, and Mewat districts in its jurisdiction.
- ❖ While Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ And Rohtak Division has also has five (5) districts namely Kamal, Jhajjar, Rohtak, Panipat, and Sonapat districts in its jurisdiction.



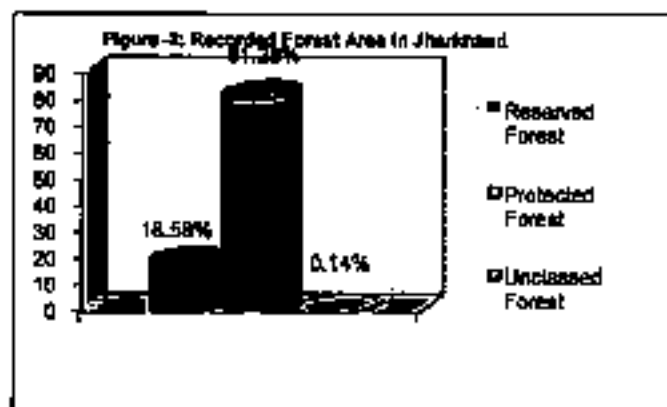
2.1.1 Land Use Pattern of Haryana

- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ❖ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%). Permanent pasture and other grazing lands (0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See figure -1 as given below. Source: Land



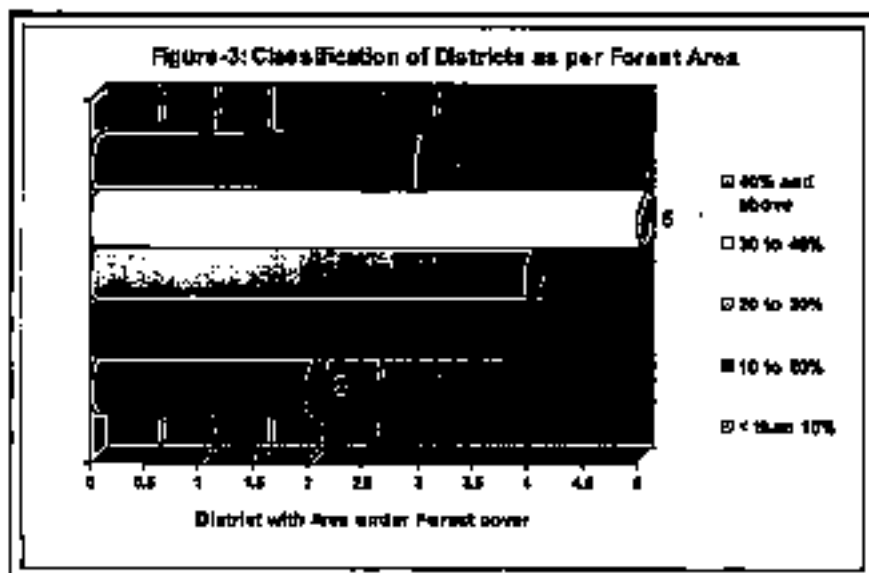
2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. See figure -2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ♦ Distribution of forest land among districts (21) of the state is highly uneven. Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover while two districts namely Gurgaon (8.35%) and Mewat (8.35%) fall in the category of 5% to 10% forest cover.
- ♦ It followed seven districts namely Faridabad, Palwal, Bhiwani, Ambala, Rewari, Mahendragarh and Kaithal fall in the category of 2% to 5% forest cover. On the other hand 10 districts namely Fatehabad, Hisar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat have less than 2% geographical area under forest cover.

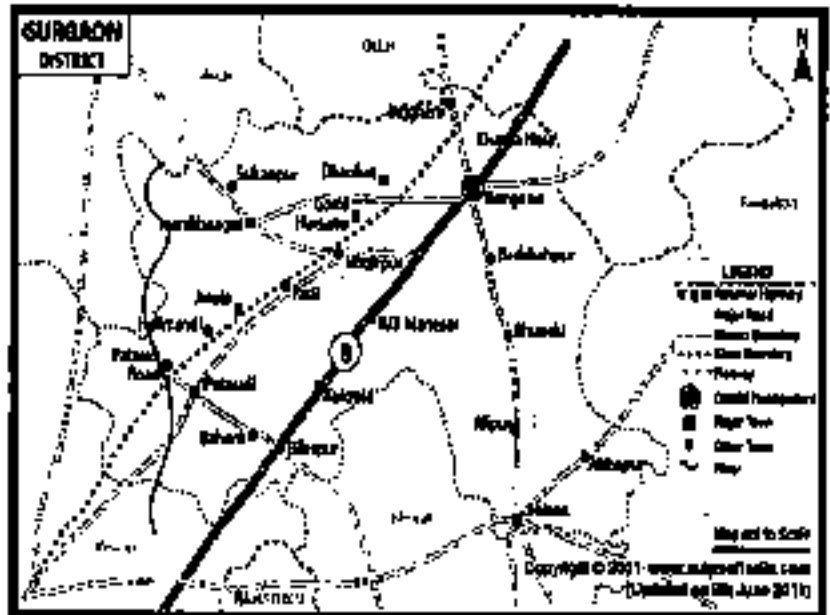


2.2 Profile of Gurgaon District

- ♦ Gurgaon is a leading financial and industrial city of India, situated in the National Capital Region near the Indian capital New Delhi in the state of Haryana. It is located 32 km south-west of New Delhi. Gurgaon district has a population of 876,824. Witnessing rapid urbanization, Gurgaon has become the city with the third highest per capita income in India, even though the city grapples with the problem of lack of proper infrastructure and utilities, frequent power outages and rising crime. Historically known as *Guru Gram*, the city's economic growth story started when the leading Indian automobile manufacturer Maruti

Suzuki India Limited established a manufacturing plant in Gurgaon in the 1970s. Today, Gurgaon is home to about 250 Fortune 500 companies.

- ♦ The origin of the city's name can be traced back to ancient Hindu scriptures. It is believed that this land was owned by the legendary rulers Pandavas and Kauravas who presented it to Guru Dronacharya, their royal guru for warfare, as an appreciation of his training. The land came to be known as *Guru Gram*, which literally translated means "Village of the Guru", which in due course of time got distorted to the name Gurgaon. The village still exists within the modern day city.



- ♦ Gurgaon is located in Gurgaon district in the Indian state of Haryana and is situated in the south eastern part of the state, and northern part of the country. The city is located on the border with Delhi with New Delhi to its north east. The city has a total area of 282.7 square miles (738.8 km²). The average land elevation is 711.9 ft (217 m) above sea level.
- ♦ Under the Köppen climate classification, Gurgaon experiences monsoon-influenced humid subtropical climate (Cwa). The city experiences four distinct seasons - spring, summer, autumn and winter, along with the monsoon season setting in towards the latter half of the summer. Summers, from early April to mid October, are typically very hot and humid, with an average daily June high temperature of 104 °F (40 °C). The season experiences heat indices easily breaking 110 °F (43 °C). Winters are very cold and foggy with few sunny days, and with a December daytime average of 37.4 °F (3 °C). The Western Disturbance brings some rain in winters that further add to the chill. Spring and autumn are mild and pleasant seasons with low humidity. The monsoon season usually starts in the first week of July and continues till August. Thunderstorms are not uncommon during the Monsoon. The average annual rainfall is approximately 28.1 inches (714 mm).^[10]

2.3 Forest Cover in Gurgaon District

- ♦ As per India State of Forest Report-2011, Gurgaon district has 8.35% area under forest cover against 3.64% (6.80% both forest & tree cover) of state average. Main plant species adopted under CAMPA programme in the district are *Alanthus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Ber*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pilikhan*, *Pipal*, *Shisham*, *Siras*, etc.

CHAPTER-3

QUANTITATIVE EVALUATION AND FINDINGS

3.1 Classification of Area Covered/Treated

- During 2013-14, a total of 13 RKM land belonging to Protected Forest was treated under CAMPA programme by adopting Compensatory Afforestation (CA) scheme at Gurgaon range in Gurgaon forest division (T). Apart from plantation other activities followed and assets created were construction of boundary wall at Kadipur Government high school under Gurgaon range, repair and reinstallation of diesel pump set and tube well at Sultanpur Bird Sanctuary and purchase of rescue vehicle at DWLO division office, Gurgaon. Refer table-3.1 as given below.

Table 3.1 Area Covered/Treated /Plantation and Other Activities of CAMPA					
Sl No.	Forest Division	Land Category	Name of Scheme	Area in RKM	Year of Plantation
1.	Gurgaon (T)	Protected Forest	CA	8	2013-14
2.	Gurgaon (T)	Protected Forest	CA	5	
Total				13	
Other Activities/ Assets Created					
3.	Gurgaon (T)	Boundary Wall of Kadipur Govt. Land.			
4.	DWLO, Gurgaon	Repair and reinstallation of Tube well			
5.	DWLO, Gurgaon	Purchase of Rescue vehicle			

3.2 Physical and Financial Targets and Achievements

- Total expenditure incurred on different activities of CAMPA in Gurgaon district under two forest divisions was Rs. 45.04 lakh against the target of Rs. 53.25 lakh during 2013-14. A sum of Rs. 5.0 lakh was spent on plantation of protected forestland (13 RKM) while Rs. 31.02 lakh was spent on construction of boundary wall at Kadipur Government high school under Gurgaon forest division. On the other hand a sum of Rs. 3.0 lakh was spent on repair and reinstallation of diesel pump set and tube well at Sultanpur Bird Sanctuary. Finally Rs. 6.01 lakh incurred on purchase of a rescue vehicle at DWLO division, Gurgaon. Refer table 3.2 for detail information on physical and financial target and achievements of CAMPA as given below:

Table 3.2: Physical and Financial Target and Achievements (2013-2014)							
Sl No.	Forest Division	Range	Site /MFC/Village/ Asset Name	Physical (Area In RKM. & Rs.)		Financial (Rs.)	
				Target	Achievement	Target	Achievement
1.	Gurgaon (T)	Gurgaon	Ghata Bundi O-Tail	8	8	307688	307688
2.	Gurgaon (T)	Gurgaon	Gurgaon Palaudi Road Km. 3-13 L&R	5	5	192312	192312
Sub-Total				13	13	500000	500000
1.	Gurgaon (T)	Gurgaon	Boundary Wall of Kadipur Govt. Land.			3525000	3102219
2.	DWLO, Gurgaon	Sultanpur Bird Sanctuary	Repair and reinstallation of Tube well			1300000	300000
3.	DWLO, Gurgaon	Gurgaon	Purchase of Rescue vehicle				601451
Grand Total:				13	13	5325000	4503670

3.3 Inventory/ List of Plantation

- During 2013-14 a total 13 RKM area was treated at two sites namely Ghata Bundh (8 RKM) and Gurgaon Pataudi Road KM 3-13 R&L (5 RKM) at Gurgaon range. Mostly tall plant species were adopted. A total of 3250 plant species of *Ailanthus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Ber*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, *Siras*, etc. were planted at both the sites. Range-wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table 3.3 Inventory/ List of Plantation of the Project

Sl.	Range	Village/VFC/Site	Scheme of Plantation	Area in RKM	No. of Plants	Name of Plants Species	Year of Plantation
1	Gurgaon	Ghata Bundh	CA	8	2000	B. Papri (880), Amaltas (200), Kachnar (300), Pilkhan (200), Jamun (100), Pipal (80), Ber (60), Neem (60), Siras (50), P. Papri (50), Gulmohar (20), etc.	2013-14
2	Gurgaon	Gurgaon Pataudi Road Km. 3-13 L&R (Kadipur, Gadoli, Harsaru, Wazirpur)	CA	5	1250	B. Papri (450), P. Papri (450), Bakain (165), Shisham (95), Pilkhan (40), Neem (25), Jamun (15), etc.	
Total				13	3250		

3.4 Analysis of Plantation and Assessment of Survival Percentage

- Both the plantation sites namely Ghata Bundh and Gurgaon Pataudi Road KM 3-13 were thoroughly covered during field visit to assess the overall quality and health of plantation



and to estimate survival percentage. Average survival rate of plantation estimated was 66%. It was 68% at Ghata Bundh while it was 63% at Gurgaon Pataudi Road Km. 3-13 L&R. Average height of plantation was 5 feet. Growth and health of plantation was good. Refer table 3.4 for detail information on survival assessment. Also refer photographs as given above.

Table 3.4 Plantation Sites and Survival Assessment/Estimation

Sl.	Division/Range	VFC/Site	Scheme	Area (ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	Gurgaon	Ghata Bundh	CA	8	2000	1360	68	2013-14
2	Gurgaon	Gurgaon Pataudi Road Km. 3-13 L&R (Kadipur, Gadoli, Harsaru, Wazirpur)	CA	5	1250	788	63	
Total				13	3250	2148	66	

3.5 Other Activities / Assets Created in the Project

- Besides plantation work other important activities/assets created by state CAMPA at Gurgaon forest division and DWLO, Gurgaon



Details of Assets Created through CAMPA (2013-2014)					
Sl.	Forest Division	Range	Details of Asset Created	Financial (Rs.)	
				Target	Achievement
1.	Gurgaon (T)	Gurgaon	Boundary Wall of Kadipur Govt. Land	35,25,000	31,02,219
2.	DWLO, Gurgaon	Sultanpur Bird Sanctuary	Repair and rehabilitation of Tube well	13,00,000	3,00,000
3.	DWLO, Gurgaon	Gurgaon	Purchase of Rescue vehicle		6,01,451
Total				48,25,000	40,03,670

were boundary wall, repair and installation of tube well and purchase of rescue vehicle as discussed above. These assets were thoroughly reviewed during field visit. Physical verification of assets revealed that overall quality of these assets was satisfactory. Details of them are given above in tabular form. Also refer photographs.

3.6 List of Important Registers/Records Maintained and Available in the Project

- Importance register/ Records maintained by the project authority were work register, Cash book, Maps, etc. Plantation journal/register was missing. However, the project authority assured us that it would be taken care very soon for all the plantation sites in the project.

3.7 Process of Monitoring and Evaluation of Project

- Monitoring and Evaluation (M & E) of CAMPA is carried out by M & E wing average once or twice a year. Last evaluation of CAMPA was carried out in October 2014 for the entire four years of project activity (2010-11 to 2013-14). The headquarters of M & E wing is located at Kamal in Haryana. It consists of one conservator of forest (CF) and two Deputy Conservator of Forest (DCF). M & E wing conducts monitoring & evaluation of all forestry programmes being implemented in the district comprising two forest divisions.

3.8 Involvement of Independent Agency In Evaluation Process of CAMPA

- It was reported that an independent agency named Agricultural Finance Corporation Ltd. of New Delhi carried out monitoring & evaluation of CAMPA programme for the duration of 2011-12 and final reports of all the districts were submitted in 2013. An overall finding of the study was good.

3.9 Flow of Funds and Bank Accounts Details

- Bank account of CAMPA Programme was in the Name of Divisional Forest Officer at Corporation Bank with saving A/C No.: 044900101023499 at Gurgaon Branch. Apart from this there were three other bank accounts (one each) at range level (Gurgaon, Sohna, and Hailey Mandi-Pataudi). It is operated by chairman from a Village Forest Committee (VFC) who might be a Sarpanch or Deputy Sarpanch and member secretary, a Range Forest Officer (RFO). These bank accounts existed with a nearest available branch of any bank from a range forest office. Flow of funds was smooth at all levels as reported by the project authority.

CHAPTER-4

QUALITATIVE ANALYSIS AND FINDINGS

4.1 Preference and Basis of Species Selection

- ❖ Main factors considered in the selection/choice of plant species were type of soil, climate and natural factors prevailing in the area, suitability in the in the area economic value benefitting local people, demand/choice put by local community, etc. However, the project authority took the final call in this regard after taking into account of above factors.

4.2 Status of Soil and Moisture Conservation

- ❖ It was observed that plantation conducted under CAMPA accrued benefits in conserving soil moisture. It was average in most part of project area. However, the project authority reported that there was no provision of additional funds for soil moisture conservation work.

4.3 Assessment of Survival Percentage of Plantation and Methodology Adopted

- ❖ Average estimated survival rate of plantation was 66%. It was 68% at Ghata Bundh plantation site while at Gurgaon Pataudi Road Km. 3-13 I&R, the survival was 63%. Average height of plantation was 5 feet. Growth and health of these plantations was satisfactory.
- ❖ A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random locations to estimate survival percentage. For row /linear plantation, row counting of plants was followed. Feedbacks through interviews with various stakeholders of project, observations and experiences of members of evaluation team were also considered to validate and estimate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ❖ There was very little natural regeneration of plants in the CAMPA plantation as observed during field inspection. In most part of urban and suburban areas natural regeneration was negligible while on block forest and rural areas there were some glimpses of it due to presence of other species in and around the newly planted saplings.

4.5 Quality of work as Observed during Field Visit

- ❖ Overall quality of work of plantation and assets created by CAMPA was found satisfactory at majority locations as observed during field visit. A thorough inspection of all the project sites was conducted by members of evaluation team in this regard.

4.6 Factors Affecting Growth and Survival Percentage of Plantation

- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.

4.7 Protection and Maintenance of Plantation and Project Assets

- ✦ Barbed wire fencing was adopted at all the plantation sites for protection of plantation along with a few brick/ iron/wood gabions in urban and sub-urban areas. Forest staff especially foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. It was observed that in urban part there should additional care and provision of fencing and protection. There is need to motivate community people in this regard.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ✦ Most of the forest staffs working in the field such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle the necessary requirements while dealing with various aspects of forestry programmes. But even daily wages or temporary staffs, watchers, etc. should also be imparted necessary skill to deal with new challenges of the programme. The project authority was of the view that meetings and interactive programmes are organized at certain intervals on the initiatives of DFO to acquaint, update and motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People In Project

- ✦ There was average to low participation of local community in the implementation and protection of the programme. Among target project sites and VFC forest officials maintained interaction from time to time. But it was not adequate. Interaction, meetings and awareness raising programmes with local community should be a regular phenomenon of such programmes for sustainable development and better outcome of the programme. Modern tools of mass media should be adopted in the awareness and motivation of community to catch their attention and its long lasting impact.

4.10 Benefits and Impact of the Programme

- ✦ CAMPA programme accrued both direct and indirect benefits. Plantation helped in bringing additional geographical area under plantation and forest cover resulting into extra availability of fuel-wood and fodder along with other forest produces. It helped in improving quality of ecology and environment as well as micro-climate of the area, benefitting all kinds of flora and fauna. Part-time wage employment during project activity and plantation season also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project Area

- ✦ As reported by the project authority there was no formation of SHG under CAMPA programme. The project did not have such provision or allocation of funds for such activities. However, the project authority was in agreement with our suggestions that these institutions help in extension of programme and better motivation of local community so that they willingly participate and extend cooperation to project authority during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

The project authority was faced with a number of natural and anthropogenic constraints and limitations in programme implementation, protection and management, which impacted the performance. Some of the most notable constraints and limitations of the project are discussed below.

5.1 Rampant Grazing by Loose Domestic Cattle in most part of Project Area

- ✦ Grazing impacted survival and growth of plantation adversely. It was a common problem in most part of the project area. Unprotected grazing caused far reaching damage to plantations: the animals' feet loosen the soil, and has a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff during Programme Implementation (2013-14)

- ✦ It was reported that there was shortage of frontline staff like foresters and forest guards in the division during 2013-14 of CAMPA programme implementation. However, recently fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and now it was normal capacity was okay. But the programme had adverse impact on quality and outcome due to shortage of staffs during 2013-14.

5.3 Low wage Rate of Forest Department as compared to Industrial sector

- ✦ Wage rate of forest department (average Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (Rs. 400-500 per day) causing hardship and limitation in finding labour force during peak plantation season and project work. It adversely impacted quality and outcome of the programme.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in most part of the project area, there was high demand of labour force and hence the forest department had to face shortage of labour. In industrial sector average wage rate per day was Rs. 400-500 while it was Rs. 213 in forest department.

5.5 Lack of infrastructure in the Division and Range Level Offices

- ✦ At division level there was no problem of basic infrastructure including vehicle but range level offices were facing shortage of necessary vehicles for day to day activities as reported by the project authority. It impacts the performance of staff and quality and outcome of project work.

5.6 Growth and Survival of Plantation Faced severe beating due to several Factors

- ✦ Important factors having adverse impact on growth and survival of plantation were damage caused by wild animals like, rabbits, blue bulls and porcupines, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic monsoon rain, rapid urbanization, etc.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

On the basis of foregoing description, analysis and assessment of the CAMPA programme and interaction and interviews held with forest officials, the following suggestions and recommendations are proposed for improvement in project output and efficacy. It is as follows:

6.1 Suggestions and Recommendations

6.1.1 Control on Grazing by Domestic cattle and Wild Animals

- ❖ The project authority should adopt a viable strategy to check or at least minimize the menace of rampant grazing by domestic animals in most part of the project area. Wild animals like blue bulls and rabbits in some part of project areas also caused damage to plantation. Local community should be motivated to adopt stall feeding to their animals.

6.1.2 Make Elaborate Arrangement for Protection and Maintenance of Plantation

- ❖ There should be a suitable provision of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing of barbed wire should be adopted as per requirement to certain locations and type of plantation. It was observed that barbed wire fencing was very common at most plantation sites. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick or wood for better survival and higher outcome.

6.1.3 Fill all Vacant Posts of Frontline Staff on time through Proper Recruitment Process

- ❖ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure on existing staff. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was felt badly during 2013-14 of project work.

6.1.4 Make a Provision of fine /punishment against Illicit felling and Damage of Forest Wealth

- ❖ A provision of fine /punishment or both should be levied against all persons involved in unprotected grazing and deliberate damage to plantation. Such punishments or fines could work as deterrent among the local community. However, the project authority said that such provisions are present and adopted when required as per the forest rules and guidelines.

6.1.5 Run a capacity-building Programme to impart knowledge and hone skills

- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs along with some willing local community to impart skill enhancement and better knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.1.6 Make the protection and maintenance funding for Four years to bring higher outcome

- ❖ There should be regular funding provision for four consecutive years for protection and maintenance of plantation for better outcome.

6.1.7 There should be regular, systematic and effective monitoring and evaluation system

- ◆ Monitoring and evaluation is critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M-& E wing of forest department was based in Karnal comprising one CF and two DFOs who take care of this work for the entire forestry programme. The entire plantation programmes and related work were monitored and evaluated once a year. The project authority should pay a better attention in this regard to increase its effectiveness.

6.1.8 Run an intensive awareness campaign to motivate local community people

- ◆ It must be noted that for better awareness there should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*s, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.1.9 Make a provision of exposure visit to staff member and opinion leaders

- ◆ There should be provision of exposure visits of forest staffs to advance nursery and plantation areas within the state and outside for better understanding and learning new ideas and knowledge. These are important methods of development process.

6.1.10 Introduce the Concept and Practice of Carbon Credits

- ◆ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures in new ways, and it should forthwith be introduced in our country at the village level of environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.2 Interview with Project Authority (DFO, RFOs, Foresters, etc.)

- ◆ Summary of Interviews with Project Authority with Contact Details
 - a) Ms Vasvi Tyagi (IFS), DFO, Gurgaon Forest Division (T), Gurgaon district, Haryana, Mobile No.: +918860450860, Landline (O) No.: +91-1242322057
 - b) Mr. Kulvinder Singh, DFO, DWLO, Gurgaon, Haryana, Mobile No. +91-9968163096, Landline (O) No.: +91-1242222272
- ◆ The evaluator interviewed DFO, Gurgaon (T), Ms Vasvi Tyagi and DFO, DWLO, Gurgaon, Mr. Kulvinder Singh along with RFOs and foresters after field visit of. We discussed issues relating to CAMPA implementation, its progress, management and overall outcome. The project authorities replied our queries candidly. However, there was no plantation work at DWLO forest division. Three assets were created during 2013-14 namely construction of boundary wall, repair and reinstallation of tube well and purchase of rescue vehicle.
- ◆ Project authority expressed confidence and satisfaction on overall outcome and progress of CAMPA programme during 2013-14 at both Gurgaon Forest Division (T) and DWLO forest division.

- ♣ With regard to selection and choice of plant species the project authority was of the view that nature of topography and soil, climatic condition, survival factor, less prone to grazing/biotic factor, demand and preference by local people, etc. were main factors in this regard. Most preferred plant species were *Papri, Amaltas, Kachnar, Amaltas, Pithan, Bakain, Gulmohar, Neem, Shisham*, etc.
- ♣ To ensure better outcome of the project the project authority made regular interaction and meetings with staff members, monitored their previous records, fixed the accountability on the basis of performance, etc.
- ♣ With regard to benefits and impact of CAMPA programme the project authority said that it generated employment opportunity and members of households who worked helped in earning additional income. On long term basis the plantation of CAMPA helped in improving ecology and environment of the area. Other assets created in the programme like boundary wall at Kadipur government high school, repair and reinstallation of tube well at Sultanpur National Bird Sanctuary and purchase of rescue vehicle at DWLO forest division Gurgaon, etc. also brought significant benefits.
- ♣ The DFO further said that reasons of plant casualty were mainly open grazing by loose domestic animal, illicit felling of plant, shortage of labour forces, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.
- ♣ When asked about provision of fine /punishment against wrong indulgence and causing damage to plantation including grazing by domestic cattle, etc. the project authority said that existing Forest Acts are adopted when required.

6.3 Evaluator's Assessment

- ✓ After field inspection of the programme, meeting with forest officials, local community people and verification of records / documents, it was concluded that above statements made by DFO, Gurgaon (T) Ms Vasvi Tyagi and DFO, DWLO, Gurgaon, Mr. Mr. Kulvinder Singh were true to large extent. The project authority carried out good work in CAMPA programme at Gurgaon forest division. Proper attention should be paid for intensive awareness campaigns by adopting modern tools of mass media for better impact. The system of monitoring and evaluation of the programme should be streamlined and carried out effectively on regular basis.

Photographs: Project Activities and Plantation Area

Plantation Sites: Plantation Sites-1: Ghata Bundh, Scheme: CA, Year: 2013-14, Area: 8 km linear, No. of Plants: 2000 (Jamun-1000, Papri (881), Neem (60), P. Papri (50), Pilkhan (200), Siras (50), Amaltas (200), Ber (60), Pipal (80), Gulmohar (20) and Kachnar (300). Plantation Sites-2: Gurgaon Pataudi Road, Scheme: CA, Year: 2013-14, Area: 5 km linear, No. of Plants-1250, Species: Jamun (15), Papri (460), Neem (25), Shisham (95), (Bakain) (165), P. Papri (450 and Pilkhan (40).

Creation of Assets: Boundary Wall, Repair and reinstallation of Tube well and Purchase of Rescue vehicle



Final APO, State CAMPA Scheme for 2013-14 of Gurgaon Forest Division

1	2	3		4	5	6	7	8	9	10	11	12	13	14	15
Sl	Scheme	Target Allotment		Range	Block	Beat	Reach Name	Khasra No./RD	GPS Reading	Soil Type	Nature of Plantation	Plantation Type: Clear felling/New	Target Achieved RKM	Total Plants	Species Name with No.
		ha-	RKM												
1	State CAMPA (CA)	--	8	Gurgaon	Wazirabad	Wazirabad	Ghata Bundh	RD 0-Tail	N28,24,42,08 E077.06.42.4 N28,24,56.9 E077.06.42.4 N28,25.05 E077.6.47.3	Sandy	--	New	8	2000	Jamun-1000, Papri (881), Neem (60), P Papri (50), Pilkhan (200), Siras (50), Amaltas (200), Ber (60), Pipal (80), Gulmohar (20) and Kachnar (300)
2	State CAMPA (CA)	--	5	Gurgaon	Farukhnagar	Wazirabad	Gurgaon Pataudi Road	KM 3-13 (L&R)	N28,26,29,85 E76.58.52.54 N28,24,54.25 E76.53.58.55	Sandy	--	New	5	1250	Jamun (15), Papri (460), Neem (25), Shisham (95), Bakain (165), P. Papri (450) and Pilkhan (40).
Total		--	13										13	3250	--

Final APO, State CAMPA Scheme for 2013-14 of DWLD, Gurgaon for Gurgaon District Only

Sl	Item of Work	Sanctioned Amount Rs.	Actual Expenditure			Deviation if Any
			Amount	Quantity	Location/Remark	
1	Repair and Re-installation of Tube well	1300000	300000	2	SNP	Completed
2	Purchase of Rescue Vehicle		601451	1	Entire Division	Purchased/Alteration Pending
Total		1300000	901451	3		

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi



MONITORING & EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY MAHENDRAGARH FOREST DIVISION IN MAHENDRAGARH DISTRICT OF HARYANA

Duration of Evaluation: 2013-14

Final Report

Submitted to

OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
VAN BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

LOCUS RESEARCH & CONSULTANTS PVT. LTD.

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Mahendragarh Forest Division in Mahendragarh District of Haryana (2013-14)" was successfully completed. However, it would not have been possible without the kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram along with office staff Mr. D.P. Tyagi for reposing faith and awarding the honour of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Mahendragarh Forest Division, Mr. Ved Prakash along with RFOs and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2013-14.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.




Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, April, 2015

Preface

(Mahendragarh Forest Division-2013-14)

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana Implemented by Mahendragarh Forest Division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2013-14 a total 184.172 RKM/ha f (164.172 RKM and 20 ha) land was treated under CAMPA by adopting CA (135.372 RKM) and NPV (28.8 RKM and 20 ha). Rs 84.24 lakh was spent against the target of Rs. 111.32 lakh. A total of 0.45 lakh plant species of *Papri, Shisham, Lasaura, Amla, Neem, Jamun, Bakain*, etc. were planted in the project at 16 places/sites.

Average survival percentage of seedlings estimated was 71%. The survival percentage was 77 % at RF Duloth in Mahendragarh range while it was 67% at Mahendragarh Satnall Road, KM: 11-1B, L/R. Average height of plantation was 5 feet. Growth and health of plantation was good. Average grading awarded to the programme was 6.5 (on 1 to 10 scale), which was very good.

In the process of evaluation, members of evaluation team interacted with field level forest staff and local community. At most places local people were happy with the efforts made by forest department. Plantation Journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi
April, 2015



Omesh K. Singh
Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APDs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLD	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NCH	Nangal Chaudhary
NGO	Non-Government Organization
NPV	Net Present Value
NTPP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL. No.	Common Name	Botanical Name
1.	Amla	Emblica Officinalis
2.	Arjun	Terminalia arjuna
3.	Bakain	Melia azedarach
4.	Jamun	Terminalia arjuna
6.	Lasaura	Cordia Bixa
6.	Neem	Azadiracta indica
7.	Papri	Holoptelea integrifolia
8.	Pipal	Ficus religiosa
9.	Shisham	Dalbergia sissoo

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2013-14****Mahendragarh Forest Division, Mahendragarh District, Haryana**

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	8
	Financial	8
Qualitative Aspects	Survival	7
	Health of Plantation	8
	Maintenance	8
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.5

Executive Summary**1.0 INTRODUCTION**

- Monitoring and evaluation of CAMPA programme of Mahendragarh Forest Division in Mahendragarh district was conducted in the month of April 25-29, 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based agency. During 2013-14 a total 184.172 RKM/ha (184.172 RKM and 20 ha) forestland was treated under CAMPA by adopting CA (135.372 RKM) and NPV (28.8 RKM and 20 ha) scheme of plantation. A sample of 60.21% (110.886 RKM/ha) was drawn for field visit of plantation area and assessment of other aspects and also to estimate survival percentage.

2.0 CAMPA: AN OVERVIEW

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a CAMPA as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-8, Panchkula.

3.0 OBJECTIVES OF THE CAMPA

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION /AREA OF MONITORING & EVALUATION

- The study covered the entire Mahendragarh Forest Division in Mahendragarh district of Haryana.

5.0 REFERENCE PERIOD

- ♦ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2013-14.

6.0 NEED OF THE STUDY

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting survival of plantation and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. A sample of 68.60% (63.58 RKM/ha) was drawn during field visit of plantation area to estimate survival percentage of plantation. Sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count seedlings at random location to estimate survival percentage. Row counting of plants was adopted.

9.0 PROFILE OF THE STUDY AREA

- ♦ Haryana was created on November 1, 1966 with seven districts. Subsequently 14 other districts were included through restructuring the previous ones. Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ♦ Mahendragarh district is situated in the south western corner of Haryana. It is located at 28.28°N 76.15°E. According to India State of Forest Report-2011, Mahendragarh district has 3.82% area under forest cover against 3.64% of state average. Main plant species found and adopted under CAMPA programme in the district were *Papri, Bakain, Shisham, Arjun, Kikar, Neem, Pipal*, etc.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ♦ 184.172 RKM/ha (164.172 RKM and 20 ha) forestland was treated under CAMPA by adopting CA and NPV schemes of plantation during 2013-14.
- ♦ Rs 84.24 lakh was spent in the project against the target of Rs. 111.32 lakh.
- ♦ 0.45 lakh plant species of *Papri, Shisham, Lasaura, Amra, Neem, Jamun, Bakain*, etc. were planted in the project at 16 sites.
- ♦ Average survival percentage of seedlings estimated was 71%. The survival percentage was 77 % at RF Duloth in Mahendragarh range while it was 67% at Mahendragarh Satnail Road, KM: 11-18, L/R. Average height of plantation was 5 feet. Growth and health of plantation was good.
- ♦ Two types of registers were maintained namely cashbook and work book. DFO said that plantation journal would be prepared soon for all the plantation sites.

- ✦ Monitoring and Evaluation (M & E) of CAMPA along with other forestry programmes are conducted by a separate wing called M & E Wing. The last evaluation of state CAMPA Haryana of Mahendragarh Forest Division was conducted in October 2014. It consists of one CF and two DCFs. Its head office is at Karnal in Haryana.
- ✦ An Independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.
- ✦ Bank account of CAMPA Programme of Mahendragarh forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Mahendragarh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ✦ Factors impacting choice of species were topography, soil type, climate, rainfall, suitability in the area, economic value, preference by locals, etc. Project authority called the final shot in this regard.
- ✦ Improvement in soil moisture conservation was observed at most plantation sites of CAMPA.
- ✦ Limited natural regeneration of plant species in the plantation area was found. In urban and suburban zone it was negligible while on block forestland there were some glimpses of it.
- ✦ Quality of Work in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.
- ✦ Open and rash grazing by loose domestic animals, wild animals like, rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. Impacted Growth and Survival of Plantation
- ✦ Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. Barbed wire and bush fencing were found at most plantation sites under protection of plantation. In urban areas brick/iron/wood gabions were also adopted along with barbed.
- ✦ Motivation and Technical Competence of Personnel Involved in the Project was found satisfactory. Range Forest Officers (RFO), foresters and forest guards were trained to tackle necessary work. Temporary/daily wages workers, cattle watchers, etc. were lacking these skills to deal with new challenges of the programme.
- ✦ Role of Local People in Project Work was far from satisfactory. There was low participation of local community in the programme. Modern tools of mass media should be adopted for awareness and motivation of community.
- ✦ CAMPA accrued both direct and indirect benefits in the project area. Additional geographical area came under forest cover. It helped in improving quality of ecology and environment as well as micro-climate of the area.
- ✦ Formation of SHG in the Project was optional for the project authority to provide additional benefits of community in the project area. There was no attempt at this front from the project authority.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ✦ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ✦ There was shortage of frontline staff like foresters and forest guards in the division during 2013-14 of CAMPA programme implementation, which impacted the programme adversely.
- ✦ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It had adverse impact.

- ◆ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ◆ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ◆ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ◆ Measures should be taken to check grazing in the area. Stall feeding of domestic animals should be promoted among local community through regular awareness and motivation.
- ◆ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gabions of Iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ◆ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ◆ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ◆ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ◆ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ◆ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ◆ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ◆ Selection plantation species should be based on scientific parameters and local factors. There was adoption of high proportion of Papri at most plantation sites during 2013-14. The project authority agreed with our view points and assured us that due attention would be given in future plantation.
- ◆ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ✦ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ✦ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ✦ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The Supreme Court order of July 10, 2009 directs the following:
 - ✦ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ✦ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
 - ✦ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ◆ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ◆ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ◆ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ◆ The amount would be transferred to it by the ad-hoc CAMPA.
 - ◆ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ◆ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ◆ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ◆ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The state government may also credit to the State CAMPA
 - ◆ Grants or aid received if any;
 - ◆ Any loan taken by the Authority or any borrowings made by it; and
 - ◆ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ◆ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ◆ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ◆ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ◆ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ◆ "State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ◆ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ◆ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ◆ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ◆ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ◆ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ◆ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

- ◆ Important objectives of CAMPA are as follows:
 - ◆ Conservation, protection, regeneration and management of existing natural forests;
 - ◆ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - ◆ Compensatory Afforestation
 - ◆ Environmental services, which include:-
 - ◆ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ◆ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ◆ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ◆ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
 - ◆ Science, Research, Training and Capacity Building.
 - ◆ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ◆ The study area covers the entire Mahendragarh Forest Division in Mahendragarh district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ◆ Reference period of monitoring & evaluation is one year, i.e. 2013-14.

1.7 Components of the Project

- ❖ Main components of CAMPA are as follows:
 - ✦ People's Participation
 - ✦ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - ✦ Monitoring and Evaluation of the programme
 - ✦ Conservation and protection of forests, Infrastructure development, wildlife conservation and protection, etc.
 - ✦ Extension and awareness
 - ✦ Monitoring of the programme, etc

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ❖ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
❖ District	: Mahendragarh
❖ Forest Division	: Mahendragarh
❖ Forest Circle	: Gurgaon Circle, Gurgaon
❖ State	: Haryana
Project Location	
❖ Watersheds/Sub-watersheds	: NA
❖ Development Blocks	: NA
❖ Forest Ranges (3)	: 1.Mahendragarh, 2. NCH, and 3. Narnaul CAMPA plantation was carried out at Mahendragarh and Narnaul ranges only during 2013-14.
❖ Project Sites	: 16 (Sixteen)
Assets/ Infrastructure Development Activities, if any	
❖ NA.	
Preparation of Plantation Journal and Record Upkeep	
❖ There was not any separate register or Plantation journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
❖ Project Duration	: 2013-14
❖ Project Area (78.8 RKM)	: Target: 184.17 RKM/ha (164.172 RKM and 20 ha)
❖ Project Cost	: Target: Rs.84.24162 lakh and Achievement: Rs. 111.3241 lakh
Proposed Strategies and Salient Features of the Project	
❖ There was no provision of VFCs under CAMPA programme.	
❖ Plantation was carried out under NPV and CA schemes	

1.9 Need of the Study

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ❖ Scope of study is confined to Mahendragarh Forest Division in Mahendragarh district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ◆ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements
 - ◆ To evaluate performance of the programme
 - ◆ To estimate of survival percentage of plant species adopted in the project.
 - ◆ To analyze factors impacting plantation survival and suggest remedial measures.
 - ◆ To assess peoples' participation and assets created
 - ◆ To assess the direct and indirect benefits and impact of the programme.
 - ◆ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ◆ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ◆ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ◆ Sample Selection, Size and its Distribution: A sample of 60.21% (110.896 RKM/ha) was drawn for field visit of plantation area and other assets to estimate survival percentage from the total target of 184.172 RKM/ha. To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50mx50m) was adopted for counting the plantation at random locations along with row counting keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ◆ The report is divided into six chapters. It is as follows:
 - ◆ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ◆ Chapter-2 gives the Profile of the Project Area and its Location
 - ◆ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ◆ Chapter-4 gives Qualitative Analysis and Findings.
 - ◆ Chapter-5 deals with Project Constraints and Limitations
 - ◆ Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

- ◆ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

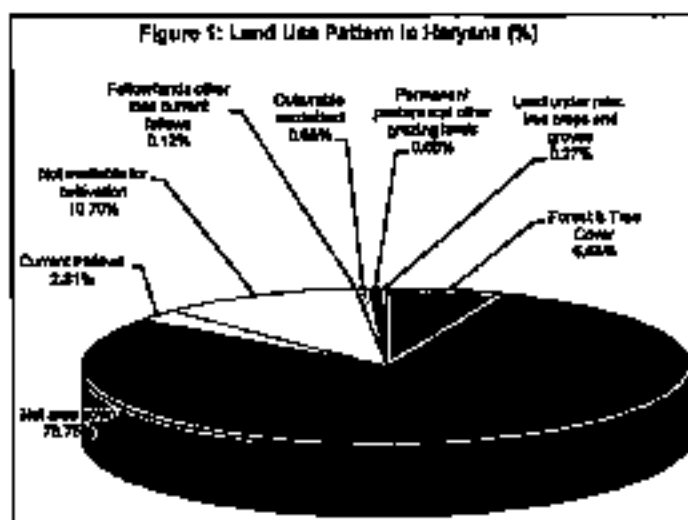
2.1 State Profile

- ♦ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
- ♦ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ♦ Gurgaon Division has six (6) districts namely Palwal, Mahendragarh, Mahendragarh, Gurgaon, Rewari, and Mahendragarh districts in its jurisdiction.
- ♦ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Mahendragarh districts.
- ♦ Rohtak Division also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



2.1.1 Land Use Pattern of Haryana

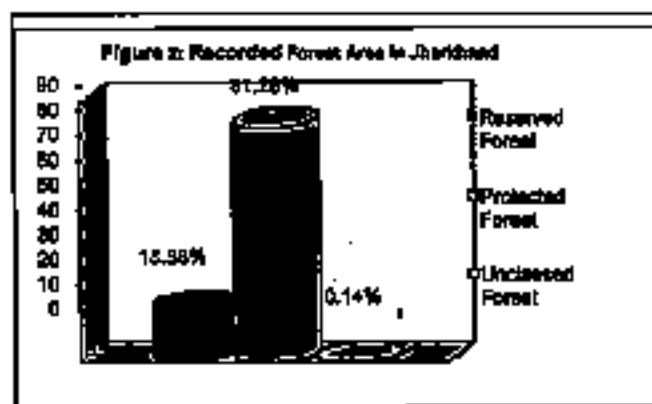
- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus forestland and tree cover together covers 6.80% of the state geographical area.
- ♦ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands



(0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun)

2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2.

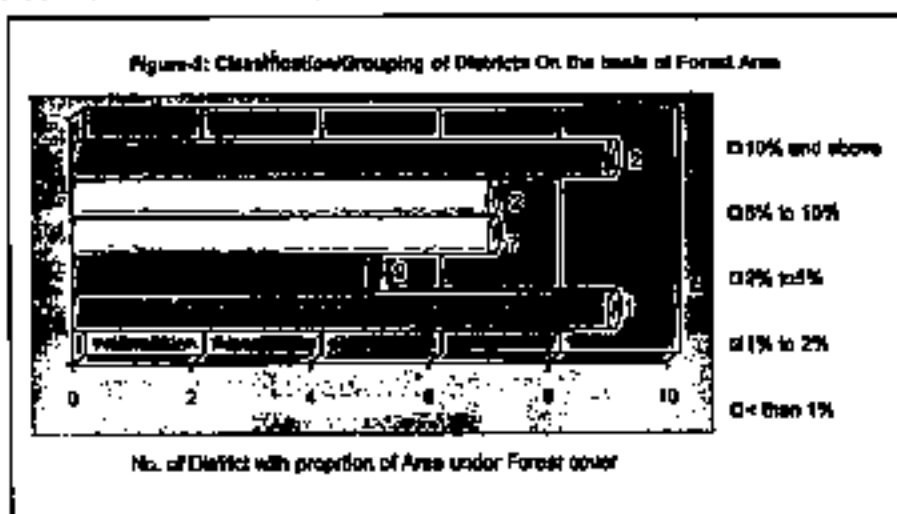


2.1.3 District wise Distribution of Forest Area in Haryana

- ♦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. **Group-1:** Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.

- ♦ **Group-2:** Two districts namely Gurgaon (8.35%) and Mahendragarh (8.35%) and fall in the category of 5% to 10% forest cover.

- ♦ **Group-3:** Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh Bhiwani, Rewari and Katheral fall in the category of 2% to 5% forest cover.



- ♦ **Group-4:** Nine districts namely Hisar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Mahendragarh, and Sonapat and they fall in group of 1% to 2% forest cover.
- ♦ **Group-5:** One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure-3 for further information.

2.2 Profile of Mahendragarh District and Forest Division

- ♦ Mahendragarh district is situated in the south western corner of Haryana. It is located at 28.28°N 76.15°E. It has an average elevation of 262 metres (859 feet). Mahendragarh

district is bounded on the north by Bhiwani and Rohtak districts, on the east by Rewari district and Alwar district of Rajasthan, on the south by Alwar, Jaipur and Sikar districts of Rajasthan, and on the west by Sikar and Jhunjhunu districts of Rajasthan. The district occupies an area of 1,859 sq. km. Narnaul city is the administrative headquarters of the district. Mahendragarh is one of the very few districts in India where the name of the district and its main town are different.

- ✦ It is named after Maharaja Mahendra Singh who was the ruler during the Mughal era. It is situated at the bank of Dohan river (which was a seasonal river), which is at the verge of extinction. Mahendragarh district is divided into 4 tehsils, Narnaul, Ateli, Kanina and Mahendragarh and 1 sub-tehsils, namely Nangal Chowdhary. There are 4 Vidhan Sabha constituencies in this district: Ateli, Mahendragarh, Narnaul and Nangal Chaudhry. All of these are part of Bhiwani-Mahendragarh Lok Sabha constituency.
- ✦ As of 2011 it is the third least populous district of Haryana (out of 21), after Panchkula and Rewari. It has a population of 9.22 roughly equal to the nation of Fiji or the US state of Delaware. This gives it a ranking of 462nd in India (out of a total of 640). The district has a population density of 485 inhabitants per square kilometre. Its population growth rate over the decade 2001-2011 was 13.43%. Mahendragarh has a sex ratio of 778 females for every 1000 males and a literacy rate of 78.9%.



2.3 Forest Cover in Mahendragarh District

- ✦ According to India State of Forest Report-2011, Mahendragarh district has 3.82% area under forest cover against 3.64% of state average. Main plant species found and adopted under CAMPA programme in the district were *Papri*, *Lasura*, *Amla*, *Bakain*, *Shisham*, *Neem*, *Pipal*, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- During 2013-14 a total 184.172 RKM/ha (164.172 RKM and 20 ha) forestland was treated under CAMPA by adopting CA (135.372 RKM) and NPV (28.8 RKM and 20 ha) scheme of plantation. The plantation area was spread over in all two ranges of the division namely Mahendragarh and Narnaul. Refer table-3.1 for detailed information.

Table 3.1 Area Covered/Treated Under CAMPA (2012-13)

Sl. No.	Range	Plantation/Project Site	Land Category	Scheme of Plantation	Ha.	RKM	Year of Plantation
1	Narnaul	R.F. Krishnawadi	R.F.	CAMPA NPV ANR	20	—	2013-14
2	Mgarh	R.F. Duloth	R.F.	CAMPA NPV Irrigated	—	28.8	2013-14
3	Mgarh	R.F. Duloth	R.F.	C.A.	—	10	2013-14
4	Mgarh	Mahendragarh Bawana Rd	Road	C.A.	—	7	2013-14
5	Mgarh	Mahendragarh Setnall Rd	Road	C.A.	—	8	2013-14
6	Mgarh	Rawal Karina Rd	Road	C.A.	—	10.304	2013-14
7	Mgarh	Sihang Karina Rd	Road	C.A.	—	14.8	2013-14
8	Narnaul	Kamariya app. Rd	Road	C.A.	—	14.8	2013-14
9	Narnaul	Nehru Nagar App. Rd	Road	C.A.	—	10	2013-14
10	Narnaul	Narnaul Kulkapur Rd	Road	C.A.	—	10	2013-14
11	Narnaul	Narnaul Rambasa Rd	Road	C.A.	—	8.9	2013-14
12	Narnaul	Narnaul Nizampur Rd	Road	C.A.	—	10	2013-14
13	Narnaul	Chahal Bhatola Khanpur Rd	Road	C.A.	—	8	2013-14
14	Narnaul	Rawal Narnaul Rd	Road	C.A.	—	8	2013-14
15	Narnaul	Rawal Narnaul Rd	Road	C.A.	—	14	2013-14
16	Narnaul	Mandiana Kachchi Nahar	Canal	C.A.	—	8.788	2013-14
				Total	20	184.172	
						184.172	

3.2 Physical and Financial Target and Achievements

- Total expenditure incurred in the project during 2013-14 was Rs 84.24 lakh against the target of Rs. 111.32 lakh. Plantation work was carried out at 16 locations/sites covering two forest ranges of the division. Refer table 3.2 for detail information.

Table-3.2: Physical and Financial Target and Achievements (2012-13)

Sl. No.	Range	Plantation/Project Site	Land Category	Scheme of Plantation	Physical (Area)		Financial (Rs. in Lakh)	
					Ha.	RKM	Target	Achievement
1	Narnaul	R.F. Krishnawadi	Ground	CAMPA NPV ANR	20	—	3.44	3.18
2	Mgarh	R.F. Duloth	Ground	CAMPA NPV Irrigated	—	28.8	11.8	10.82
3	Mgarh	R.F. Duloth	Ground	C.A.	—	10	2.84	2.8
4	Mgarh	Mahendragarh Bawana Rd	Road	C.A.	—	7	1.80	1.89
5	Mgarh	Mahendragarh Setnall Rd	Road	C.A.	—	8	1.70	1.88
6	Mgarh	Rawal Karina Rd	Road	C.A.	—	10.304	2.80	2.90
7	Mgarh	Sihang Karina Rd	Road	C.A.	—	14.8	4.10	4.08
8	Narnaul	Kamariya app. Rd	Road	C.A.	—	14.8	4.20	4.15
9	Narnaul	Nehru Nagar App. Rd	Road	C.A.	—	10	2.80	2.80
10	Narnaul	Narnaul Kulkapur Rd	Road	C.A.	—	10	2.80	2.80
11	Narnaul	Narnaul Rambasa Rd	Road	C.A.	—	8.9	2.50	2.48
12	Narnaul	Narnaul Nizampur Rd	Road	C.A.	—	10	2.70	2.80
13	Narnaul	Chahal Bhatola Khanpur Rd	Road	C.A.	—	8	2.02	2.28
14	Narnaul	Rawal Narnaul Rd	Road	C.A.	—	8	1.70	1.88
15	Narnaul	Rawal Narnaul Rd	Road	C.A.	—	14	3.98	3.94
16	Narnaul	Mandiana Kachchi Nahar	Canal	C.A.	—	8.788	1.84	1.82
		Total			20	184.172	83.62	82.24
Other activities/Assets Created								
1		Maintenance of Plantation					3122182	3983837
2		Raising of TP					0	106000
3		Range Quarters					0	1308474
4		Construction of Tube well					0	560000
		Total					31,22,182	69,28,411
		Grand Total			20	184,172	84,24,182	111,32,411

3.3 Inventory/ List of Plantation

- A total of 0.45 lakh plant species of *Papri, Shisham, Lasaura, Amla, Neem, Jamun, Bakain, etc.* were planted in the project at 16 places/sites comprising 184.172 RKM/ha forestland. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Sl. No.	Name of Range	Plantation/Project Site/Village Name	Scheme/Block	Plantation Target Achieved		No. of plants	Name of Plant	Year of Plantation
				Ha.	RKM			
1	Narnaul	R.F. Krishnawadi	CAMPA NPV-ANR	20	--	4000	P.Papri	2013-14
2	Magarh	R.F. Duloth	CAMPA NPV Integrated	--	28.8	5544	Papri, Amla, Lathuri	
3	Magarh	R.F. Duloth	C.A.	--	10	2500	Papri, Lasaura	
4	Magarh	Mahendragarh Bawana Rd KM: 1-5	C.A.	--	7	1780	Papri Shisham	
5	Magarh	Mahendragarh Satnali Rd KM: 11-18	C.A.	--	6	1500	Papri	
6	Magarh	Rowari Karina Rd KM: 28-32	C.A.	--	10.304	2576	Papri	
7	Magarh	Sarna Karina Rd KM: 18-28	C.A.	--	14.8	3680	Papri	
8	Narnaul	Karnanya app. Rd KM: 6-15	C.A.	--	14.8	3700	Papri	
9	Narnaul	Nehru Nagar App. Rd KM: 0-5	C.A.	--	10	2500	Papri	
10	Narnaul	Narnaul Kullajpur Rd KM: 0-7	C.A.	--	10	2500	Papri	
11	Narnaul	Narnaul Rambasa Rd KM: 0-5	C.A.	--	8.8	2225	Papri	
12	Narnaul	Narnaul Rizempur Rd KM: 7-14	C.A.	--	10	2500	Papri	
13	Narnaul	Ohari Bhatola Khanpur Rd KM: 0-8	C.A.	--	8	2000	Papri	
14	Narnaul	Rowari Narnaul Rd KM: 28-35	C.A.	--	6	1500	Papri	
15	Narnaul	Rowari Narnaul Rd KM: 35-40	C.A.	--	14	3500	Papri	
16	Narnaul	Mandiana Kachdi Nahar KM: 0-3	C.A.	--	5.788	1442	Papri	
TOTAL				20	184.172	45043		
				184.172 RKM/ha				

3.4 Analysis of Sample Plantation and Survival Assessment

- A sample of 60.21% (110.896 RKM/ha) was drawn for field visit of plantation area to estimate survival percentage from the total target of



184.172 RKM/ha.

- Average survival percentage of seedlings estimated was 71%. The survival percentage was 77 % at RF Duloth in Mahendragarh range while it was 67% at Mahendragarh Satnali Rd, KM: 11-18, L/R. Average height of plantation was 5 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.

Table 3.4: Analysis of Sample Plantation sites and Assessment of Survival

Sl. No.	Range	Plantation Site	Scheme	Area (RKM/ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	Mahendragarh	Mahendragarh Satnali Rd, KM: 11-18, L/R	CA	6	1500	1005	67	2013-14
2	Mahendragarh	Rowari-Karina Rd, KM: 28-34, L/R	CA	10.304	2576	1803	70	
3	Mahendragarh	Duloth RF	CA	10	2500	1825	73	
4	Mahendragarh	Duloth RF	NPV-Intgd	28.8	7200	5544	77	
5	Narnaul	Krishnawadi RF	NPV-ANR	20	5000	3700	74	
6	Narnaul	Nehru Nagar App. Road, KM: 0-5	CA	10	2500	1800	72	
7	Narnaul	Mandiana Kachdi Nahar, KM: 0-3	CA	5.792	1448	1028	71	
8	Narnaul	Rowari-Narnaul Road, KM: 35-40	CA	14	3500	2380	68	
9	Narnaul	Rowari Narnaul Rd KM: 28-35	CA	6	1500	1035	69	
				110.896	27724	20120	71	

3.5 Registers/Records Maintained in the Project

- ✦ Cashbook and work registers were maintained by project authority. DFO of the division assured the evaluation team with regard to preparation of plantation journal for all the plantation sites conducted under CAMPA programme.

3.6 Monitoring and Evaluation System in the Project

- ✦ The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate evaluation wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana at Mahendragarh forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- ✦ The project authority reported that an Independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.

3.8 Bank Account Details and Flow of Funds

- ✦ Bank account of CAMPA Programme of Mahendragarh forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Mahendragarh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- ✦ Topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were main factors in the selection of plant species. However, the project authority took decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ✦ Whenever the plantation was conducted under CAMPA programme there was some improvement in soil moisture conservation. However, limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.

4.3 Assessment of Survival Percentage

- ✦ Average survival percentage of seedlings estimated was 71%. The survival percentage was 77 % at RF Duloth in Mahendragarh range while it was 67% at Mahendragarh Satnali Road, KM: 11-18, L/R. Average height of plantation was 5 feet. Growth and health of plantation was good. To estimate survival percentage a sample plot of 0.25 ha (50meterx50meter) was adopted at random location and row counting of plantation was also adopted to count the seedling at random location. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration In the Plantation Area

- ✦ Natural regeneration of plant species in the area was hardly observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone there were some glimpses of it due to presence of other species around plantation area.

4.5 Quality of Work

- ✦ Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ✦ Grazing by domestic animals, damage wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation

4.7 Protection and Maintenance of Plantation

- ✦ Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ Iron/wood gabions

were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be better care of plantation through elaborate fencing and regular care. The process of awareness raising and motivation of local community should be adopted in the project at regular intervals.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ✦ All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- ✦ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ✦ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- ✦ The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff

- ✦ Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in some part of the project area and in NCR region, there was high demand of labour force and hence the forest department had to face shortage of labour as reported.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like damage caused by wild animals like rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals

- ✱ Some viable measures should be adopted to check or at least minimize harzinbg. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- ✱ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gablons of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- ✱ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- ✱ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- ✱ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Make Four Years of Protection and Maintenance Funding

- ✱ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- ✱ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF and two DFOs. It head office is located at Kamal CAMPA programme along with other

forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- ✦ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- ✦ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Selection Plantation Species should be based on scientific parameters and local factors

- ✦ There was adoption of high proportion of Papri at most plantation sites during 2012-13. The project authority agreed with our view points and assured us that due attention would be given in future plantation.

6.11 Introduce Practice and Concept of Earning Carbon Credits

- ✦ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option.

6.12 Interview with Project Authority

- a) During pre and post field inspection and evaluation of the programme the members of evaluation team interacted Interviewed DFO Mahendragarh (Mr. Ved Prakash, Mob:+91-9416365166, Office.: +91-1285220229) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- ✦ DFO, Mr. Ved Prakash and other officials were happy with outcome and progress of CAMPA work carried out during 2012-13. About selection of plant species they were of the view that soil, climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were main factors. Most preferred plant species in the division were Papri, Lasaura, Amla, Neem, Bakain, Shisham, etc. Open grazing due high cattle pressure, rocky terrain, poor soil, erratic and low rain fall were main of factors plantation casualty. The project authority further said that all the field staffs were hard working and they owned responsibility and performed their duty well. There was need to work hard to improve the outcome of the programme.

6.13 Evaluator's Assessment

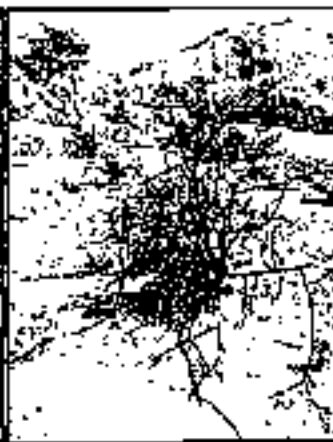
- ✦ After field inspection, verification of official records and interaction with DFO and other stakeholders of the programme, it was concluded that above statements made by the project authority was true to a great extent. The project authority followed the stated guidelines of programme. Modern tools of mass media should be adopted for awareness campaigns for better impact. System of internal monitoring and evaluation in the programme should be streamlined and carried out effectively.

Photographs of Plantation Area: Mahendragadh Forest Division (2013-14)

✦ Mahendragadh Range: 7 sites

✦ Main Plant Species: Papri, Shisham, Lassaure, Amli, Neem, Bakain, etc

✦ Narnaul Range: 9 Sites



Final A.P.O. State CAMPA Scheme of Mahendragarh Forest Division in Mahendragarh District of Haryana (2013-14)

Sl No	Type of land (Forest/Non-forest)	Name of Scheme/ component	Name of Range	Name of Site	Khasra No. KU/RD	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
I	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	RF	CA	Narnaul	R.F. Krishnewari	NA	July	20	—	4000	P.Papri	4x4	NA	NA
2.	RF	CAMPA NPV ANR	Mahendragarh	R.F. Duboth	NA	July	—	28.8	5544	Papri, Aris Larusa	4x4	NA	NA
3.	RF	CAMPA NPV Instad	Mahendragarh	R.F. Duboth	NA	July	—	10	2800	Papri, Larusa	4x4	NA	NA
4.	Road	C.A.	Mahendragarh	Mahendragarh Bawana Rd KM: 1.5-9	NA	July	—	7	1750	Papri Chisham	4x4	NA	NA
5.	Road	C.A.	Mahendragarh	Mahendragarh Saheli Rd KM: 11-18	NA	July	—	6	1500	Papri	4x4	NA	NA
6.	Road	C.A.	Mahendragarh	Rewari Karina Rd KM: 25-32	NA	July	—	10.304	2575	Papri	4x4	NA	NA
7.	Road	C.A.	Mahendragarh	Shana Karina Rd KM: 15-25	NA	July	—	14.6	3550	Papri	4x4	NA	NA
8.	Road	C.A.	Narnaul	Karniya app. Rd KM: 5-18	NA	July	—	14.8	3700	Papri	4x4	NA	NA
9.	Road	C.A.	Narnaul	Narnau Nagar App. Rd KM: 0-8	NA	July	—	10	2500	Papri	4x4	NA	NA
10.	Road	C.A.	Narnaul	Narnaul Kulapuri Rd KM: 0-7	NA	July	—	10	2500	Papri	4x4	NA	NA
11.	Road	C.A.	Narnaul	Narnaul Ranshara Rd KM: 0-8	NA	July	—	8.9	2225	Papri	4x4	NA	NA
12.	Road	C.A.	Narnaul	Narnaul Nigampur Rd KM: 7-14	NA	July	—	10	2500	Papri	4x4	NA	NA
13.	Road	C.A.	Narnaul	Dhani Bhalela Khanpur Rd KM: 0-5	NA	July	—	8	2000	Papri	4x4	NA	NA
14.	Road	C.A.	Narnaul	Rewari Narnaul Rd KM: 28-35	NA	July	—	6	1500	Papri	4x4	NA	NA
15.	Road	C.A.	Narnaul	Rewari Narnaul Rd KM: 35-40	NA	July	—	14	3500	Papri	4x4	NA	NA
16.	Canal	C.A.	Narnaul	Mandara Kachhi Nahar KM: 0-3	NA	July	—	8.768	1442	Papri	4x4	NA	NA
Total							20	104.172	48943		—	—	

**Compensatory Afforestation Fund Management and
Planning Authority (CAMPA)**
Ministry of Environment & Forests (MOEF)
Government of India, New Delhi



**MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY MEWAT FOREST DIVISION (NUH) IN MEWAT DISTRICT OF HARYANA**

Duration of Evaluation: 2013-14

Final Report

Submitted to

**OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
VAN BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA**

April, 2015

Conducted by

LOCUS RESEARCH & CONSULTANTS PVT. LTD.

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Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Mewat Forest Division (Nuh) in Mewat District of Haryana (2013-14)" was successfully completed. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal, and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram and office staff Mr. D.P. Tyagi for reposing faith and awarding the work of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Mewat Forest Division (T), Harish Walia along with RFOs and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.




Dinesh K. Singh

Director
Locus Research & Consultants Pvt. Ltd.
New Delhi, April, 2015

Preface

Compensatory Afforestation, Fund Management and Planning Authority (CAMPFA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPFA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPFA, b) facilitate scientific, technological and other assistance that may be required by State CAMPFA, c) make recommendations to State CAMPFA based on a review of their plans and programmes and d) provide a mechanism to State CAMPFA to resolve issues of an inter-state or Centre-State.

State CAMPFA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPFA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPFA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPFA Haryana of ~~Forest~~ forest division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2013-14 a total 155 RKM forestland was treated under CAMPFA by adopting CA-TP scheme of plantation in all the three ranges of the division. Total expenditure incurred in the above activities was Rs. 55.82 lakh. A total of 0.388 lakh plant species of *Papri, Bakain, Shisham, Arjun, Kikar, Balam, Khira, Tur, Jamun, Reungha, Allantus, Neem, Pipal, Ber*, etc. was planted in the project.

Average survival percentage of seedlings estimated was 73%. The survival percentage was 75% at Nuh Drain under and it was 69% at Tauru-Kota Road. Average height of plantation was 5 feet. Growth and health of plantation was good. Average grading awarded to the programme was 5.5 (on 1 to 10 scale), which was very good.

Members of evaluation team interacted with field level forest staff and local community during field inspection. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

April, 2015



Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Fardabad Division (T)	Fardabad Forest Division Territorial
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL No.	Common Name	Botanical Name
1.	Ailanthus	Ailanthus excelsa
2.	Arjun	Terminalia arjuna
3.	Bakain	Melia azedarach
4.	Ber	Ziziphus mauritiana
5.	Blam Kheera	Kygelia pinnata
6.	Jamun	Terminalia arjuna
7.	Kikar	Acacia Arabica
8.	Neem	Azadirachta indica
9.	Papri	Holoptelea integrifolia
10.	Pilkhan	Ficus virens
11.	Pipal	Ficus religiosa
12.	Reunjha	Acacia leucophloea
13.	Shisham	Dalbergia sissoo
14.	Tun	Toona ciliata

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2013-14**

Mewat Forest Division, Mewat District, Haryana

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	7
	Health of Plantation	6
	Maintenance	6
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.5

Executive Summary**1.0 INTRODUCTION**

- Monitoring and evaluation of CAMPA programme of Mewat Forest Division in Mewat district carried out during 2013-14 was conducted in the month of April 15-18, 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency. A total 155 RKM forestland was treated by adopting CAYTP plantation scheme at 8 places in all three ranges. A sample of 83.22% (129 RKM) project area was drawn for field visit and analysis of programme and to estimate survival percentage. Summary of findings of the study is given below.

2.0 CAMPA: AN OVERVIEW

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 OBJECTIVES OF THE CAMPA

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION / AREA OF MONITORING & EVALUATION

- ♦ The study covered the entire Mewat (Nuh) Forest Division in Mewat district of Haryana.

5.0 REFERENCE PERIOD

- ♦ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2013-14.

6.0 NEED OF THE STUDY

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - ♦ To assess physical and financial targets and achievements
 - ♦ To evaluate performance of the programme
 - ♦ To estimate of survival percentage of plant species adopted in the project.
 - ✓♦ To analyze factors impacting survival of plantation and suggest remedial measures.
 - ♦ To assess peoples' participation and assets created
 - ♦ To assess the direct and indirect benefits and impact of the programme.
 - ✓♦ To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. A sample of 83.22% (129 RKM) project area was drawn for field visit and analysis of programme and to estimate survival percentage. 0.25 ha (50meterx50meter) unit/plot was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants in row was adopted.

9.0 PROFILE OF THE STUDY AREA

- ♦ The state of Haryana comprises 21 districts, 45 sub-tehsils, 47 subdivisions, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ♦ As per India State of Forest Report-2011, Mewat district has 8.5% area under forest cover.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ♦ 155-RKM forestland was treated under CAMPA by adopting Compensatory Afforestation scheme of during 2013-14. Plantation area was spread over all the three forest ranges namely Nuh range (44 RKM), FP Jhirka range (81 RKM) and Punhana range (20 RKM) in the division.
- ♦ Total expenditure of the programme was Rs 55.82 lakh against the target of same amount. Plantation work was carried out at 8 locations/sites covering all the three forest ranges of the division.

- ❖ 0.388 lakh plant species of *Papri, Bakain, Shisham, Arjun, Kikar, Babun Khira, Tun, Jamun, Reunja, Allanthus, Neem, Pipal, Bar*, etc. were planted in the project at eight different sites.
- ❖ Average survival percentage of seedlings estimated was 73%. It was 75% at Nuh Drain and 69% at Tauru-Kota Road. Average height of plantation was 5 feet. Growth and health of plantation was good.
- ❖ Work register and cashbook were important registers maintained by project authority. In this project, DFO of the division assured the evaluator that plantation journal would be prepared in all the plantation sites conducted under CAMPA programme when it was discussed with him.
- ❖ The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate evaluation wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana at Mewat forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF).
- ❖ The project authority reported that an independent agency called **Agricultural Finance Corporation Ltd.** of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.
- ❖ Bank account of CAMPA Programme of Mewat forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Nuh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Main factors in the selection of plant species were topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were. However, the project authority took decision in this regard after taking into account of all these factors.
- ❖ CAMPA programme improved soil moisture conservation to extent. Limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.
- ❖ Natural regeneration of plant species in the area was hardly observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone there were some glimpses of it due to presence of other species around plantation area.
- ❖ Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection.
- ❖ Grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation.
- ❖ Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ Iron/wood gabions were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance.
- ❖ Forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers, cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

- ❖ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area.
- ❖ CAMPA programme accrued direct and indirect benefits. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.
- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gabions of iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Viable measures should be adopted to check grazing problem. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ❖ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ❖ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The Supreme Court order of July 10, 2009 directs the following:
 - ❖ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ❖ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
 - ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ❖ The details of establishment of State CAMPA are as follows :

- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ❖ The amount would be transferred to it by the ad-hoc CAMPA.
 - ❖ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ❖ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ❖ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ❖ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
- b) The state government may also credit to the State CAMPA
 - ❖ Grants or aid received if any;
 - ❖ Any loan taken by the Authority or any borrowings made by it; and
 - ❖ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ❖ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ❖ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ❖ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ❖ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation. Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ❖ State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ❖ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ❖ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

♦ Important objectives of CAMPA are as follows:

- ♦ Conservation, protection, regeneration and management of existing natural forests;
- ♦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- ♦ Compensatory Afforestation
- ♦ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- ♦ Science, Research, Training and Capacity Building.
- ♦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ♦ The study area covers the entire Mewat Forest Division (Nuh) in Mewat district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ♦ Reference period of monitoring & evaluation is one year, i.e. 2013-14.

1.7 Components of the Project

✦ Main components of CAMPA are 'as follows:

- ✦ People's Participation
- ✦ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
- ✦ Monitoring and Evaluation of the programme
- ✦ Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
- ✦ Extension and awareness
- ✦ Monitoring of the programme, etc

1.8 Project Implementing Agency and Proposed Activities of the Programme

✦ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Implementing Agency and Proposed Activities of the Programme (2013-14)

Project Implementing Agency	
✦ District	: Mewat
✦ Forest Division	: Mewat
✦ Forest Circle	: Gurgaon Circle, Gurgaon
✦ State	: Haryana
Project Location	
✦ Watersheds/Sub-watersheds	: NA
✦ Development Blocks	: NA
✦ Forest Ranges (3)	: 1.Mewat, 2.Firoapur Jhikka and 3. Punhana and CAMPA work carried out in all the three ranges
✦ Project Sites	: 8 (Six)
Assets/ Infrastructure Development Activities, if any	
✦ NA	
Preparation of Plantation Journal and Record Upkeep	
✦ There was not any separate register or Plantation journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
✦ Project Duration	: 2013-14
✦ Project Area	: Target: 155 RKM with CA/TP Scheme. Target 100 per cent Achieved)
✦ Project Cost	: Target: Rs.55.82 lakh and Achievement: Rs55.82 lakh
Proposed Strategies and Salient Features of the Project	
✦ There was no provision of VFCs under CAMPA programme as like NAP	
✦ Plantation was carried out under NPV and CA schemes	

1.9 Need of the Study

✦ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

✦ Scope of study is confined to Mewat Forest Division (Nuh) in Mewat district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting plantation survival and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ❖ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ❖ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ❖ Sample Selection, Size and its Distribution: A Sample of 83.22% (129 RKM) plantation area was drawn during field visit in the process of evaluation of CAMPA programme conducted during 2013-14 from the total target of 155 RKM.
- ❖ To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50m x 50m) was adopted for counting the plantation at random locations along with row counting keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - Chapter-2 gives the Profile of the Project Area and its Location
 - Chapter-3 discusses Quantitative Analysis and Findings of the Study
 - Chapter-4 gives Qualitative Analysis and Findings.
 - Chapter-5 deals with Project Constraints and Limitations
 - Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

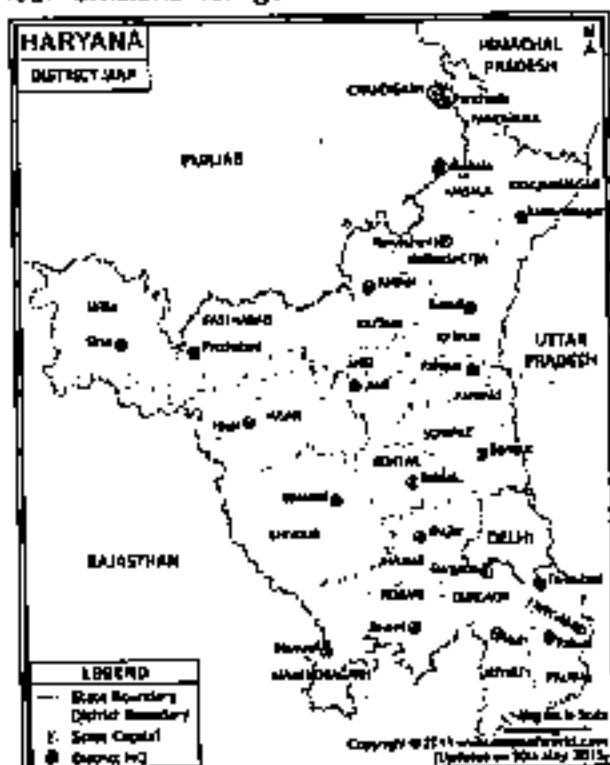
- ❖ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

2.1 State Profile

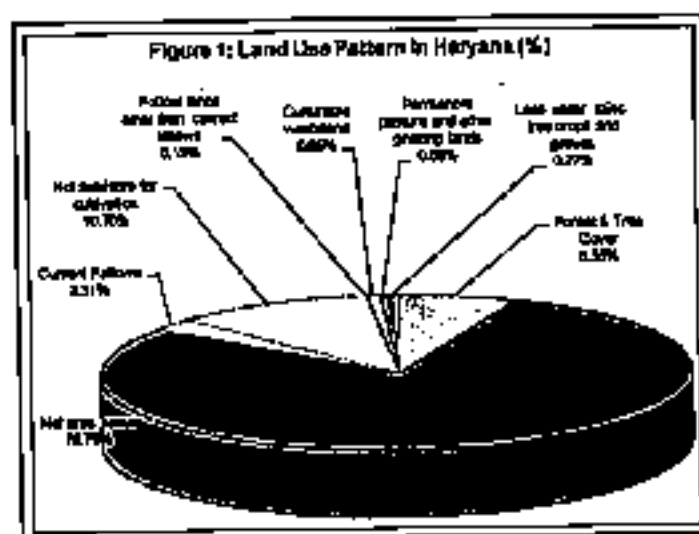
- ♦ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:



- ♦ Ambala Division has five (5) districts namely Kairthal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ♦ Gurgaon Division has six (6) districts namely Palwal, Mewat, Mahendragarh, Gurgaon, Rewari, and Mewat districts in its jurisdiction.
- ♦ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ♦ Rohtak Division also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.

2.1.1 Land Use Pattern of Haryana

- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus forestland and tree cover together covers 6.80% of the state geographical area.

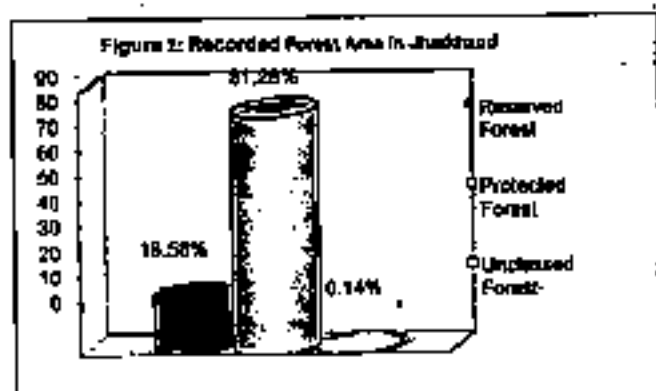


- ♦ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands

(0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use India State of Forest Report 2011, FSI Dehra Dun.

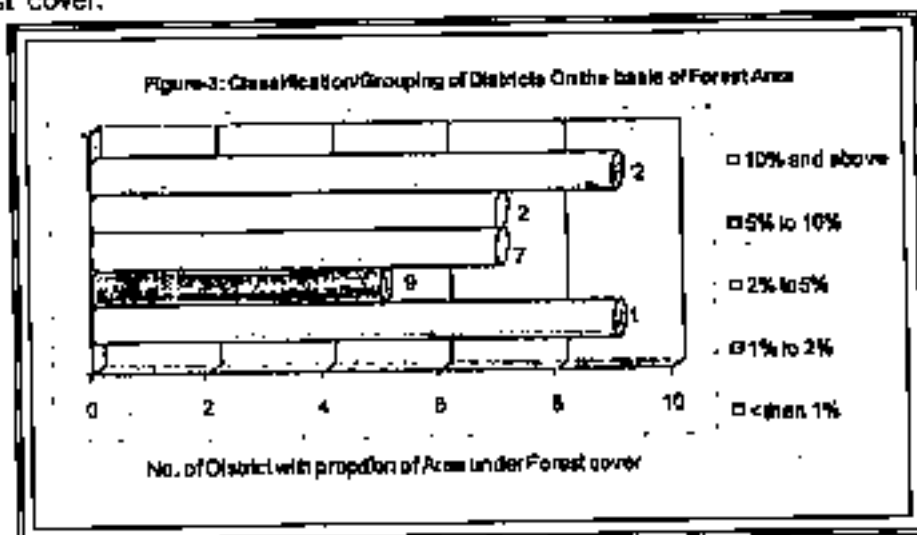
2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ♦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. **Group-1:** Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ♦ **Group-2:** Two districts namely Gurgaon (8.35%) and Mewat (8.35%) and fall in the category of 5% to 10% forest cover.
- ♦ **Group-3:** Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh, Bhiwani, Rewari and Kaithal, fall in the category of 2% to 5% forest cover.



- ♦ **Group-4:** Nine districts namely Hisar, Jhajar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat and they fall in group of 1% to 2% forest cover.
- ♦ **Group-5:** One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure-3 for further information.

2.2 Profile of Mewat District and Forest Division

- ♦ Mewat district is one of the 21 districts and situated in the southern part of Haryana. It was carved as the 20th district of Haryana from erstwhile Gurgaon district and Hathin Block of Faridabad district on 4th April 2005. However, Hathin sub-division was shifted to Palwal

district in 2008. It is bounded by Gurgaon district on the north, Rewari district on the west and Faridabad and Palwal districts on the east. Nuh town is the headquarters of this district. The district comprises Nuh, Taoru, Nagina, Firozpur Jhirka and Punhana blocks along with 431 villages and 297 panchayats.

- ❖ The district occupies an area of 1859.61sq. km. Mewat is populated by the Meos community (mostly Muslims) who are agriculturalists. It has a population of 10.89 lakh (2011 census) roughly equal to Cyprus or the US state of Rhode Island. This gives it a ranking of 420th in India out of a total of 640 districts. The district has a population density of 729 inhabitants per square kilometer. Its population growth rate over the decade 2001-2011 was 37.94%. Mewat has a sex ratio of 906 females for every 1000 males and a literacy rate of 56.1%. The average household size in rural Mewat was 7.



- ❖ The soil of Mewat is light in texture, particularly sandy, sandy loam and clay loam. The upper hills are mostly barren. The main occupation of the people is agriculture and agro-based activities. The agriculture in Mewat is mostly rain fed except in small pockets where canal irrigation is available. Agriculture production measured in terms of crop yield per hectare is comparatively low to the other districts of the State. Animal husbandry, particularly dairy is the secondary source of income for people of Mewat and those who live closer to the hilly ranges of Aravalli also keep a few sheep and goats. Milk yields are not so low, however, due to heavy indebtedness most of the farmers are forced to sell the milk to the lenders at lower than normal price, which drastically reduces their income. The poultry population in Mewat is much less in comparison to other districts of Haryana State.
- ❖ Climate and Rainfall: Mewat falls under the Sub-Tropical, Semi-arid climatic zone with extremely hot temperature in summer. Dryness of air is standard feature in Mewat except during the monsoon season. May and June are the hottest months of the year with the temperature ranging from 30° C to 48° C. January, on the other hand is the coldest month with temperature ranging between 2° C to 25° C. Strong dusty winds are conspicuous during summer. The annual rainfall varies considerably from year to year. The maximum rainfall is experienced during the monsoon season, which reaches its peak in the month of July. The principal precipitation occurs during monsoon period from June to September when about 80% of the rainfall is received. The average rainfall varies from 336 mm to 440 mm in the district.

2.3 Forest Cover in Mewat District

- ❖ According to India State of Forest Report-2011, Mewat district has 8.5% area under forest cover against 3.64% of state average. Main plant species found adopted under CAMPA programme in the district were *Papri*, *Bakain*, *Shisham*, *Arjun*, *Kikar*, *Balam Khira*, *Tun*, *Jamun*, *Reunjha*, *Ailanthus*, *Neem*, *Pipal*, *Ber*, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- A total 155 RKM forestland was treated under CAMPA by adopting Compensatory Afforestation scheme of plantation during 2013-14. The plantation area was spread over all the three forest ranges namely Nuh range (44 RKM), FP Jhirka range (81 RKM) and Punhana range (20 RKM) in the division. Refer table-3.1 for detailed information.

Table 3.1 Area Covered/Treated Under CAMPA (2013-14)

Sl No	Range	Project/Plantation Site	Land Category	Scheme of Plantation	Area in RKM	Year of Plantation
1	Nuh	Tauru Kota Road (Tauru, Mohammadpur)	PF	CA/Tall Plantation	10	2013-14
2	Nuh	Rangala Bundh	PF	CA/Tall Plantation	24	
3	Nuh	Nuh Drain	PF	CA/Tall Plantation	20	
4	FP Jhirka	Kotla Bundh	PF	CA/Tall Plantation	37	
5	FP Jhirka	Reegarth Bundh	PF	CA/Tall Plantation	28	
6	FP Jhirka	Baransi Distributory	PF	CA/Tall Plantation	16	
7	Punhana	Gurgaon Canal	PF	CA/Tall Plantation	10	
8	Punhana	Punhana to Tirwara Road, Tirwara to Nai Road	PF	CA/Tall Plantation	10	
Sub Total					155.00	

3.2 Physical and Financial Target and Achievements

- Total expenditure incurred in the entire CAMPA programme was Rs 55.82 lakh against the target of same amount. Plantation work was carried out at 8 locations/sites covering all the three forest ranges of the division. Refer table 3.2 for detail information.

Table-3.2: Physical and Financial Target and Achievements (2013-14)

Sl No	Range	Plantation Site	Physical (Area in ha)		Financial (Rs. in lakh)	
			Target	Achievement	Target	Achievement
1.	Nuh	Tauru Kota Road (Tauru, Mohammadpur)	10	10	3.84984	3.84984
2.	Nuh	Rangala Bundh	24	24	9.23961	9.23961
3.	Nuh	Nuh Drain	20	20	7.69968	7.69968
4	FP Jhirka	Kotla Bundh	37	37	14.24440	14.24440
5	FP Jhirka	Reegarth Bundh	28	28	10.77954	10.77954
6	FP Jhirka	Baransi Distributory	16	16	6.15974	6.15974
7	Punhana	Gurgaon Canal	10	10	3.84984	3.84984
8	Punhana	Punhana to Tirwara Road/Tirwara to Nai Road	10	10	3.84984	3.84984
			155.00	155.00	55.82265	55.82265

3.3 Inventory/ List of Plantation

- A total of 0.388 lakh plant species of *Papri, Bakain, Shisham, Arjun, Kikar, Batam Khira, Tun, Jamun, Reunjiha, Ailanthus, Neem, Pipal, Ber*, etc. were planted in the project at eight different sites comprising 155.00 RKM of forestland. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table 3.3: Inventory/List of Plantation

Sl. No.	Range	Project/Plantation Site	Scheme of Plantation	Area RKM	No. of plants	Name of Plant Species	Year of Plantation
1	Nuh	Tauru-Kota Road (Tauru, Mohammadpur)	CA/Tall Plantation	10	2500	Papri, Bakain, Anjun, Shisham, Kitar, Bakam Khira, Tur, Jamun, Reuphar, Alantus, Neem, Papal, Bar,	2013-14
2	Nuh	Rangala Bundh	CA/Tall Plantation	24	6000		
3	Nuh	Nuh Drain	CA/Tall Plantation	20	5000		
4	FP Jhirka	Kotla Bundh	CA/Tall Plantation	37	9250		
5	FP Jhirka	Raigarh Bundh	CA/Tall Plantation	28	7000		
6	FP Jhirka	Benarsi Distributory	CA/Tall Plantation	16	4000		
7	Punhana	Gurgaon Canal	CA/Tall Plantation	10	2500		
8	Punhana	Punhana to Thwara Road/Thwara to Nail Road	CA/Tall Plantation	10	2500		
Total				155.00	38750		

3.4 Analysis of Sample Plantation and Survival Assessment

- A sample of 83.22% (129 RKM) plantation area was drawn for field visit of and to estimate survival percentage of CAMPA plantation.

- Average survival percentage of seedlings estimated was 73%. The survival percentage was 75% at Nuh Drain under and it was 69% at Tauru-Kota Road. Average height of plantation was 5 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.



Table 3.4: Analysis of Sample Plantation sites and Assessment of Survival

Sl. No.	Range	Plantation Site	Scheme	Area (ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	Nuh	Tauru-Kota Road (Tauru, Mohammadpur)	CA/Tall Plantation	10	2500	1725	69	
2	Nuh	Rangala Bundh	CA/Tall Plantation	24	6000	4380	73	
3	Nuh	Nuh Drain	CA/Tall Plantation	20	5000	3750	75	
4	FP Jhirka	Kotla Bundh	CA/Tall Plantation	37	9250	6568	71	
5	FP Jhirka	Raigarh Bundh	CA/Tall Plantation	28	7000	5180	74	
6	Punhana	Gurgaon Canal	CA/Tall Plantation	10	2500	1800	72	
Total				129	32250	23403	73	

3.5 Registers/Records Maintained in the Project

- Work register and cashbook were important registers maintained by project authority in this project. DFO of the division assured the evaluator that plantation journal would be prepared in all the plantation sites conducted under CAMPA programme when it was discussed with him.

3.6 Monitoring and Evaluation System in the Project

- The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate evaluation wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana at

Mewat forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- ✦ The project authority reported that an independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.

3.8 Bank Account Details and Flow of Funds

- ✦ Bank account of CAMPA Programme of Mewat forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Nuh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- Topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were main factors in the selection of plant species. However, the project authority took decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- Wherever the plantation was conducted under CAMPA programme there was some improvement in soil moisture conservation. However, limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.

4.3 Assessment of Survival Percentage

- The estimated survival percentage of plantation carried out during 2012-13 was 70%. It was highest at FP Jhirka Anaj Mandi under NPV scheme (71%) while it was 69% at Allpur Tigra Reegarh Sec. 4 & 5. Average height of plantation was 6 feet and they had good growth and health.
- To estimate survival percentage a sample plot of 0.25 ha (50meterx50meter) was adopted at random location and also row counting of plantation was also adopted to count the seedling at random location. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- Natural regeneration of plant species in the area was hardly observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone there were some glimpses of it due to presence of other species around plantation area.

4.5 Quality of Work

- Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- Grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation.

4.7 Protection and Maintenance of Plantation

- Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be better care of plantation through elaborate fencing and regular care. The process of awareness raising and motivation of local community should be adopted in the project at regular intervals.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff

- ✦ Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2013-14 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in some part of the project area and in NCR region, there was high demand of labour force and hence the forest department had to face shortage of labour as reported.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. Impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals

- ✦ As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- ✦ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- ✦ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- ✦ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- ✦ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Make Four Years of Protection and Maintenance Funding

- ✦ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- ✦ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF

and two DFOs. Its head office is located at Karnal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- ✦ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- ✦ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Introduce Practice and Concept of Earning Carbon Credits

- ✦ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- ✦ Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.11 Interview with Project Authority

- a) During pre and post field inspection and evaluation of the programme the members of evaluation team interacted interviewed DFO Mewat (Mr. Harish Walla, Mob: +91-9416317400, Office: +91-1267274701) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- ✦ The DFO, Mr. Harish Walla along with other project authority felt satisfaction overall outcome of the programme and progress of the programme conducted during 2012-13. With regard to selection plant species soil type, climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were main factors as replied by the. Most preferred plant species in the division were *Bakain*, *Shisham*, *Ajun*, *Kikar*, *Balam Khira*, *Tun*, *Jamun*, *Reunjha*, *Ailanthus*, *Neem*, *Pipal*, *Ber*, etc. Open grazing due high cattle pressure, rocky terrain, poor soil, erratic and low rain fall were main of factors plantation casualty. The project authority further said that all the field staffs were hard working and they owned responsibility and performed their duty well. There was need to work hard to improve the outcome of the programme.

6.12 Evaluator's Assessment

- ✦ After field inspection and thorough interaction with DFO and other stakeholders of the programme along with verification of official records, it was concluded that above statements made by the project authority was true to a great extent. The project authority followed the stated guidelines of programme. Modern tools of mass media should be adopted for awareness campaigns for better impact. Internal monitoring and evaluation in the programme should be updated and carried out effectively.

Photographs of Plantation Area: Mewat (Nuh) Forest Division (2013-14)

- Muh Ridge: 3 sites (84 RKM)
- PP Jhirka Ridge: 3 sites (84 RKM)
- Panbura Ridge: 2 sites (20 RKM)

- Main Species: *Papri, Bakam, Arjun, Shesham, Kikar, Belam Khera, Top, Jambun, Reurpha, Alantus, Neem, Pipal, Ber, etc.*



Final A.P.O. State CAMPA Scheme of Mewat Forest Division (Nuh) in Mewat District of Haryana (2013-14)

SL No	Type of land (Forest/Non-forest)	Name of Scheme	Name of Range	Name of Site	Khasra No. KM/RD	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Forestland	CA-TP	Nuh	Tauru-Kota Road (Tauru, Mohammadpur)	NA	July	NA	10	4x4	Kikar, Shisham, Bakain, Papri	2500	NA	NA
2.	Forestland	CA-TP	Nuh	Rangala Bundh	NA	July	NA	24	4x4	Kikar, Shisham, Papri	6000	NA	NA
3.	Forestland	CA-TP	Nuh	Nuh Drain	NA	July	NA	20	4x4	Shisham, Papri	5000	NA	NA
4.	Forestland	CA-TP	FP Jhirka	Kotla Bundh	NA	July	NA	37	4x4	Papri, Arjun	9250	NA	NA
5.	Forestland	CA-TP	FP Jhirka	Reeguh Bundh	NA	July	NA	28	4x4	Papri, Neam	7000	NA	NA
6.	Forestland	CA-TP	FP Jhirka	Baransi Distributory	NA	July	NA	16	4x4	Papri, Ber	4000	NA	NA
7.	Forestland	CA-TP	Punhana	Gungaon Canal	NA	July	NA	10	4x4	Shisham, Papri	2500	NA	NA
8.	Forestland	CA-TP	Punhana	Punhana to Tirwara Road/Tirwara to Nel Road	NA	July	NA	10	4x4	Shisham, Kikar	2500	NA	NA
Total		--	--	--	--	--	--	155	--	--	38750	--	--

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)
Ministry of Environment & Forests (MOEF)
Government of India, New Delhi



**MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY PALWAL FOREST DIVISION IN PALWAL DISTRICT OF HARYANA**

Duration of Evaluation: 2013-14

Final Report

Submitted to

**OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
VAN BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA**

April, 2015

Conducted by

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**Compensatory Afforestation Fund Management and
Planning Authority (CAMPA)**

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi

**MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY MEWAT FOREST DIVISION (NUH) IN MEWAT DISTRICT OF HARYANA**

Duration of Evaluation: 2013-14

Final Report

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Palwal Forest Division in Palwal District of Haryana (2013-14)" was successfully completed. However, it would not have been possible without the kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram along with office staff Mr. D.P. Tyagi for reposing faith and awarding the honour of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Palwal Forest Division, Mr. Sundar Sambharya along with RFOs and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2013-14.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.




Dinesh K. Singh

Director
Locus Research & Consultants Pvt. Ltd.
New Delhi, April, 2015

Preface

(Palwal Forest Division-2013-14)

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest use. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana implemented by Palwal Forest Division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2013-14 a total 20 RKM land was treated under CAMPA by adopting NPV scheme of plantation at Palwal Forest Division. Total expenditure incurred in the above activities was Rs. 6.6 lakh. A total of 0.10 lakh plant species of *Kikar*, *Neem*, *Pipal*, *Ber*, etc. were planted in the project at three different sites.

Average survival percentage of plants estimated was 75%. It was highest (79%) at Sultanpur-RF plantation and 72% at Nuh-Hathini Road. Average height of plantation was 5 feet. Growth and health of plantation was good. Average grading awarded to the programme was 6.6 (on 1 to 10 scale), which was very good.

In the process of evaluation members of evaluation team interacted with field level forest staff and local community. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

April, 2015



Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENE	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Ha	Hectare
JPMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL. No.	Common Name	Botanical Name
1.	Alestonia	Indian Mallow/ Devil Tree
2.	Arjun	Terminalia arjuna
3.	Ber	Ziziphus mauritiana
4.	Jamun	Terminalia arjuna
5.	Kikar	Acacia Arabica
6.	Neem	Azadirachta indica
7.	Papri	Holoptelea integrifolia
8.	Pilkhan	Ficus virens
9.	Pipal	Ficus religiosa
10.	Shisham	Dalbergia sissoo

GRADING AND EXECUTIVE SUMMARY

Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2013-14

Palwal Forest Division, Palwal District, Haryana

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	7
	Health of Plantation	6
	Maintenance	6
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	6
	Satisfaction over Perceived Benefits by the Local Population	6
Overall Grading (Very Good)		6.6

Executive Summary

1.0 INTRODUCTION

- ♦ Monitoring and evaluation of CAMPA programme of Palwal Forest Division in Palwal district was conducted in the month of April 19-22, 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based agency. 20 RKM land was treated by adopting NPV scheme of plantation during 2013-14. 100 percent project area covered during field inspection and to estimate survival percentage.

2.0 CAMPA: AN OVERVIEW

- ♦ CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a CAMPA as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities. State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 OBJECTIVES OF THE CAMPA

- ♦ Important objectives of CAMPA are as follows:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION /AREA OF MONITORING & EVALUATION

- ♦ The study covered the entire Palwal Forest Division in Palwal district of Haryana.

5.0 REFERENCE PERIOD

- ♦ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2013-14.

6.0 NEED OF THE STUDY

- Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting survival of plantation and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. 74.65% (32.40 RKM) area was sampled to assess the programme and estimate survival percentage. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants in row was adopted.

9.0 PROFILE OF THE STUDY AREA

- Haryana was created on November 1, 1966 with seven districts. Subsequently 14 other districts were included through restructuring the previous ones. Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- Palwal is the 21st district of Haryana state in northern India and Palwal city is headquarters. It is situated at a distance of 60 km from Delhi on the Delhi-Mathura highway (NH-2). As per India State of Forest Report-2011, Palwal district has 4.32% area under forest cover.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- 20 RKM land was treated under CAMPA by adopting NPV scheme of plantation at three locations/sites. It was implemented at Palwal range only. 0.10 lakh plant species of *Papri, Shisham, Jamun, Kikar, Ber, etc.* were planted.
- Total expenditure during 2013-14 was Rs. 6.6 lakh against the target of same amount. Plantation work was carried out at 3 places.
- Average survival percentage of seedlings estimated was 75%. It was highest (79%) at Sultanpur-RF and it was 72% at Nuh-Hathini Road. Average height of plantation was 5 feet. Growth and health of plantation was good.
- Two types of registers were maintained namely cashbook and work book. DFO said that plantation journal would be prepared soon for all the plantation sites.
- Monitoring and Evaluation (M & E) of CAMPA along with other forestry programmes are conducted by a separate wing called M & E Wing. The last evaluation of state CAMPA Haryana of Palwal Forest Division

was conducted in October 2014. It consists of one CF and two DCFs. Its head office is at Karnal in Haryana.

- ❖ An independent agency called **Agricultural Finance Corporation Ltd.** of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.
- ❖ Bank account of CAMPA Programme of Palwal forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Palwal branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Factors impacting choice of species were topography, soil type, climate, rainfall, suitability in the area, economic value, preference by locals, etc. Project authority called the final shot in this regard.
- ❖ Improvement in soil moisture conservation was observed at most plantation sites of CAMPA.
- ❖ Limited natural regeneration of plant species in the plantation area was found. In urban and suburban zone it was negligible while on block forestland there were some glimpses of it.
- ❖ Quality of Work in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.
- ❖ Open and rash grazing by loose domestic animals, wild animals like, rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. impacted Growth and Survival of Plantation.
- ❖ Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. Barbed wire and bush fencing were found at most plantation sites under protection of plantation. In urban areas brick/iron/wood gabions were also adopted along with barbed.
- ❖ Motivation and Technical Competence of Personnel Involved in the Project was found satisfactory. Range Forest Officers (RFO), foresters and forest guards were trained to tackle necessary work. Temporary/daily wages workers, cattle watchers, etc. were lacking these skills to deal with new challenges of the programme.
- ❖ Role of Local People in Project Work was far from satisfactory. There was low participation of local community in the programme. Modern tools of mass media should be adopted for awareness and motivation of community.
- ❖ CAMPA accrued both direct and indirect benefits in the project area. Additional geographical area came under forest cover. It helped in improving quality of ecology and environment as well as micro-climate of the area.
- ❖ Formation of SHG in the Project was optional for the project authority to provide additional benefits of community in the project area. There was no attempt at this front from the project authority.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2013-14 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.

- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Measures should be taken to check grazing in the area. Stall feeding of domestic animals should be promoted among local community through regular awareness and motivation.
- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gabions of Iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ❖ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ❖ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The Supreme Court order of July 10, 2009 directs the following:
 - ❖ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ❖ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
 - ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ❖ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ♦ The amount would be transferred to it by the ad-hoc CAMPA.
 - ♦ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ♦ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ♦ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ♦ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The state government may also credit to the State CAMPA
 - ♦ Grants or aid received if any;
 - ♦ Any loan taken by the Authority or any borrowings made by it; and
 - ♦ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ❖ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ❖ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ❖ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ❖ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation; Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ❖ State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

❖ Important objectives of CAMPA are as follows:

- Conservation, protection, regeneration and management of existing natural forests;
- Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- Compensatory Afforestation;
- Environmental services, which include-
 - Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- Science, Research, Training and Capacity Building.
- Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ❖ The study area covers the entire Palwal Forest Division in Palwal district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ❖ Reference period of monitoring & evaluation is one year, i.e. 2013-14.

1.7 Components of the Project

- ◆ Main components of CAMPA are as follows:
 - ◆ People's Participation
 - ◆ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - ◆ Monitoring and Evaluation of the programme
 - ◆ Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
 - ◆ Extension and awareness
 - ◆ Monitoring of the programme, etc.

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ◆ A brief outline of the project agency and programme implementation is given below in table-1.2

Table-1.2: Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
◆ District	: Palwal
◆ Forest Division	: Palwal
◆ Forest Circle	: Gurgaon Circle, Gurgaon
◆ State	: Haryana
Project Location	
◆ Watersheds/Sub-watersheds	: NA
◆ Development Blocks	: NA
◆ Forest Ranges (3)	: 1.Palwal, 2.Hodal. CAMPA work carried out at Palwal range only
◆ Project Sites	: 3 (Three)
Assets/ Infrastructure Development Activities, if any	
◆ NA	
Preparation of Plantation Journal and Record Upkeep	
◆ There was not any separate register or Plantation journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
◆ Project Duration	: 2013-14
◆ Project Area (78.8 RKM)	: Target: 20 RKM ((NPV) and it was achieved cent percent
◆ Project Cost	: Target: Rs.6.6 lakh and achievement: Rs. 6.6 lakh
Proposed Strategies and Salient Features of the Project	
◆ There was no provision of VFCs under CAMPA programme.	
◆ Plantation was carried out by adopting NPV scheme	

1.9 Need of the Study

- ◆ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ◆ Scope of study is confined to Palwal Forest Division in Palwal district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ♦ To assess physical and financial targets and achievements
 - ♦ To evaluate performance of the programme
 - ♦ To estimate of survival percentage of plant species adopted in the project
 - ♦ To analyze factors impacting plantation survival and suggest remedial measures.
 - ♦ To assess peoples' participation and assets created
 - ♦ To assess the direct and indirect benefits and impact of the programme.
 - ♦ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ❖ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ❖ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ❖ Sample Selection, Size and its Distribution: There was 100% (20 RKM) coverage of plantation area for field visit and evaluation of CAMPA programme during 2013-14. It was carried out at three locations namely Nuh-Hathini Road (5 RKM), Mandkola-Saroli-Kanoli Road (5 RKM) and Sultanpur-RF (10 RKM) under Palwal range of the division.
- ❖ To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50mx50m) was adopted for counting the plantation along with row counting at random locations keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapterwise Organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - ♦ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ♦ Chapter-2 gives the Profile of the Project Area and its Location
 - ♦ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ♦ Chapter-4 gives Qualitative Analysis and Findings.
 - ♦ Chapter-5 deals with Project Constraints and Limitations
 - ♦ Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

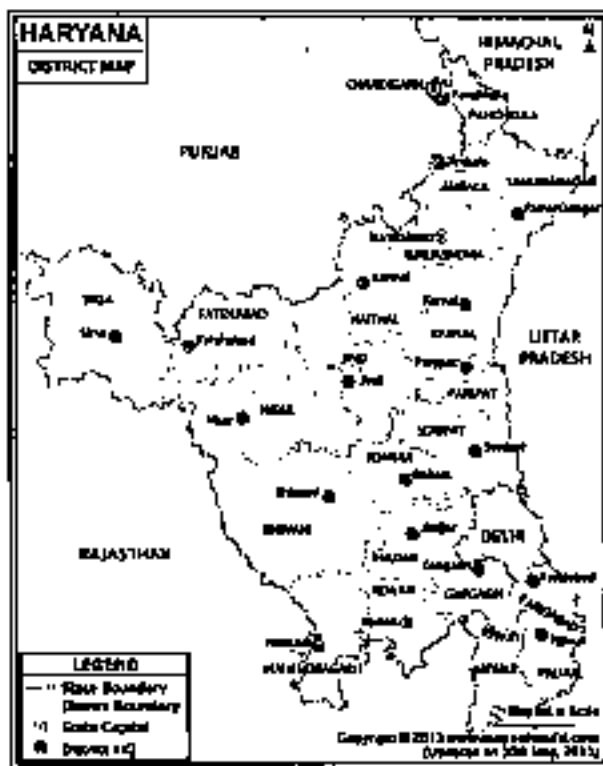
- ❖ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

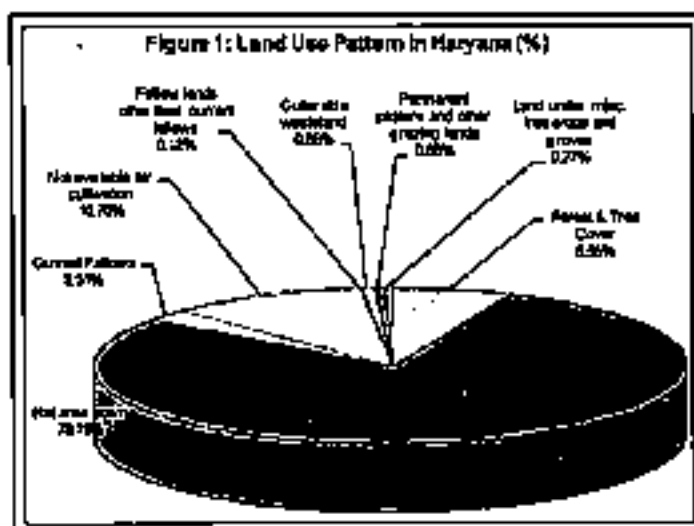
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 147 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1956 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
- ❖ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunagar.
- ❖ Gurgaon Division has six (6) districts namely Palwal, Patwal, Mahendragarh, Gurgaon, Rewari, and Palwal districts in its jurisdiction.
- ❖ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ Rohtak Division also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



2.1.1 Land Use Pattern of Haryana

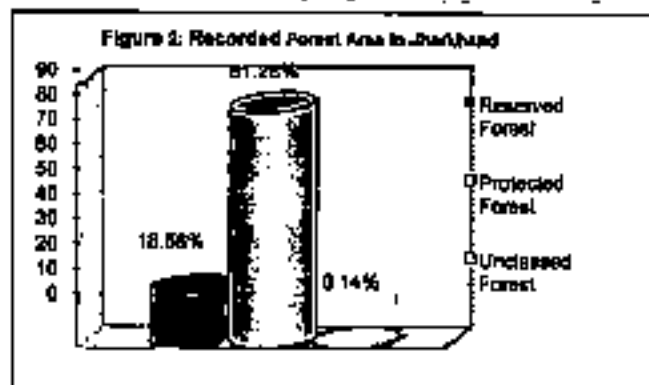
- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus forestland and tree cover together covers 6.80% of the state geographical area.
- ❖ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands



(0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun).

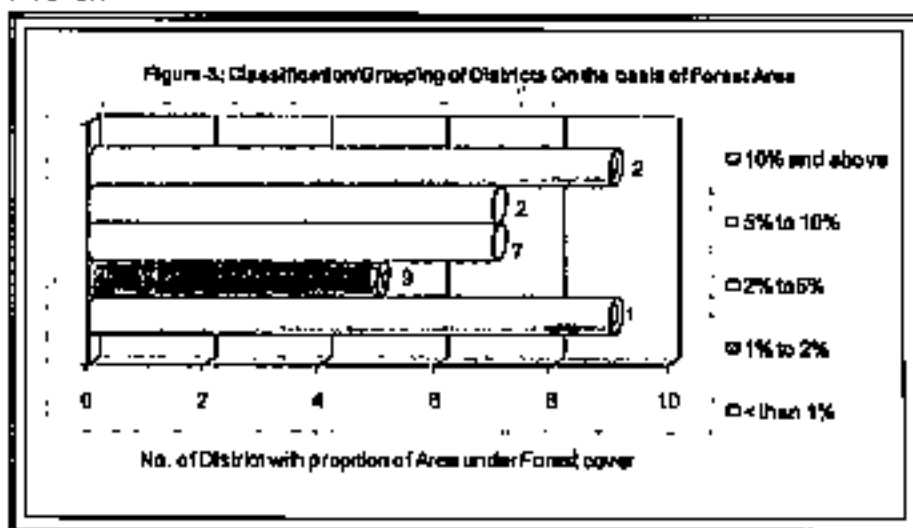
2.1.2 Recorded Forest Area in Haryana

- ❖ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ❖ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ❖ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. **Group-1:** Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ❖ **Group-2:** Two districts namely Gurgaon (8.35%) and Palwal (8.35%) and fall in the category of 5% to 10% forest cover.
- ❖ **Group-3:** Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh, Bhiwani, Rewari and Kaithal fall in the category of 2% to 5% forest cover.
- ❖ **Group-4:** Nine districts namely Hissar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat and they fall in group of 1% to 2% forest cover.
- ❖ **Group-5:** One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure 3 for further information.

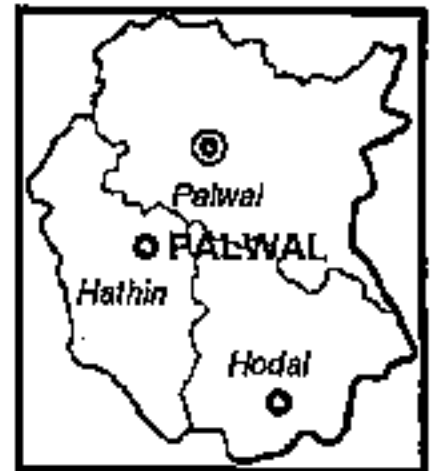


2.2 Profile of Palwal District and Forest Division

- ❖ Palwal is the 21st district of Haryana in northern India and Palwal city is its headquarters. It is situated at a distance of 60 km from Delhi and 55 km from Khair City on the Delhi-Mathura highway (NH-2). It is a place of great antiquity supposed to figure in the

earliest Aryan traditions under the name of Apelava, part of the Pandava kingdom of Indraprastha, which was later restored by Vikramaditya.

- ♦ Palwal is located at 28.15°N 77.33°E. It has an average elevation of 195 metres (639 ft). Palwal has many temples, Schools, Colleges, and banks. It also contains developed areas like Housing board colony, New colony, Main market, shivapuri, Krishna colony, camp colony, Huda sector 2, etc. Government is also putting more emphases toward the economy and development of Palwal as it is situated in mid of developed cities like Delhi, Gurgaon, Noida, Faridabad, Khair, Mathura at and about an equiv-distance, It consist agriculture based areas as well as commercial areas.



- ♦ The city Palwal got its name from a demon, "Palwasur" who ruled this place during the reign of Pandavas. He was killed by Balarama, elder brother of Shri Krishna. In his memory, every year a festival is organised in palwal which is known as "Baldev Chhat Ka Mela". There is also a temple dedicated to Balaram near Municipal Office chowk. Railway Station of Palwal is the place from where Mahatma Gandhi ji were arrested first time. A historical building "Gandhi Ashram" was made in the memory of Mahatma Gandhi Syed Yusuf Ali Palwali was a noble and rich man from Palwal during the short ruling period of Muhammad Azam Shah and died along with Muhammad Azam Shah on 19 June 1707 at the battle of Jajwan.
- ♦ On 15 August 1979, Gurgaon district was further divided to form a new Faridabad district, and Palwal became a part of it. Finally Palwal became the 21st district of Haryana on 15 August 2008. According to the 2011 census Palwal district has a population of 10.40 lakh. This gives it a ranking of 43rd in India (out of a total of 640).[8] The district has a population density of 761 inhabitants per square kilometre (1,970/sq mi). Its population growth rate over the decade 2001-2011 was 25.49%. Palwal has a sex ratio of 879 females for every 1000 males,[8] and a literacy rate of 70.3%.
- ♦ District comprises 282 Villages, 237 Gram Panchayats, 1 Municipal Council, 2 Municipal Committee, 3 Sub Divisions, 4 Development Blocks and 3 Tehsils. Sub Division is under the control of sub Divisional Magistrate while each Dev. Block is under the control of Block Development and Panchayat Officer.

2.3 Forest Cover in Palwal District

- ♦ According to India State of Forest Report-2011, Palwal district has 4.32% area under forest cover against 3.64% of state average. Main plant species found and adopted under CAMPA programme in the district were *Papri*, *Shisham*, *Jamun*, *Pilkhan*, *Silveroak*, *Chakrasia*, *Alesteria*, *Kajela*, *Cesistonia*, *Molsri*, *Neem*, *Pipal*, *Ber*, *Kikar*, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- ✦ Altogether 20 RKM Protected forestland was treated under CAMPA by adopting NPV scheme of plantation during 2013-14. The plantation area was spread over Pakhal forest range at three locations namely Nuh-Hathini Road (5 RKM), Mandkola- Saroli-Kanoli Road (5 RKM) and Sultanpur-RF (10 RKM). Refer table-3.1 for detailed information.

Table 3.1 Area Covered/Treated Under CAMPA (2013-14)

Sl No	Range	Project/Plantation Site	Land Category	Scheme of Plantation	Area In RKM	Year of Plantation
1	Pakhal	Nuh-Hathini Road, PF-KM.0-7 L/ R	Road	NPV/Ridge	5	2013-14
2	Pakhal	Mandkola- Saroli-Kanoli Road PF-KM.0-6 L/R	Road	NPV/Ridge	5	
3	Pakhal	Sultanpur RF	RF	NPV/Ridge	10	
Total					20	

3.2 Physical and Financial Target and Achievements

- ✦ Total expenditure incurred in the entire CAMPA programme during 2013-14 was Rs 6.6 lakh against the target of same amount. Plantation work was carried out at three locations/sites under Pakhal forest range. Refer table 3.2 for detail information.

Table 3.2: Physical and Financial Target/Achievements (2013-14)

Sl No.	Range	Plantation Site	Physical (Area in ha)		Financial (Rs. in lakh)	
			Target	Achievement	Target	Achievement
1.	Pakhal	Nuh-Hathini Road, KM. 0-7 L&R	5	5	1.63	1.63
2.	Pakhal	Mandkola-Saroli-Kanoli Road, KM. 0-6, L&R	5	5	1.64	1.64
3.	Pakhal	Sultanpur RF	10	10	3.33	3.33
Total			20	20	6.6	6.6

3.3 Inventory/ List of Plantation

- ✦ A total of 0.10 lakh plant species of *Kikar*, *Neem*, *Pipal*, *Ber*, etc. were planted in the project at three different sites comprising 20.00 RKM land. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table 3.3: Inventory/List of Plantation

Sl No	Range	Project/Plantation Site	Scheme of Plantation	Area RKM	No. of plants	Name of Plant Species	Year of Plantation
1	Pakhal	Nuh-Hathini Road, KM. 0-7 L&R	NPV	5	2500	Kikar, Neem, Pipal, Ber,	2013-14
2	Pakhal	Mandkola-Saroli-Kanoli Road, KM. 0-6 L&R	NPV	5	2500	Kikar, Neem, Pipal, Ber,	
3	Pakhal	Sultanpur RF	NPV	10	5000	Kikar, Neem, Pipal, Ber,	
Total				20	10000		

3.4 Analysis of Sample Plantation and Survival Assessment

- To evaluate CAMPA programme and to estimate survival percentage there was 100% (20 RKM) coverage of plantation area.

- Average survival percentage of plantation estimated was 75%. The survival percentage was highest (79%) at Sultanpur-RF plantation under of NPV scheme and it was 72% at Nuh- Hathini Road. Average height of plantation was 5 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.



Table 3.4: Analysis of Sample Plantation sites and Assessment of Survival

Sl. No.	Range	Plantation Site	Scheme	Area (ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	Palwal	Nuh-Hathini Road, KM 0-7 L&R	NPV	5	2500	1850	72	2013-14
2	Palwal	Mandkola-Syandly-Kanoli Road, KM 0-6, L&R	NPV	5	2500	1775	73	
3	Palwal	Sultanpur RF	NPV	10	5000	3950	79	
Total				20	10000	7575	75	

3.5 Registers/Records Maintained in the Project

- Mainly cashbook and work registers were maintained in the project. The project authority was of the view that plantation journal would be prepared soon in all the plantation sites, which was found missing.

3.6 Monitoring and Evaluation System in the Project

- Monitoring and Evaluation (M & E) system of CAMPA along with other forestry programmes are conducted by a separate evaluation wing called M & E Wing. The last evaluation of state CAMPA, Haryana at Palwal forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- The project authority reported that an independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.

3.8 Bank Account Details and Flow of Funds

- Bank account of CAMPA Programme of Palwal forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Palwal branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- Main factors in the selection of plant species were nature of topography, soil type, climate, rainfall, suitability of species in the area, economic value of plant species, preference shown by local community, etc. However, the project authority took final decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- Significant improvement in soil moisture conservation was found where plantation carried out under CAMPA programme. However, it was reported that due to limited provision of funds on this head of the programme did not provide much options for the project authority to carry forward additional work.

4.3 Assessment of Survival Percentage

- Average survival percentage of plantation estimated was 75%. The survival percentage was highest (79%) at Sultanpur-RF plantation under of NPV scheme and it was 72% at Nuh-Hathini Road. Average height of plantation was 5 feet. Growth and health of plantation was good. 0.25 ha (50meterx50meter) sample plot was adopted at random location along row counting of plantation to estimate survival percentage. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- There was little natural regeneration of plant species in the plantation area as observed during field inspection. In most part of urban and suburban zone natural regeneration was negligible while on block forestland in rural areas there were some glimpses of it due to presence of other species in and around the new plantation.

4.5 Quality of Work Observed During Field Visit

- Overall quality of work especially plantation and creation of assets in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- Grazing by loose domestic animals, wild animals like rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc impacted growth and survival of plantation.

4.7 Protection and Maintenance of Plantation and Project Assets

- There was barbed wire and bush fencing at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gablons were also adopted along

with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be provision of better care of plantation through elaborate fencing and protection as observed. The process of awareness raising and motivation of local community should be a regular phenomenon in the project.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ✦ All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers, cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- ✦ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ✦ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- ✦ The project authority did not much effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such Institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

Chapter-5

The Constraints and Limitations of Project

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff

- ✦ During 2012-13 of CAMPA programme implementation there was shortage of frontline staff like foresters and forest guards in the division. It impacted the programme adversely. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and currently there was not any shortage.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in some part of the project area and in NCR region, there was high demand of labour force and hence the forest department had to face shortage of labour as reported.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

Chapter-6

Suggestions and Recommendations

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals

- As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gablons of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2013-14 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Make Four Years of Protection and Maintenance Funding

- There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF

and two DFOs. Its head office is located at Karnal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Introduce Practice and Concept of Earning Carbon Credits

- The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.11 Interview with Project Authority

- During pre and post field inspection and evaluation of the programme the members of evaluation team interacted interviewed DFO Palwal (Mr. Sunder Sambharya, Mob: +919416776910, Office: +911275248978) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- During the interaction project authority showed satisfaction on overall outcome of the programme conducted during 2013-14. However, they had to face a number of challenges in protection and maintenance of plantation due to high biotic pressure coupled adverse climate and soil condition. Most of the households keep animals and they leave for grazing in open areas. Most part of the division had poor soil locally called *kalar/alkaline*. Important plant species adopted in the CAMPA were *Papri, Shisham, Jamun, Kitar, Ber*, etc.

6.12 Evaluator's Assessment

- After field inspection and interaction with DFO and other stakeholders of the programme and verification of official records, it was concluded that above statements made by the project authority was true to a great extent. The project authority followed the stated guidelines of programme to a great extent. Modern tools of mass media should be adopted for awareness campaigns. Internal monitoring and evaluation of the programme should be streamlined and carried out effectively on regular basis.

Photographs of Plantation Area: Palwal Forest Division (2013-14)

◆ Palwal Range: 3 sites (20 RKM)

▲ Main Species: Kikar, Papri, Sheesham, Jambun, Ailanthus, Neem, Pipal, Bar, etc.



Final A.P.O. State CAMPA Scheme of Palwal Forest Division in Palwal District of Haryana (2013-14)

Sl. No.	Type of land (Forest/Non-forest)	Name of Scheme/ component	Name of Range	Name of Site	Khasra No. KM/RD	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	RGM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Forestland	NPV	Palwal	Nuh-Hathin Road, KM. 0-7 L&R	NA	July	NA	5	4x4	Khar, Neem, Pipal, Bar.	2500	NA	NA
2	Forestland	NPV	Palwal	Mandkela-Syaroli-Karoli Road, KM. 0-6, L&R	NA	July	NA	5	4x4	Khar, Neem, Pipal, Bar.	2500	NA	NA
3	Forestland	NPV	Palwal	Sultanpur RF	NA	July	NA	10	4x4	Khar, Neem, Pipal, Bar.	5000	NA	NA
Total		-	-	-	-	-	-	20	-	-	10000	-	-

**Compensatory Afforestation Fund Management and Planning
Authority (CAMPA)**

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi



**Monitoring and Evaluation of State CAMPA Haryana being
Implemented by CFP Forest Divisions Jatusana (Rewari), Bhiwani, Hisar
and DWLO Forest Division Hisar of Haryana**

Duration of Evaluation: 2013-14



Submitted to

**Office of Principal Chief Conservator of Forests, Forest Conservation
Van Bhawan, C-18, Sector-6, Panchkula, Haryana**



Conducted by

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**Compensatory Afforestation Fund Management and Planning
Authority (CAMPA)**

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi

**Monitoring and Evaluation of State CAMPA Haryana being Implemented
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Forest Division Hisar in Haryana**

Duration of Evaluation: 2013-14

Final Report

Submitted to

**Office of Principal Chief Conservator of Forests Haryana
Van Bhawan, C-18, Sector-6, Panchkula, Haryana**

August, 2015

Conducted by

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by GFP Forest Divisions Jatusana (Rewari), Bhiwani, Hisar and DWLO Forest Division Hisar of Haryana (2013-14)" was successfully completed. However, it would not have been possible without kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.


First of all, I would like to express my sincere gratitude to the erstwhile PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram along with office staff Mr. D.P. Tyagi for reposing faith and awarding the honorable task of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFOs of GFP Jatusana (Rewari), Bhiwani, Hisar and DWLO Hisar along with RFOs and other forest staffs for extending necessary help and cooperation during field inspection, which were carried out in the last week of August (24-28), 2015. My interaction with them helped the members of evaluation team in understanding different aspects of CAMPA programme and its implementation during 2013-14.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS retd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishore Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.




Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, August, 2015




Preface

Preface

(CFP Forest Division Jatusana, Bhiwani, Hisar and DWLO Hisar: 2013-14)

- ◆ **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State.
- ◆ **State CAMPA, Haryana** was established on March 3, 2010 for the purpose of management of funds. It was registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-8, Panchkula, Haryana. The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
- ◆ **Locus Research & Consultants Pvt. Ltd., (Delhi)** was assigned the task of Monitoring & Evaluation of State CAMPA Haryana (2012-13) at CFP Jatusana, Bhiwani, Hisar and DWLO Hisar by PCCF Office, Panchkula. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience. This study was conducted during August 23-28, 2015.
- ◆ **CFP Jatusana (Rewari)** covered 150 ha/RKM (100 ha and 50 RKM) land at 11 sites with total cost of Rs 32.25 lakh during 2013-14. 33 lakh plant species of Clonal Eucalyptus, Gular, Imli, Neem, Papri, Pilkhan, Sahitoot, Shisham, Siris, B. Dek, etc. were planted. Estimated survival of plantation was 81%.
- ◆ **CFP Bhiwani** covered 25 ha land with a total cost of Rs 3.25 lakh at one site. 0.051 lakh plant species of Clonal Eucalyptus was planted at eight different places. Estimated survival of plantation was 65%.
- ◆ **CFP Hisar** treated 175 ha/RKM (125 ha and 50 RKM) land with a cost of Rs 29.19 lakh. 0.375 lakh plant species of Clonal Eucalyptus, Shisham, Bakain, Neem, B. Dek, etc. were planted at 14 places. Estimated survival of plantation was 87%.
- ◆ **DWLO Hisar** created three assets under CAMPA during 2013-14 namely plantation (414.4 ha), concrete wall with iron chain link (504 RKM) and purchase of one vehicle with a total cost of 30.75 lakh. 0.080 lakh plant species of Neem, Jamun, Pilkhan, Vad, Pipat, Baheda, Sahitoot, Gular, etc. were planted under iron gabion at Bir Bara Ban RF in Jind. Average survival percentage of plantation estimated at DWLO Hisar was 55%.
- ◆ **Average grading** awarded to the programme was 7.00 (on 1 to 10 scale), which was very good.
- ◆ **Evaluator** interacted with project authority, other stakeholders and local community during field inspection. Local people were happy with the efforts made by forest department. Plantation journal was missing but other records were found in good condition. Selection of species was made in accordance with local factors and choice of the community. Flow of funds was smooth. There was lack of awareness among local people. Overall outcome of the programme was satisfactory as observed during field inspection.
- ◆ **Some important suggestions and recommendations** have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.




Dinesh K. Singh
Director

New Delhi

August, 2015

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo.	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CFP	Community Forestry Programme
CN	Compartment Number
CPT	Continuous Protection Tranch
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
ha	hectare
JFMC	Joint Forest Management Committee
LTG	Linear Tree Grove
M&E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local and Botanical Name of Plant Species

Sl. No.	Common Name	Botanical Name
1.	Arjun	<i>Terminalia arjuna</i>
2.	Baheda	<i>Terminalia pinnata</i>
3.	Burma Dek/Teak	<i>Tectona grandis</i>
4.	Bakain	<i>Melia azedarach</i>
5.	Eucalyptus clone	<i>Eucalyptus spp.</i>
6.	Frans	<i>Heimerocallis hybrids</i>
7.	Gular	<i>Ficus racemosa</i>
8.	Imli	<i>Tamarindus indica</i>
9.	Jamun	<i>Zizyphus maritima</i>
10.	Jand	<i>Prosopis spicigera/cineraria</i>
11.	Neem	<i>Azadirachta indica</i>
12.	Papri	<i>Holoptelea integrifolia</i>
13.	Pipal	<i>Ficus religiosa</i>
14.	Pilkhan	<i>Ficus virens</i>
15.	Sahtoot	<i>Morus nigra/alba</i>
16.	Shisham	<i>Dalbergia sissoo</i>
17.	Siras	<i>Albizia lebeck</i>
18.	Vad	<i>Ficus bengalensis</i>

GRADING AND EXECUTIVE SUMMARY

Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2013-14
CFP Jatulsana (Rewari), Bhiwani, Hisar and DWLO Hisar in Haryana

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	9
Qualitative Aspects	Survival	7
	Health of Plantation	6
	Maintenance	7
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	6
	Satisfaction over Perceived Benefits by the Local Population	6
Overall Grading (Very Good)		7.00

Executive Summary

1.0 Introduction

- ◆ Monitoring and evaluation of CAMPA programme at CFP Jatulsana (Rewari), CFP Bhiwani and CFP Hisar Forest Divisions was conducted in the month of August 23-28, 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based agency. Division wise coverage of area under CAMPA during 2013-14 was 150 ha/RKM at CFP Jatulsana/Rewari, 25 ha at CFP Bhiwani, 175 ha/RKM at CFP Hisar and 414.5 ha DWLO Hisar. Sample was drawn to evaluate the programme and estimate survival percentage of plantation.

2.0 CAMPA: An Overview

- ◆ CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a CAMPA as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities. State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhevan, Sector-6, Panchkula.

3.0 Objectives Of The CAMPA

- ◆ Important objectives of CAMPA are as follows:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.

4.0 Geographic Location /Area of Monitoring & Evaluation

- ◆ It covers CFP forest divisions Jatulsana (Rewari), Bhiwani, Hisar and DWLO Hisar. Plantation area was spread in the districts of Rewari, Mahendragarh, Jhajjar, Bhiwani, Hisar, Jind, Fatehabad, Sirsa etc.

5.0 Reference Period

- ♦ The reference period of monitoring & evaluation of CAMPA at Hisar is one year, i.e. 2013-14.

6.0 Need of the Study

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 Objectives of the Study

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting survival of plantation and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management

8.0 Methodology and sample Selection

- ♦ A mix of Simple random, systematic, stratified and purposive sampling techniques was adopted for field inspection of the programme and to interview forest project authority and other stakeholders.
- ♦ A sample of 136.4 ha/RKM (90.93%) was drawn from CFP Jatusana, 100% from CFP Bhiwani, 139.5 ha/RKM (79.71%) from CFP Hisar and 100% DWLO Hisar (414.5 ha) to assess the project asset and to estimate survival percentage of plantation during 2013-14.
- ♦ 0.25 ha/RKM (50mx50m) sample plots were adopted on block forest area to count saplings at random location to estimate survival percentage. For linear plantation, counting of plants in row was adopted.

9.0 Profile of the Study Area

- ♦ Haryana was created on November 1, 1966 with seven districts. Subsequently 14 other districts were included through restructuring the previous ones. Total geographical area of Haryana is 44212 sq km which is 1.35% of total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% area of the state.
- ♦ Rewari district is located in southern part of Haryana. It is 80 km away from New Delhi. It was accorded the status of a district by the government of Haryana on November 1, 1989. Rewari, which forms a part of the NCR, is adjacent to Rajasthan and, therefore, has dust storms in summer. Rugged hilly terrain of Aravalli ranges and sand dunes affect the city's climate.
- ♦ Bhiwani was created on 22nd December 1972. It is named after its headquarters, Bhiwani city. Bhiwani city, it is believed, was founded by a Rajput named Neem after his wife Bhani. The name Bhani later changed to Bhiyani and subsequently to Bhiwani. Bhiwani is around 124 kms from Delhi.
- ♦ Hisar was the largest district in Haryana until its reorganization in 1966 as some parts of it was transferred to the newly created Jind district. Bhiwani and Loharu tehsils were transferred to Bhiwani district in 1974. Hisar was further bifurcated when Sirsa district was formed. Fatehabad district was later created as well. It is situated at a distance of 164 kilometers northwest of Delhi on NH 10. Hisar city is one of the important and fast growing urban centers of Haryana.

10.0 Main Findings of the study

10.1 Quantitative Analysis and Findings

- ♦ CFP Jatusana (Rewari): covered 150 ha/RKM (100 ha and 50 RKM) land under CAMPA by adopting Linear Tree Grove (LTG-50 RKM) and Bio-drainage (100 ha) schemes of plantation during 2013-14. The

project area was spread in Jhajjar (100 ha) and Mahendragarh (50 RKM) districts. Rs 32.25 lakh against the target of same amount. A total of 0.33 lakh plant species of *Clonal Eucalyptus*, *Gular*, *Imli*, *Neem*, *Papri*, *Pikhan*, *Sahtoot*, *Shisham*, *Siris*, *B. Dek*, etc. were planted in the project at 11 places/sites on 150 ha/RKM land. Average survival percentage of plantation estimated was 81%.

- ❖ **CFP Bhiwani:** A total of 25 ha land treated by CFP Bhiwani at one site with a total cost of Rs. 3.25 lakh. 0.051 lakh plant species of *Clonal Eucalyptus* was planted. Average survival percentage of plantation estimated was 85%.
- ❖ **CFP Hisar:** CFP Hisar Forest Division treated 175 ha/RKM land (125 ha and 50 RKM) by adopting LTG (50 RKM) and Bio-drainage (125 ha) schemes of plantation at 14 places with a total cost of Rs. 29.19 lakh. 0.375 lakh plant species of *Clonal Eucalyptus*, *Shisham*, *Bakain*, *Neem*, *B. Dek*, etc. were planted in the project. Average survival percentage of plantation estimated was 87%.
- ❖ **CFP Hisar:** DWLO Hisar created three assets under CAMPA during 2013-14 namely plantation (414.4 ha), concrete wall with iron chain link (504 RKM) and purchase of one vehicle with total cost of Rs. 31.75 lakh. 0.060 lakh plant species of *Neem*, *Jamun*, *Pikhan*, *Vadi*, *Pipal*, *Bahada*, *Sahtoot*, *Gular*, etc. were planted. Average survival percentage of plantation estimated at DWLO Hisar was 55%.
- ❖ In all the four forest divisions (CFP Jatusana, CFP Bhiwani, CFP Hisar and DWLO Hisar) project authority maintained mainly work register and cashbook under CAMPA programme. Plantation journal would be prepared of respective sites as stated by the project authorities.
- ❖ **Monitoring and Evaluation** is conducted by a separate wing of forest department called M & E Wing. It is conducted once or twice a year as reported by the project authorities. The last evaluation of state CAMPA Haryana of CFP Jatusana, Bhiwani and Hisar forest divisions was conducted in September-October 2014. M & E wing consists of one CF and two DCF. Its head office is at Kamal. M & E wing carries out monitoring & evaluation of entire forestry programmes including CAMPA coming under state and central jurisdiction.
- ❖ **Agricultural Finance Corporation Ltd. (AFC Limited)**, a Delhi based agency carried out monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12 prior to current monitoring & evaluation being carried out by **Locus Research & Consultants Pvt. Ltd.** Overall findings of the study by **AFC Limited** were satisfactory as reported.
- ❖ Bank accounts of the respective forest divisions (CFP Jatusana, CFP Bhiwani, CFP Hisar and DWLO Hisar) were operating with Corporation Bank at district headquarters branches. The signing authorities were Divisional Forest Officers. Flow of funds was smooth as reported by various stakeholders of the programme.

10.2 Qualitative Analysis and Findings

- ❖ Main factors impacting selection and choice of species were topography, soil type, climate, rainfall, suitability in the area, economic value, preference by locals, etc.
- ❖ Improvement in soil moisture conservation was observed at most plantation sites of CAMPA.
- ❖ Limited natural regeneration of plant species in the plantation area was found. In urban and suburban zone it was negligible while on block forestland there were some glimpses of it.
- ❖ Quality of Work in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.
- ❖ Open and rash grazing by loose domestic animals, wild animals like, rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. Impacted Growth and Survival of Plantation
- ❖ Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. Barbed wire and bush fencing were found at most plantation sites under protection of plantation. In urban areas brick/iron/wood gabions were also adopted along with barbed.

- ❖ Motivation and Technical Competence of Personnel Involved in the Project was found satisfactory. Range Forest Officers (RFO), foresters and forest guards were trained to tackle necessary work. Temporary/daily wages workers, cattle watchers, etc. were lacking these skills to deal with new challenges of the programme.
- ❖ Role of Local People in Project Work was far from satisfactory. There was low participation of local community in the programme. Modern tools of mass media should be adopted for awareness and motivation of community.
- ❖ CAMPA accrued both direct and indirect benefits in the project area. Additional geographical area came under forest cover. It helped in improving quality of ecology and environment as well as micro-climate of the area.
- ❖ Formation of SHG in the Project was optional for the project authority to provide additional benefits of community in the project area. There was no attempt at this front from the project authority.

11.0 Constraints and Limitations of the Project

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2013-14 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.
- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 Suggestions and Recommendations

- ❖ Measures should be taken to check grazing in the area. Stall feeding of domestic animals should be promoted among local community through regular awareness and motivation.
- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gabions of iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ◆ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ◆ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ◆ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
- ◆ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
- ◆ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
- ◆ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ✦ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ✦ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ✦ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ✦ The amount would be transferred to it by the ad-hoc CAMPA.
 - ✦ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ✦ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ✦ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ✦ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The state government may also credit to the State CAMPA
 - ✦ Grants or aid received if any;
 - ✦ Any loan taken by the Authority or any borrowings made by it; and
 - ✦ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ❖ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ❖ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ❖ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ❖ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ❖ "State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ✦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ✦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ✦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ✦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.
- ✦ Department of Forests, Government of Haryana, awarded the honorable task of Monitoring & Evaluation of CAMPA programme to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency in January 2015. Altogether 11 districts and forest divisions coming under their jurisdiction of Haryana were assigned to our agency.

1.4 Objectives of the Programme/CAMPA

- ✦ Important objectives of CAMPA are as follows:
 - ✦ Conservation, protection, regeneration and management of existing natural forests;
 - ✦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - ✦ Compensatory Afforestation
 - ✦ Environmental services, which include:-
 - ✦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ✦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ✦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ✦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
 - ✦ Science, Research, Training and Capacity Building.
 - ✦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of the Study

- ✦ The study area covers four forest divisions i.e. CFP Jatwana (Rewari), Bhiwani, Hisar and DWLD Hisar in Haryana. However, CAMPA work of these forest divisions was spread among

several districts of the state namely Rewari, Mahendragarh, Jhajjar, Bhiwani, Hisar, Jind, Fatehabad, Sirsa, etc. A detail of geographical location of project area is given below in tabular form of all the 4 forest divisions as mentioned above.

Table 1.1: Division Wise geographical location of CAMPA project work (2013-14)

Sl. No	Forest Division	District Name of Project Location
1.	CFP Jatusana (Rewari)	Jhajjar and Mahendragarh
2.	CFP Bhiwani	Jind
3.	CFP Hisar	Hisar, Fatehabad and Sirsa
4.	DWLO Hisar	Hisar and Jind

1.5 Reference Period of the Study

- Reference period of CAMPA Monitoring & Evaluation was one year, i.e. 2013-14.

1.7 Components of the Project

- Main components of CAMPA are as follows:
 - People's Participation
 - Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - Monitoring and Evaluation of the programme
 - Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
 - Extension and awareness.

1.8 Project Implementing Agency and Proposed Activities of the Programme

- A brief outline of project agency and programme implementation is given below in table-1.2a, 1.2b, 1.2c and 1.2d for CFP Jatusana, Bhiwani, Hisar and DWLO Hisar.

Table 1.2 a: Implementing Agency and Proposed Activities of Programme (CFP Jatusana)

Project Implementing Agency	
❖ Forest Division	: Jatusana
❖ District	: Rewari
❖ Forest Circle	: Hisar
❖ State	: Haryana
Project Location	
❖ Watersheds/Sub-watersheds	: NA
❖ Development Blocks	: NA
❖ Forest Ranges	: 1, Jatusana, 2, Kanina
❖ Project Sites/Locations	: 11 (Eleven)
❖ Project Area	: Project area of CFP Jatusana Forest Division was spread in two districts namely Mahendragarh and Jhajjar
Assets/ Infrastructure Development Activities, if any	
❖ NA	
Preparation of Plantation Journal and Record Upkeep	
❖ No.	
Project Duration, Area and Cost	
❖ Project Duration	: 2013-14
❖ Project Area	: Target: 150ha/RKM, Achievement: 150ha/RKM
❖ Project Cost	: Target: Rs.32.25 Lakh, Achievement: Rs.32.25 lakh
Proposed Strategies and Salient Features of the Project	
❖ There is no provision of VFC in CAMPA	
❖ Plantation was carried out under NPV and CA schemes/components	

Table 1.2b: Implementing Agency and Proposed Activities of Programme (CFP Bhiwani)

Project Implementing Agency	
♦ Forest Division	: CFP Bhiwani
♦ District	: Bhiwani
♦ Forest Circle	: Hisar
♦ State	: Haryana
Project Location	
♦ Watersheds/Sub-watersheds	: NA
♦ Development Blocks	: NA
♦ Forest Ranges and district	: 1. Bhiwani, 2. Loharu, 3. Jind, 4. Siwani
♦ Project Sites/Locations	: 1 (One)
♦ Project Area	: The project area was spread only in Jind district during 2013-14.
Assets/ Infrastructure Development Activities s, if any	
♦ NA	
Preparation of Plantation Journal and Record Upkeep	
♦ No	
Project Duration, Area and Cost	
♦ Project Duration	: 2013-14
♦ Project Area (78.8 RKM)	: Target: 25 ha, Achievement: 25 ha
♦ Project Cost	: Target: Rs.3.25 lakh, Achievement: Rs.3.25 lakh
Proposed Strategies and Salient Features of the Project	
♦ There is no provision of VFC in CAMPA	
♦ Plantation was carried out under NPV and CA schemes/components	

Table 1.2c: Implementing Agency and Proposed Activities of Programme (CFP Hisar)

Project Implementing Agency	
♦ Forest Division	: Hisar
♦ District	: Hisar
♦ Forest Circle	: Hisar
♦ State	: Haryana
Project Location	
♦ Watersheds/Sub-watersheds	: NA
♦ Development Blocks	: NA
♦ Forest Ranges	: 1. Hisar, 2. Fatehabad, 3. Sirsa
♦ Project Sites/Locations	: 14 (fourteen)
♦ Spread of Project Area	: The project area of CFP Hisar Forest Division was spread in the districts of Hisar, Fatehabad and Sirsa.
Assets/ Infrastructure Development Activities s, if any	
♦ NA	
Preparation of Plantation Journal and Record Upkeep	
♦ There was no plantation journal but records upkeep was satisfactory	
Project Duration, Area and Cost	
♦ Project Duration	: 2013-14
♦ Project Area (78.8 RKM)	: Target: 175 ha/RKM, Achievement: 175 ha/RKM
♦ Project Cost	: Target: Rs. 29.19 lakh, Achievement: Rs. 29.19 lakh
Proposed Strategies and Salient Features of the Project	
♦ There is no provision of VFC in CAMPA	
♦ Plantation was carried out under NPV and CA schemes/components	

Table 1.2d: Implementing Agency and Proposed Activities of Programme (DWLO Hisar)

Project Implementing Agency	
◆ Forest Division	: DWLO Hisar
◆ District	: Hisar
◆ Forest Circle	: Hisar
◆ State	: Haryana
Project Location	
◆ Watersheds/Sub-watersheds	: NA
◆ Development Blocks	: NA
◆ Forest Ranges	: 1.Hisar and 2. Jind
◆ Project Sites/Locations	: 3 (Three)
◆ Spread of Project Area	: It was spread in Hisar and Jind districts of Haryana
Assets/ Infrastructure Development Activities, if any	
◆ Creation of fencing and purchase of vehicle for rescuing Animals	
Plantation Journal and Record Upkeep	
◆ NA	
Project Duration, Area and Cost	
◆ Project Duration	: 2013-14
◆ Project Area	: Target: 414.4 ha, Achievement: 414.4 ha. Besides, two other assets were created i.e. concrete wall fencing with iron chain link (504 RKMO) and purchase of one vehicle in the division.
◆ Project Cost	: Target: Rs. 30.75 lakh, Achievement: Rs.30.75 lakh
Proposed Strategies and Salient Features of the Project	
◆ There is no provision of VFC formation in CAMPA	
◆ Plantation was carried out under NPV and CA schemes/components	

1.9 Need of the Study

- ◆ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ◆ Scope of study is confined to CFP Forest Divisions Jatusana (Rewari), Bhiwani, Hisar and DWLO Hisar in Haryana.

1.11 Objectives of Monitoring & Evaluation

- ◆ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements
 - ◆ To evaluate performance of the programme
 - ◆ To estimate of survival percentage of plant species adopted in the project.
 - ◆ To analyze factors impacting plantation survival and suggest remedial measures.
 - ◆ To assess peoples' participation and assets created
 - ◆ To assess the direct and indirect benefits and impact of the programme.
 - ◆ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ◆ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources. A combination of

simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.

❖ **Division Wise Sample Selection, Size and Distribution**

- (a) CFP Jatusana/Rewari: A sample of 136.4 ha/RKM (90.93%) area was drawn from the total area of 150 ha/RKM for field inspection and to estimate survival percentage of plantation. The sample was representative to all districts and schemes of plantation.
 - (b) CFP Bhiwani: A sample of 100% coverage of project area 25 ha area was covered for field inspection and to estimate survival percentage of plantation.
 - (c) CFP Hisar: A sample of 139.5 ha/RKM (79.71%) area was drawn from the total area of 175 ha/RKM for field inspection and to estimate survival percentage of plantation. The sample was representative to all districts and schemes of plantation.
 - (d) DWLO Hisar: 100% area (414.5 ha) was covered for field inspection and to estimate survival percentage of plantation.
- ❖ To estimate survival rate of plantation a unit/plot/grid of 0.25 ha (50mx50m) was adopted at random locations for counting the plantation. Row counting was also adopted. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - Chapter-1 Introduces the Project Concept, Strategy Objectives and Methodology.
 - Chapter-2 gives the Profile of the Project Area and its Location
 - Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - Chapter-4 gives Qualitative Analysis and Findings.
 - Chapter-5 deals with Project Constraints and Limitations
 - Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

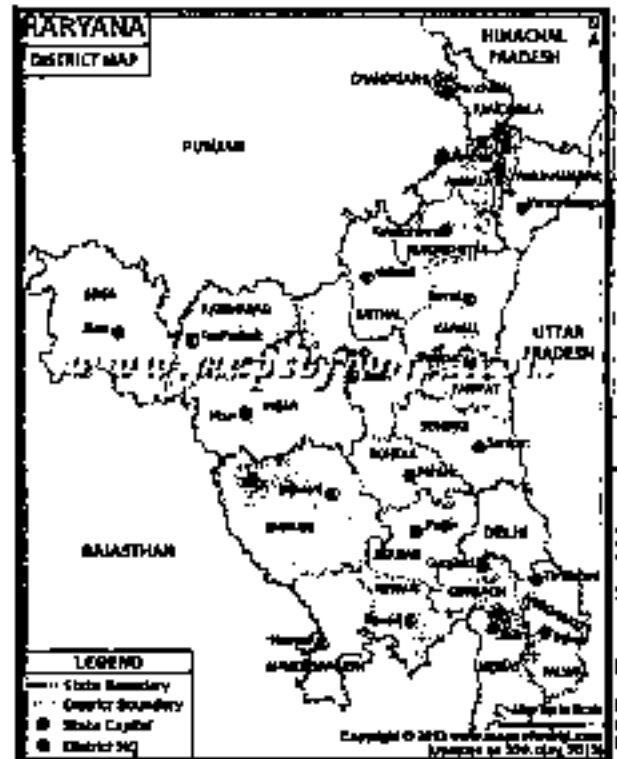
- ❖ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

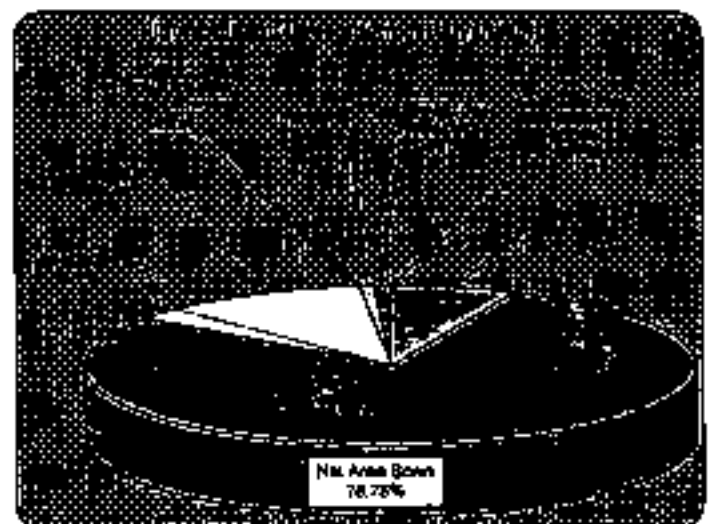
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
- ❖ **Ambala Division** has five (5) districts namely Kalithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ❖ **Gurgaon Division** has six (6) districts namely Patwal, Sirsa, Mahendragarh, Gurgaon, Rewari, and Sirsa districts in its jurisdiction.
- ❖ **Hisar Division** consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ **Rohtak Division** also has five (5) districts namely Kamal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



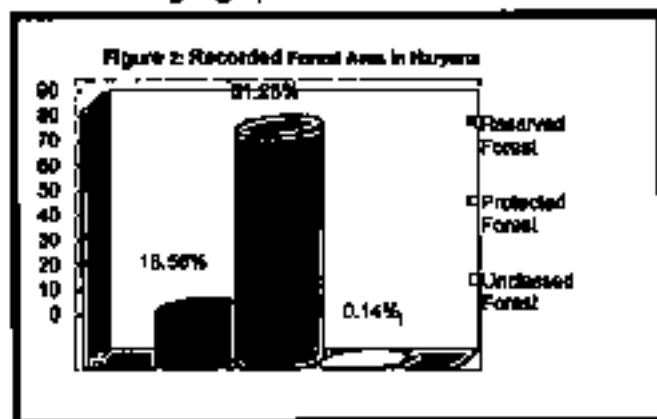
2.1.1 Land Use Pattern of Haryana

- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq. km). Thus forestland and tree cover together covers 6.80% of the state geographical area.
- ❖ Haryana is an agricultural state and about 81.80% land is under Net sown area /cultivation followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands (0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use India State of Forest Report 2011, FSI Dehradun.



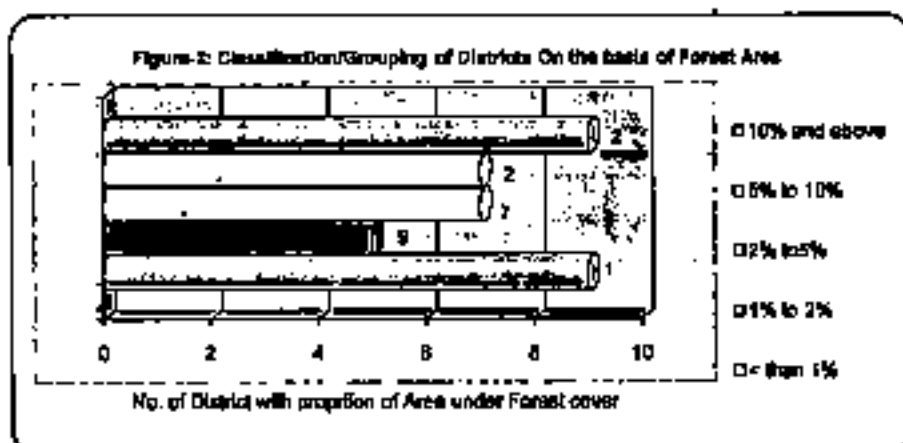
2.1.2 Recorded Forest Area in Haryana

- ✦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ✦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ✦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. **Group-1:** Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ✦ **Group-2:** Two districts namely Gurgaon (8.35%) and Mewat (8.35%) and fall in the category of 5% to 10% forest cover.
- ✦ **Group-3:** Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh, Bhiwani, Rewari and Kalka fall in the category of 2% to 5% forest cover.
- ✦ **Group-4:** Nine districts namely Hisar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat and they fall in group of 1% to 2% forest cover.
- ✦ **Group-5:** One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure-3 for further information.



2.2 Profile of CFP & DWLO Forest Divisions and Districts (Rewari, Bhiwani, Hisar and other districts of project implementation)

- CFP Jataspur /Rewari: Rewari district is located in southern part of Haryana. It is 80 km away from New Delhi. It was accorded the status of a district by the government of Haryana on November 1, 1989. As per census 2011 it is the second least populous district of Haryana (out of 21)



after Panchkula. Rewari, which forms a part of the National Capital Region, is adjacent to Rajasthan and, therefore, has dust storms in summer. Rugged hilly terrain of Aravali ranges as well as sand dunes in the district affect the city's climate.

- b) CFP Bhiwani: This district was created on 22nd December 1972. The district is named after its headquarters, Bhiwani city. Bhiwani city, it is believed, was founded by a Rajput named Neem after his wife Bhani. The name Bhani later changed to Bhiyani and subsequently to Bhiwani. It occupies an area of 5,140 square kms and is situated between 28.19° and 29.05° North Latitudes and 75.26° and 76.28° East Longitudes. It has 442 villages with a population of 1,425,022. The Bhiwani is around 124 kms from Delhi. Other major towns in the district are Swani, Charkhi-Dadri, Loharu, Tosham and Bawani Khara.



- c) CFP Hisar: It was the largest district in Haryana until its reorganization in 1966 as some parts of it was transferred to the newly created Jind district. Bhiwani and Loharu tehsils were transferred to Bhiwani district in 1974. Hisar was further bifurcated when Sirsa district was formed. Fatehabad district was later created as well. Hisar is located at 29°9'11" North Latitude and 75°43'6" East Longitude. It is situated at a distance of 164 kilometers northwest of Delhi on the National Highway (NH 10). Hisar city is one of the important and fast growing urban centers of Haryana. It has grown to a vital position on the urban map of Haryana. It has come up because of location factors. Its location is such that for any development away from the G.T. Road Hisar draws the attention.



- d) DWLO Hisar: This forest division was situated in the district of Hisar. However, its geographical area/project work was spread in two districts namely Hisar and Jind. Details are given in the above section.

2.3 Forest Cover in the districts Rewari, Bhiwani and Hisar

- ❖ Rewari (*India State of Forest Report-2011*) district has 3.04% area under forest against 3.64% of state average. Main plant species adopted under CAMPA programme were *Papri, Neem, Shisham, Siras, Arjun, Frans, Jamun, Clone Eucalyptus*, etc.
- ❖ Bhiwani district has 3.18% area under forest cover. Main plant species adopted under CAMPA programme were *Clone Eucalyptus, Jamun, Papri, Neem, Sahtoot, Bakain, Shisham*, etc.
- ❖ Hisar district has 1.05% area under forest cover. Main plant species adopted under CAMPA programme at by CFP Hisar were *Eucalyptus Clone, Siras, Pithkan, Papri, Shisham, Bakain, Neem, Arjun, Jand, etc.*

Chapter-3

Quantitative Evaluation and Findings

3.1 (A) Classification of Area Covered/Treated (CFP Jatusana/Rewari)

- CFP Jatusana (Rewari) Covered 150 ha/RKM (100 ha and 50 RKM) land under CAMPA by adopting Linear Tree Grove (LTG-50 RKM) and Bio-drainage (100 ha) schemes of plantation during 2013-14. The project area was spread in Jhaljar (100 ha) and Mahendragarh (50 RKM) districts. Refer table-3.1a for detail information.

Table 3.1a Area Covered/Treated by CFP Jatusana Forest Division Under CAMPA (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Land Category	Scheme of Plantation	Area in RKM	Area in ha
1	Jhaljar	Jhaljar	Dubaidhan	Non Forest Land	Bio Drainage	00	100
2	Mahendragarh	Kanina	Pall University	Non Forest Land	LTG	19	00
3	Mahendragarh	Kanina	Mahendragarh to Dhadhot Road D-B L&R	Non Forest Land	LTG	19	00
4	Mahendragarh	Kanina	Bhojwas to Bewal-Khatana Kacha way	Non Forest Land	LTG	6	00
5	Mahendragarh	Kanina	Bhojwas to Kakrale & Rambasa Road	Non Forest Land	LTG	3.6	00
6	Mahendragarh	Kanina	Kakrale School & Animal Hospital	Non Forest Land	LTG	1.4	00
7	Mahendragarh	Kanina	Bhojwas School	Non Forest Land	LTG	1	00
8	Mahendragarh	Kanina	Bhojwas Power House	Non Forest Land	LTG	0.58	00
9	Mahendragarh	Kanina	Bhojwas Animal Hospital	Non Forest Land	LTG	0.84	00
10	Mahendragarh	Kanina	Garhi School	Non Forest Land	LTG	1.1	00
11	Mahendragarh	Kanina	Sundish Co. Operative Society	Non Forest Land	LTG	0.5	00
Total						80	100

3.2 (A) Physical and Financial Target and Achievements (CFP Jatusana/Rewari)

- Total expenditure of the entire project during 2013-14 was Rs 32.25 lakh against the target of same amount. Plantation work was carried out at 11 places in two districts, i.e. Mahendragarh and Jhaljar. Refer table 3.2b as given below.

Table-3.2b: Physical and Financial Target and Achievements of CFP Jatusana/Rewari (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Physical (Area in RKM/ha)		Financial (In Rs.)	
				Target	Achieved	Target	Achieved
1	Jhaljar	Jhaljar	Dubaidhan	100	100	1300000	1300000
2	Mahendragarh	Kanina	Pall University	19	19	1925000	1925000
3	Mahendragarh	Kanina	Mahendragarh to Dhadhot Road D-B L&R	19	19		
4	Mahendragarh	Kanina	Bhojwas to Bewal-Khatana Kacha way	6	6		
5	Mahendragarh	Kanina	Bhojwas to Kakrale & Rambasa Road	3.6	3.6		
6	Mahendragarh	Kanina	Kakrale School & Animal Hospital	1.4	1.4		
7	Mahendragarh	Kanina	Bhojwas School	1	1		
8	Mahendragarh	Kanina	Bhojwas Power House	0.58	0.58		
9	Mahendragarh	Kanina	Bhojwas Animal Hospital	0.84	0.84		
10	Mahendragarh	Kanina	Garhi School	1.1	1.1		
11	Mahendragarh	Kanina	Sundish Co. Operative Society	0.5	0.5		
Total				190	190	3225000	3225000

3.3 (A) Inventory/ List of Plantation (CFP Jatusana/Rewari)

- A total of 0.33 lakh plant species of *Clonal Eucalyptus*, *Gular*, *Amli*, *Neem*, *Papri*, *Palkhan*, *Sahtoot*, *Shisham*, *Siris*, *B. Dek*, etc. were planted in the project at 11 places/sites on 150 ha/RKM land. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3c.

Table 3.3c: Inventory/List of Plantation of CFP Jatusana/Rewari under CAMPA (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Schema of Plantation	Area Ha/RKM	No. of plants	Name of Plant Species
1	Jhajjar	Jhajjar	Dubaldhan	Bio Drainage	100	20000	Clonal Eucalyptus
2	Mahendragarh	Kanina	Pall University	LTG	19	4750	Neem, B. Dek, Papri, Inil Pukhan, Sahitoo, Shisham
3	Mahendragarh	Kanina	Mahendragarh to Dhadhoh Road 0-6 L&R	LTG	16	4000	Papri Shisham
4	Mahendragarh	Kanina	Bhojwasa to Bawal-Kharana Kacha way	LTG	8	1500	Papri
5	Mahendragarh	Kanina	Bhojwasa to Kakrala & Rambasa Road	LTG	3.8	900	Papri
6	Mahendragarh	Kanina	Kakrala School & Animal Hospital	LTG	1.4	350	Papri
7	Mahendragarh	Kanina	Bhojwasa School	LTG	1	250	Papri, Gular, B. Dek, Neem
8	Mahendragarh	Kanina	Bhojwasa Power House	LTG	0.85	140	Sirs, B. Dek
9	Mahendragarh	Kanina	Bhojwasa Animal Hospital	LTG	0.84	210	Neem, Gular, B. Dek, Pukhan, Sirs
10	Mahendragarh	Kanina	Garti School	LTG	1.1	275	Papri, Neem, B. Dek
11	Mahendragarh	Kanina	Sundrah Co. Operative Society	LTG	0.5	125	Papri, Neem, B. Dek, Sirs
Total					150	32500	

3.4 (A) Analysis of Sample Plantation and Survival Assessment (CFP Jatusana/Rewari)

- ❖ A sample of 136.4 ha/RKM (90.93%) area was drawn by adopted stratified systematic random sampling technique for field inspection of plantation/project assets and to estimate survival percentage. The sample was representative to all districts and schemes of plantation.
- ❖ Average survival percentage of plantation estimated was 81%. The survival percentage was highest (83%) at kakral School and animal hospital in Mahendragarh district and it was lowest (78%) at Dubaldhan in Jhajjar district. Average height of plantation was 9 feet. Growth and health of plantation was good. Refer table 3.4d for further information along as given below.

Table 3.4d: Analysis of Sample Plantation sites and Survival % of CFP Jatusana/Rewari (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Schema of Plantation	Area Ha/RKM	No. of plants	Plants Survived	Survival (%)
1	Jhajjar	Jhajjar	Dubaldhan	Bio Drainage	100	20000	15600	78
2	Mahendragarh	Kanina	Pall University	LTG	19	4750	3880	82
3	Mahendragarh	Kanina	Mahendragarh to Dhadhoh Road 0-6 L&R	LTG	16	4000	3200	80
4	Mahendragarh	Kanina	Kakrala School & Animal Hospital	LTG	1.4	350	290	83
Total					136.4	29100	22864	81

3.1 (B) Classification of Area Covered/Treated (CFP Bhiwani)

- ❖ A total of 25 ha land treated by CFP Bhiwani under CAMPA programme by adopting Bio-drainage (Ridge) plantation scheme at one site during 2013-14. The project area was spread in the district of Jind only. Refer table-3.1e for detail information.

Table 3.1e Area Covered/Treated Under CAMPA of CFP Bhiwani Forest Division (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Land Category	Schema of Plantation	Area in ha
1.	Bhiwani	Jind	Kharant-26 farmers	Private	Bio-Drainage	25
Total						25

3.2 (B) Physical and Financial Target and Achievements (CFP Bhiwani)

- ❖ A sum of Rs 3.25 lakh was spent in project during 2013-14 against the target of same amount. Plantation work was carried out at one place in Jind district. Refer table 3.2-f as given below.

Table 3.2-f: Physical and Financial Target and Achievements of CFP Bhiwani Forest Division (2013-14)

Sl. No.	District	Name of Range	Plantation Site	Physical (Area in ha)		Financial (Rs. in lakh)	
				Target	Achievement	Target	Achievement
1	Bhiwani	Jind	Kharainti-25 farmers	25	25	3.25	3.25
		Total		25	25	3.25	3.25

3.3 (B) Inventory/ List of Plantation (CFP Bhiwani)

- ♦ A total of 0.051 lakh plant species of *Clonal Eucalyptus* was planted in the project at one site and covered 25 ha land. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3g.

Table 3.3g: Inventory/ List of Plantation of CFP Bhiwani Forest Division (2013-14)

Sl. No.	District	Name of Range	Project/Plantation Site	Scheme of Plantation	Area in ha	No. of Plants	Name of Plant Species
1	Bhiwani	Jind	Kharainti-25 farmers	Bio-Drainage	25	5100	Eucalyptus clone
		Total			25	5100	

3.4 (B) Analysis of Sample Plantation and Survival Assessment (CFP Bhiwani)

- ♦ There was 100% coverage of project area 25 ha for field inspection of plantation and to estimate survival percentage of plantation.
- ♦ Average survival percentage of plantation estimated was 85% at Kharainti village among 25 farmers. Average height of plantation was 9 feet. Growth and health of plantation was very good. Refer table 3.4h for further information along with photographs as given below.

Table 3.4h: Analysis of Sample Plantation and Survival % of CFP Bhiwani (2013-14)

Sl. No.	District	Name of Range	Project/Plantation Site	Scheme of Plantation	Area in ha	No. of plants	No. of Plants Survived	Survival (%)
1	Bhiwani	Jind	Kharainti-25 farmers	Bio-Drainage	25	5100	4335	85
		Total			25	5100	4335	85

3.1 (C) Classification of Area Covered/Treated (CFP Hissar)

- ♦ CFP Hissar Forest Division treated 175 ha/RKM land (125 ha and 50 RKM) by adopting LTG (50 RKM) and Bio-drainage (125 ha) schemes of plantation at 14 places during 2013-14. The project area was spread in three districts namely Hissar (50 ha), Sirsa (75 ha) and Fatehabad (50 RKM). Refer table-3.1i for detail information.

Table: 3.1i Area Covered/Treated Under CAMPA of CFP Hissar (2013-14)

Sl. No.	District	Name of Range	Project/Plantation Site	Land Category	Scheme of Plantation	Area in RKM	Area in ha
1	Hissar	Hissar	Kumbhaq Farmers	Farmland	CAMPA Bio-Drainage	00	50
2	Sirsa	Sirsa	Lohgarh	Farmland	CAMPA Bio-Drainage	00	75
3	Hissar	Hissar	Dhanau-Dinglana Road L/R	Govt. Land	LTG	6.5	00
4	Hissar	Hissar	Sukhni-Bugana Road L/R	Govt. Land	LTG	2.5	00
5	Hissar	Hissar	Kinola Pabra Road L/R	Govt. Land	LTG	6.5	00
6	Hissar	Hissar	Pabra-Kandoor Road L/R	Govt. Land	LTG	2.5	00
7	Fatehabad	Fatehabad	Mohamedpur Roht Road to Badopal 0-4 Km L/R	Govt. Land	LTG	3	00
8	Fatehabad	Fatehabad	Dehman to Gorakhpur Rd. 0 to 5 L/R	Govt. Land	LTG	3	00
9	Fatehabad	Fatehabad	Khejun to Jharolia Rd. 0 to 4 Km. L/R	Govt. Land	LTG	6	00
10	Fatehabad	Fatehabad	Khekar to Jharoli Kalan Rd. 0-4 Km. L/R	Govt. Land	LTG	4	00
11	Fatehabad	Fatehabad	Dehman to Mochi Rd. 0 to 6 Km. L/R	Govt. Land	LTG	4	00
12	Fatehabad	Fatehabad	Jandi to Chandrawal-Bhulan Rd 0-5 Km L/R	Govt. Land	LTG	2	00
13	Fatehabad	Fatehabad	Badopal to Bhane Road L/R	Govt. Land	LTG	2.5	00
14	Fatehabad	Fatehabad	Dehman to shwari 0-4 km L/R	Govt. Land	LTG	5.5	00
		Total				50	125

3.2 (C) Physical and Financial Target and Achievements (CFP Hissar)

- ♦ Total expenditure of the entire project during 2013-14 was Rs 29.19 lakh against the target of same amount. Plantation work was carried out at 14 places/sites in three districts, i.e. Hissar, Fatehabad and Sirsa Refer table 3.2j as given below.

Table 3.2j: Physical and Financial Target and Achievements of CFP Haryana (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Physical (Area in RKMha)		Financial (Rs.)	
				Target	Achievement	Target	Achievement
1	Haryana	Haryana	Kumbhaq Farmers	60 ha	50 ha	818100	818100
2	Sirsa	Sirsa	Lohgarh	75 ha	75 ha	788305	788305
3	Haryana	Haryana	Dhanu-Dhingsana Road L/R	8.5	8.6	288500	288500
4	Haryana	Haryana	Sukhani-Bugana Road L/R	2.5	2.5	79100	79100
5	Haryana	Haryana	Kinola Palna Road L/R	6.5	6.4	203100	203100
6	Haryana	Haryana	Palna- Kandoli Road L/R	2.5	2.5	63900	63900
7	Fatehabad	Fatehabad	Mohamedpur Rohi Road to Badopal 0-4Km L/R	3	3	81800	81800
8	Fatehabad	Fatehabad	Dehman to Gorkhpur Rd. 0 to 5 L/R	3	3	88830	88830
9	Fatehabad	Fatehabad	Khajuri to Jhalana Rd. 0to 4 Km. L/R	6	6	210800	210800
10	Fatehabad	Fatehabad	Khajuri to Jhalna Isalan Rd. 0-4 Km. L/R	4	4	105300	105300
11	Fatehabad	Fatehabad	Dehman to Mocchi Rd. 0 to 5 Km. L/R	4	4	158800	158800
12	Fatehabad	Fatehabad	Jandli to Chandrawal-Bhutan Rd 0-8km L/R	2	2	43800	43800
13	Fatehabad	Fatehabad	Badopal to Bhana Road L/R	2.5	2.5	111412	111412
14	Fatehabad	Fatehabad	Dehman to sheni 0-4 km L/R	5.5	5.5	120670	120670
			Total	175	175	2918747	2918747

3.3 (C) Inventory/ List of Plantation (CFP Haryana)

- A total of 0.375 lakh plant species of *Clonal Eucalyptus*, *Shisham*, *Bakain*, *Neem*, *B. Dek*, etc. were planted in the project covered covering 175 ha/RKM land. District wise, range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3k.

Table 3.3k: Inventory/List of Plantation of CFP Haryana (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Scheme of Plantation	Area Hare/Km	No. of plants	Name of Plant Species
1	Haryana	Haryana	Kumbhaq Farmers	CAMPA Bio-Drainage	50	10000	Clonal Eucalyptus
2	Sirsa	Sirsa	Lohgarh	CAMPA Bio-Drainage	75	15000	Clonal Eucalyptus
3	Haryana	Haryana	Dhanu-Dhingsana Road L/R	LTG	8.5	2125	Bakain, Neem, Shisham
4	Haryana	Haryana	Sukhani-Bugana Road L/R	LTG	2.5	625	Bakain, Neem, Shisham
5	Haryana	Haryana	Kinola Palna Road L/R	LTG	6.5	1625	Bakain, Neem, Shisham
6	Haryana	Haryana	Palna- Kandoli Road L/R	LTG	2.5	625	Shisham
7	Fatehabad	Fatehabad	Mohamedpur Rohi Road to Badopal 0-4Km L/R	LTG	3	750	Neem, Shisham
8	Fatehabad	Fatehabad	Dehman to Gorkhpur Rd. 0 to 5 L/R	LTG	3	750	Shisham
9	Fatehabad	Fatehabad	Khajuri to Jhalana Rd. 0to 4 Km. L/R	LTG	6	1500	Shisham, B. dek
10	Fatehabad	Fatehabad	Khajuri to Jhalna Isalan Rd. 0-4 Km. L/R	LTG	4	1000	Shisham, Neem
11	Fatehabad	Fatehabad	Dehman to Mocchi Rd. 0 to 5 Km. L/R	LTG	4	1000	Neem, B. dek, Shisham, other
12	Fatehabad	Fatehabad	Jandli to Chandrawal-Bhutan Rd 0-8km L/R	LTG	2	600	Shisham, B. dek
13	Fatehabad	Fatehabad	Badopal to Bhana Road L/R	LTG	2.5	625	Neem, Shisham
14	Fatehabad	Fatehabad	Dehman to sheni 0-4 km L/R	LTG	5.5	1375	Shisham
			Total		175	31600	

3.4 (C) Analysis of Sample Plantation and Survival Assessment (CFP Haryana)

- By adopted stratified systematic random sample technique 139.5 ha/RKM (79.71%) area was sampled for field inspection of plantation and to estimate survival percentage. The sample was representative to all districts and schemes of plantation.
- Average survival percentage of plantation estimated was 87%. The survival percentage was highest (91%) at Khumbha village of Haryana district and it was lowest (79%) at Dehman to Mocchi Rd. 0 to 5 Km. L/R in Fatehabad district. Average height of plantation was 9 feet. Growth and health of plantation was good. Refer table 3.4l for further information along with photographs as given below.

Table 3.4b: Analysis of Sample Plantation and Survival % of CFP Hissar (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Scheme of Plantation	Area Ha/RKM	No. of plants	No. of plants Survived	Survival (%)
1	Hissar	Hissar	Kumbhaq – Farmers	CAMPA Bio-Drainage	30	10000	9100	91
2	Sirsa	Sirsa	Lohgarh	CAMPA Bio-Drainage	75	10000	13350	89
3	Hissar	Hissar	Suthani-Bugana Road L/R	LTG	2.5	625	610	83
4	Fatehabad	Fatehabad	Khajuri to Jhalanka Rd. 0 to 4 Km. L/R	LTG	8	1500	1215	81
5	Fatehabad	Fatehabad	Dehman to Mochi Rd. 0 to 8 Km. L/R	LTG	4	1000	790	79
6	Fatehabad	Fatehabad	Jandli to Chandrawal-Bhutan Rd 0-5km L/R	LTG	2	500	420	84
			Total		139.5	28625	25394	87

3.1 (D) Classification of Area Covered/Treated (DWLO Hissar)

- ✦ DWLO Hissar created three assets under CAMPA during 2013-14 namely plantation (414.4 ha), concrete wall with iron chain link (504 RKM) and purchase of one vehicle. Plantation was conducted by adopting CA (TP) scheme of plantation at one place. The project area was located in Jind district. Refer table-3.1j for detail information.

Table 3.1j Area Covered/Treated Under CAMPA of DWLO Hissar Forest Division (2013-14)

Plantation Work						
Sl. No	District	Name of Range	Project Activity/Plantation Site	Land Category	Scheme of Plantation	Area in ha
1.	Jind	Jind	Bir Bara Ban/Jind (Native Plant Species)	RF Wildlife	CA-TP	414.4
Other Activities						
2.	Hissar	Hissar	Fencing of Deer Park, Hissar	504 RKM		—
3.	Hissar	Hissar	Purchase of Animal Rescue Vehicle	one		—
			Total			414.4

3.2 (D) Physical and Financial Target and Achievements (DWLO Hissar)

- ✦ Total expenditure in the entire project was Rs 30.75 lakh against the target of same amount. It was Rs. 10 lakh on plantation work, Rs. 14.83 lakh on fencing and Rs. 5.92 lakh on purchase of vehicle. Refer table 3.2k as given below.

Table-3.2k: Physical and Financial Target and Achievements of DWLO Hissar Forest Division (2013-14)

Sl. No.	District	Name of Range	Project/Plantation Site	Physical (Area in ha)		Financial (Rs. in lakh)	
				Target	Achievement	Target	Achievement
1	Jind	Jind	Bir Bara Ban/Jind (Native Plant Species)	414.4	414.4	10.00	10.00
2	Hissar	Hissar	Fencing at Deer Park, Hissar (504 RKM)			14.83	14.83
3	Hissar	Hissar	Purchase of Animal Rescue Vehicle (one)			5.92	5.92
			Total	414.4	414.4	30.75	30.75

3.3 (D) Inventory/ List of Plantation (DWLO Hissar)

- ✦ A total of 0.060 lakh plant species of *Neem*, *Jamun*, *Pikhan*, *Vad*, *Pipal*, *Baheda*, *Sahtool*, *Gular*, etc. were planted under Iron gabion at Bir Bara Ban RF in Jind at three patches covering 414.4 ha land. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3l.

Table 3.3 l: Inventory/List of Plantation of DWLO Hissar Forest Division (2013-14)

Sl. No	District	Name of Range	Project/Plantation Site	Scheme of Plantation	Area in ha	No. of Plants	Name of Plant Species
1.	Jind	Jind	Bir Bara Ban, Jind (Native Plants)	CA-TP	414.4	600	Neem, Jamun, Pikhan, Vad, Pipal, Baheda, Sahtool, Gular, etc.

3.4 (D) Analysis of Sample Plantation and Survival Assessment (DWLO Hissar)

- ✦ The entire plantation area 414.4 ha (100%) was visited in the field inspection of plantation area and to estimate survival percentage. Average survival percentage of plantation estimated at DWLO Hissar was 55%. Refer table 3.4m for further information as given below.

Table 3.4m: Analysis of Sample Plantation and Survival % of DWLO Hisar Forest Division (2013-14)

Sl. No.	District	Name of Range	Project/Plantation Site	Scheme of Plantation	Area in ha	No. of Plants	No. of plants Survived	Survival (%)
1.	Hisar	Hisar	Bir Baus Bandh (Native Plant)	CA-TP	414.4	600	330	55

3.5 (D) Assessment of Other Assets and Activities of CAMPA

- As discussed above besides plantation DWLO Hisar also created two other assets like creation concrete wall with iron chain link fencing at Deer Park Hisar and purchase of one vehicle in the division. Refer table 3.5 for detail information.

Table 3.5: Assessment of Other Assets and Activities DWLO Hisar Forest Division (2013-14)

Sl. No.	District	Name of Range	Asset Name	Financials (Rs. in lakh)		Quality of Asset
				Target	Achievement	
1.	Hisar	Hisar	Fencing of Deer Park, Hisar	14.83	14.83	Very good
2.	Hisar	Hisar	Purchase of Artificial Rescue Vehicle	6.92	6.92	
Total				20.75	20.75	

3.6 Registers/Records Maintained In the Project

- In all the four forest divisions (CFP Jatusana, CFP Bhiwani, CFP Hisar and DWLO Hisar) project authorities maintained work register and cashbook under CAMPA programme. Plantation journal would be prepared of the respective plantation sites as stated by the project authorities. It was missing in all of them.

3.7 Monitoring and Evaluation System in the Project

- It is conducted by a separate wing called M & E Wing. It is conducted once or twice a year as reported by the project authorities. The last evaluation of state CAMPA Haryana of CFP Jatusana, CFP Bhiwani, CFP Hisar and DWLO forest divisions was conducted in September-October 2014. M & E wing consists of one CF and two DCF. Its head office is at Karnal. M & E wing carries out monitoring & evaluation of entire forestry programmes including CAMPA coming under state and central jurisdiction.

3.8 Involvement of Independent Agency for Evaluation of CAMPA

- Agricultural Finance Corporation Ltd. (AFC Limited), a Delhi based agency carried out monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12 prior to current monitoring & evaluation being carried out by Locus Research & Consultants Pvt. Ltd. Overall findings of the study by AFC Limited were satisfactory as reported.

3.9 Details of Bank Account and Flow of Funds

- Bank accounts of the respective forest divisions (CFP Jatusana, Bhiwani and Hisar) for CAMPA Programme were operating) with Corporation Bank at direct headquarters branches. The signing authorities were Divisional Forest Officers. Flow of funds was smooth as reported by various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Selection and Preference of Species under CAMPA

- ❖ The project authority of respective forest divisions (CFP Jatusana, Bhiwani and Hisar) preferred mostly local plant species at most of plantation sites. However, factors like topography and terrain, soil type, local climate, intensity of rainfall, suitability of species in the area, demand by local community, etc. were also considered in the selection of plant species.

4.2 Soil and Moisture Conservation

- ❖ Most of the plantation sites covered under CAMPA helped in improving soil moisture conservation to varying degree. However, limitation of funds on this head of the programme could not provide adequate options to the project authority to create additional work along with plantation.

4.3 Assessment of Survival Percentage

- ❖ The survival percentage of plantation among forest divisions CFP Jatusana, CFP Bhiwani, CFP Hisar and DWLO Hisar was estimated separately. Details are discussed below.
 - CFP Jatusana/Rewari: Average survival percentage of plantation estimated was 81%. The survival percentage was highest (83%) at kakrala School and animal hospital in Mahendragarh district and it was lowest (78%) at Dubaldhan in Jhajjar district. Average height of plantation was 9 feet. Growth and health of plantation was good. Better method of protection and maintenance of project assets resulted into good survival percentage of plantation.
 - CFP Bhiwani: Average survival percentage of plantation estimated was 85% at Kharalnti village among 26 farmers. Average height of plantation was 9 feet. Growth and health of plantation was very good. The project authority also followed intensive method of replacement of dead species and also helped in this regard.
 - CFP Hisar: Average survival percentage of plantation estimated was 87%. The survival percentage was highest (91%) at Khumbha village of Hisar district and it was lowest (79%) at Dehman to Mocchi Rd. 0 to 6 Km. L/R in Fatehabad district. Average height of plantation was 9 feet. Growth and health of plantation was good.
 - DWLO Hisar: Average survival percentage of plantation estimated at DWLO Hisar was 55%. Average height of plantation was 9 feet. Growth and health of plantation was Average. Due damage caused by wild animals especially monkeys, the survival percentage was not satisfactory.
- ❖ To estimate survival percentage a sample plot of 0.25 ha (50meterx50meter) was adopted at random location and row counting of plantation was also adopted to count the seedling at random location. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ❖ There was limited scope of natural regeneration of plant species at most of the plantation area. Adoption of high proportion of clone Eucalyptus in the project along bunds of agricultural fields in single and double rows had little scope of it. Secondly, roadside plantation also had limited scope of natural regeneration. There were some glimpses of it at few locations, where there was availability of regular irrigation facility. Grasses and weeds were common phenomenon at most of these areas.

4.5 Quality of Work

- ❖ As discussed above overall quality of plantation of all three divisions was satisfactory. The survival percentage, growth and health of plantation at majority locations were very good as observed during field inspection. Members of evaluation team covered more than 50% project area of three divisions during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals (rabbits, blue bull, porcupine, etc.) destruction caused by humans, poor soil condition, extreme nature of climate (very high in summer low in winter), erratic nature of monsoon rain, etc.

4.7 Protection and Maintenance of Plantation

- ❖ In physical sense the project authority of respective forest division adopted barbed wire and bush fencing at most plantation sites under protection of plantation. At few places brick/iron/wood gabions were also adopted along with barbed wire in this regard.
- ❖ Foresters and forest guards used to make regular rounds of plantation area in the process of protection and maintenance of project assets. There should be better care of plantation through elaborate fencing and regular care. The process of awareness raising and motivation of local community should be adopted in the project at regular intervals.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ❖ Regular forest staffs like Range Forest Officers (RFO), Foresters and Forest Guards were trained to tackle necessary work of forestry programmes under CAMPA. Temporary and daily wages workers, cattle watchers, similar other staffs, etc. should be imparted necessary skill learning and enhancement programmes so that they could deal with new challenges of the programme. Interactive programmes and meetings were organized on the initiatives of DFOs to motivate forest staffs with necessary information on forestry programmes capacity building and to improve their performance during duty.

4.9 Role of Local People in Project Work

- ❖ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ❖ The programme accrued direct and indirect benefits. Plantation work brought additional geographical area under vegetation and forest cover. It resulted into addition of area under forest, additional availability of fuel-wood, fodder, other forest produces, etc. The programme also helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ◆ Grazing by loose domestic animals was the most common problem in causing death and destruction of CAMPA plantation in all the three forest divisions (CFP Jatousana, CFP Bhiwani and CFP Hisar). It also impacted growth and health of plantation. Grazing caused far reaching damage to plantation as animals' feet loosen the top soil and causing erosion of soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff

- ◆ The Project authority of some forest divisions were of the opinion that during 2013-14 there was shortage of frontline staffs like foresters and forest guards in their divisions. It impacted CAMPA programme adversely. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and currently there was no shortage of staff.

5.3 Low Wage Rate under Forest Department Adversely Impacted Programme

- ◆ Wage rate of forest department was much low (@Rs. 213 per day) as compared to industrial establishments and in urban areas (@Rs. 400-500 per day). It was a limitation to the project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme.

5.4 Rapid Urbanization/ Urban Sprawl and High demand of Labour Force

- ◆ Due to high rate of urbanization and industrial growth in many parts of the project area, there was high demand of labour force. The forest department had to face shortage of labour whenever they required. It impacted the programme adversely.

5.5 Inadequate Infrastructure

- ◆ It was reported that there was inadequacy of necessary infrastructure including availability of vehicles especially at range level offices as reported by the project authority. It impacted performance and quality of work as well as project outcome.

5.6 Biotic and Natural Factors Impacting Survival and Quality of Plantation

- ◆ Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

- 6.1 Long Term Measures Should be Adopted to Control Grazing by Domestic Animals**
 - ❖ As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- 6.2 There should be Adequate Measures of Protection and Maintenance of Plantation**
 - ❖ Project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing of barbed wire was found visible in but they were broken at a number of places. Timely repair or replacement of broken wires should be made at that moment. It is suggested that along road plantation the project authority should adopt gabions (iron/brick/wood) as barbed wire fencing was not very successful and full proof.
- 6.3 Vacant Posts Should be Filled on Time**
 - ❖ It is suggested that any vacant post of forest staff should be filled on time through proper recruitment channel to ease the pressure on existing staff. For effective implementation and management of afforestation programme necessary number of staff was prerequisite. However, currently there was no shortage of such staff but it was there during 2013-14.
- 6.4 Provision of fine /punishment be Made Against Wrong Indulgence**
 - ❖ There should be provision of fine/punishment or both against those persons who were found involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent. The project authority said that as per the forest rules some provisions were applied against such people.
- 6.5 Capacity-Building and Skill Enhancement Programme Should be Organized**
 - ❖ The project authority should organize Capacity building and skill enhancement programmes for forest staffs, local community to learn for new ideas and knowledge and to update their knowledge as well. However, foresters and forest guards were already trained but it would help in keeping their knowledge up to date.
- 6.6 Monitoring and Evaluation Process Should be Regular, Systematic and Effective**
 - ❖ Monitoring and evaluation is a critical component of most administered programmes and its significance is more pronounced for mass plantation programme like CAMPA. As per the project authority M & E wing of forest department takes care of this work for the entire forestry programme of the state. It consists of one CF and two DFOs. Its head office is located at Karnal. Monitored & evaluation of CAMPA programme along with other forestry projects is conducted once or sometimes twice a year. The internal monitoring and evaluation of the project at division level should be made effective and carried out at regular interval.

6.7 Intensive Awareness Campaign to Motivate Local Community

- ❖ Intensive Awareness Campaign should be followed by adopting mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community. This should be a regular activity.

6.8 Exposure Visit should Organized from Time to Time

- ❖ Project authority should organize exposure visit of forest staffs within or outside state to successful plantation areas and advanced nurseries for better understanding and learning new ideas and knowledge. Such visits are important for development process and also to improve quality and outcome of the programme.

6.9 Introduce Practice and Concept of Carbon Credits and Encourage to Earn It

- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- ❖ Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.10 Interview with Project Authority

- a) In the process of monitoring and evaluation of the programme the members of evaluation team interacted and interviewed the project authority face to face in most cases and in a few cases their view points were shared through telephonic discussion. A brief summary of interviews along their contacts is as follows.

- DFO CFP Jatusana (Rewari): Mob:+91-9456528807, Office: +91-1274251231
- DFO CFP Bhiwani: Mob:+91-9456004769, Office:+91-1664249049
- DFO CFP Hisar: Mob:+91-9416407999, Office:+91-1662259713
- DWLO Hisar: Mob:+91-9466560033, Office: +91-1662259233

- Summary of interviews held with DFOs, RFOs, Foresters, etc. is as follows.

- The project authorities showed satisfaction with overall progress and outcome of CAMPA plantation and related activities carried out during 2013-14 at CFP Jatusana (Rewari), CFP Bhiwani and CFP Hisar forest divisions. In the selection of plant species preference was given to clone Eucalyptus, followed by *Bakain*, *Frans*, *Jamun*, *Jand*, *Neem*, *Papri*, *Pipal*, *Pilkhan*, *Sahtoot*, *Shisham*, *Siras*, *Intli*, *B. Dek*, *Vad*, etc. There was very good survival rate at most of the plantation sites as observed during field inspection. The project authorities were of the view that adoption of clone Eucalyptus helped in keeping good survival and better growth. They also expressed that intensive field visit by forest staff also helped in this regard. Grazing by domestic animals was biggest threat to plantation as advocated by project authority. They also advocated for additional funds so that better provision of fencing could be made and LTG plantation should be guarded with gabions.

6.11 Evaluator's Assessment

- After verification of official records, inspection of project areas, interaction with project authorities (DFOs, RFOs, Foresters, etc.) and other stakeholders of programme, etc., it was found that the above statements of project authority was true to a great extent. They followed stated guidelines of programme to a great extent. It is further suggested that internal monitoring and evaluation system of the programme should be carried out effectively on regular basis.

Photographs of Plantation Area: CFP Jatusana, Bhiwani, Hissar and DWLO Hissar (2013-14)

- CFP Jatusana: 11 Sites : (160 ha/RKM)
- CFP Bhiwani: 1 Site : (25 ha)
- CFP Hissar: 13 Sites : (176 ha/RKM)
- DWLO Hissar: 3 sites : (414.8 ha)

- Main Plant Species: Baheda, Bakain, Eucalyptus clone, Frans, Gulab, Imli, Jamun, Neem, Papri, Pipal, Pishan, Sahitoot, Shisham, Siras, Vad, etc.

CFP Jatusana (Rewari)



CFP Bhiwani



CFP Hissar



DWLO Hissar



Final A.P.O. State CAMPA Scheme, CFP Jatiana (Rewari) of Haryana (2013-14)													
Sl. No	Type of land	Name of Scheme/	Name of District/Range	Name of Site	Khassra No. KM/RO	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	RoM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Farmland	Bio drainage	Jhajjauwajgar	Dubaldhan	NA	July-Aug.	100	100	20000	Clonal Eucalyptus	1.5x1.5	NA	NA
2.	Non-Forestland	LTG	Mahengrh/Kanina	Pall University	NA	July-Aug	00	19	4750	Neem, B. Dek, Papri, Guli Pillhan, Saitoor, Shigham	4x4	NA	NA
3.	Non-Forestland	LTG	Mahengrh/Kanina	Manhendergarh to Dheedhol Road O-S L&R	NA	July-Aug	00	18	4000	Papri Shigham	4x4	NA	NA
4.	Non-Forestland	LTG	Mahengrh/Kanina	Bhojawas to Bewal-Khajana Kacha way	NA	July-Aug	00	8	1500	Papri	4x4	NA	NA
5.	Non-Forestland	LTG	Mahengrh/Kanina	Bhojawas to Kakrale & Rambas Road	NA	July-Aug	00	3.8	900	Papri	4x4	NA	NA
6.	Non-Forestland	LYG	Mahengrh/Kanina	Kakrale School & Animal Hospital	NA	July-Aug	00	1.4	350	Papri	4x4	NA	NA
7.	Non-Forestland	LTG	Mahengrh/Kanina	Bhojawas School	NA	July-Aug	00	1	250	Papri, Gular, B. Dek, Neem	4x4	NA	NA
8.	Non-Forestland	LTG	Mahengrh/Kanina	Bhojawas Power House	NA	July-Aug	00	0.88	140	Sirs, B. Dek	4x4	NA	NA
9.	Non-Forestland	LTG	Mahengrh/Kanina	Bhojawas Animal Hospital	NA	July-Aug	00	0.84	210	Neem, Gular, B. Dek, Pillhan, Sirs	4x4	NA	NA
	Non-Forestland	LTG	Mahengrh/Kanina	Garhi School		July-Aug	00	1.1	275	Papri, Neem, B. Dek,	4x4	NA	NA
	Non-Forestland	LTG	Mahengrh/Kanina	Sungha Co. Operative Society		July-Aug	00	0.5	125	Papri, Neem, B. Dek, Sirs	4x4	NA	NA
Total							100	50	32500	—	—	—	—

Final A.P.O. State CAMPA Scheme, CFP Bhawan of Haryana (2013-14)													
Sl. No	Type of land (Forest/Non-Forest)	Name of Scheme/ component	Name of District/ Range	Name of Site	Khassra No. KM/RO	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	RoM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Farmland	Bio-Drainage	Bhawan/ Jind	Khajant Village, 28 Farmers	NA	July-Aug.	25	00		Clonal Eucalyptus	1.5x1.5	NA	NA
Total							25	0	5100	—	—	—	—

Final A.P.O. State CAMPA Scheme, CFP Hissar of Haryana (2013-14)													
Sl. No	Type of land (Forest/Non-forest)	Name of Scheme/Component	Name of District/Range	Name of Site	Khasra No. KMWD	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Forest/Private land	Bio-Diesel	Hissar/Hissar	Kumbha	NA	July	00	50	10000	Clonal Eucalyptus	1.5x1.5	NA	NA
2	Forest/Private land	Bio-Diesel	Hissar/Hissar	Lohgarh	NA	July	00	75	15000	Clonal Eucalyptus	1.5x1.5	NA	NA
3	Non-Forestland	LTG	Hissar/Hissar	Dhansu-Dhingsana Road L/R	NA	July	8.8	00	2125	Bakain, Neem, Shisham	1.5x1.5	NA	NA
4	Non-Forestland	LTG	Hissar/Hissar	Sulchani-Bugana Road L/R	NA	July	2.5	00	575	Bakain, Neem, Shisham	1.5x1.5	NA	NA
5	Non-Forestland	LTG	Hissar/Hissar	Kinela Patra Road L/R	NA	July	6.6	00	1625	Bakain, Neem, Shisham	1.5x1.5	NA	NA
6	Non-Forestland	LTG	Hissar/Hissar	Patna- Karpol Road L/R	NA	July	2.5	00	525	Shisham	1.5x1.5	NA	NA
7	Non-Forestland	LTG	Fatehabad/ Fatehabad	Mohammadpur Rohi Road to Badolai D-4 Km L/R	NA	July	3	00	750	Neem, Shisham	4x4	NA	NA
8	Non-Forestland	LTG	Fatehabad/ Fatehabad	Dahman to Goraipur Rd. 0 to 5 L/R	NA	July	3	00	750	Shisham	4x4	NA	NA
9	Non-Forestland	LTG	Fatehabad/ Fatehabad	Khajuri to Jhansi Rd. 0 to 4 Km. L/R	NA	July	6	00	1500	Shisham, B. dek	4x4	NA	NA
10	Non-Forestland	LTG	Fatehabad/ Fatehabad	Khajuri to Jhansi Rd. 0-4 Km. L/R	NA	July	4	00	1000	Shisham, Neem	4x4	NA	NA
11	Non-Forestland	LTG	Fatehabad/ Fatehabad	Dahman to Mochi Rd. 0 to 6 Km. L/R	NA	July	4	00	1000	Neem, B. dek, Shisham, other	4x4	NA	NA
12	Non-Forestland	LTG	Fatehabad/ Fatehabad	Jandli to Chandrawal-Bhujia Rd 0-5 Km L/R	NA	July	2	00	500	Shisham, B. dek	4x4	NA	NA
13	Non-Forestland	LTG	Fatehabad/ Fatehabad	Badolai to Bhana Road L/R	NA	July	2.5	00	625	Neem, Shisham	4x4	NA	NA
14	Non-Forestland	LTG	Fatehabad/ Fatehabad	Dahman to Jhansi D-4 km L/R	NA	July	5.5	00	1375	Shisham	4x4	NA	NA
Total							50	125	37500	-	-	-	-

Final A.P.O. State CAMPA Scheme, DWLO Hissar of Haryana (2013-14)													
Sl. No	Type of land (Forest/Non-forest)	Name of Scheme	Name of District/Range	Name of Site	Khasra No. KMWD	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Forestland-RF	CA-TP	Jind/Jind	Bir Bara Band (Native Plant Species)	NA	July-Aug.	414.4	00	500	Neem, Jamun, Pichan, Vad, Pipal, Baheda, Sahjan, Gular, etc.	In Garden-NA	NA	NA
2.	Forestland	NA	Hissar/Hissar	Fencing of Deer Park, Hissar-504 RKM	NA	NA	00	00	NA	NA	NA	NA	NA
3.	Division	NA	Hissar/Hissar	Purchase of Animal Rescue Vehicle-1	NA	NA	00	00	NA	NA	NA	NA	NA
Total							414.4	00	500	-	-	-	-

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MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING
IMPLEMENTED BY FARIDABAD FOREST DIVISION (TF) AND COMMUNITY
FOREST DIVISION IN FARIDABAD DISTRICT OF HARYANA

Duration of Evaluation: 2012-13

Final Draft Report

Submitted to
OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

February, 2015

Conducted by
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**MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING
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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being Implemented by Faridabad Forest Division (T) in Faridabad District of Haryana (2012-13)" was successfully completed. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal, and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram and office staff Mr. D.P. Tyagi for reposing faith and awarding the work of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Faridabad Forest Division (T), Ms Renjitha along with RFOs of Faridabad and Ballabgarh ranges and other forest staffs. My interaction with them helped me in understanding different aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.



Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, February, 2015

Preface

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates.....a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

~~State CAMPA~~ State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana of Faridabad forest division by PCCF office on professional terms and conditions. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, It has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

55.66 RKM forestland was treated under CAMPA by adopting Net Present Value (50.0 RKM) and Compensatory Afforestation (15.66 RKM) schemes of plantation in both ranges (Faridabad & Ballabgarh) during 2012-13. Besides, construction of forest guard hut/quarter was started at Pratapggarh forest colony in Ballabgarh range of the division. Total expenditure incurred in the above activities was Rs. 22.6 lakh. 0.289 lakh plant species of *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karant*, *Kikar*, *Papri*, *Pilthar*, *Pipal*, *Shisham*, etc. was planted in the project.

Average survival percentage of seedlings estimated was 65%. The survival percentage was highest at R.F Allpur site/VFC (81%) while it was lowest at Gurgaon Canal RD 0-7 L & R forestland site (57%). Average height of plantation was 6 feet. Average grading awarded to the programme was 6.4 (on 1 to 10 scale), which was very good.

Members of evaluation team interacted with a number of field level forest staff and local community in the process of field inspection and evaluation of the programme. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of fund was smooth as reported by the project authority. There was lack of awareness and not ready to own responsibility on public related issues among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

February, 2015



Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Faridabad Division (T)	Faridabad Forest Division Territorial
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

LOCAL NAME AND BOTANICAL NAME OF PLANT SPECIES

SL No.	Common Name	Botanical Name
1.	Alstonia	Indian Mallow/ Devil Tree
2.	Arjun	Terminalia arjuna
3.	Bakain	Melia azedarach
4.	Blam Kheera	Kigelia pinnata
5.	Gular	Ficus glomerata
6.	Gulmohar	Delonix regia
7.	Karanj	Pongamia pinnata
8.	Kachnar	Bauhinia variegata
9.	Kikar	Acacia Arabica
10.	Neem	Azadirachta indica
11.	Papri	Holoptelea integrifolia
12.	Pilkhan	Ficus virens
13.	Pipal	Ficus religiosa
14.	Shisham	Dalbergia sissoo

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation in the Management and Planning Authority (CAMPA), Haryana-2012-13****Faridabad Forest Division in Faridabad District of Haryana**

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	9
Qualitative Aspects	Survival	6
	Health of Plantation	6
	Maintenance	6
	Sustainability	5
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.4

Executive Summary**1.0 INTRODUCTION**

- Monitoring and evaluation of State CAMPA, Haryana at Faridabad Forest Division (T) in Faridabad district was conducted in the month of January 11-14, 2015 by **Locus Research & Consultants Pvt. Ltd.**, a Delhi based professional agency. During 2012-13, a total of 65.66 RKM forestland was treated by adopting NPV (50.0 RKM) and CA (15.66.0 RKM) plantation schemes at 5 places along with creation of asset at one place. There was 100% coverage of project sites/areas and assets in field visit and analysis. Summary of findings of the study is given below.

2.0 CAMPA: AN OVERVIEW

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 OBJECTIVES OF THE NAP

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION /AREA OF MONITORING & EVALUATION

- ❖ It covers Faridabad Forest Division (Territorial) in Faridabad district of Haryana.

5.0 REFERENCE PERIOD

- ❖ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2012-13.

6.0 NEED OF THE STUDY

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements
 - ◆ To evaluate performance of the programme
 - ◆ To estimate of survival percentage of plant species adopted in the project.
 - ◆ To analyze factors impacting survival of plantation and suggest remedial measures.
 - ◆ To assess peoples' participation and assets created
 - ◆ To assess the direct and indirect benefits and impact of the programme.
 - ◆ To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ❖ Simple random, systematic, stratified and purposive sampling techniques were adopted as per need to interview forest officials and community leader. There was cent percent (100%) coverage area and project activities carried out by CAMPA at Faridabad during 2012-13. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants in row was adopted.

9.0 PROFILE OF THE STUDY AREA

- ❖ The state of Haryana comprises 21 districts, 45 sub-tehsils, 47 subdivisions, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1956, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ❖ As per India State of Forest Report-2011, Faridabad district has 4.32% area under forest cover.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ❖ During 2012-13, a total of 65.66 RKM forestland treated by adopting NPV (50.0 RKM) and CA (15.66 RKM) schemes of plantation with a total expenditure of Rs 22.6 lakh against the target of same amount.
- ❖ A total of 0.289 lakh plant species of *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, etc. were planted in the project at five different sites comprising 65.66 RKM of forestland.

- ❖ Average survival percentage of seedlings estimated was 65%. It was highest at R.F Alipur site/VFC (81%) while it was lowest at Gurgaon Canal RD 0-7 L & R forestland site (57%). Average height of plantation was 6 feet. Growth and health of plantation was good.
- ❖ A two room forest guard hut/quarters with toilet cum bathroom, kitchen and overhead water tank (500 liters) was constructed at Pratapgarh Forest Complex of Ballabgarh forest range in the division.
- ❖ Important registers maintained in the project were work register, cashbook, sketch map, etc. Plantation journal was not available but the DFO assured us that plantation journal would be prepared very soon.
- ❖ The system of Monitoring and Evaluation (M & E) of CAMPA is conducted by a separate wing called M & E Wing. It is conducted either once or twice a year as reported by the project.
- ❖ In 2013, an agency named Agricultural Finance Corporation Ltd. of Delhi carried out last evaluation of CAMPA work of the duration of 2010-11 and 2011-12. Overall finding of the study was satisfactory.
- ❖ Bank account of CAMPA Programme of Faridabad forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Faridabad Branch along with two ranges.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Important factors led the selection of species were nature of topography, soil type, climate, rainfall, suitability of species in the area, economic value of plant species, preference shown by local community, etc.
- ❖ There was significant improvement in soil moisture conservation where plantation carried out under CAMPA programme.
- ❖ Estimated survival percentage of plantation carried out during 2012-13 was 65%. It was highest at R.F Alipur (81%) while it was lowest at Gurgaon Canal RD 0-7 L&R forestland (57%).
- ❖ Overall quality of work especially plantation and creation of assets in the programme was found in good shape at majority locations as observed during field inspection.
- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.
- ❖ Mostly barbed wire and bush fencing was found at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ Iron/wood gabions were also adopted along with barbed wire in this regard.
- ❖ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area.. Modern tools of mass media should be adopted for awareness and motivation of community.
- ❖ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest products, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation.

- ❖ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It impacted quality and outcome of the programme adversely.
- ❖ Due to high rate of urbanization and industrialization in most part of the project area, there was high demand of labour force and hence the forest department had to face shortage of labour.
- ❖ Range offices were facing shortage of necessary vehicle and infrastructure as reported. It impacted performance and quality of work as well as outcome of project.
- ❖ Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Some viable measures should be adopted to check grazing problem. Wild. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- ❖ The project authority should make necessary provision of protection and maintenance of plantation by adopting multi-pronged strategy. It is suggested that in urban and suburban areas the project authority should adopt gablons of iron, brick, wood, etc. as barbed wire fencing was not successful.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community.
- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF and two DFOs.
- ❖ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad-natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- ❖ Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

CHAPTER-1

PROJECT CONCEPT, STRATEGY, OBJECTIVE AND METHODOLOGY

1.1 CAMPA : An Overview

- ◆ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an Inter-state or Centre-State character.
- ◆ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators.
- ◆ Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ◆ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
 - ◆ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ◆ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.

- ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
- ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Details of Establishment, State CAMPA

- ❖ The details of establishment of State CAMPA are summarized below :
 - a) The State Government may establish the Compensatory Afforestation Fund Management and Planning Authority (State CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ◆ Amount transferred to it by the ad-hoc CAMPA.
 - ◆ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ◆ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ◆ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ◆ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The State Government may also credit to the State CAMPA
 - ◆ Grants or aid received if any;
 - ◆ Any loan taken by the Authority or any borrowings made by it; and

- Any other sums received by the Authority by way of benefaction, gift or donations.
- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 Establishment of State CAMPA, Haryana

- ✦ On March 3, 2010, Haryana Government constituted the State Compensatory Afforestation Fund Management and Planning Authority (STATE CAMPA), Haryana for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.
- ✦ State CAMPA, Haryana will have three bodies, namely - a Governing Body, a Steering Committee and an Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ✦ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the State Government for a period of two years will be its Members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ✦ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ✦ "State Compensatory Afforestation Fund Management and Planning Authority"(CAMPA) is intended as an instrument to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

- ♦ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife conservation and protection and other related activities and for matters connected therewith or incidental thereto.
- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of CAMPA Programme

- ❖ Conservation, protection, regeneration and management of existing natural forests;
- ❖ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- ❖ Compensatory afforestation;
- ❖ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- ❖ Science, Research, Training and Capacity Building.
- ❖ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location /Area of Monitoring & Evaluation

- ❖ The evaluation study covers Faridabad Forest Division (Territorial) in Faridabad district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ◆ The reference period of monitoring & evaluation CAMPA is one year, i.e. 2012-13.

1.7 Components of Project

- ◆ People's Participation
- ◆ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
- ◆ Monitoring and Evaluation of the programme
- ◆ Conservation and protection of forests, infrastructure development, wildlife conservation and protection and related activities.

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ◆ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Project Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
◆ District	: Faridabad
◆ Forest Division	: Faridabad
◆ Forest Circle	: Gurgaon Circle, Gurgaon
◆ State	: Haryana
Project Location	
◆ Watersheds/Sub-watersheds	: Gurgaon Canal RD50-52(R), RD 0-27 L&R
◆ Development Blocks	: Faridabad, Bopani, Suraj Kund and Pall (Faridabad Range), Ballabgarh, Sikrauna, Dayalpur and Tigaon (Ballabgarh Range)
◆ Forest Ranges	: Faridabad and Ballabgarh
◆ Villages/JFMCs/Site	: 6 (Six)
◆ Other Development Activities In the Project: Construction of Forest guard's hut/ quarters	
◆ Preparation of Micro-plan and Plantation Journal if any: Plantation journals were found but there micro plans were not available. It was not necessary in the CAMPA program as reported by project Authority.	
Project Duration, Area and Cost	
◆ Project Duration	: 2012-13
◆ Project Area	: Target: 65.66 RKM Achievement: 65.66 RKM
◆ Project Cost	: Target: Rs. 22.605 lakh, Achievement: Rs. 22.605 lakh
Proposed Strategies and Salient Features of the Project	
◆ Plantation Schemes: NPV and CA	
◆ Important community assets created in the project: Construction of Forest guard hut / quarter at Pratapgarh in Ballabgarh range of the division.	

1.9 Need of the Study

- ◆ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ◆ Scope of study is confined to Faridabad Forest Division (FD) in Faridabad district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ◆ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements

- ♦ To evaluate performance of the programme
- ♦ To estimate of survival percentage of plant species adopted in the project.
- ♦ To analyze factors impacting plantation survival and suggest remedial measures.
- ♦ To assess peoples' participation and assets created
- ♦ To assess the direct and indirect benefits and impact of the programme.
- ♦ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure

- ♦ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ♦ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.

1.13 Sample Selection, Size and Distribution

- ♦ There cent percent coverage of plantation area and other project assets during field visit in the process of evaluation of CAMPA programme in the division during 2012-13. A total 65.66 RKM forestland was treated by adopting two schemes of plantation namely Net Present Value (50.0 RKM) and Compensatory Afforestation (15.66 RKM) at five places. Besides, there was construction of forest guard hut at one place. The project activity was spread over both the forest ranges of the division namely Faridabad and Ballabgarh schemes of plantation.
- ♦ To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50mx50m) was adopted for counting them at random locations in the plantation area.

1.14 Chapter-wise organization of Report

- ♦ The report is divided into six chapters. It is as follows:
 - ♦ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ♦ Chapter-2 gives the Profile of the Project Area and its Location
 - ♦ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ♦ Chapter-4 gives Qualitative Analysis and Findings.
 - ♦ Chapter-5 deals with Limitations and Constraints of the Project.
 - ♦ Chapter-6 provides Suggestions and Recommendations for Improvement.

1.15 Limitations of the Study

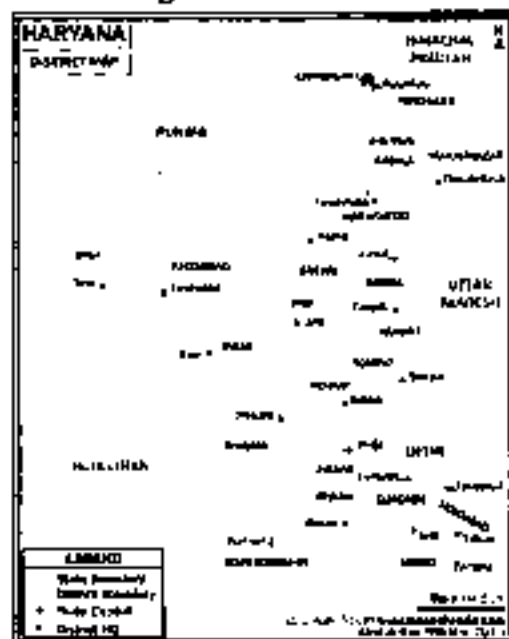
- ♦ It hard to find respondents at both rural and urban areas of project implementation. It impacted collection necessary information.
- ♦ Lack of necessary awareness among community about details of CAMPA also impacted collection of necessary information. However, adequate efforts were made by members of evaluation team to minimize these limitations.

CHAPTER-2

PROFILE OF PROJECT AREA

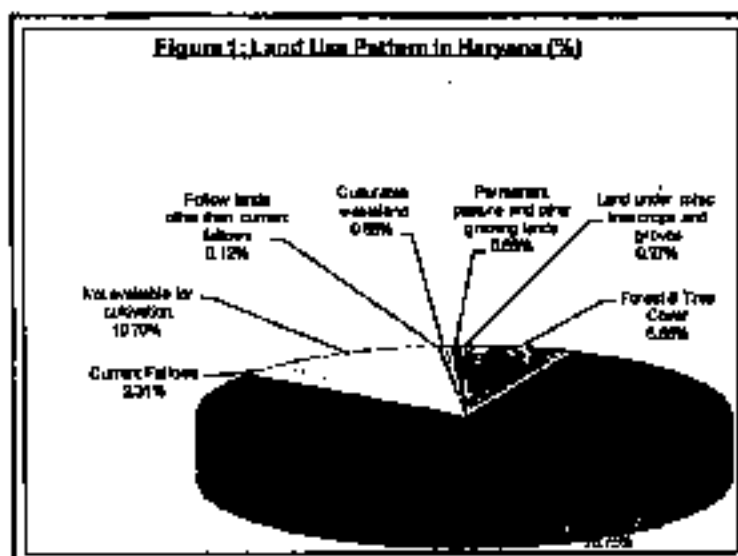
2.1 State Profile

- ♦ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ♦ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ♦ Gurgaon Division has six (6) districts namely Palwal, Faridabad, Mahendragarh, Gurgaon, Rewari, and Mewat districts in its jurisdiction.
- ♦ While Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ♦ And Rohtak Division has also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat districts in its jurisdiction.



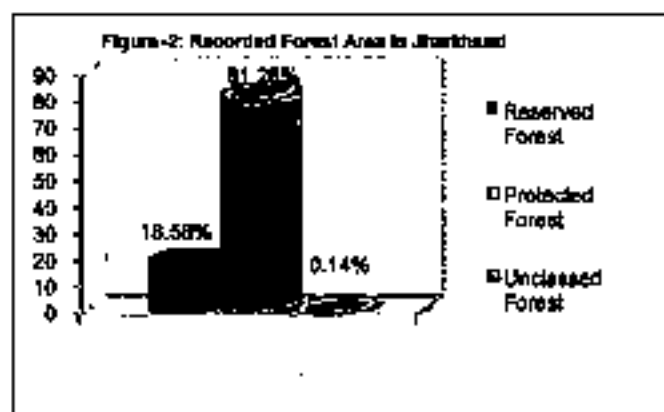
2.1.1 Land Use Pattern of Haryana

- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ♦ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands (0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. *Sources: Land Use (India State of Forest Report 2011, FSI Dehra Dun).*



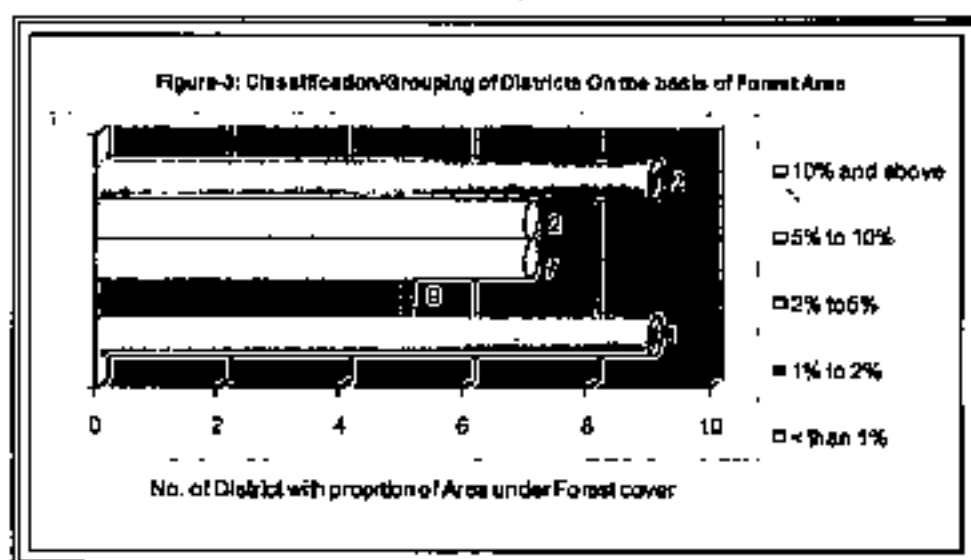
2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. See Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

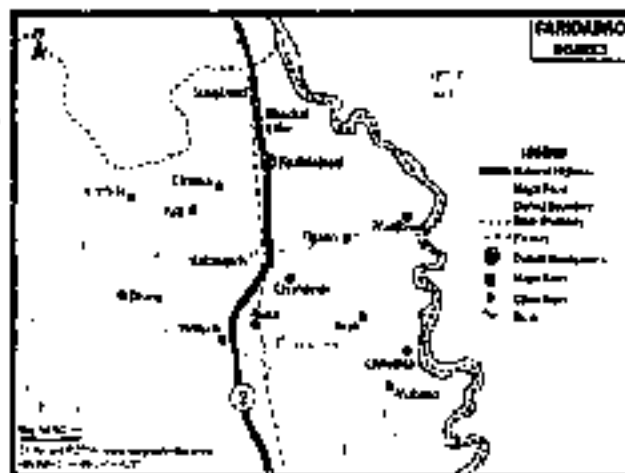
- ♦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. **Group-1:** Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ♦ **Group-2:** two districts namely Gurgaon (8.35%) and Mewat (8.35%) fall in the category of 5% to 10% forest cover.
- ♦ **Group-3:** It followed seven districts namely Faridabad (4.32%), Palwal, Bhiwani, Ambala, Rewari, Mahendragarh and Kaithal fall in the category of 2% to 5% forest cover.
- ♦ **Group-4:** On the other hand 9 districts namely Hisar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat have 1% to 2% geographical area under forest cover.
- ♦ **Group-5:** Fatehabad is the only district which has less than 1% area under forest cover. Refer Figure-3 for pictorial understanding.



2.2 Profile of Faridabad District and Forest Division

- ♦ **History:** Faridabad District came into existence on 15 August 1979 as the 12th district of the state. It was carved out from erstwhile Gurgaon district. Faridabad, the south-eastern district in the state of Haryana, was founded in 1607 AD by Farid, the treasurer of Jahangir, with the object of protecting the Grand Trunk Road (now National Highway 2), which passed through the town. Sheikh Farid built a fort, a tank and a mosque, which are now in ruins. Later on, it became the headquarters of a Pargana, which was held in jagir by Ballabgarh ruler.

- ♦ **Geography:** Faridabad is located at 28.43°N 77.32° E longitude. It has an average elevation of 198 metres (649 ft). City is located on the plains of river Yamuna . It is bordered by the Yamuna to the east and Aravali hills towards the west and southwest. Today, virtually all of the land has been developing with residential housing as the population of the city swelled during the mid-1990s. Much like the rest of India, the people of Faridabad rely on the ground water for their basic needs, which is the gift of good monsoon season. Unlike Gurgaon, which is prone to direct hot summer winds coming from Jaipur (in Rajasthan), Faridabad is blessed because of Aravalli Range Mountains between Gurgaon and Faridabad blocking hot summer winds to enter its geographical space. Faridabad is the largest city in the north Indian state of Haryana, in Faridabad district. It is a leading Industrial center and situated in the National Capital Region (India) near the Indian capital New Delhi. It is located between Delhi, Noida, Greater Noida and Gurgaon. It is surrounded by Delhi to its North, Noida to its North East, Greater Noida to its East and Gurgaon to its West. Faridabad enjoys a prime location both geographically and politically. The river Yamuna forms the eastern district boundary with Uttar Pradesh, Faridabad is also a major industrial hub of Haryana. About 50% of the income tax collected in Haryana is from Faridabad and Gurgaon.



- ♦ **Climate:** The climate of Faridabad district can be classified as tropical steppe, hot semi-arid (Köppen BSh) which is mainly characterized by the extreme dryness of the air except during monsoon months. During three months of south west monsoon from last week of June to September, the moist air of oceanic penetrate into the district and causes high humidity, cloudiness and monsoon rainfall. The period from October to December constitutes post monsoon season. The cold weather season prevails from January to the beginning of March and followed by the hot weather or summer season which prevalls up to the last week of June. The normal annual rainfall in Faridabad district is about 542 mm (21.3 in) spread over 27 days. The south west monsoon sets in the last week of June and withdraws towards the end of September and contributes about 85% of the annual rainfall. July and August are the wettest months 15% of the annual rainfall occurs during the non-monsoon months in the wake of thunder storms and western disturbances.
- ♦ **Population:** As per provisional data of 2011 census Faridabad had a population of 1,404,653, out of which males were 750,446 and females were 654,207. The literacy rate was 84.88 per cent.

2.3 Forest Cover in Faridabad District

- ♦ As per India State of Forest Report-2011, Faridabad district has 4.32% area under forest cover against 3.64% of state average. If both area under forest & tree cover is taken together this goes up to 6.80%. Main plant species adopted under CAMPA programme in the district are *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, etc.

CHAPTER-3

QUANTTTATIVE EVALUATION AND FINDINGS

3.1 Classification of Area Covered/Treated

- During 2012-13, a total of 65.66 RKM forestland was treated under CAMPA by adopting Net Present Value (50.0 RKM) and Compensatory Afforestation (15.66 RKM) schemes of plantation. It was implemented in both the ranges of the division i.e. Faridabad and Ballabgarh. Under CA scheme mostly tall plants were drawn from nurseries while under NPV scheme ridge plantation method adopted. Refer table-3.1 for detailed information.

Table 3.1 Area Covered/Treated Under CAMPA (2012-13)

Sl. No.	Range	Land Category	Scheme of Plantation	Area in RKM
1.	Ballabgarh	Forestland	FCA (Tall Plant)	0.56
2.	Ballabgarh	Forestland	FCA (Tall Plant)	13.24
Sub-Total Ballabgarh Range				13.80
3.	Faridabad	Forestland	FCA (Tall Plant)	0.14
4.	Faridabad	Forestland	FCA (Tall Plant)	1.72
Sub Total Faridabad Range				1.86
Total (CA)				15.66
5.	Faridabad	Forestland	CAMPA/NPV (Ridge Plantation)	50
Total (NPV)				50
Grand Total				65.66
Other Activities/ Assets under CAMPA				
6.	Ballabgarh	Forestland	Construction of Forest Guard Quarter	

3.2 Physical and Financial Target and Achievements

- A sum of Rs 22.6 lakh was the total expenditure of the entire project during 2012-13 against the target of same amount. Altogether assets were created at six places in which plantation work was conducted at five places and construction of forest guard hut/ quarters at one place. Refer table 3.2 for detail information.

Table-3.2: Physical and Financial Target and Achievements (2012-13)

Sl. No.	Range	JFMC/Village/Site	Physical (Area in ha)		Financial (Rs. in lakh)	
			Target	Achievement	Target	Achievement
1.	Faridabad	R.F. Allpur	50 RKM	50 RKM	16 lakh	16.00
2.	Faridabad	Gurgaon Feeder 0-12 L&R	0.14 RKM	0.14 RKM	0.005	0.005
3.	Faridabad	Near Sector 13 & 14	1.72 RKM	1.72 RKM	0.6	0.6
4.	Ballabgarh	Gurgaon Feeder 50-52 R Side	0.56	0.56	0.2	0.2
5.	Ballabgarh	Gurgaon Canal RD 0-7 L&R	13.24	13.24	4.8	4.8
Total			65.66	65.66	21.605	21.605
Other Activities/ Assets Created in the Project						
6.	Ballabgarh	Construction of Forest Guard Quarter			1.0	1.0
Grand Total					22.605	22.605

3.3 Inventory/ List of Plantation

- A total of 0.289 lakh plant species of *Alstonia*, *Arjun*, *Bakain*, *Balam Khira*, *Gullar*, *Karanj*, *Kikar*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, etc. were planted in the project at five different sites comprising 65.66 RKM of forestland. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table 3.3: Inventory/List of Plantation

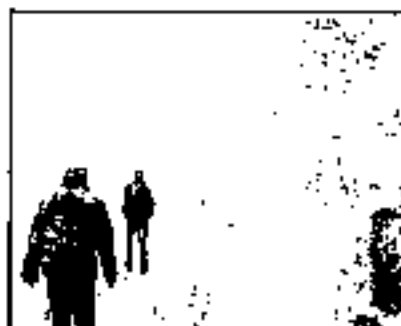
Sl. No.	Range	Village/JFMC/ Site	Scheme of Plantation	Area RKM	No. of plants	Name of Plant Species	Year of Plantation
1	Faridabad	R.F. Alipur	NPV/Ridge	50	25000	Kikar, Shisham	2012-13
2	Faridabad	Gurgaon Feeder RDD-12 L&R	CA/T.P.	0.14	35	Kikar, Papri	
3	Faridabad	Sector 13 & 14, Faridabad	CA/T.P.	1.72	430	Alstonia	
4	Ballabgarh	Gurgaon Feeder 50-52	CA/T.P.	0.56	140	Papri	
5	Ballabgarh	Gurgaon Canal RD 0-7 L&R	CA/T.P.	13.24	3310	Shisham, Bakaur, Papri, Arjun	
Sub Total				65.66	28915		

3.4 Analysis of Plantation and Survival Assessment

- In the process of monitoring and evaluation of CAMPA programme of Faridabad Forest Division in Faridabad District of Haryana entire plantation area (65.66 RKM) along with all plantation sites and assets created were verified during field visit and to estimate survival percentage of plantation. Four plantation sites belonged to CA/Tall Plantation scheme while one plantation site belonged to NPV/ Ridge plantation scheme. Apart from above activities there was construction of forest guard quarters at one place in Ballabgarh range.



- Average survival percentage of seedlings estimated was 65%. The survival percentage was highest at R.F. Alipur site/VFC (81%) while it was lowest at Gurgaon Canal RD 0-7 L & R forestland site (57%). Average height of plantation was 6 feet.



Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.

Table 3.4: Analysis of CAMPA Assets and Assessment of site wise Survival

Sl. No.	Range	JFMC/Site	Scheme	Area (ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	Faridabad	R.F. Alipur	Ridge	50	25000	20250	81	2012-13
2	Faridabad	Gurgaon Feeder RD 0-12 L&R Side	T.P.	0.14	35	22	62	
3	Faridabad	Near Sector 13 & 14 Faridabad	T.P.	1.72	430	280	65	
4	Ballabgarh	Gurgaon Feeder 50-52	T.P.	0.56	140	81	58	
5	Ballabgarh	Gurgaon Canal RD 0-7 L&R	T.P.	13.24	3310	1897	57	
Total				65.66	28915	22519	65	

3.5 Analysis of Other Activities of the Project

- Construction of a two room forest guard hut/quarters with toilet cum bathroom, kitchen and overhead water tank (500 liters) was started at Pratapgarh Forest Complex of Ballabgarh forest range in the division. However, only Rs. 1 lakh was spent during this financial year (2012-13) and it was completed in the next financial year (2013-14). Refer table 3.5 as given above along with for detail information in this regard. Also see photograph of the pucca hut on the right side.

Table 3.5: Assets Created under CAMPA (2012-13)

Sl.	Forest Division	Range	Details of Asset Created	Financial (Rs.)	
				Target	Achievement
1.	Faridabad	Ballabgarh, Pratapgarh forest complex	Construction of Forest Guard Quarter	1 Lakh	1 Lakh
Total				1Lakh	1 Lakh



3.6 Registers/Records Maintained in the Project

- Important registers maintained by project authority were work register, cashbook, sketch map, etc. Plantation journal was found missing at all the plantation sites covered in the CAMPA project. However, the DFO of the division Ms Renjitha assured us that plantation journal would be prepared very soon for all the plantation sites of CAMPA.

3.7 Monitoring and Evaluation System Adopted in the Project

- The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana of Faridabad forest division was conducted in October 2014. The M & E wing consists of one conservator of forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Kamal in Haryana quarters. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state.

3.8 Involvement of Independent Agency for Evaluation of CAMPA

- The project authority reported that an independent agency named Agricultural Finance Corporation Ltd. based in Delhi carried out last evaluation of CAMPA work for the duration of 2010-11 and 2011-12. It was conducted in 2013 and overall finding of the study was satisfactory.

3.9 Bank Account Details and Flow of Funds

- Bank account of CAMPA Programme of Faridabad forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Faridabad Branch. Apart from this there were two other bank accounts for ranges of the division namely Faridabad Range and Ballabgarh Range. These bank accounts were also with the same Corporation Bank at Faridabad branch. Flow of funds was smooth as reported and information gathered from the stakeholders.

CHAPTER-4

QUALITATIVE ANALYSIS AND FINDINGS

4.1 Preference and Basis of Species Selection

- ✱ Important factors in the selection of plant species were nature of topography, soil type, climate, rainfall, suitability of species in the area, economic value of plant species, preference shown by local community, etc. However, the project authority took final decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ✱ There was significant improvement in soil moisture conservation at all those places where plantation carried out under CAMPA programme. However, it was reported that due to limited provision of funds on this head of the programme did not provide much options for the project authority to carry forward additional work.

4.3 Assessment of Survival Percentage and Methodology

- ✱ After thorough evaluation of the programme the estimated survival percentage of plantation carried out during 2012-13 was 65%. It was highest at R.F Alipur (81%) while it was lowest at Gurgaon Canal RD D-7 L&R forestland (57%). Average height of plantation was 6 feet with average to good growth and health.
- ✱ A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants was followed for survival assessment. Information gathered through interviews with various stakeholders of the project, observations and experiences of members of evaluation team, etc. were taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ✱ There was very little natural regeneration of plants in the CAMPA plantation as observed during field inspection. In most part of urban and suburban areas natural regeneration was negligible while on block forest and rural areas there were some glimpses of it due to presence of other species in and around the newly planted saplings.

4.5 Quality of work Observed During Field Visit

- ✱ Overall quality of work especially plantation and creation of assets in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ✱ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.

4.7 Protection and Maintenance of Plantation and Project Assets

- ◆ There was barbed wire and bush fencing at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions were also adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be provision of better care of plantation through elaborate fencing and protection as observed. The process of awareness raising and motivation of local community should be a regular phenomenon in the project.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ◆ All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Meetings and interactive programmes were organized from time to time on the initiatives of DFO to update and motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- ◆ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ◆ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- ◆ The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5.

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

- 5.0 Project Constraints and Limitations:** There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.
- 5.1 Unprotect Grazing by Loose Domestic Animals**
- Open grazing by 'loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.
- 5.2 Shortage of Frontline Forest Staff During 2012-13 of Project Work**
- Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.
- 5.3 Low Wage Rate of Forest Department as Compared to Private Sector**
- Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.
- 5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate**
- Due to high rate of urbanization and industrialization in most part of the project area, there was high demand of labour force and hence the forest department had to face shortage of labour. In industrial sector average wage rate per day was Rs. 400-500 while it was Rs. 213 in forest department.
- 5.5 Inadequate Infrastructure in the Division and Forest Ranges**
- At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.
- 5.6 Other Biotic and Natural Factors Impacting Survival of Plantation**
- Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

- 6.1 Suggestions and Recommendations for Improvement:** On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:
- 6.1.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals**
- ★ As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- 6.1.2 Make Proper Arrangement of Protection and Maintenance of Plantation**
- ★ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.
- 6.1.3 Vacant Posts of Frontline Staff Should be Filled on Time**
- ★ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.
- 6.1.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources**
- ★ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.
- 6.1.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills**
- ★ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.
- 6.1.6 Make Four Years of Protection and Maintenance Funding**
- ★ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.1.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF and two DFOs. Its head office is located at Karnal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.1.8 Intensive Awareness Campaign to Motivate Local Community

- There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.1.9 Organize Exposure Visit for Staff Member and Local Community

- Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.1.10 Introduce Practice and Concept of Earning Carbon Credits

- The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.2 Interview with Project Authority/DFO

- Summary of interviews held with DFO, Ms Renjitha is given below with contact detail. It is as follows:
 - Ms Renjitha (IFS), DFO, Faridabad Forest Division (T), Faridabad district, Haryana, Mobile No.:+91-8901558515, Landline No.: +91-1292286760.
- The evaluator conducted interaction (pre evaluation/field visit) and interviewed (post evaluation) with DFO, Faridabad (T), Ms Renjitha along with an RFO. A number of issues related to implementation, progress, management and outcome of CAMPA were discussed in great detail. She replied all the queries straight forward and satisfactorily.
- The DFO confidently expressed that overall outcome and progress of CAMPA programme carried out during 2012-13 under Faridabad Forest Division in Faridabad district of Haryana was very good.

- ✦ On selection and preference of plant species in the project, the DFO was of the opinion that important factors like topography, soil condition, local climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were taken into consideration. Most preferred plant species in the project were *Papri, Shisham, Kikar, Bakain Arjun, Alstonia*, etc.
- ✦ With reference to benefits accrued and impact of CAMPA programme, the project authority further said that it generated employment opportunity to members of households who worked and got opportunity to earn additional income. Plantation helped in improving ecology and environment of the area. Construction of forest guard hut/quarter at Pratapgarh forest colony under Ballabgarh forest range had significant impact on forest staff working in the field.
- ✦ For betterment in the project outcome, the DFO told that she maintained regular interaction with staff members, monitored their work records and past performance, fixed accountability on the basis of performance, etc. It helped in improving performance of staff and quality of work.
- ✦ The project authority also explained that important factors impacting growth and survival of plantation were grazing by domestic animal, illicit felling of plant, shortage of labour forces, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, low wage rate under forest department, etc.
- ✦ Finally the DFO assured the members of evaluation team that plantation journals, which were missing, would be prepared of all the plantation sites carried out under CAMPA during 2012-13.

6.3 Evaluator's Assessment

- ✦ After field inspection, meeting with DFO, other forest officials, local community and analysis and verification of official records / documents, it was concluded that above statements made by the DFO, Ms Renjitha was true to a great extent. The project authority did a commendable job in the programme at Faridabad forest division. Awareness raising campaigns should be conducted at regular interval by adopting modern tools of mass media for better impact. Monitoring and evaluation work of the programme should be streamlined and conducted effectively at regular interval.

Photographs: Plantation Area and Other Project Assets of Faridabad Division (2012-13)

Site-1: R.F. Alpuri, Range: Faridabad, Scheme: NPV/Ridge, Area: 50 RKM, No. of Plant: 25000 (Kikar, Shisham)

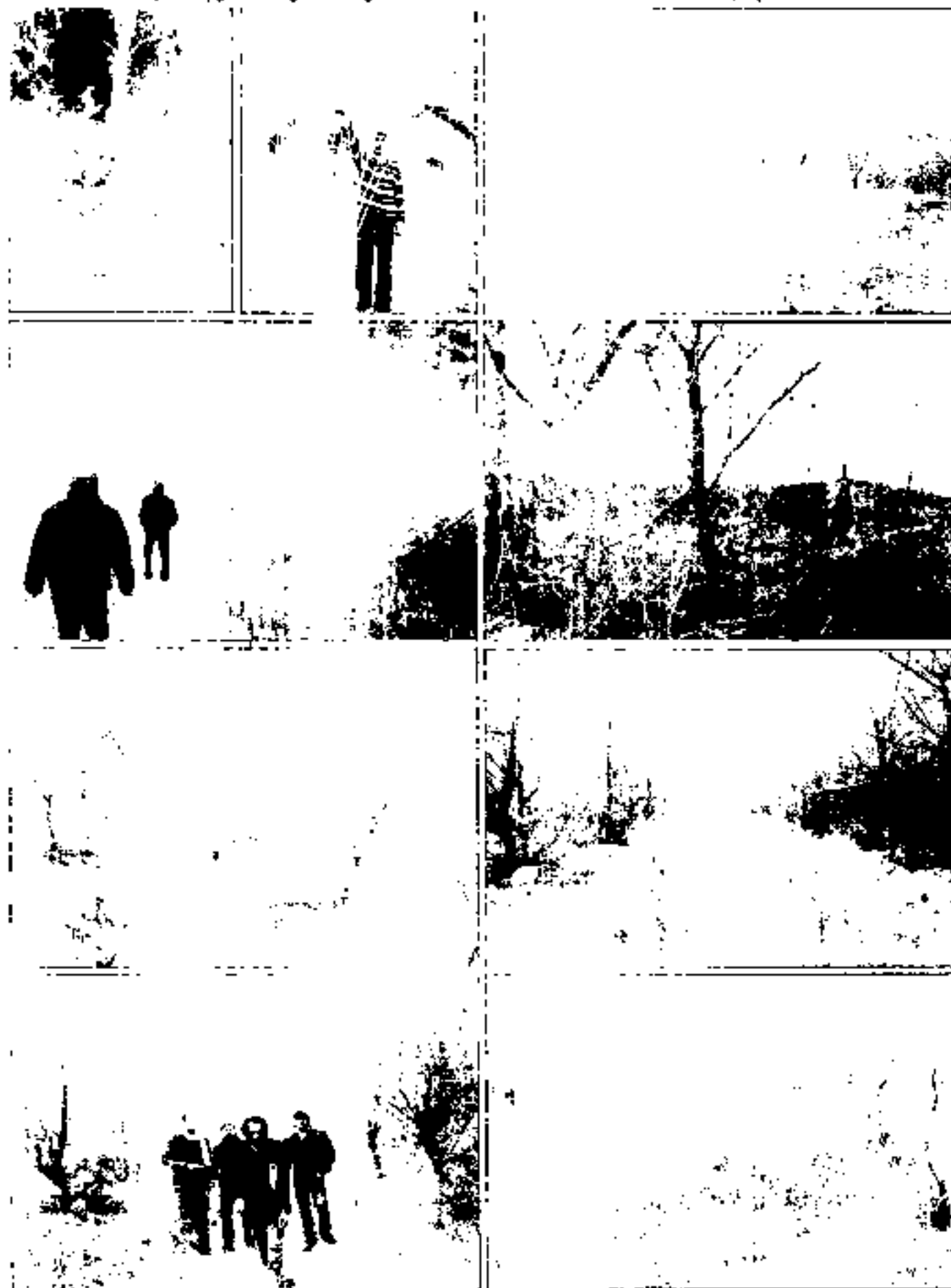
Site-2: Gurgaon Feeder RD 0-12 L&R, Range: Faridabad, Scheme: CA/TP, Area: 0.14 RKM, No. of Plant: 35 (Kikar, Papri)

Site-3: Sector 13 & 14 Faridabad, Range: Faridabad, Scheme: CA/TP, Area: 1.72 RKM, No. of Plant: 430 (Alstonia)

Site-4: Gurgaon Feeder 50-52, Range: Ballabgarh, Scheme: CA/TP, Area: 0.56 RKM, No. of Plant: 140 (Papri)

Site-5: Gurgaon Canal RD 0-7 L & R, Scheme: CA/TP, Area: 13.24 RKM, No. of Plant: 3310 (Shisham, Bakam, Papri, Arjun)

Site-6: Forest Colony Pratapgarh, Range: Ballabgarh, Assets: Construction of Forest Guard Hut/ Quarter



Final A.P.O. State CAMPA Scheme (2012-13) of Faridabad Forest Division (T) in Faridabad District of Haryana													
Sl No	Type of land (Forest/Non-forest)	Name of Scheme/ component	Name of Range/ Block/Beat	Name of Sta	Khasra No. KM/RO	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Forestland	FCA (Tall Plant)	Faridabad	R.F. Alipur	NA	July		50 RKM	NA	Kikar, Shisham	25000	77°26'25"E	28°27'24"E
2.	Forestland	FCA (Tall Plant)	Faridabad	Gurgaon Feeder 0-12 L&R	NA	July		0.14 RKM	NA	Kikar, Papri	35	77°20'28.3"E	28°20'15.3"E
3.	Forestland	FCA (Tall Plant)	Faridabad	Near Sector 13 & 14	NA	July		1.72 RKM	NA	Alistonia	430	77°20'9.8"E	28°23'23.1"E
4.	Forestland	FCA (Tall Plant)	Ballabgarh	Gurgaon Feeder 50-52 R Side	NA	July		0.56	NA	Papri	140	77°20'27.7"E 77°20'30.5"E 77°20'27.7"E 77°20'30.5"E	28°21'32.2"E 28°21'50.5"E 28°21'32.2"E 28°21'50.5"E
5.	Forestland	NPV (Ridge Plantation)	Ballabgarh	Gurgaon Canal RD 0-7 L&R	NA	July		13.24	NA	Shisham, Bakain, Papri, Arjun	3310	77°20'28.3"E	28°20'15.7"E
Total								6566			28915		

Final A.P.O. State CAMPA Scheme (2012-13) of Faridabad Forest Division (T) in Faridabad District of Haryana						
Sl No.	Item of Work	Sanctioned Amount (Rs. in lakh)	Actual Expenditure			Deviation if Any
			Amount (Rs. in lakh)	Quantity	Location/Remark	
1.	Construction of Forest Guard Hut/Quarter at Pratapgarh in Ballabgarh range	1.0	1.0	1	At Pratapgarh forest colony in Ballabgarh range	Not Completed in 2012-13
Total		1.0	1.0	1		

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi



**MONITORING AND EVALUATION OF STATE CAMPA, HARYANA BEING IMPLEMENTED
BY GURGAON FOREST DIVISION (I) IN GURGAON DISTRICT OF HARYANA**

Duration of Evaluation: 2012-13

Detailed Project Report

Submitted to

**OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANAVAN
BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA**

February, 2015

Conducted by

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Compensatory Afforestation Fund Management and Planning Authority (CAMPA)
Ministry of Environment & Forests (MOEF)
Government of India, New Delhi

MONITORING AND EVALUATION OF STATE CAMPA, HARYANA BEING
IMPLEMENTED BY GURGAON FOREST DIVISION (T) AND WILDLIFE FOREST
DIVISION IN GURGAON DISTRICT OF HARYANA

Duration of Evaluation: 2012-13

Draft Final Report

Submitted to
OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANAVAN
BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

February, 2015

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ACKNOWLEDGEMENT

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Gurgaon Forest Division (T) in Gurgaon District of Haryana (2012-13)" was successfully completed. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

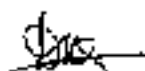
First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal, and other officials placed at PCCF office especially DCF, Mr. Garg, Mr. Hembram and Mr. D.P. Tyagi for reposing faith and awarding the honorable duty of conducting Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency. My brief interaction with PCCF uplifted my spirit as he took final decision to award this study very deftly and in no time soon after the meeting was over.

During the process of evaluation I interacted with DFO, Ms Vasvi Tyagi (Territorial Division) and DFO, Mr. Kulvinder Singh (DWLO Division), some RFOs along with other officials of both the forest divisions, which helped me in understanding various aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.





Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, February, 2015

Preface

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates.....a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character. State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana at Gurgaon by PCCF office on professional terms and conditions. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

Under CAMPA programme, a total 95.016 RKM forestland was treated along with work initiated on boundary wall, and construction of staff flats during 2012-13. Total expenditure incurred on above activities was Rs. 36.92 lakh against the target of Rs. 79.96 lakh. A total of 23769 plant species of *Ailanthus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Ber*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, *Sras*, etc. were planted at five sites /VFCs by adopting NPV and CA schemes.

Average survival of seedlings estimated was 63%. The survival percentage was highest at Bhondsi site/VFC (77%) and it was lowest at Kadipur forestland site (51%). Average height of plantation was 6 feet. Average grading awarded to the programme was 6.2 (on a scale of 1 to 10), which was very good.

Members of evaluation team interacted with JFMC local community and forest officials in the process of field inspection of project area. At most places local people were happy with the efforts made by forest department. A Plantation Journal was missing but other project related records were recorded and kept well. Selection of species was made in accordance with local factors and needs of the community. Flow of fund was smooth as reported by the project authority. There was lack of awareness and low sense of responsibility on public and environmental issues among the local people. Overall outcome of the programme was satisfactory.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.



D.K.S.
Dinesh K. Singh
Director
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New Delhi

February, 2015

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Gurgaon Division (T)	Gurgaon Forest Division Territorial
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

LOCAL NAME AND BOTANICAL NAME OF PLANT SPECIES

SL. No.	Common Name	Botanical Name
1.	Alainthus	Alainthus
2.	Alstonia	Indian Mallow/ Devil Tree
3.	Amaltas	Cassia fistula
4.	Arjun	Terminalia arjuna
5.	Bakain	Melia azedarach
6.	Ber	Ziziphus mauritiana
7.	Chakrasia/ Indian Redwood	Chukrasia tabularis
8.	Champa	Magnolia champaca
9.	Gulmohar	Delonix regia
10.	Jamun	Syzygium cumini
11.	Kachnar	Bauhinia variegata
12.	Khair	Acacia catechu
13.	Kikar	Acacia Arabica
14.	Lasoda	Cordia Dichotoma
15.	Neem	Azadirachta indica
16.	Papri	Holoptelea integrifolia
17.	Pilkhan	Ficus virens
19.	Pipal	Ficus religiosa
20.	Shisham	Dalbergia sissoo
21.	Siras	Albizia lebeck

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana****Gurgaon Forest Division in Gurgaon District of Haryana**

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	6
	Health of Plantation	6
	Maintenance	6
	Sustainability	5
	Degree of Peoples' Participation	5
JFM/Social Aspects	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.2

Executive Summary**1.0 Introduction**

- Monitoring and evaluation of State CAMPA, Haryana of Gurgaon Forest Division (T) in Gurgaon district was conducted in the month of January (7-10), 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency. A total 95.016 RKM forestland treated with NPV and CA plantation schemes at 5 places along with creation of two assets during 2012-13. There was 100% coverage of project sites/areas and assets during field visit. Summary of findings of the study is given below.

2.0 CAMPA: An Overview

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 Objectives of the NAP

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 Geographic Location /Area of Monitoring & Evaluation

- It covers Gurgaon Forest Division (Territorial) in Gurgaon district of Haryana.

5.0 Reference Period

- ♦ The reference period of monitoring & evaluation CAMPA is one year, i.e. 2012-13.

6.0 Need of the Study

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any in from the stated guidelines, etc.

7.0 Objectives of the Study

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - ♦ To assess physical and financial targets and achievements
 - ♦ To evaluate performance of the programme
 - ♦ To estimate of survival percentage of plant species adopted in the project.
 - ♦ To analyze factors impacting plantation survival and suggest remedial measures.
 - ♦ To assess peoples' participation and assets created
 - ♦ To assess the direct and indirect benefits and impact of the programme.
 - ♦ To provide recommendations for improvement in future implementation and management.

8.0 Methodology and Sample selection

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted as per need and interviewing forest officials and community leader, etc. There was cent percent (100%) coverage area and project activities carried out during 2012-13.

9.0 Profile of the Study Area

- ♦ The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state. As per India State of Forest Report-2011, Gurgaon district has 8.35% area under forest cover.

10.0 Main Findings of the Study

10.1 Quantitative Findings

- ♦ 95.016 RKM land forestland was treated under CAMPA programme by adopting CA scheme at Gurgaon range in Gurgaon forest division (T) during 2013-14. Besides, initiatives were made for creation of assets i.e., boundary wall and staff flats. But they could not be finished in this financial year.
- ♦ Total expenditure was Rs. 36.92 lakh on entire project work against the target of Rs. 79.96 lakh during the same period.
- ♦ 23769 plant species of *Allanthurus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Ber*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, *Siras*, etc. were planted in the project.
- ♦ Average survival percentage of seedlings estimated was 63%. The survival percentage was highest at Bhondsi site/VFC (77%) and it was lowest at Kadipur forestland site (51%). Average height of plantation was 6 feet. Growth and health of plantation was good. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random locations to estimate survival percentage. For row /linear plantation, row counting of plants was followed. Feedbacks through interviews with various

stakeholders of project, observations and experiences of members of evaluation team were also considered to validate and estimate survival percentage.

- ❖ Work register, Cash book, Maps, etc. were importance registers maintained by the project authority. Plantation Journal was missing but project authority assured us that it would be introduced soon.
- ❖ Monitoring and Evaluation (M & E) wing conducts monitoring of CAMPA for once or twice a year on average basis. Last evaluation of CAMPA was carried out in October 2014 for the entire four years of project activity (2010-11 to 2013-14). The headquarters of M & E wing is located at Karnal in Haryana.
- ❖ Flow of funds was smooth at all levels as reported by the project authority.

10.2 Qualitative Findings

- ❖ Type of soil, climate and natural factors, survival factor and suitability in the area, demand/choice put by local community, etc. were main factors in the selection of species.
- ❖ CAMPA plantation accrued benefits in conserving soil moisture. The project authority reported that there was no provision of additional funds for soil moisture conservation work.
- ❖ Natural regeneration of plantation in the CAMPA was negligible. In block forest region there were some glimpses of it due to presence of other species in and around the newly planted saplings.
- ❖ Overall quality of work was found satisfactory at majority locations as observed during field visit.
- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.
- ❖ For protection of plantation Barbed wire fencing was very common at all sites along with a few brick/iron/wood gabions in urban and sub-urban areas. Foresters and forest guards were responsible for making regular rounds of plantation area in this regard.
- ❖ The project authority was of the view that meetings and interactive programmes were organized at certain intervals on the initiatives of DFO to acquaint, update and motivate forest staffs with necessary information on forestry programmes and CAMPA related issues.
- ❖ There was average to low participation of local community in the implementation and protection of the programme.
- ❖ CAMPA programme accrued both direct and indirect benefits. It helped in improving quality of ecology and environment benefitting all kinds of flora and fauna. Wage employment during project activity and plantation season also accrued benefits to local people in earning additional income.

11.0 Constraints and Limitations of the Project

- ❖ Grazing by domestic animals had adverse impacted survival and growth of plantation. It caused far reaching damage to plantations as animals' feet loosen the soil, and has a cascading detrimental effect on all saplings planted in the area.
- ❖ There was shortage of foresters and forest guards in the division during 2013-14. The programme had adverse impact on quality and outcome due to this during 2013-14.
- ❖ Average wage rate of forest department was Rs. 213 per day, which was much low as compared to local industrial establishments and urban areas (Rs. 400-500 per day) causing hardship and limitation in finding labour force during peak plantation season and project work.
- ❖ Due to high rate of urbanization and industrialization, there was high demand of labour force and hence the forest department had to face shortage of labour. In industrial sector average wage rate per day was Rs. 400-500 while it was Rs. 213 in forest department and hence the forest.

- ❖ Range level offices were facing shortage of necessary vehicles for day to day activities as reported by the project authority. It impacts the performance of staff and quality and outcome of project work.
- ❖ Main factors impacting growth and survival of plantation were damage caused by wild animals like, rabbits, blue bulls and porcupines, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic monsoon rain, rapid urbanization, etc.

12.0 Suggestions and Recommendations

- ❖ A viable strategy should be adopted to minimize the menace of grazing by domestic animals in most part of the project area. Wild animals like blue bulls and rabbits also caused damage to plantation. Local community should be motivated to adopt stall feeding to their animals.
- ❖ A multi-pronged strategy should be adopted for protection and maintenance of plantation. It was observed that barbed wire fencing was very common at most plantation sites. It is suggested that in urban and suburban areas the project authority should adopt gablons of iron, brick or wood for better survival and higher outcome.
- ❖ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure on existing staff.
- ❖ A provision of fine /punishment or both should be levied against all persons involved in unprotected grazing and deliberate damage to plantation.
- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs along with some willing local community to impart skill enhancement and better knowledge.
- ❖ There should be regular funding provision for four consecutive years for protection and maintenance of plantation for better outcome.
- ❖ Monitoring and evaluation system is critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). The project authority should pay a better attention in this regard to increase its effectiveness.
- ❖ Mass media communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. should be adopted for awareness for better and long lasting impact among local community.
- ❖ Exposure visit and tour programme should be organized for forest staffs to advance nursery and plantation areas within the state and outside for better understanding and learning new ideas and knowledge. These are important methods of development process.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures in new ways, and it should forthwith be introduced in our country at the village level of environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

CHAPTER-1

PROJECT CONCEPT, STRATEGY, OBJECTIVE AND METHODOLOGY

1.1 CAMPA : An Overview

- ❖ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ❖ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators.
- ❖ Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
 - ❖ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ❖ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.

- ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
- ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Details of Establishment State CAMPA

- ❖ The details of establishment of State CAMPA are summarized below :
 - a) The State Government may establish the Compensatory Afforestation Fund Management and Planning Authority (State CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ❖ Amount transferred to it by the ad-hoc CAMPA.
 - ❖ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ❖ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ❖ The Funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ❖ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The State Government may also credit to the State CAMPA
 - ❖ Grants or aid received if any;
 - ❖ Any loan taken by the Authority or any borrowings made by it; and
 - ❖ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 Establishment of State CAMPA, Haryana

- ♦ On March 3, 2010, Haryana Government constituted the State Compensatory Afforestation Fund Management and Planning Authority (STATE CAMPA), Haryana for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.
- ♦ State CAMPA, Haryana will have three bodies, namely - a Governing Body, a Steering Committee and an Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ♦ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the State Government for a period of two years will be its Members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ♦ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ♦ "State Compensatory Afforestation Fund Management and Planning Authority"(CAMPA) is intended as an instrument to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ♦ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ♦ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural

regeneration, conservation and protection of forests, infrastructure development, wildlife conservation and protection and other related activities, and for matters connected therewith or incidental thereto.

- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the Institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of CAMPA

- ♦ Conservation, protection, regeneration and management of existing natural forests;
- ♦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- ♦ Compensatory afforestation;
- ♦ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- ♦ Science, Research, Training and Capacity Building.
- ♦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location /Area of Monitoring & Evaluation

- ♦ The evaluation study covers Gurgaon Forest Division (Territorial) in Gurgaon district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ♦ The reference period of monitoring & evaluation CAMPA is one year, i.e. 2012-13.

1.7 Components of Project

- ❖ People's Participation
- ❖ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
- ❖ Monitoring and Evaluation of the programme
- ❖ Conservation and protection of forests, infrastructure development, wildlife conservation and protection and related activities.

1.8 Details of Project Implementing Agency and Proposed Activities

- ❖ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Project Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
❖ District	: Gurgaon
❖ Forest Division	: Gurgaon (T)
❖ Forest Circle	: South Circle, Gurgaon
❖ State	: Haryana
Project Location	
❖ Watersheds/Sub-watersheds	: NA
❖ Development Blocks (9)	: Gurgaon, Farukhnagar, Manesar, Sohna, Damdama, Badrhalpur, Hailey Mandi, Inchapuri and Bhorkalan
❖ Forest Ranges (3)	: Gurgaon, Sohna and Hailey Mandi but there was no CAMPA work at Hailey Mandi range during 2012-13.
❖ Villages/VFCs/Sites	: 7 (Seven): List attached with chapter-3
Other Development Activities in the Project Area	
❖ There was no implementation any other afforestation scheme during 2012-13 in CAMPA area. In urban areas some other schemes were implemented. However, developmental activities of line departments were implemented in most part of the CAMPA programme.	
Preparation of Micro-plan and Plantation Journal	
❖ There was no requirement of micro-plan as reported and hence not prepared. But plantation journal was also missing. Work register was available and used as plantation journal.	
Project Duration	: 2012-13
Project Area and assets created	: Target and achievements: 95.016 RKM Plantation and creation of boundary wall, and construction of staff flats (incomplete)
Project Cost	: Target: Rs. 79.96 lakh, Achievement/spent: Rs. 36.92 lakh
Proposed Strategies and Salient Features of the Project	
❖ <u>Plantation Scheme</u> : Compensatory Afforestation (CA) and Net Present value (NPV)	
❖ <u>Assets/Infrastructure created under CAMPA</u> : there was no provision for creation assets in the name of EPA in CAMPA as reported. However, apart from Plantation CAMPA programme has wide scope for creation of assets and Infrastructure.	

1.9 Need of the Study

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ❖ Scope of study is confined to Gurgaon Forest Division (T) in Gurgaon district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ❖ To assess physical and financial targets and achievements
 - ❖ To evaluate performance of the programme
 - ❖ To estimate of survival percentage of plant species adopted in the project.
 - ❖ To analyze factors impacting plantation survival and suggest remedial measures.
 - ❖ To assess peoples' participation and assets created
 - ❖ To assess the direct and indirect benefits and impact of the programme.
 - ❖ To provide recommendations for improvement in future implementation and management

1.12 Research Methodology and Sampling Procedure

- ❖ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ❖ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.

1.13 Sample Selection, Size and Distribution

- ❖ There was 100% coverage of plantation area (95.016 RKM) and other project assets in the process of field visit for monitoring and evaluation of CAMPA, Haryana of Gurgaon forest division and district. Out of five plantation sites four of them belonged to NPV scheme namely Khuntपुरi-sector 48&5, Raipur RF, Bhondsi, and Kadipur forest land and one site was under CA scheme namely Wazirabad, Sec.54 Forest Land. Besides, there were two other sites where assets created in the project, i.e. construction of Staff Flats at Om Nagar on Pataudi Road and creation of boundary wall at Kadipur government land.

1.14 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - ❖ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ❖ Chapter-2 gives the Profile of the Project Area and its Location
 - ❖ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ❖ Chapter-4 gives Qualitative Analysis and Findings.
 - ❖ Chapter-5 deals with Limitations and Constraints of the Project.
 - ❖ Chapter-6 provides Suggestions and Recommendations for Improvement.

1.15 Limitations of the Evaluation Study

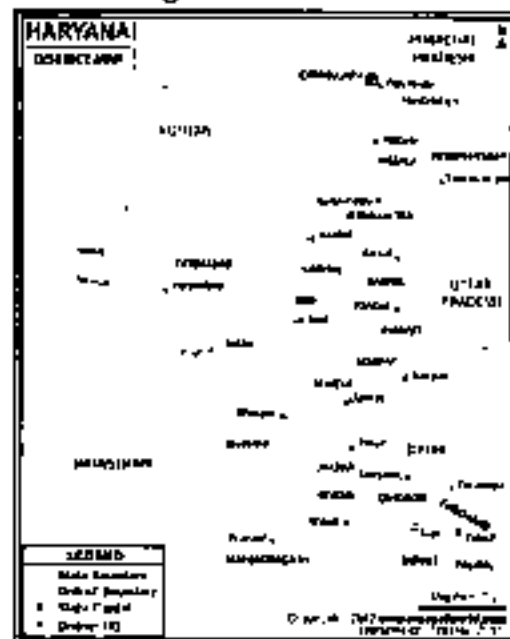
- ❖ It hard to find respondents at both rural and urban areas of project implementation. It impacted collection necessary information.
- ❖ Lack of necessary awareness among community about details of CAMPA also Impacted collection of necessary information. However, adequate efforts were made by members of evaluation team to minimize these limitations.

CHAPTER-2

PROFILE OF PROJECT AREA

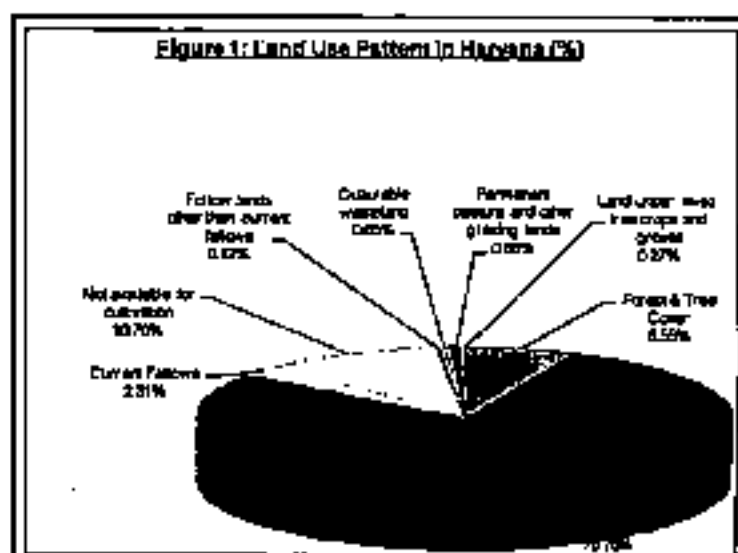
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1966, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ❖ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ❖ Gurgaon Division has six (6) districts namely Palwal, Faridabad, Mahendragarh, Gurgaon, Rewari, and Mewat districts in its jurisdiction.
- ❖ While Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ And Rohtak Division has also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat districts in its jurisdiction.



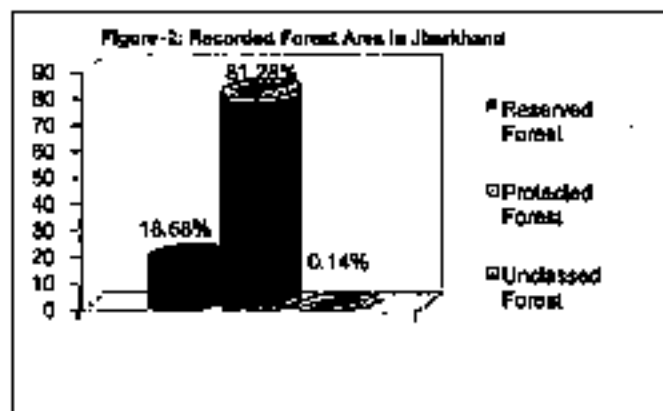
2.1.1 Land Use Pattern of Haryana

- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use patterns about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ❖ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%). Permanent pasture and other grazing lands (0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun).



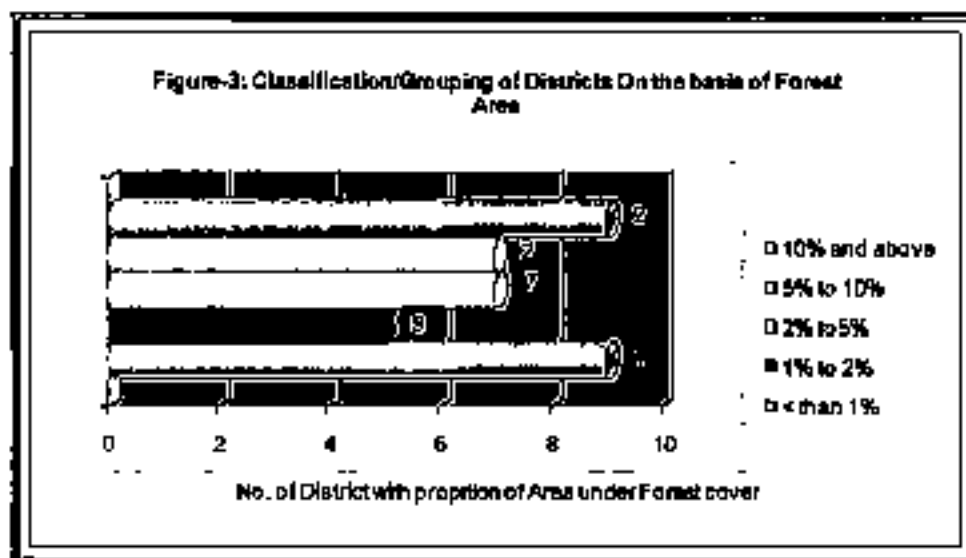
2.1.2 Recorded Forest Area in Haryana

- ❖ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ❖ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. See Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ❖ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. Group-1: Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ❖ Group-2: two districts namely Gurgaon (8.35%) and Mewat (8.35%) fall in the category of 5% to 10% forest cover.
- ❖ Group-3: It followed seven districts namely Faridabad (4.32%), Palwal, Bhiwani, Ambala, Rewari, Mahendragarh and Kaithal fall in the category of 2% to 5% forest cover.
- ❖ Group-4: On the other hand 9 districts namely Hisar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat have 1% to 2% geographical area under forest cover.
- ❖ Group-5: Fatehabad is the only district which has less than 1% area under forest cover. Refer Figure-3 for pictorial understanding.

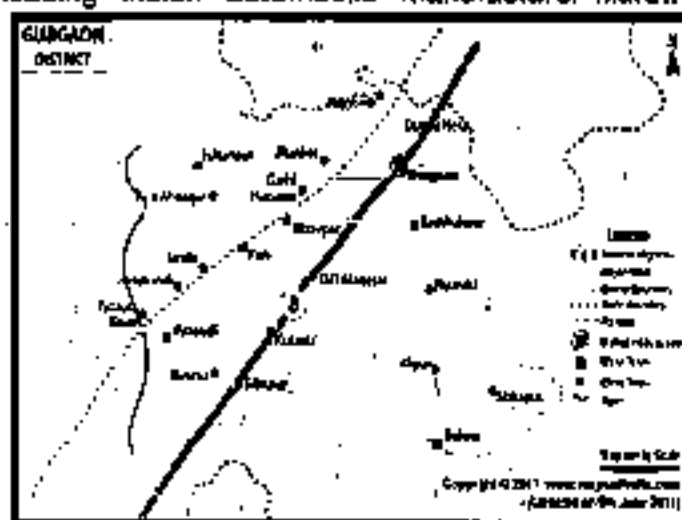


2.2 Profile of Gurgaon District

- ❖ Gurgaon is a leading financial and industrial city of India, situated in the National Capital Region near the Indian capital New Delhi in the state of Haryana. It is located 32 km south-west of New Delhi. Gurgaon district has a population of 876,824. Witnessing rapid urbanization, Gurgaon has become the city with the third highest per capita income in India, even though the city grapples with the problem of lack of proper infrastructure and

utilities, frequent power outages and rising crime. Historically known as *Guru Gram*, the city's economic growth story started when the leading Indian automobile manufacturer Maruti Suzuki India Limited established a manufacturing plant in Gurgaon in the 1970s. Today, Gurgaon is home to about 250 Fortune 500 companies.

- ✦ The origin of the city's name can be traced back to ancient Hindu scriptures. It is believed that this land was owned by the legendary rulers Pandavas and Kauravas who presented it to Guru Dronacharya, their royal guru for warfare, as an appreciation of his training. The land came to be known as *Guru Gram*, which literally translated means "Village of the Guru", which in due course of time got distorted to the name Gurgaon. The village still exists within the modern day city.
- ✦ Gurgaon is located in Gurgaon district in the Indian state of Haryana and is situated in the south eastern part of the state, and northern part of the country. The city is located on the border with Delhi with New Delhi to its north east. The city has a total area of 282.7 square miles (738.8 km²). The average land elevation is 711.9 ft (217 m) above sea level.
- ✦ Under the Köppen climate classification, Gurgaon experiences monsoon-influenced humid subtropical climate (Cwa). The city experiences four distinct seasons - spring, summer, autumn and winter, along with the monsoon season setting in towards the latter half of the summer. Summers, from early April to mid October, are typically very hot and humid, with an average daily June high temperature of 104 °F (40 °C). The season experiences heat indices easily breaking 110 °F (43 °C). Winters are very cold and foggy with few sunny days, and with a December daytime average of 37.4 °F (3 °C). The Western Disturbance brings some rain in winters that further add to the chill. Spring and autumn are mild and pleasant seasons with low humidity. The monsoon season usually starts in the first week of July and continues till August. Thunderstorms are not uncommon during the Monsoon. The average annual rainfall is approximately 28.1 inches (714 mm).



2.3 Forest Cover in Gurgaon District

- ✦ As per India State of Forest Report-2011, Gurgaon district has 8.35% area under forest cover against 3.64% (6.80% both forest & tree cover) of state average. Main plant species adopted under CAMPA programme in the district are *Ailanthus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Ber*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pilkhan*, *Pipal*, *Shisham*, *Siras*, etc.

CHAPTER-3

QUANTITATIVE EVALUATION AND FINDINGS

3.1 Classification of Area Covered/Treated

- During 2012-13, a total 95.016 RKM forestland was treated by adopting plantation scheme of Net Present value (NPV-4 sites) and Compensatory Afforestation (CA-one site) at 5 places of Sohna and Gurgaon forest ranges. Funds also allocated for creation of two assets namely construction of flats for staff and boundary wall. Refer table-3.1 as given below.

Table 3.1 Area Covered/Treated Under CAMPA				
Sl.	Land Category	Scheme of Plantation	Area in RKM.	Year
1.	Reserve Forest	State CAMPA (NPV)	20	2012-13
2.	Compact	State CAMPA (NPV)	7	
3.	Compact	State CAMPA (NPV)	1	
4.	Forest U/S 38	State CAMPA (NPV)	16	
5.	Sec. 4&5 Gurgaon	Compensatory Afforestation (CA)	51.016 ✓	
6.	Construction of Staff Flats in Om Nagar and Pataudi Road		--	
7.	Boundary Wall of Kadipur Govt. Land, (not completed in this financial yr)		--	
Total			95.016	

3.2 Physical and Financial Targets and Achievements

- A sum of Rs. 36.92 lakh was spent on the entire CAMPA project work during 2012-13 against the target of Rs 79.96 lakh. On plantation work at five places total expenditure made was Rs.34.53 lakh while Rs. 2.39 lakh was spent on other assets (*Construction of Staff Flats at Om Nagar on Pataudi Road and boundary Wall at Kadipur Govt. land*) against the target of Rs.45.25 lakh. These assets were. But the assets were not completed in this financial year. Refer table 3.2 for detail information about expenditure as given below:

Table 3.2 Physical and Financial Target and Achievements of CAMPA (2012-2013)						
Sl. No.	Range	JFMC/Village/Site	Physical (Area in ha/RKM)		Financial (In Rupees)	
			Target	Achievement	Target	Achievement
1.	Sohna	Khuntpur	51.016	51.016 ✓	1887370	1868920
2.	Sohna	Rajpur RF	20	20 ✓	720000	720000
3.	Sohna	Bhondai	16	16 ✓	576000	576000
4.	Gurgaon	Kadipur forest land	7	7 ✓	252000	252000
5.	Gurgaon	Wazirabad, Sec.54 Forestland	1	1 ✓	36000	36000
Total			95.016	95.016	3471370	3452920
6.	Gurgaon	Construction of Staff Flats in Om Nagar and Pataudi Road			1000000	239409
7.	Gurgaon	Boundary Wall of Kadipur Govt. Land,			3525000	00
Grand Total			95.016	95.016	7996370	3692329

3.3 Inventory/ List of Plantation

- A total 23769 plant species was planted on 95,016 RKM forestland at five sites/VFCs in two ranges by adopting NPV (4 sites) and CA (1 site) schemes of plantation. Main plant species adopted were *Ailanthus*, *Alstonia*, *Amaltas*, *Arjun*, *Bakain*, *Ber*, *Chakrasia*, *Champa*, *Gulmohar*, *Jamun*, *Kachnar*, *Khair*, *Kikar*, *Lasoda*, *Neem*, *Papri*, *Pilkhani*, *Pipal*, *Shisham*, *Siras*, etc. Range-wise, year wise, scheme wise and area wise list of plantation is given below in Table 3.3.

Table-3.3: List of JFMCs/Plantation Treated in the Project

Sl. No.	Range	Village/JFMC /Site	Scheme of Plantation	Area in RKM	No. of Plants	Name of Plants Species	Year of Plantation
1.	Sohna	Khuntपुरी, Sec. 4&5	NPV	51.016	12769	P. Papri (10000), Bakain (500), Jamun (500) Lasoda (1769)	2012-13
2.	Sohna	Raipur RF	NPV	20	5000	P.Papri (2500), B.Papri (2500)	
3.	Sohna	Bhondsi	NPV	16	4000	P. Papri (2000), Khair (2000)	
4.	Gurgaon	Kadipur forest land	NPV	7	1750	Jamun (50), Papri (421), Alainshus (5) Gulmohar (400) Kikar (550) Champa (250) Kachnar (7), Chakrasia (60), Ber (2), Pipal (5)	
5.	Gurgaon	Wazirabad, Sec.54 Forest Land	CA	1	250	Jamun (30), Neem (50), Shisham (50), Alstonia (50), Arjun (20) and Bakain (50)	
Sub-Total				95.016	23769		

3.4 Analysis and Assessment of Survival Percentage of Plantation

- The entire plantation area (95.016 RKM) and other project assets were covered in the field visit for monitoring and evaluation of CAMPA, Haryana at Gurgaon. Out of five plantation



sites four sites belonged to NPV scheme namely Khuntपुरी-sec. 4&5, Raipur RF, Bhondsi, and Kadipur forest land and one site was under CA scheme namely Wazirabad, Sec.54 Forest Land.

- Average survival percentage of seedlings estimated was 63%. The survival percentage was highest at Bhondsi site/VFC (77%) and it was lowest at Kadipur forestland site (51%). Average height of plantation was 6 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.



Table 3.4 List of Sample Villages/JFMCs/Plantation Sites and Survival Estimation

Sl. No.	Range	Site/VFC	Scheme	Area (RKM)	No. of Plants	Plants Survived	Survival (%)	Year
1.	Sohna	Khuntपुरी, Sec. 4&5	NPV	51.016	12769	6895	54	2012-13
2.	Sohna	Raipur RF	NPV	20	5000	3450	69	
3.	Sohna	Bhondsi	NPV	16	4000	3080	77	
4.	Gurgaon	Kadipur forest land	NPV	7	1750	893	51	
5.	Gurgaon	Wazirabad, Sec.54 Forest Land	CA	1	250	168	67	
Sub-Total				95.016	23769	14486	63	

3.5 Other Activities / Assets Created in the Project

- Through CAMPA programme initiatives were taken for the creation of two assets at Gurgaon forest range of Gurgaon division namely boundary wall at Kadipur and construction



Details of Assets Created under CAMPA (2012-13)					
Sl.	Forest Division	Range	Details of Asset Created	Financial (Rs.)	
				Target	Achievement
1.	Gurgaon (F)	Gurgaon	Construction of Staff Flats	1000000	239409
2.	Gurgaon (F)	Gurgaon	Boundary Wall of Kadipur	3525000	00
Total				4525000	239409

of staff flats at Om Nagar and Pataudi road. However, both of them were not completed in this financial year (2012-13). Details of them are given above in tabular form.

3.6 List of Important Registers/Records Maintained and Available in the Project

- ◆ Importance register/ Records maintained by the project authority were work register, Cash book, Maps, etc. Plantation Journal/register was missing. However, the project authority assured us that it would be taken care very soon for all the plantation sites in the project.

3.7 Process of Monitoring and Evaluation of Project

- ◆ Monitoring and Evaluation (M & E) of CAMPA is carried out by M & E wing average once or twice a year. Last evaluation of CAMPA was carried out in October 2014 for the entire four years of project activity (2010-11 to 2013-14). The headquarters of M & E wing is located at Karnal in Haryana. It consists of one conservator of forest (CF) and two Deputy Conservator of Forest (DCF). M & E wing conducts monitoring & evaluation of all forestry programmes being implemented in the district comprising two forest divisions.

3.8 Role of Independent Agency in Evaluation Process of CAMPA

- ◆ It was reported that an Independent agency named Agricultural Finance Corporation Ltd. of New Delhi carried out monitoring & evaluation of CAMPA programme for the duration of 2011-12 and final reports of all the districts were submitted in 2013. An overall finding of the study was good.

3.9 Flow of Funds and Bank Accounts Details

- ◆ Bank account of CAMPA Programme was in the Name of Divisional Forest Officer at Corporation Bank with saving A/C No.: 044900101023499 at Gurgaon Branch. Apart from this there were three other bank accounts (one each) at range level (Gurgaon, Sohna, and Hailey Mandi-Pataudi). It is operated by chairman from a Village Forest Committee (VFC) who might be a Sarpanch or Deputy Sarpanch and member secretary, a Range Forest Officer (RFO). These bank accounts existed with a nearest available branch of any bank from a range forest office. Flow of funds was smooth at all levels as reported by the project authority.

CHAPTER-4

QUALITATIVE ANALYSIS AND FINDINGS

4.1 Preference and Basis of Species Selection

- ❖ Main factors considered in the selection/choice of plant species were type of soil, climate and natural factors prevailing in the area, suitability in the in the area economic value benefitting local people, demand/choice put by local community, etc. However, the project authority took the final call in this regard after taking into account of above factors.

4.2 Status of Soil and Moisture Conservation

- ❖ It was observed that plantation conducted under CAMPA accrued benefits in conserving soil moisture. It was average in most part of project area. However, the project authority reported that there was no provision of additional funds for soil moisture conservation work.

4.3 Assessment of Survival Percentage of Plantation and Methodology Adopted

- ❖ Average estimated survival percentage of seedlings planted during 2012-14 was 63%. The survival percentage was highest at Bhondsi site/VFC (77%) and It was lowest at Kadipur forestland site (51%). Average height of plantation was 6 feet. Growth and health of plantation was also very good.
- ❖ A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random locations to estimate survival percentage. For row /linear plantation, row counting of plants was followed. Feedbacks through interviews with various stakeholders of project, observations and experiences of members of evaluation team were also considered to validate and estimate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ❖ There was very little natural regeneration of plants in the CAMPA plantation as observed during field inspection. In most part of urban and suburban areas natural regeneration was negligible while on block forest and rural areas there were some glimpses of it due to presence of other species in and around the newly planted saplings.

4.5 Quality of work as Observed during Field Visit

- ❖ Overall quality of work of plantation and assets created by CAMPA was found satisfactory at majority locations as observed during field visit. A thorough inspection of all the project sites was conducted by members of evaluation team in this regard.

4.6 Factors Affecting Growth and Survival Percentage of Plantation

- ❖ Important factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.

4.7 Protection and Maintenance of Plantation and Project Assets

- ❖ Barbed wire fencing was adopted at all the plantation sites for protection of plantation along with a few brick/ iron/wood gablons in urban and sub-urban areas. Forest staff especially foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. It was observed that in urban part there should additional care and provision of fencing and protection. There is need to motivate community people in this regard.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ❖ Most of the forest staffs working in the field such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle the necessary requirements while dealing with various aspects of forestry programmes. But even daily wages or temporary staffs, watchers, etc. should also be imparted necessary skill to deal with new challenges of the programme. The project authority was of the view that meetings and interactive programmes are organized at certain intervals on the initiatives of DFO to acquaint, update and motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project

- ❖ There was average to low participation of local community in the implementation and protection of the programme. Among target project sites and VFC forest officials maintained interaction from time to time. But it was not adequate. Interaction, meetings and awareness raising programmes with local community should be a regular phenomenon of such programmes for sustainable development and better outcome of the programme. Modern tools of mass media should be adopted in the awareness and motivation of community to catch their attention and its long lasting impact.

4.10 Benefits and Impact of the Programme

- ❖ CAMPA programme accrued both direct and indirect benefits. Plantation helped in bringing additional geographical area under plantation and forest cover resulting into extra availability of fuel-wood and fodder along with other forest produces. It helped in improving quality of ecology and environment as well as micro-climate of the area, benefitting all kinds of flora and fauna. Part-time wage employment during project activity and plantation season also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project Area

- ❖ Presently, there was not any effort initiated by the project authority in direction of SHG formation under CAMPA programme. It was reported that CAMPA did not have any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such Institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

The project authority faced a number of natural and anthropogenic constraints and limitations in programme implementation, protection and management, which impacted the performance. Some of the most notable constraints and limitations of the project are discussed below.

5.1 Uncontrolled Grazing by Loose Domestic Animals In most part of Project Area

- ❖ Grazing impacted survival and growth of plantation adversely. It was a common problem in most part of the project area. Unprotected grazing caused far reaching damage to plantations; the animals' feet loosen the soil, and has a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff during Programme Implementation (2013-14)

- ❖ It was reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, recently fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and now it was normal capacity was okay. But the programme had adverse impact on quality and outcome due to shortage of staffs during 2012-13.

5.3 Low wage Rate of Forest Department as compared to Industrial sector

- ❖ Wage rate of forest department (average Rs. 213 per day) was much low as compared to local Industrial establishments and urban areas (Rs. 400-500 per day) causing hardship and limitation in finding labour force during peak plantation season and project work. It adversely impacted quality and outcome of the programme.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ❖ Due to high rate of urbanization and Industrialization in most part of the project area, there was high demand of labour force and hence the forest department had to face shortage of labour. In industrial sector average wage rate per day was Rs. 400-500 while it was Rs. 213 in forest department.

5.5 Lack of infrastructure in the Division and Range Level Offices

- ❖ At division level there was no problem of basic infrastructure including vehicle but range level offices were facing shortage of necessary vehicles for day to day activities as reported by the project authority. It impacts the performance of staff and quality and outcome of project work.

5.6 Growth and Survival of Plantation Faced severe beating due to several Factors

- ❖ Important factors having adverse impact on growth and survival of plantation were damage caused by wild animals like, rabbits, blue bulls and porcupines, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic monsoon rain, rapid urbanization, etc.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

Based on the foregoing description, analysis and assessment of the CAMPA programme and interaction and interviews held with forest officials, the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Suggestions and Recommendations

6.1.1 Control on Grazing by Domestic cattle and Wild Animals

- ❖ The project authority should adopt a viable strategy to check or at least minimize the menace of rampant grazing by domestic animals in most part of the project area. Wild animals like blue bulls and rabbits in some part of project areas also caused damage to plantation. Local community should be motivated to adopt stall feeding to their animals.

6.1.2 Make Elaborate Arrangement for Protection and Maintenance of Plantation

- ❖ There should be a suitable provision of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing of barbed wire should be adopted as per requirement to certain locations and type of plantation. It was observed that barbed wire fencing was very common at most plantation sites. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick or wood for better survival and higher outcome.

6.1.3 Fill all Vacant Posts of Frontline Staff on time through Proper Recruitment Process

- ❖ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure on existing staff. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was felt badly during 2013-14 of project work.

6.1.4 Make a Provision of fine /punishment against Damage of Forest Wealth

- ❖ A provision of fine /punishment or both should be levied against all persons involved in unprotected grazing and deliberate damage to plantation. Such punishments or fines could work as deterrent among the local community. However, the project authority said that such provisions are present and adopted when required as per the forest rules and guidelines.

6.1.5 Run a capacity-building Programme to impart knowledge and hone skills

- ❖ Workshops and Capacity building programmes should be organized by involving field level forest staffs along with some willing local community to impart skill enhancement and better knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.1.6 Make the Protection and Maintenance funding for Four Years

- ✦ There should be regular funding provision for four consecutive years for protection and maintenance of plantation for better outcome.

6.1.7 Regular, systematic and Effective Monitoring and Evaluation System

- ✦ Monitoring and evaluation is critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department was based in Karnal comprising one CF and two DFOs who take care of this work for the entire forestry programme. The entire plantation programmes and related work were monitored and evaluated once a year. The project authority should pay a better attention in this regard to increase its effectiveness.

6.1.8 Run an Intensive Awareness Campaign to Motivate Local Community

- ✦ It must be noted that for better awareness there should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad-natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.1.9 Make a Provision of Exposure Visit to Staff member and Opinion Leaders

- ✦ There should be provision of exposure visits of forest staffs to advance nursery and plantation areas within the state and outside for better understanding and learning new ideas and knowledge. These are important methods of development process.

6.1.10 Introduce the Concept and Practice of Carbon Credits

- ✦ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures in new ways, and it should forthwith be introduced in our country at the village level of environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.2 Interview with Project Authority

- ✦ Summary of Interviews with Project Authority with Contact Details
- a) Ms Vasvi Tyagi (IFS), DFO, Gurgaon Forest Division (T), Gurgaon district, Haryana, Mobile No. +91-8860450860, Landline (Off.) No.: +91-1242322057
- ✦ Post evaluation and finishing field inspection of entire project area, the evaluator interviewed the DFO, Gurgaon (T), Ms Vasvi Tyagi along with RFOs and foresters. We discussed issues related to CAMPA implementation, its progress, management and overall outcome. The DFO replied our queries satisfactorily.

- ✦ Project authority expressed confidence and satisfaction on overall outcome and progress of CAMPA programme during 2012-13 of Gurgaon Forest Division (T) in Gurgaon district. With regard to selection/ choice of plant species the project authority was of the view that factors like topography and soil, climatic condition, survival factor, biotic factor, low damage due to grazing, preference of local people, etc. were main factors in this regard. Most preferred plant species under CAMPA were *Papri, Amaltas, Kachnar, Amaltas, Pilkhan, Bakain, Gulmohar, Neem, Shisham*, etc.
- ✦ To ensure better outcome in the project the DFO and other officials maintained regular interaction with staff members, monitored their previous records of work, fixed the accountability on the basis of performance, etc.
- ✦ With regard to benefits and impact of CAMPA programme the project authority said that it generated employment opportunity to all those members of households who worked as daily wage workers for earning additional income. The plantation of CAMPA helped in improving ecology and environment of the area. Construction of forest guard hut/quarter at Pratapgarh forest colony under Ballabgarh forest range had significant impact on forest staff.
- ✦ The DFO further said that main reasons of plant casualty were open grazing by loose domestic animal, Illicit felling of plant, shortage of labour forces, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, rapid urban sprawl, etc.
- ✦ On adopting the provision of fine /punishment against wrong indulgence and causing damage to project assets including open grazing by domestic cattle, the project authority said that existing Forest Acts were adopted whenever required.

6.3 Evaluator's Assessment

- ✦ After field inspection, meeting with forest officials, local community and verification of records / documents, it was concluded that above statements made by DFO, Gurgaon (T) Ms Vasvi Tyagi was true to a large extent. The project authority carried out good work under CAMPA programme at Gurgaon forest division. Awareness raising campaigns should be a regular activity in the programme by adopting modern tools of mass media for better impact higher motivation. Monitoring and evaluation work should be streamlined and carried out effectively at regular interval.

Photographs: Plantation Area and Project Assets of Sohna Range and Gurgaon Range

Plantation Sites:1. Raipur RF, Scheme: NPV, Year: 2012-13, Area: 20Rkm linear both sides of road. No. of Plants: 5000 (P. Papri-2500 and B. Papri-2500). **Plantation Sites:**2. Bhonsi (Forest U/S 38), Scheme: NPV, Year: 2012-13, Area: 16RKM linear both sides of road. No. of Plants: 4000 (P. Papri-2000 and Khairi-2000). **Plantation Sites:**3. Khuntpur, Scheme: CA. Year: 2012-13, Area: 51.018 RKM, No. of Plants: 12789 (P. Papri-10000 and Bakam-500, Jamun-500, Lasoda-1789).

Plantation Sites:4. Kadipur, Forestland, Scheme: NPV, Year: 2012-13, Area: 7RKM, No. of Plants: 1750 Kikar (550), Papri (421), Gulmohar (400), Champa (250), Chakrasia (60), Jamun (50), Kachnar (7), Papal (5), Ailanthus (5), and Ber (2)

Plantation Sites:5. Sec-46, Forestland, Scheme: NPV, Year: 2012-13, Area: 1RKM, No. of Plants: 250- Alstonia (50), Neem (50), Bakain (50), Shisham (50), Jamun (30), Arjun (20)



Final A.P.O. State CAMPA Scheme for 2012-13 of Gurgaon Forest Division-T in Gurgaon district

Sl. No.	Type of land (Forest/Non-forest)	Name of Scheme/ component	Name of Range/ Block/Beat	Name of Site	Khasra No. KM/RD	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Reserved Forest	State CAMPA (NPV)	Sohna/ Sohma/ Raipur	Raipur RF	--	July 2012	0	20	4x4	P.Papri (2500) B. Papri (2500)	5000	N 28° 013558	E 77° 03728
2.	Compact	State CAMPA (NPV)	Gurgaon/ Gurgaon/ Gurgaon	Kadipur Forestland	--	July 2012	0	7	4x4	Kikar (550), Papri (421), Gulmohar (400), Champa (250), Chakrasia (60), Jamun (50), Kachnar (7), Pipal (5), Alanthus (5), and Ber (2)	1750	N 28° 36536	E 76° 59526
3.	Compact	State CAMPA (NPV)	Gurgaon/ Gurgaon/ Gurgaon	Sector-45 Forestland	--	July 2012	0	1	4x4	Alstonia (50), Neem (50), Bakain (50), Shisham (50), Jamun (30), Arjun (20)	250	N 28° 13558	E 077° 03728
4.	Forest U/S JB	State CAMPA (NPV)	Sohna/ Badshahpur/ Bhondsi	Bhondsi	--	July 2012	0	16	4x4	P.Papri (2000), Khair (2000)	4000	77° 04327	28° 36309
5.	NA	CA	Sohna/ Damdama Silani	Khuntpur	--	July 2012	0	51.016	3x3	P.Papri (10000), Lasoda (1769), Bakain (500), and Jamun (500)	12769	77. 11, 12, 32	28. 12, 41, 11
Total		--	--	--	--	--	--	95.016	--	--	23769	--	--

Final A.P.O. State CAMPA Scheme for 2012-13 of Gurgaon Forest Division-T in Gurgaon District

Sl. No.	Item of Work	Sanctioned Amount Rs.	Actual Expenditure			Deviation if Any
			Amount	Quantity	Location/Remark	
1.	Construction of Staff Flats In Om Nagar on Pataudi Road-CA ✓	1000000	239409	1	Om Nagar, Gurgaon	Not Completed in 2012-13
2.	Boundary Wall of Kadipur Govt. Land-CA	3225000	00	1	Kadipur, Gurgaon	Work not started in 2012-13
Total ✓		4225000	239409	2	--	--

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi

MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY MAHENDRAGARH FOREST DIVISION IN MAHENDRAGARH DISTRICT OF HARYANA

Duration of Evaluation: 2012-13

Final Report

Submitted to
OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
VAN BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

April, 2015

Prepared by

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Mahendragarh Forest Division in Mahendragarh District of Haryana (2012-13)" was successfully completed. However, it would not have been possible without the kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.

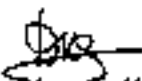
First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram along with office staff Mr. D.P. Tyagi for reposing faith and awarding the honour of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Mahendragarh Forest Division, Mr. Ved Prakash along with RFOs and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. IBKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.




Dinesh K. Singh

Director
Locus Research & Consultants Pvt. Ltd.
New Delhi, April, 2015

Preface

Mahendragarh Forest Division-2012-13

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana Implemented by Mahendragarh Forest Division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2012-13 a total 92.68 RKM/ha (67.68 RKM and 25 ha) land was treated under CAMPA by adopting CA CAMPA-ANR and CAMPA urban. Rs. 14.97 lakh was spent against the target of Rs. 71.23 on the entire project activity. A total of 0.219 lakh plant species of *Papri*, *Neem Shisham*, *Bakain*, etc. were planted in the project at 15 sites.

Average survival percentage of seedlings estimated was 68%. The survival percentage was 72% at RF Duloth under Mahendragarh range. Average height of plantation was 6 feet. Growth and health of plantation was good. Average grading awarded to the programme was 6.5 (on 1 to 10 scale), which was very good.

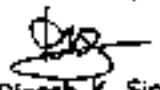
In the process of evaluation, members of evaluation team interacted with field level forest staff and local community. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

April, 2015




Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APDs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NCH	Nangal Chaudhary
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL. No.	Common Name	Botanical Name
1.	Arjun	Terminalia arjuna
2.	Bakain	Melia azedarach
3.	Jamun	Terminalia arjuna
4.	Neem	Azadirachta indica
5.	Papri	Holoptelea integrifolia
6.	Pipal	Ficus religiosa
7.	Shisham	Dalbergia sissoo

GRADING AND EXECUTIVE SUMMARY**Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2012-13****Mahendragarh Forest Division, Mahendragarh District, Haryana**

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	7
	Health of Plantation	6
	Maintenance	6
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.5

Executive Summary**1.0 INTRODUCTION**

- Monitoring and evaluation of CAMPA programme of Mahendragarh Forest Division in Mahendragarh district was conducted in the month of April 25-29, 2015 by **Locus Research & Consultants Pvt. Ltd.**, a Delhi based agency. 92.68 RKM/ha (67.68-RKM and 25 ha) forestland was treated under CAMPA by adopting CA, CAMPA-ANR and CAMPA-Urban schemes of plantation during 2012-13. A sample of 68.60% (63.58 RKM/ha) was drawn for field inspection of plantation area and other assets of the project and to estimate survival percentage.

2.0 CAMPA: AN OVERVIEW

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a CAMPA as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 OBJECTIVES OF THE CAMPA

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION /AREA OF MONITORING & EVALUATION

- The study covered the entire Mahendragarh Forest Division in Mahendragarh district of Haryana.

5.0 REFERENCE PERIOD

- ♦ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2012-13.

6.0 NEED OF THE STUDY

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme Implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - ♦ To assess physical and financial targets and achievements
 - ♦ To evaluate performance of the programme
 - ♦ To estimate of survival percentage of plant species adopted in the project.
 - ♦ To analyze factors impacting survival of plantation and suggest remedial measures.
 - ♦ To assess peoples' participation and assets created
 - ♦ To assess the direct and indirect benefits and impact of the programme.
 - ♦ To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. A sample of 68.60% (63.58 RKM/ha) was drawn during field visit of plantation area to estimate survival percentage of plantation. Sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. Row counting of plants was adopted.

9.0 PROFILE OF THE STUDY AREA

- ♦ Haryana was created on November 1, 1966 with seven districts. Subsequently 14 other districts were included through restructuring the previous ones. Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ♦ Mahendragarh district is situated in the south western corner of Haryana. It is located at 28.28°N 76.15°E. According to India State of Forest Report-2011, Mahendragarh district has 3.82% area under forest cover against 3.64% of state average. Main plant species found and adopted under CAMPA programme in the district were *Papri, Bakain, Shisham, Arjun, Kikar, Neem, Pipal*, etc.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ♦ 92.68 RKM/ha (67.68-RKM and 25 ha) forestland was treated under CAMPA by adopting CA, CAMPA-ANR and CAMPA-Urban schemes of plantation during 2012-13.
- ♦ Rs. 14.97 lakh was spent on project during 2012-13 against the target of Rs. 71.23.
- ♦ 0.219 lakh plant species of *Papri, Neem Shisham, Bakain*, etc. were planted in the project at 15 sites.
- ♦ Average survival percentage of seedlings estimated was 68%. The survival percentage was 72% at RF Duloth under Mahendragarh range while it was only 64% at Amarapur to Thanwas Road under NCH range. Average height of plantation was 6 feet.

- ❖ Two types of registers were maintained namely cashbook and work book. DFO said that plantation journal would be prepared soon for all the plantation sites.
- ❖ Monitoring and Evaluation (M & E) of CAMPA along with other forestry programmes are conducted by a separate wing called M & E Wing. The last evaluation of state CAMPA Haryana of Mahendragarh Forest Division was conducted in October 2014. It consists of one CF and two DCFs. Its head office is at Karnal in Haryana.
- ❖ An independent agency called **Agricultural Finance Corporation Ltd.** of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.
- ❖ Bank account of CAMPA Programme of Mahendragarh forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Mahendragarh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Factors impacting choice of species were topography, soil type, climate, rainfall, suitability in the area, economic value, preference by locals, etc. Project authority called the final shot in this regard.
- ❖ Improvement in soil moisture conservation was observed at most plantation sites of CAMPA.
- ❖ Limited natural regeneration of plant species in the plantation area was found. In urban and suburban zone it was negligible while on block forestland there were some glimpses of it.
- ❖ Quality of Work in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.
- ❖ Open and rash grazing by loose domestic animals, wild animals like, rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. impacted Growth and Survival of Plantation
- ❖ Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. Barbed wire and bush fencing were found at most plantation sites under protection of plantation. In urban areas brick/iron/wood gabions were also adopted along with barbed.
- ❖ Motivation and Technical Competence of Personnel Involved in the Project was found satisfactory. Range Forest Officers (RFO), foresters and forest guards were trained to tackle necessary work. Temporary/daily wages workers, cattle watchers, etc. were lacking these skills to deal with new challenges of the programme.
- ❖ Role of Local People in Project Work was far from satisfactory. There was low participation of local community in the programme. Modern tools of mass media should be adopted for awareness and motivation of community.
- ❖ CAMPA accrued both direct and indirect benefits in the project area. Additional geographical area came under forest cover. It helped in improving quality of ecology and environment as well as micro-climate of the area.
- ❖ Formation of SHG in the Project was optional for the project authority to provide additional benefits of community in the project area. There was no attempt at this front from the project authority.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.

- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.
- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Measures should be taken to check grazing in the area. Stall feeding of domestic animals should be promoted among local community through regular awareness and motivation.
- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gablons of iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ Selection plantation species should be based on scientific parameters and local factors. There was adoption of high proportion of Papri at most plantation sites during 2012-13. The project authority agreed with our view points and assured us that due attention would be given in future plantation.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ◆ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ◆ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ◆ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
- ◆ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
- ◆ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
- ◆ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ♦ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ♦ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ♦ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ♦ The amount would be transferred to it by the ad-hoc CAMPA.
 - ♦ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ♦ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ♦ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ♦ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The state government may also credit to the State CAMPA
 - ♦ Grants or aid received if any;
 - ♦ Any loan taken by the Authority or any borrowings made by it; and
 - ♦ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ♦ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ♦ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ♦ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ♦ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ♦ "State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ♦ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ♦ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, Infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

- ♦ Important objectives of CAMPA are as follows:
 - ♦ Conservation, protection, regeneration and management of existing natural forests;
 - ♦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - ♦ Compensatory Afforestation
 - ♦ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
 - ♦ Science, Research, Training and Capacity Building.
 - ♦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ♦ The study covers entire Mahendragarh Forest Division in Mahendragarh district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ♦ Reference period of monitoring & evaluation is one year, i.e. 2012-13.

1.7 Components of the Project

- ◆ Main components of CAMPA are as follows:
 - ◆ People's Participation
 - ◆ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - ◆ Monitoring and Evaluation of the programme
 - ◆ Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
 - ◆ Extension and awareness
 - ◆ Monitoring of the programme, etc

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ◆ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
◆ District	: Mahendragarh
◆ Forest Division	: Mahendragarh
◆ Forest Circle	: Gurgaon Circle, Gurgaon
◆ State	: Haryana
Project Location	
◆ Watersheds/Sub-watersheds	: NA
◆ Development Blocks	: NA
◆ Forest Ranges (3)	: 1. Mahendragarh, 2. NCH and 3. Narnaul. During 2012-13 CAMPA work was conducted in all of them.
◆ Project Sites/Locations	: 15 (Fifteen)
Assets/ Infrastructure Development Activities, if any	
◆ NA	
Preparation of Plantation Journal and Record Upkeep	
◆ There was not any separate register or Plantation journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
◆ Project Duration	: 2012-13
◆ Project Area (78.8 RKM)	: Target: 9268 RKM/ha (67.68 RKM and 25 ha)
◆ Project Cost	: Target: Rs.71.23 lakh and achievement: Rs.14.97 lakh
Proposed Strategies and Salient Features of the Project	
◆ There is no provision of VFC in CAMPA programme	
◆ Plantation was carried out under NPV and CA schemes/components	

1.9 Need of the Study

- ◆ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ◆ Scope of study is confined to Mahendragarh Forest Division in Mahendragarh district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements
 - ◆ To evaluate performance of the programme
 - ◆ To estimate of survival percentage of plant species adopted in the project.
 - ◆ To analyze factors impacting plantation survival and suggest remedial measures.
 - ◆ To assess peoples' participation and assets created
 - ◆ To assess the direct and indirect benefits and impact of the programme.
 - ◆ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ❖ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ❖ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ❖ Sample Selection, Size and its Distribution: A sample of 68.60% (63.58 RKM/ha) was drawn during field visit of plantation area to estimate survival percentage of plantation. To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50mx50m) was adopted for counting the plantation at random locations along with row counting keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - ◆ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ◆ Chapter-2 gives the Profile of the Project Area and its Location
 - ◆ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ◆ Chapter-4 gives Qualitative Analysis and Findings.
 - ◆ Chapter-5 deals with Project Constraints and Limitations
 - ◆ Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

- ❖ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

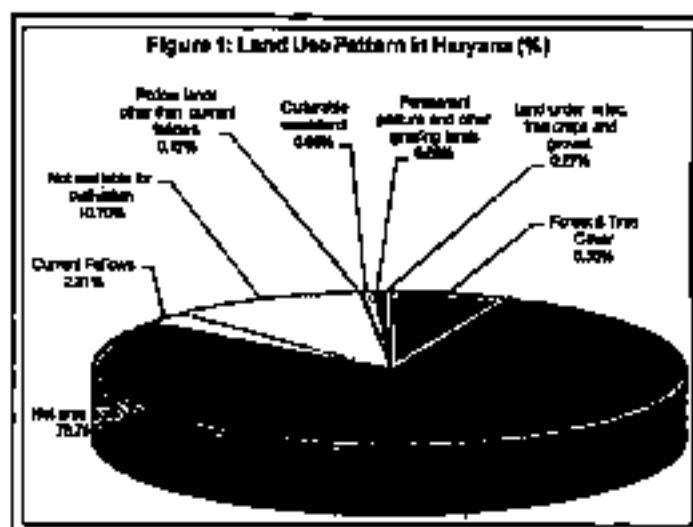
2.1 State Profile

- ♦ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
 - ♦ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
 - ♦ Gurgaon Division has six (6) districts namely Palwal, Mahendragarh, Mahendragarh, Gurgaon, Rewari, and Mahendragarh districts in its jurisdiction.
 - ♦ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Mahendragarh districts.
 - ♦ Rohtak Division also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



2.1.1 Land Use Pattern of Haryana

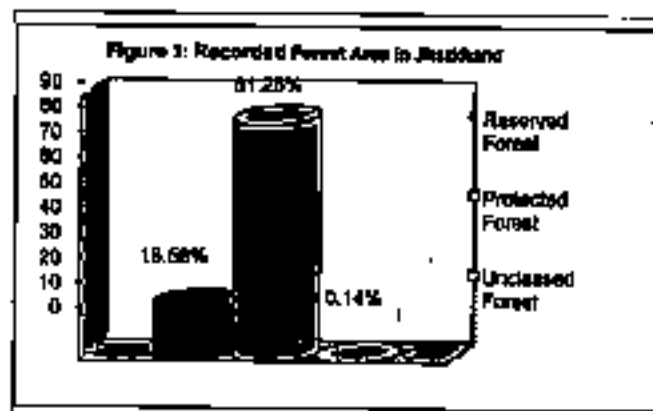
- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus forestland and tree cover together covers 6.80% of the state geographical area.
- ♦ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands



(0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: *Land Use (India State of Forest Report 2011, FSI Dehra Dun)*.

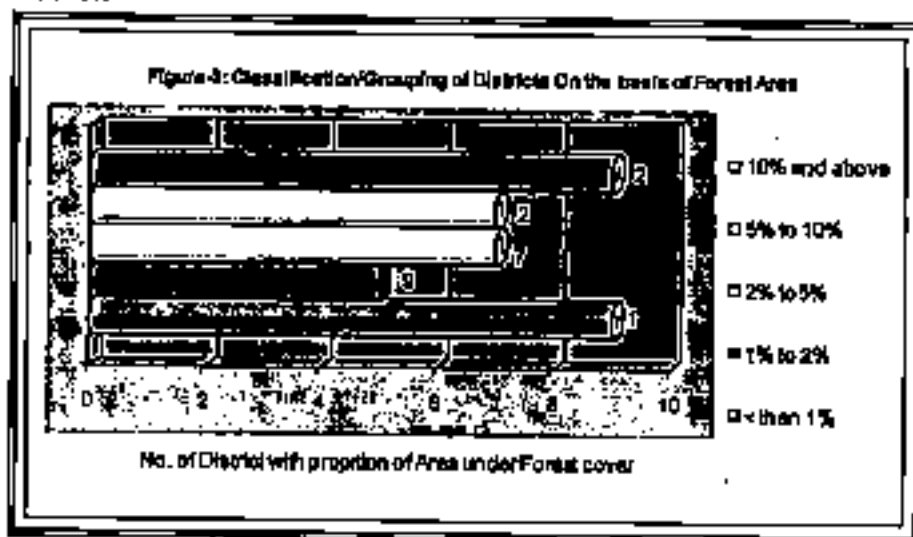
2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ♦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. Group-1: Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ♦ Group-2: Two districts namely Gurgaon (8.35%) and Mahendragarh (8.35%) and fall in the category of 5% to 10% forest cover.
- ♦ Group-3: Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh Bhiwani, Rewari and Kaithal fall in the category of 2% to 5% forest cover.
- ♦ Group-4: Nine districts namely Hissar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Mahendragarh, and Sonapat and they fall in group of 1% to 2% forest cover.
- ♦ Group-5: One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure-3 for further information.

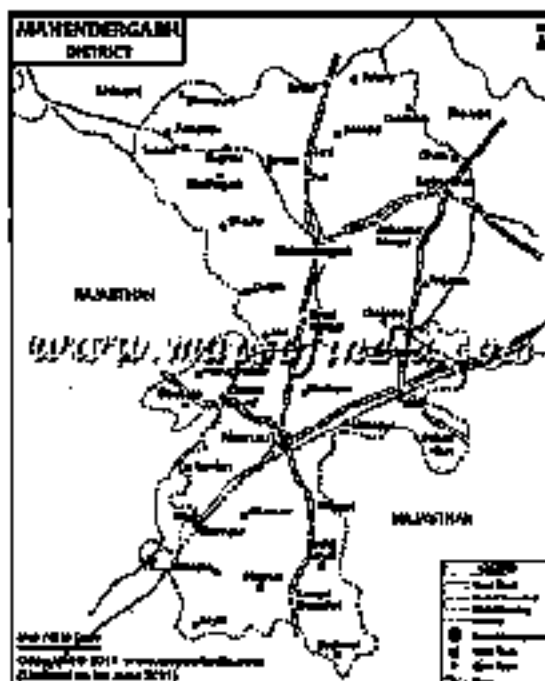


2.2 Profile of Mahendragarh District and Forest Division

- ♦ Mahendragarh district is situated in the south western corner of Haryana. It is located at 28.28°N 76.15°E. It has an average elevation of 262 metres (859 feet). Mahendragarh

district is bounded on the north by Bhiwani and Rohtak districts, on the east by Rewari district and Alwar district of Rajasthan, on the south by Alwar, Jaipur and Sikar districts of Rajasthan, and on the west by Sikar and Jhunjhunu districts of Rajasthan. The district occupies an area of 1,859 sq. km. Narnaul city is the administrative headquarters of the district. Mahendragarh is one of the very few districts in India where the name of the district and its main town are different.

- ◆ It is named after Maharaja Mahendra Singh who was the ruler during the Mughal era. It is situated at the bank of Dohan river (which was a seasonal river), which is at the verge of extinction. Mahendragarh district is divided into 4 tehsils, Narnaul, Ateli, Kanina and Mahendragarh and 1 sub-tehsils, namely, Nangal Chowdhary. There are 4 Vidhan Sabha constituencies in this district: Ateli, Mahendragarh, Narnaul and Nangal Chaudhry. All of these are part of Bhiwani-Mahendragarh Lok Sabha constituency.
- ◆ As of 2011 it is the third least populous district of Haryana (out of 21), after Panchkula and Rewari. It has a population of 9.22 roughly equal to the nation of Fiji or the US state of Delaware. This gives it a ranking of 462nd in India (out of a total of 640). The district has a population density of 485 inhabitants per square kilometre. Its population growth rate over the decade 2001-2011 was 13.43%. Mahendragarh has a sex ratio of 778 females for every 1000 males and a literacy rate of 78.9%.



2.3 Forest Cover In Mahendragarh District

- ◆ According to India State of Forest Report-2011, Mahendragarh district has 3.82% area under forest cover against 3.64% of state average. Main plant species found and adopted under CAMPA programme in the district were *Papri*, *Bakain*, *Shisham*, *Arjun*, *Kikar*, *Balam Khira*, *Neem*, *Pipal*, *Ber*, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- 92.68 RKM/ha (67.68-RKM and 25 ha) forestland was treated under CAMPA by adopting CA, CAMPA-ANR and CAMPA-Urban schemes of plantation during 2012-13. It was implemented in all three ranges of the division (Mahendragarh, NCH and Narnaul). Refer table-3.1 for detailed information.



Table 3.1 Area Covered/Treated Under CAMPA (2012-13)

Table 3.1 Area Covered/Treated Under CAMPA (2012-13)							
Sl. No	Range	Project/Plantation Site	Land Category	Scheme of Plantation	Area		Year of Plantation
					ha	RKM	
1	Mahendragarh	RF Sohla, Comp. No.4	RF	CA	00	27.68	2012-13
2	Mahendragarh	RF Duloth, Comp. No.8	RF	CAMPA/ANR	00	10	
Sub Total					00	37.68	
3	NCH	Maliya IG Dhani to Nayan Rd	PF	CAMPA/ANR	4.4	00	
4	NCH	Amarpura to Thanwas Rd	PF	CAMPA/ANR	1.5	00	
5	NCH	Maliya IG Dhani to Narada Rd	PF	CAMPA/ANR	1.85	00	
6	NCH	Amarpura Banharl Rd	PF	CAMPA/ANR	2.25	00	
7	Narnaul	Thana Sec. 4 & 5 area	PF	CAMPA/ANR	15	00	
Sub Total					25	00	
8	NCH	New Anaj Mandi Nangal Chaudhary	PF	CAMPA/Urban	00	1	
9	NCH	Power House Nangal Chaudhary	PF	CAMPA/Urban	00	4	
10	NCH	Animal & Civil Hospital NCH	PF	CAMPA/Urban	00	1	
11	NCH	College Nangal Chaudhary	PF	CAMPA/Urban	00	2	
12	NCH	Narnaul Nangal Chaudhary Rd	PF	CAMPA/Urban	00	1	
13	NCH	Nangal Chaudhary Kamanliya Rd	PF	CAMPA/Urban	00	2	
14	NCH	Nolayaza to Gaushala Rd	PF	CAMPA/Urban	00	4	
15	Narnaul	New Anaj Mandi & Shamshan Ghat	PF	CAMPA/Urban	00	15	
Sub Total					00	30	
Grand Total					25	67.68	
					92.68 RKM/ha		

3.2 Physical and Financial Target and Achievements

- Total expenditure of the entire project during 2012-13 was Rs. 14.97 lakh against the target of Rs. 71.23. In the programme plantation work was carried out in all three ranges of the division. Refer table 3.2 for detail information.



Table 3.2: Physical and Financial Target and Achievements (2012-13)

Sl. No.	Range	Plantation Site	Physical-Area				Financial (Rs. in lakh)	
			Target		Achievement		Target	Achievement
			ha	RKM	ha	RKM		
1	Mahendragarh	RF Sohla, Comp. No.4	00	27.68	00	27.68	12.46	4.16+ 1.50=5.65
2	Mahendragarh	RF Duloth, Comp. No.8	00	10	00	10	1.50	
3	NCH	Maliya Ki Dhani to Nayan Rd	4.4	00	4.4	00	0.64	
4	NCH	Amarpura to Thanwas Rd	1.5	00	1.5	00	0.21	
5	NCH	Maliya ki Dhani to Nareda Rd	1.85	00	1.85	00	0.27	
6	NCH	Amarpura Banihari Rd	2.25	00	2.25	00	0.32	
7	Narnaul	Thana Sec. 4 & 5 area	15	00	15	00	2.18	
8	NCH	New Anaj Mandi Nangal Chaudhary	00	1	00	1	0.68	
9	NCH	Power House Nangal Chaudhary	00	4	00	4	2.75	
10	NCH	Animal & Civil Hospital NCH	00	1	00	1	0.69	
11	NCH	College Nangal Chaudhary	00	2	00	2	1.37	
12	NCH	Narnaul Nangal Chaudhary Rd	00	1	00	1	0.68	
13	NCH	Nangal Chaudhary Kamaniya Rd	00	2	00	2	1.37	
14	NCH	Nolayaza to Gushala Rd	00	4	00	4	2.74	
15	Narnaul	New Anaj Mandi & Shamshan Ghat	00	15	00	15	10.28	
Total			25	67.68	25	67.68	38.14	5.65
Other activities/Assets Created								
Maintenance of Plantation							1609100	645714
Boundary Wall							100000	99900
Range Quarter							1500000	85400
Contract Service empowered							100000	100000
Sub Total							33.09100	9.32014
Grand Total							71.23	14.97

3.3 Inventory/ List of Plantation

- * A total of 0.219 lakh plant species of *Papri*, *Neem*, *Shisham*, *Bakain*, etc. were planted in the project at 15 sites comprising 92.68 RKM/ha land in all three ranges of the division. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table 3.3: Inventory/List of Plantation

Sl. No.	Range	Project/Plantation Site	Scheme of Plantation	Area		No. of plants	Name of Plant Species	Year of Plantation
				Ha	RKM			
1	Mahendragarh	RF Sohla, Comp. No.4	CA	00	27.68	6920	Papri, Neem	2012-13
2	Mahendragarh	RF Duloth, Comp. No.8	CAMPA/ANR	00	10	2500	Papri	
3	NCH	Maliya Ki Dhani to Nayan Rd	CAMPA/ANR	4.4	00	880	Papri	
4	NCH	Amarpura to Thanwas Rd	CAMPA/ANR	1.5	00	300	Papri, Neem	
5	NCH	Maliya ki Dhani to Nareda Rd	CAMPA/ANR	1.85	00	370	Papri	
6	NCH	Amarpura Banihari Rd	CAMPA/ANR	2.25	00	450	Papri, Neem	
7	Narnaul	Thana Sec. 4 & 5 area	CAMPA/ANR	15	00	3000	Papri, Neem	
8	NCH	New Anaj Mandi NCH	CAMPA/Urban	00	1	250	Papri	
9	NCH	Power House Nangal Chaudhary	CAMPA/Urban	00	4	1000	Papri	
10	NCH	Animal & Civil Hospital NCH	CAMPA/Urban	00	1	250	Papri	
11	NCH	College Nangal Chaudhary	CAMPA/Urban	00	2	500	Papri	
12	NCH	Narnaul Nangal Chaudhary Rd	CAMPA/Urban	00	1	250	Papri	
13	NCH	Nangal Chaudhary Kamaniya Rd	CAMPA/Urban	00	2	500	Papri, Neem	
14	NCH	Nolayaza to Gushala Rd	CAMPA/Urban	00	4	1000	Papri, Neem	
15	Narnaul	New Anaj Mandi & Shamshan Ghat	CAMPA/Urban	00	15	3750	Papri, Neem, Bakain	
Total				25	67.68	21920		
					92.68 RKM/ha			

3.4 Analysis of Sample Plantation and Survival Assessment

- A sample of 68.60% (63.58 RKM/ha) was drawn during field visit of plantation area and to estimate survival percentage of plantation.
- Average survival percentage of seedlings estimated was 68%. The survival percentage was 72% at RF Duloth under Mahendragarh range while it was only 64% at Amarapur to Thanwas Road under NCH range. Average height of plantation was 6 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.



Table 3.4: Analysis of Sample Plantation sites and Assessment of Survival

Sr. No.	Range	Plantation Site	Scheme	Area (ha/RK 40)	No. of Plants	Plants Survived	Survival (%)	Year
1	Mahendragarh	RF Sohta, Comp. No.4	CA	27.68	8920	4913	71	2012-13
2	Mahendragarh	RF Duloth, Comp. No.8	CAMPA/ANR	10	2500	1800	72	
3	NCH	Malhya Ki Dhani to Nayan Rd	CAMPA/ANR	4.4	880	563	64	
4	NCH	Amarapura to Thanwas Rd	CAMPA/ANR	1.5	300	186	62	
5	NCH	Power House Nangal Chaudhary	CAMPA/Urban	4	1000	680	68	
6	NCH	Animal & Civil Hospital NCH	CAMPA/Urban	1	250	173	69	
7	Narnaul	New Anaj Mandi & Shamsan Ghat	CAMPA/Urban	15	3750	2475	66	
Total				63.58	15600	10790	68	

3.5 Registers/Records Maintained in the Project

- Cashbook and work registers were maintained by project authority. DFO of the division assured the evaluation team with regard to preparation of plantation journal for all the plantation sites conducted under CAMPA programme.

3.6 Monitoring and Evaluation System in the Project

- The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate evaluation wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana at Mahendragarh forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- The project authority reported that an independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.

3.8 Bank Account Details and Flow of Funds

- Bank account of CAMPA Programme of Mahendragarh forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Mahendragarh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- ✦ Topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were main factors in the selection of plant species. However, the project authority took decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ✦ Wherever the plantation was conducted under CAMPA programme there was some improvement in soil moisture conservation. However, limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.

4.3 Assessment of Survival Percentage

- ✦ Average survival percentage of seedlings estimated was 68%. The survival percentage was 72% at RF Duloth under Mahendragarh range while it was only 64% at Amarapur to Thanwas Road under NCH range. Average height of plantation was 5 feet. Growth and health of plantation was good. To estimate survival percentage a sample plot of 0.25 ha (50meterx50meter) was adopted at random location and row counting of plantation was also adopted to count the seedling at random location. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ✦ Natural regeneration of plant species in the area was hardly observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone there were some glimpses of it due to presence of other species around plantation area.

4.5 Quality of Work

- ✦ Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ✦ Grazing by domestic animals, damage wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation

4.7 Protection and Maintenance of Plantation

- ✦ Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions

were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be better care of plantation through elaborate fencing and regular care. The process of awareness raising and motivation of local community should be adopted in the project at regular intervals.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ✦ All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers, cattle watchers, etc, should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- ✦ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ✦ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- ✦ The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff

- ✦ Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in some part of the project area and in NCR region, there was high demand of labour force and hence the forest department had to face shortage of labour as reported.

5.5 Inadequate Infrastructure In the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. Impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals

- ✦ Some viable measures should be adopted to check or at least minimize harzinbg. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- ✦ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- ✦ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- ✦ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- ✦ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Make Four Years of Protection and Maintenance Funding

- ✦ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- ✦ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF and two DFOs. Its head office is located at Karnal. CAMPA programme along with other

forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- ✦ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- ✦ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Selection plantation species should be based on scientific parameters and local factor

- ✦ There was adoption of high proportion of Papri at most plantation sites during 2012-13. The project authority agreed with our view points and assured us that due attention would be given in future plantation.

6.11 Introduce Practice and Concept of Earning Carbon Credits

- ✦ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option.

6.12 Interview with Project Authority

- a) During pre and post field inspection and evaluation of the programme the members of evaluation team interacted interviewed DFO Mahendragarh (Mr. Ved Prakash, Mob:+91-9416365166, Office: +91-1285220229) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- ✦ DFO, Mr. Ved Prakash and other officials were happy with outcome and progress of CAMPA work carried out during 2012-13. About selection of plant species they were of the view that soil, climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were main factors. Most preferred plant species in the division were Papri, Neem, Bakain, Shisham, etc. Open grazing due high cattle pressure, rocky terrain, poor soil, erratic and low rain fall were main of factors plantation casualty. The project authority further said that all the field staffs were hard working and they owned responsibility and performed their duty well. There was need to work hard to improve the outcome of the programme.

6.13 Evaluator's Assessment

- ✦ After field inspection, verification of official records and interaction with DFO and other stakeholders of the programme, it was concluded that above statements made by the project authority was true to a great extent. The project authority followed the stated guidelines of programme. Modern tools of mass media should be adopted for awareness campaigns for better impact. System of internal monitoring and evaluation in the programme should be streamlined and carried out effectively.

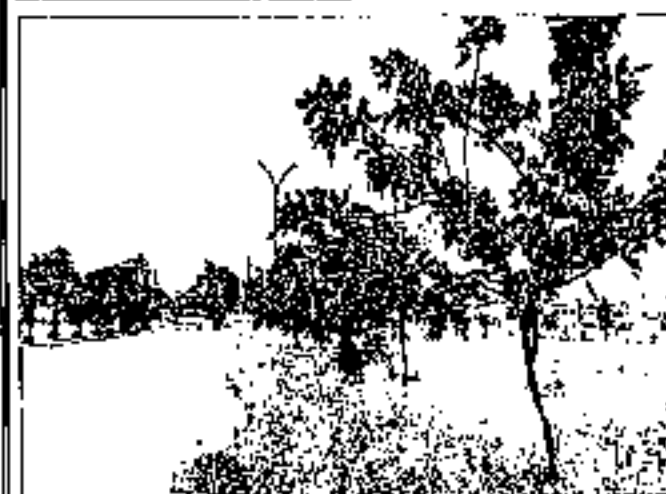
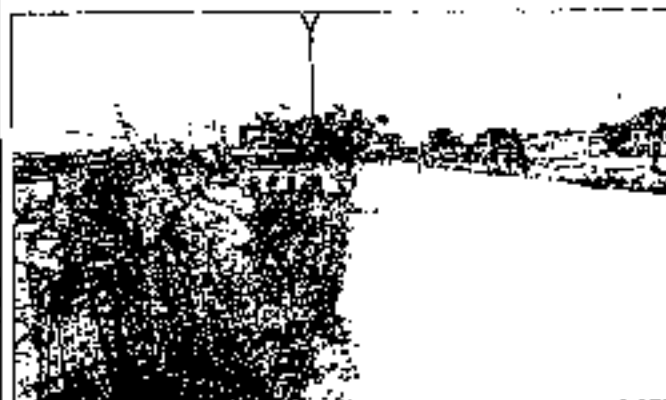
Photographs of Plantation Area: Mahendragiri Forest Division (2012-13)

✦ Mahendragiri Range: 2 sites

✦ NCH Range: 11 sites

✦ Karnali Range: 2 Sites

✦ Main Plant Species: Papri, Shisham, Neem, Bakain, etc



Final A.P.O. State CAMPA Scheme of Mahendragarh Forest Division in Mahendragarh District of Haryana (2012-13)													
Sl. No	Type of land (Forest/Non-forest)	Name of Scheme/ component	Name of Range	Name of Site	Khasra No. KM/RD	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	RF	CA	Mahendragarh	RF Sohla, Comp. No.4	NA	July	00	27.68	6920	Papri, Neem	4x4	NA	NA
2.	RF	CAMPA/ANR	Mahendragarh	RF Buloth, Comp. No.8	NA	July	00	10	2500	Papri	4x4	NA	NA
3.	Road	CAMPA/ANR	NCH	Maliya Ki Dhani to Nayan Rd	NA	July	4.4	00	880	Papri	4x4	NA	NA
4.	Road	CAMPA/ANR	NCH	Amarpura to Thanwas Rd	NA	July	1.5	00	300	Papri, Neem	4x4	NA	NA
5.	Road	CAMPA/ANR	NCH	Maliya Ki Dhani to Nareda Rd	NA	July	1.85	00	370	Papri	4x4	NA	NA
6.	PF	CAMPA/ANR	NCH	Amarpura Banilhari Rd	NA	July	2.25	00	450	Papri, Neem	4x4	NA	NA
7.	Forestland	CAMPA/ANR	Namaul	Thana Sec. 4 & 5 area	NA	July	15	00	3000	Papri, Neem	4x4	NA	NA
8.	Campus	CAMPA/Urban	NCH	New Anji Mandi NCH	NA	July	00	1	250	Papri	4x4	NA	NA
9.	Power House area	CAMPA/Urban	NCH	Power House Nangal Chaudhary	NA	July	00	4	1000	Papri	4x4	NA	NA
10.	Hospital	CAMPA/Urban	NCH	Animal & Civil Hospital NCH	NA	July	00	1	250	Papri	4x4	NA	NA
11.	College	CAMPA/Urban	NCH	College Nangal Chaudhary	NA	July	00	2	500	Papri	4x4	NA	NA
12.	Road	CAMPA/Urban	NCH	Namaul Nangal Chaudhary Rd	NA	July	00	1	250	Papri	4x4	NA	NA
13.	Road	CAMPA/Urban	NCH	Nangal Chaudhary Kamaniya Rd	NA	July	00	2	500	Papri, Neem	4x4	NA	NA
14.	Forestland	CAMPA/Urban	NCH	Nolayaza to Gushala Rd	NA	July	00	4	1000	Papri, Neem	4x4	NA	NA
15.	Campus	CAMPA/Urban	Namaul	New Anji Mandi & Shamshon Ghel	NA	July	00	15	3750	Papri, Neem, Bakun	4x4	NA	NA
	Total	—	—	—	—	—	25	67.68	21920	—	—	—	—

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi



MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY MEWAT FOREST DIVISION (NUH) IN MEWAT DISTRICT OF HARYANA

Duration of Evaluation: 2012-13

Final Report

Submitted to

OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS HARYANA
VAN BHAWAN, C-18, SECTOR 5, PANCHKULA HARYANA

April 2015

Conducted by

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Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Mewat Forest Division (Nuh) in Mewat District of Haryana (2012-13)" was successfully completed. However, it would not have been possible without the kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram along with office staff Mr. D.P. Tyagi for reposing faith and awarding the honour of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Mewat Forest Division, Mr. Harish Walla along with RFOs and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.



Dinesh K. Singh
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Director

Locus Research & Consultants Pvt. Ltd.

New Delhi, April, 2015

Preface

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates. i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana of ~~Mewat~~ forest division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2012-13 a total of 7880 RKM forestland was treated under CAMPA by adopting CA (51.80 RKM) and NPV (27 RKM) schemes of plantation at F.P. Jhirka of Mewat (Nuh) forest division. Total expenditure incurred in the above activities was Rs. 28.92 lakh. A total of 0.198 lakh plant species of *Papri, Bakain, Shisham, Arjun, Kikar, Balam Khir, Jut, Jamun, Kaurya, Ailanthus, Neem, Pipal, Bar*, etc. was planted in the project.

Average survival percentage of seedlings estimated was 70%. The survival percentage was 71% at FP Jhirka Anaj Mandi under NPV scheme and it was 69% at Alipur Tigra Reegarh Sec. 4&5. Average height of plantation was 6 feet. Average grading awarded to the programme was 6.5 (on 1 to 10 scale), which was very good.

In the process of evaluation members of evaluation team interacted with field level forest staff and local community. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

April, 2015



Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APDs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFD	Divisional Forest Officer
DG- Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Faridabad Division (T)	Faridabad Forest Division Territorial
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL No.	Common Name	Botanical Name
1.	Ailanthus	Ailanthus excelsa
2.	Arjun	Terminalia arjuna
3.	Bakain	Melia azedarach
4.	Ber	Ziziphus mauritiana
5.	Blam Kheera	Kygelia pinnata
6.	Jamun	Terminalia arjuna
7.	Kikar	Acacia Arabica
8.	Neem	Azadirachta indica
9.	Papri	Holoptelea integrifolia
10.	Pilkhan	Ficus virens
11.	Pipal	Ficus religiosa
12.	Reunjha	Acacia leucophloea
13.	Shisham	Dalbergia sissoo
14.	Tun	Toona ciliate

GRADING AND EXECUTIVE SUMMARY

Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2012-13

Mewat Forest Division, Mewat District, Haryana

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	7
	Health of Plantation	6
	Maintenance	6
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	5
Overall Grading (Very Good)		6.5

Executive Summary

1.0 INTRODUCTION

- ❖ Monitoring and evaluation of CAMPA programme of Mewat Forest Division in Mewat district carried out during 2012-13 was conducted in the month of April 15-18, 2015 by **Locus Research & Consultants Pvt. Ltd.**, a Delhi based professional agency. A total of 78.80 RKM forestland was treated by adopting CA (51.80 RKM) and NPV (27 RKM) plantation schemes at 3 places at FP Jhirka Forest range. There was 72.80% coverage of project sites/areas in field visit analyse the programme and to estimate survival percentage. Summary of findings of the study is given below.

2.0 CAMPA: AN OVERVIEW

- ❖ CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Pandhukula.

3.0 OBJECTIVES OF THE CAMPA

- ❖ Important objectives of CAMPA are as follows:
 - i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION /AREA OF MONITORING & EVALUATION

- ❖ The study covered the entire Mewat (Nuh) Forest Division in Mewat district of Haryana.

5.0 REFERENCE PERIOD

- ❖ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2012-13.

6.0 NEED OF THE STUDY

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting survival of plantation and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ❖ Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. There was coverage of 72.08% project area. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants in row was adopted.

9.0 PROFILE OF THE STUDY AREA

- ❖ The state of Haryana comprises 21 districts, 45 sub-tehsils, 47 subdivisions, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6,759 villages. During the creation of state of Haryana on November 1, 1956, there were only seven districts in the state. Subsequently, 14 other districts were included through restructuring the previous ones.
- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ❖ As per India State of Forest Report-2011, Mewat district has 8.5% area under forest cover.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ❖ 78.80 RKM forestland was treated under CAMPA by during 2012-13. It was implemented at only FP Jhirka range of the division.
- ❖ Total expenditure during 2012-13 Rs 28.92 lakh against the target of same amount. Plantation work was carried out at three places in FP Jhirka forest range on 78.80 RKM protected forestland.
- ❖ A total of 0.198 lakh plant species of *Papri, Bakain, Shisham, Arjun, Kikar, Balam Khira, Tun, Jamun, Reunjha, Ailanthus, Neem, Pipal, Ber*, etc. were planted at three sites.
- ❖ A sample of 72.08% (56.80 RKM) was drawn during field visit of plantation area to estimate survival percentage of plantation.

- ❖ Average survival percentage of seedlings estimated was 70%. The survival percentage was 71% at FP Jhinka Anaj Mandi under NPV scheme and it was 69% at Alipur Tigra Reegarh Sec. 4&5. Average height of plantation was 6 feet. Growth and health of plantation was good.
- ❖ Work register and cashbook were important registers maintained by project authority in this project. DFO of the division assured the evaluator that plantation journal would be prepared in all the plantation sites conducted under CAMPA programme when it was discussed with him.
- ❖ The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate evaluation wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana at Mewat forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry-programmes of the state along with CAMPA.
- ❖ An independent agency called **Agricultural Finance Corporation Ltd.** of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12 as reported by project authority. Overall findings of this study were satisfactory.
- ❖ Bank account of CAMPA Programme of Mewat forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Nuh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Main factors in the selection of plant species were topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were. However, the project authority took decision in this regard after taking into account of all these factors.
- ❖ CAMPA programme improved soil moisture conservation to extent. Limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.
- ❖ Natural regeneration of plant species in the area was hardly observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone there were some glimpses of it due to presence of other species around plantation area.
- ❖ Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection.
- ❖ Grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation.
- ❖ Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance.
- ❖ Forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

- ❖ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area.
- ❖ CAMPA programme accrued direct and indirect benefits. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.
- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gabions of iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Viable measures should be adopted to check grazing problem. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ❖ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ❖ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
- ❖ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
- ❖ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
- ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ❖ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ♦ The amount would be transferred to it by the ad-hoc CAMPA.
 - ♦ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ♦ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ♦ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ♦ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The state government may also credit to the State CAMPA
 - ♦ Grants or aid received if any;
 - ♦ Any loan taken by the Authority or any borrowings made by it; and
 - ♦ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ✧ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ✧ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ✧ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ✧ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ✧ "State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

- ◆ Important objectives of CAMPA are as follows:
 - ✦ Conservation, protection, regeneration and management of existing natural forests;
 - ✦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - ✦ Compensatory Afforestation
 - ✦ Environmental services, which include:-
 - Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
 - ✦ Science, Research, Training and Capacity Building.
 - ✦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ◆ The study area covers the entire Mewat Forest Division (Nuh) in Mewat district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ◆ Reference period of monitoring & evaluation is one year, i.e. 2012-13.

1.7 Components of the Project

- ❖ Main components of CAMPA are as follows:
 - ✦ People's Participation
 - ✦ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - ✦ Monitoring and Evaluation of the programme
 - ✦ Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
 - ✦ Extension and awareness
 - ✦ Monitoring of the programme, etc

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ❖ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
❖ District	: Mewat
❖ Forest Division	: Mewat
❖ Forest Circle	: Gurgaon Circle, Gurgaon
❖ State	: Haryana
Project Location	
❖ Watersheds/Sub-watersheds	: NA
❖ Development Blocks	: NA
❖ Forest Ranges (3)	: 1.Mewat, 2. Punhana 3. F.P. Jhirka but during 2012-2013 CAMPA work conducted at only F.P. Jhirka range.
❖ Project Sites/Locations	: 3 (Three)
Assets/ Infrastructure Development Activities s, if any	
❖ NA	
Preparation of Plantation Journal and Record Upkeep	
❖ There was not any separate register or Plantation journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
❖ Project Duration	: 2012-13
❖ Project Area (78.8 RKM)	: Target: 78.80 RKM (51.8 RKM with CA Scheme and 27 RKM with NPV Scheme and it was achieved cent per cent
❖ Project Cost	: Target: Rs.28.92 lakh and Achievement: Rs.28.92 lakh
Proposed Strategies and Salient Features of the Project	
❖ There was no provision of VFC in CAMPA	
❖ Plantation was carried out under NPV and CA schemes/components	

1.9 Need of the Study

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ❖ Scope of study is confined to Mewat Forest Division in Mewat district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ♦ To assess physical and financial targets and achievements
 - ♦ To evaluate performance of the programme
 - ♦ To estimate of survival percentage of plant species adopted in the project
 - ♦ To analyze factors impacting plantation survival and suggest remedial measures.
 - ♦ To assess peoples' participation and assets created
 - ♦ To assess the direct and indirect benefits and impact of the programme.
 - ♦ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ❖ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ❖ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ❖ Sample Selection, Size and its Distribution: There was 72.08% (56.80 RKM) coverage of plantation area in the project during field visit in the process of evaluation of CAMPA programme during 2012-13 from the total target of 78.80 RKM. It was 51.80 RKM from CA scheme and 5 RKM from NPV scheme of plantation. The entire project activity was carried out at FP Jhirka forest range during 2012-13 in Mewat forest division.
- ❖ To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50m×50m) was adopted for counting the plantation at random locations along with row counting keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - ♦ Chapter-1 introduces the Project Concept, Strategy, Objectives and Methodology.
 - ♦ Chapter-2 gives the Profile of the Project Area and its Location
 - ♦ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ♦ Chapter-4 gives Qualitative Analysis and Findings.
 - ♦ Chapter-5 deals with Project Constraints and Limitations
 - ♦ Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

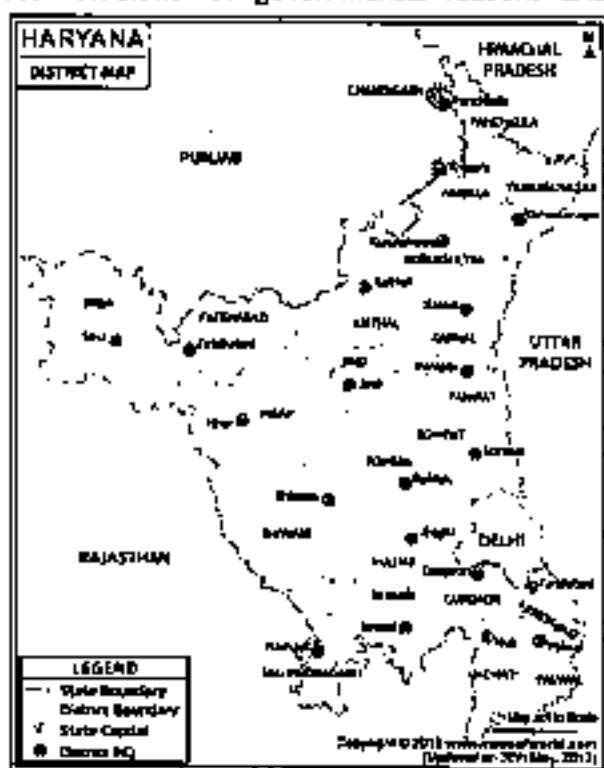
- ❖ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

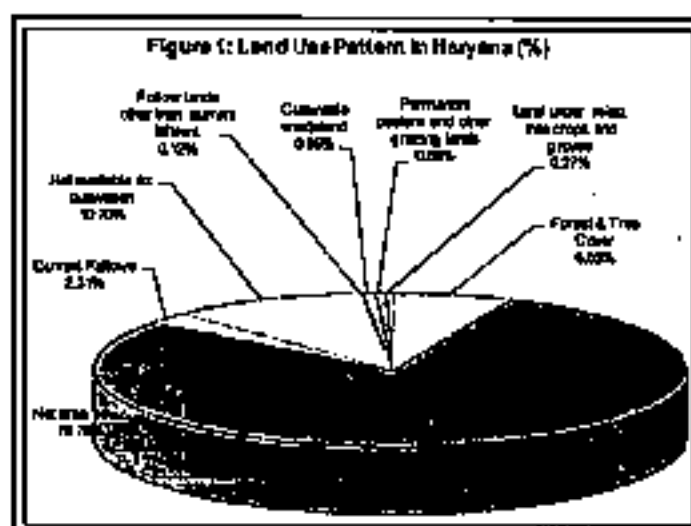
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
- ❖ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ❖ Gurgaon Division has six (6) districts namely Palwal, Mewat, Mahendragarh, Gurgaon, Rewari, and Mewat districts in its jurisdiction.
- ❖ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ Rohtak Division also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



21.1 Land Use Pattern of Haryana

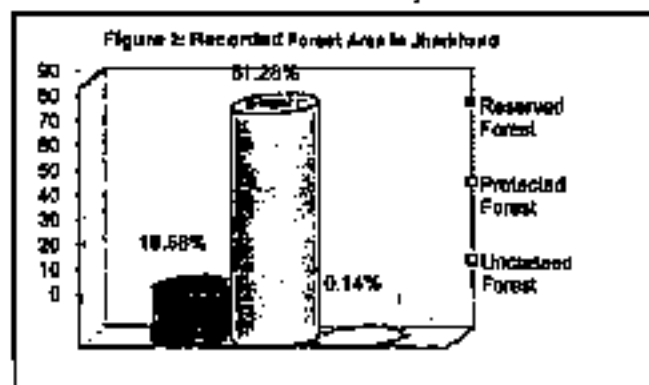
- ❖ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus forestland and tree cover together covers 6.80% of the state geographical area.
- ❖ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%). Permanent pasture and other grazing lands



(0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun).

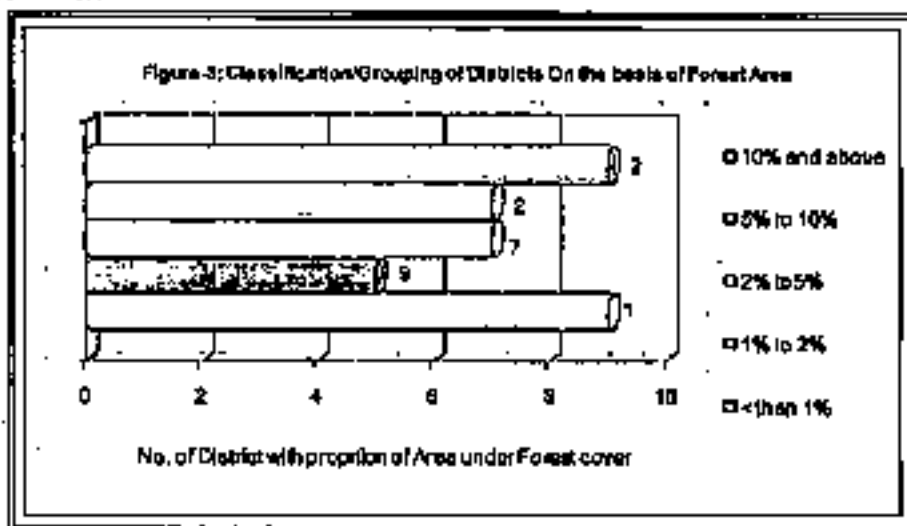
2.1.2 Recorded Forest Area in Haryana

- ❖ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ❖ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2.



2.1.3 District wise Distribution of Forest Area in Haryana

- ❖ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. Group-1: Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ❖ Group-2: Two districts namely Gurgaon (8.35%) and Noida (8.35%) and fall in the category of 5% to 10% forest cover.
- ❖ Group-3: Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh, Bhiwani, Rewari and Kaithal fall in the category of 2% to 5% forest cover.
- ❖ Group-4: Nine districts namely Hissar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat and they fall in group of 1% to 2% forest cover.
- ❖ Group-5: One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure-3 for further information.



2.2 Profile of Mewat District and Forest Division

- ❖ Mewat district is one of the 21 districts and situated in the southern part of Haryana. It was carved as the 20th district of Haryana from erstwhile Gurgaon district and Hathin Block of Faridabad district on 4th April 2005. However, Hathin sub-division was shifted to Palwal

district in 2008. It is bounded by Gurgaon district on the north, Rewari district on the west and Faridabad and Palwal districts on the east. Nuh town is the headquarters of this district. The district comprises Nuh, Taoru, Nagina, Firozpur Jhirka and Punhana blocks along with 431 villages and 297 panchayats.

- ❖ The district occupies an area of 1859.61sq. km. Mewat is populated by the Meos community (mostly Muslims) who are agriculturalists. It has a population of 10.89 lakh (2011 census) roughly equal to Cyprus or the US state of Rhode Island. This gives it a ranking of 420th in India out of a total of 640 districts. The district has a population density of 729 inhabitants per square kilometer. Its population growth rate over the decade 2001-2011 was 37.94%. Mewat has a sex ratio of 906 females for every 1000 males and a literacy rate of 56.1%. The average household size in rural Mewat was 7.



- ❖ The soil of Mewat is light in texture, particularly sandy, sandy loam and clay loam. The upper hills are mostly barren. The main occupation of the people is agriculture and agro-based activities. The agriculture in Mewat is mostly rain fed except in small pockets where canal irrigation is available. Agriculture production measured in terms of crop yield per hectare is comparatively low to the other districts of the State. Animal husbandry, particularly dairy is the secondary source of income for people of Mewat and those who live closer to the hilly ranges of Aravali also keep a few sheep and goats. Milk yields are not so low, however, due to heavy indebtedness most of the farmers are forced to sell the milk to the lenders at lower than normal price, which drastically reduces their income. The poultry population in Mewat is much less in comparison to other districts of Haryana State.
- ❖ Climate and Rainfall: Mewat falls under the Sub-Tropical, Semi-arid climatic zone with extremely hot temperature in summer. Dryness of air is standard feature in Mewat except during the monsoon season. May and June are the hottest months of the year with the temperature ranging from 30° C to 48° C. January, on the other hand is the coldest month with temperature ranging between 2° C to 25° C. Strong dusty winds are conspicuous during summer. The annual rainfall varies considerably from year to year. The maximum rainfall is experienced during the monsoon season, which reaches its peak in the month of July. The principal precipitation occurs during monsoon period from June to September when about 80% of the rainfall is received. The average rainfall varies from 336 mm to 440 mm in the district.

2.3 Forest Cover in Mewat District

- ❖ According to India State of Forest Report-2011, Mewat district has 8.5% area under forest cover against 3.64% of state average. Main plant species found adopted under CAMPA programme in the district were *Papri, Bakain, Shisham, Arjun, Kikar, Balam Khira, Tur, Jamun, Reunijha, Ailanthus, Neem, Pipal, Ber*, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- Altogether 78.80 RKM forestland was treated under CAMPA by adopting Compensatory Afforestation (51.80 RKM) and Net Present Value (27 RKM) schemes of plantation during 2012-13. It was implemented at only FP Jhirka range of the division. Refer table-3.1 for detailed information.

Table 3.1 Area Covered/Treated Under CAMPA (2012-13)						
Sl. No	Range	Project/Plantation Site	Land Category	Scheme of Plantation	Area in RKM	Year of Plantation
1.	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	Protect Forest	CA-TP	51.80	2012-13
2.	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	Protect Forest	NPV-TP	22	
3.	FP Jhirka	Jhir, Anaj Mandi, FP Jhirka	Protect Forest	NPV-TP	5	
Sub Total					78.80	

3.2 Physical and Financial Target and Achievements

- Total expenditure of the entire project during 2012-13 Rs 28.92 lakh against the target of same amount. In the programme plantation work was carried out at three places in FP Jhirka forest range on 78.80 RKM protected forestland. Refer table 3.2 for detail information.

Table-3.2: Physical and Financial Target and Achievements (2012-13)						
Sl. No.	Range	Plantation Site	Physical (Area in ha)		Financial (Rs. in lakh)	
			Target	Achievement	Target	Achievement
1.	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	51.80	51.80	19.20	19.20
2.	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	22	22	7.92	7.92
3.	FP Jhirka	Jhir, Anaj Mandi, FP Jhirka	5	5	1.80	1.80
Total			78.80	78.80	28.92	28.92

3.3 Inventory/ List of Plantation

- A total of 0.198 lakh plant species of *Papri*, *Bakain*, *Shisham*, *Arjun*, *Kikar*, *Balam Khira*, *Tun*, *Jamun*, *Reunjha*, *Ailanthus*, *Neem*, *Pipal*, *Ber*, etc. were planted in the project at three different sites comprising 78.80 RKM of forestland. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table 3.3: Inventory/List of Plantation							
Sl. No	Range	Project/Plantation Site	Scheme of Plantation	Area RKM	No. of plants	Name of Plant Species	Year of Plantation
1	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	CA	51.80	12950	Kikar, Shisham, Bakain, Papri	2012-13
2	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	NPV	22	5500	Kikar, Shisham, Papri	
3	FP Jhirka	Jhir, Anaj Mandi, FP Jhirka	NPV	5	1250	Shisham, Papri	
Total				78.80	19800		

3.4 Analysis of Sample Plantation and Survival Assessment

- In the process of monitoring and evaluation of CAMPA programme of Mewat Forest Division in Mewat District of Haryana a sample of 72.08% (56.80 RKM) was drawn during field visit of plantation area to estimate survival percentage of plantation.

- ✦ Average survival percentage of seedlings estimated was 70%. The survival percentage was 71% at FP Jhirka Anaj Mandi under NPV scheme and it was 69% at Alipur Tigra Reegarh Sec. 4&5. Average



height of plantation was 6 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.

Table 3.4: Analysis of Sample Plantation sites and Assessment of Survival

Sl. No.	Range	Plantation Site	Scheme	Area (ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	FP Jhirka	Alipur Tigra, Reegarh Sec.4 & 5	CA	51.80	12950	8936	69	2012-13
2	FP Jhirka	Jhir, Anaj Mandi, FP Jhirka	NPV	5	1250	888	71	
Total				56.80	14200	9824	70	

3.5 Registers/Records Maintained in the Project

- ✦ Work register and cashbook were important registers maintained by project authority in this project. DFO of the division assured the evaluator that plantation journal would be prepared in all the plantation sites conducted under CAMPA programme when it was discussed with him.

3.6 Monitoring and Evaluation System in the Project

- ✦ The system of Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate evaluation wing called M & E Wing. It is conducted either once or twice a year as reported by the project. The last evaluation of state CAMPA Haryana at Mewat forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- ✦ An independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12 as reported by project authority. Overall findings of this study were satisfactory.

3.8 Bank Account Details and Flow of Funds

- ✦ Bank account of CAMPA Programme of Mewat forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Nuh branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- ✦ Topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were main factors in the selection of plant species. However, the project authority took decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ✦ Wherever the plantation was conducted under CAMPA programme there was some improvement in soil moisture conservation. However, limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.

4.3 Assessment of Survival Percentage

- ✦ The estimated survival percentage of plantation carried out during 2012-13 was 70%. It was highest at FP Jhirka Anaj Mandi under NPV scheme (71%) while it was 69% at Alipur Tigra Reegarh Sec. 4 & 5. Average height of plantation was 6 feet and they had good growth and health.
- ✦ To estimate survival percentage a sample plot of 0.25 ha (50meterx50meter) was adopted at random location and also row counting of plantation was also adopted to count the seedling at random location. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration In the Plantation Area

- ✦ Natural regeneration of plant species in the area was hardly observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone there were some glimpses of it due to presence of other species around plantation area.

4.5 Quality of Work

- ✦ Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ✦ Grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation.

4.7 Protection and Maintenance of Plantation

- Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be better care of plantation through elaborate fencing and regular care. The process of awareness raising and motivation of local community should be adopted in the project at regular intervals.

4.8 Motivation and Technical Competence of Personnel Involved In the Project

- All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

CHAPTER-5

THE CONSTRAINTS AND LIMITATIONS OF PROJECT

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff During 2012-13 of Project Work

- ✦ Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in some part of the project area and in NCR region, there was high demand of labour force and hence the forest department had to face shortage of labour as reported.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

CHAPTER-6

SUGGESTIONS AND RECOMMENDATIONS

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals

- ✦ As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- ✦ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- ✦ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- ✦ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- ✦ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Make Four Years of Protection and Maintenance Funding

- ✦ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- ✦ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF

and two DFOs. Its head office is located at Karnal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- ✦ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- ✦ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Introduce Practice and Concept of Earning Carbon Credits

- ✦ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.
- ✦ Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.11 Interview with Project Authority

- a) During pre and post field inspection and evaluation of the programme the members of evaluation team interacted interviewed DFO Mewat (Mr. Harish Walia, Mob:+91-9416317400, Office: +91-1267274701) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- ✦ The DFO, Mr. Harish Walia along with other project authority felt satisfaction overall outcome of the programme and progress of the programme conducted during 2012-13. With regard to selection plant species soil type, climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were main factors as replied by the. Most preferred plant species in the division were *Bakain*, *Shisham*, *Arjun*, *Kikar*, *Balam Khira*, *Tun*, *Jamun*, *Reungha*, *Ailanthus*, *Neem*, *Pipal*, *Ber*, etc. Open grazing due high cattle pressure, rocky terrain, poor soil, erratic and low rain fall were main of factors plantation casualty. The project authority further said that all the field staffs were hard working and they owned responsibility and performed their duty well. There was need to work hard to improve the outcome of the programme.

6.12 Evaluator's Assessment

- ✦ After field inspection and thorough interaction with DFO and other stakeholders of the programme along with verification of official records, it was concluded that above statements made by the project authority was true to a great extent. The project authority followed the stated guidelines of programme. Modern tools of mass media should be adopted for awareness campaigns for better impact. Internal monitoring and evaluation in the programme should be updated and carried out effectively.

Photographs of Plantation Area: Mewar (Nuh) Forest Division (2012-13)

Site-1: Anaj Mani FP Jhirka, Range: FP Jhirka, Scheme: NPV/TP, Area: 5 RKM, No. of Plant: 1250 (Kikar, Padri, Shisham)

Site-2: Alipur Tigra, Reagarh Sec.4 B.5, Range: FP Jhirka Scheme: NPV/TP, Area: 22 RKM, No. of Plant: 5500 (Kikar, Shisham, Papri)

Site-3: Alipur Tigra, Reagarh Sec.4 & 5, Range: FP Jhirka, Scheme: CA/TP, Area: 51.80 RKM, No. of Plant: 12950 (Kikar, Shisham, Bakain, Papri, etc)



Final A.P.O. State CAMPA Scheme (2012-13) of Mewat Forest Division (Nuh) in Mewat District of Haryana													
Sl. No	Type of land (Forest/Non-forest)	Name of Scheme/ component	Name of Range/ Block/Beat	Name of Site	Khasra No. KM/RD	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	RKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Forestland	CA/TP	FP Jhirka/Alipur Tigra/Alipur Tigra	Alipur Tigra, Reegarh	Sec.4 & 5	July	NA	51.80	4x4	Kikar, Shisham, Bakain, Papri	12950	Starting Point N 27°44'29.5" E 076° 59'34.6"	Last Point N 27°44'31.3" E 076° 59'57.7"
2.	Forestland	NPV/TP	FP Jhirka Alipur Tigra/Alipur Tigra	Alipur Tigra, Reegarh Sec.4 & 5	Reegarh	July	NA	22	4x4	Kikar, Shisham, Papri	5500	Starting Point N 27°44'41.3" E 076° 59'57.8"	Last Point N 27°44'50.9" E 076° 59'38.3"
3.	Forestland	NPV/TP	FP Jhirka/ FP Jhirka/Jhir	Jhir, Anaj Mandi, FP Jhirka	Sec.4 & 5	July	NA	5	4x4	Shisham, Papri	1250	Starting Point N 27°45'50.1" E 076° 57'10.1"	Last Point N 27°45'43.4" E 076° 57'24.6"
Total		—	—	—	—	—	—	78.80	—	—	19800	—	—

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)

Government of India, New Delhi



MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY PALWAL FOREST DIVISION IN PALWAL DISTRICT OF HARYANA

Duration of Evaluation: 2012-13

Final Report

Submitted To

OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
VAN BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

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**Compensatory Afforestation Fund Management and
Planning Authority (CAMPA)**
Ministry of Environment & Forests (MOEF)
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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being implemented by Palwal Forest Division in Palwal District of Haryana (2012-13)" was successfully completed. However, it would not have been possible without the kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram along with office staff Mr. D.P. Tyagi for reposing faith and awarding the honour of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, Palwal Forest Division, Mr. Sundar Sambharya along with RFOs and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.




Dinesh K. Singh

Director
Locus Research & Consultants Pvt. Ltd.
New Delhi, April, 2015

Preface

(Palwal Forest Division)

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State.

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana of ~~Palwal~~ forest division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2012-13 a total 43.40 RKM land was treated under CAMPA by adopting CAMPA-Urban Forestry (30 RKM) and Compensatory and Afforestation (13.4 RKM) schemes of plantation at Palwal Division. Total expenditure incurred in the above activities was Rs. 14.66 lakh. A total of 0.108 lakh plant species of *Populus*, *Shisham*, *Jamun*, *Pithecha*, *Silver oak*, *Chakrasia*, *Aletrisoma*, *Kajalia*, *Lesisoma*, *Malsri*, etc. were planted in the project at 22 places/sites.

Average survival percentage of plants estimated was 67%. It was highest (70%) at Palwal-Hathin Road and it was only 65% at Hathin-Kondal Road under Hodal Forest Range. Average height of plantation was 6 feet. Growth and health of plantation was good. Average grading awarded to the programme was 5.4 (on 1 to 10 scale), which was very good.

In the process of evaluation members of evaluation team interacted with field level forest staff and local community. At most places local people were happy with the efforts made by forest department. Plantation journal was missing but other project related records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

April, 2015




Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLO	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTPP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
REG	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SMC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL No.	Common Name	Botanical Name
1.	Alesteria	Indian Mallow/ Devil Tree
2.	Arjun	Terminalia arjuna
3.	Jamun	Terminalia arjuna
4.	Blam Kheera	Kigelia pinnata
5.	Kikar	Acacia Arabica
6.	Molsri	Mimusops elengi
7.	Neem	Azadirachta indica
8.	Papri	Holoptelea integrifolia
9.	Pilkhan	Ficus virens
10.	Shisham	Dalbergia sissoo
11.	Silveroak	Grevillea robusta

GRADING AND EXECUTIVE SUMMARY

Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2012-13

Palwal Forest Division, Palwal District, Haryana

Average Grading on a Scale of 1 to 10		
Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	7
	Health of Plantation	6
	Maintenance	6
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	5
	Satisfaction over Perceived Benefits by the Local Population	4
Overall Grading (Very Good)		6.4

Executive Summary**1.0 INTRODUCTION**

- Monitoring and evaluation of CAMPA programme of Palwal Forest Division in Palwal district was conducted in the month of April 19-22, 2015 by **Locus Research & Consultants Pvt. Ltd.**, a Delhi based agency. A total of 43.40 RKM land was treated by adopting CAMPA-Urban Forestry (30 RKM) and CA (13.4 RKM) schemes of plantation during 2012-13. A sample of 74.65% (32.40 RKM) was drawn for field inspection of plantation area and other assets of the project and to estimate survival percentage.

2.0 CAMPA: AN OVERVIEW

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a **CAMPA** as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

3.0 OBJECTIVES OF THE CAMPA

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 GEOGRAPHIC LOCATION /AREA OF MONITORING & EVALUATION

- The study covered the entire Palwal Forest Division in Palwal district of Haryana.

5.0 REFERENCE PERIOD

- ♦ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2012-13.

6.0 NEED OF THE STUDY

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 OBJECTIVES OF THE STUDY

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting survival of plantation and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

8.0 METHODOLOGY AND SAMPLE SELECTION

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. 74.65% (32.40 RKM) area was sampled to assess the programme and estimate survival percentage. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants in row was adopted.

9.0 PROFILE OF THE STUDY AREA

- ♦ Haryana was created on November 1, 1966 with seven districts. Subsequently 14 other districts were included through restructuring the previous ones. Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ♦ Palwal is the 21st district of Haryana state in northern India and Palwal city is its headquarter. It is situated at a distance of 60 km from Delhi on the Delhi-Mathura highway (NH-2). As per India State of Forest Report-2011, Palwal district has 4.32% area under forest cover.

10.0 MAIN FINDINGS OF THE STUDY

10.1 QUANTITATIVE ANALYSIS AND FINDINGS

- ♦ 43.40 RKM land was treated under CAMPA by adopting CAMPA-Urban Forestry (30 RKM) and CA (13.4 RKM) schemes of plantation. It was implemented in both ranges namely Palwal and Hodal.
- ♦ Total expenditure was Rs. 14.66 lakh against the target of same amount. Plantation work was carried out at 22 places.
- ♦ 0.108 lakh plant species of *Papri*, *Shisham*, *Jamun*, *Pilkhan*, *Silveroak*, *Chakresia*, *Alesteria*, *Kajelia*, *Lesistonia*, *Molsri*, etc. were planted.
- ♦ Average survival percentage of seedlings estimated was 67%. It was highest (70%) at Palwal-Hathin Road and 65% at Hathin-Kondal Road under Hodal forest Range. Average height of plantation was 6 feet. Growth and health of plantation was good.

- ❖ Two types of registers were maintained namely cashbook and work book. DFO said that plantation journal would be prepared soon for all the plantation sites.
- ❖ Monitoring and Evaluation (M & E) of CAMPA along with other forestry programmes are conducted by a separate wing called M & E Wing. The last evaluation of state CAMPA Haryana of Palwal Forest Division was conducted in October 2014. It consists of one CF and two DCFs. Its head office is at Karnal in Haryana.
- ❖ An independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.
- ❖ Bank account of CAMPA Programme of Palwal forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Palwal branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 QUALITATIVE ANALYSIS AND FINDINGS

- ❖ Factors impacting choice of species were topography, soil type, climate, rainfall, suitability in the area, economic value, preference by locals, etc. Project authority called the final shot in this regard.
- ❖ Improvement in soil moisture conservation was observed at most plantation sites of CAMPA.
- ❖ Limited natural regeneration of plant species in the plantation area was found. In urban and suburban zone it was negligible while on block forestland there were some glimpses of it.
- ❖ Quality of Work in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.
- ❖ Open and rash grazing by loose domestic animals, wild animals like, rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. impacted Growth and Survival of Plantation
- ❖ Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. Barbed wire and bush fencing were found at most plantation sites under protection of plantation. In urban areas brick/iron/wood gabions were also adopted along with barbed.
- ❖ Motivation and Technical Competence of Personnel Involved in the Project was found satisfactory. Range Forest Officers (RFO), foresters and forest guards were trained to tackle necessary work. Temporary/daily wages workers, cattle watchers, etc. were lacking these skills to deal with new challenges of the programme.
- ❖ Role of Local People in Project Work was far from satisfactory. There was low participation of local community in the programme. Modern tools of mass media should be adopted for awareness and motivation of community.
- ❖ CAMPA accrued both direct and indirect benefits in the project area. Additional geographical area came under forest cover. It helped in improving quality of ecology and environment as well as micro-climate of the area.
- ❖ Formation of SHG in the Project was optional for the project authority to provide additional benefits of community in the project area. There was no attempt at this front from the project authority.

11.0 CONSTRAINTS AND LIMITATIONS OF THE PROJECT

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.

- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.
- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Measures should be taken to check grazing in the area. Stall feeding of domestic animals should be promoted among local community through regular awareness and motivation.
- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gablons of iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ❖ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ❖ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ❖ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
 - ❖ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ❖ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
 - ❖ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ❖ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ❖ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ❖ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ◆ The amount would be transferred to it by the ad-hoc CAMPA.
 - ◆ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ◆ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ◆ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ◆ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
 - b) The state government may also credit to the State CAMPA
 - ◆ Grants or aid received if any;
 - ◆ Any loan taken by the Authority or any borrowings made by it; and
 - ◆ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

13 State CAMPA, Haryana

- ♦ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ♦ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ♦ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ♦ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ♦ "State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ♦ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ♦ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ✦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ✦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ✦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ✦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

✦ Important objectives of CAMPA are as follows:

- ✦ Conservation, protection, regeneration and management of existing natural forests;
- ✦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
- ✦ Compensatory Afforestation
- ✦ Environmental services, which include:-
 - ✦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ✦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ✦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ✦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
- ✦ Science, Research, Training and Capacity Building.
- ✦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ✦ The study area covers entire Palwal Forest Division in Palwal district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ✦ Reference period of monitoring & evaluation is one year, i.e. 2012-13.

1.7 Components of the Project

- ❖ Main components of CAMPA are as follows:
 - People's Participation
 - Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - Monitoring and Evaluation of the programme
 - Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
 - Extension and awareness
 - Monitoring of the programme, etc

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ❖ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Implementing Agency and Proposed Activities of the Programme (2012-13)

Project Implementing Agency	
❖ District	: Palwal
❖ Forest Division	: Palwal
❖ Forest Circle	: Gurgaon Circle, Gurgaon
❖ State	: Haryana
Project Location	
❖ Watersheds/Sub-watersheds	: NA
❖ Development Blocks	: NA
❖ Forest Ranges (2)	: 1. Palwal and 2. Hodal CAMPA work conducted in both of them
❖ Project Sites/Locations	: 22 (Twenty)
Assets/ Infrastructure Development Activities, if any	
❖ NA	
Preparation of Plantation Journal and Record Upkeep	
❖ There was not any separate register or Plantation Journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
❖ Project Duration	: 2012-13
❖ Project Area (78.8 RKM)	: Target: 43.40 RKM and 100 per cent achieved.
❖ Project Cost	: Target: Rs. 14.66 lakh and Achievement: Rs. 14.66 lakh
Proposed Strategies and Salient Features of the Project	
❖ No provision of VFC	
❖ Plantation was carried out under CAMPA-Urban Plantation and CA schemes	

1.9 Need of the Study

- ❖ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, deviation, if any from the stated guidelines, etc.

1.10 Scope of the Study

- ❖ Scope of study is confined to Palwal Forest Division in Palwal district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ♦ To assess physical and financial targets and achievements
 - ♦ To evaluate performance of the programme
 - ♦ To estimate of survival percentage of plant species adopted in the project.
 - ♦ To analyze factors impacting plantation survival and suggest remedial measures.
 - ♦ To assess peoples' participation and assets created
 - ♦ To assess the direct and indirect benefits and impact of the programme.
 - ♦ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ❖ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ❖ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ❖ Sample Selection, Size and Its Distribution: A sample of 74.65% (32.40 RKM) was drawn for field inspection of plantation area and other assets of the project and to estimate survival percentage. The total target area of CAMPA was 43.40 RKM. To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50mx50m) was adopted for counting the plantation at random locations along with row counting keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - ♦ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ♦ Chapter-2 gives the Profile of the Project Area and its Location
 - ♦ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ♦ Chapter-4 gives Qualitative Analysis and Findings.
 - ♦ Chapter-5 deals with Project Constraints and Limitations
 - ♦ Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

- ❖ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

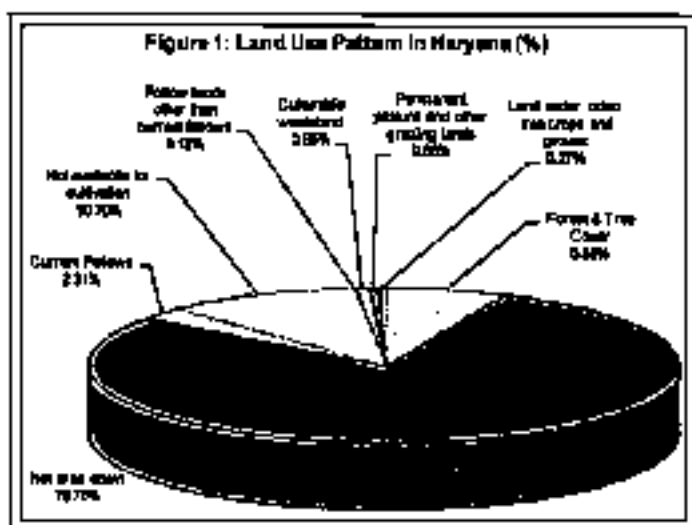
2.1 State Profile

- ❖ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
- ❖ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ❖ Gurgaon Division has six (6) districts namely Palwal, Palwal, Mahendragarh, Gurgaon, Rewari, and Palwal districts in its jurisdiction.
- ❖ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ❖ Rohtak Division also has five (5) districts namely Kamal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



2.1.1 Land Use Pattern of Haryana

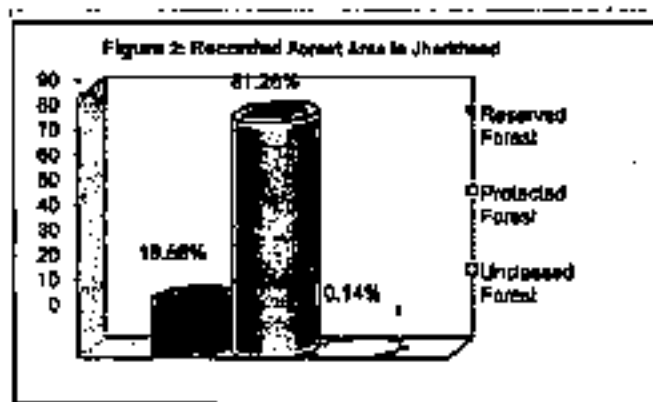
- ❖ Total geographical area of Haryana is 44212 sq. km. which is 1.35% of the total area of the country. As per land use pattern, about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus, forestland and tree cover together covers 6.80% of the state geographical area.
- ❖ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%), Permanent pasture and other grazing lands



(0.69%), Culturable wasteland (0.67%), Land under misc. tree crops and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. *Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun).*

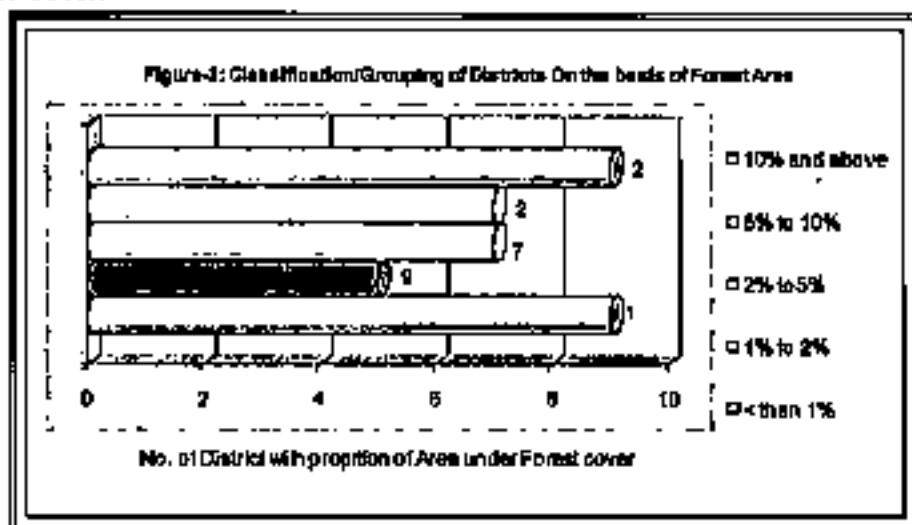
2.1.2 Recorded Forest Area in Haryana

- ♦ The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 81.57%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.
- ♦ An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. *Refer Figure-2.*



2.1.3 District wise Distribution of Forest Area in Haryana

- ♦ Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. **Group-1:** Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.
- ♦ **Group-2:** Two districts namely Gurgaon (8.35%) and Palwal (8.35%) and fall in the category of 5% to 10% forest cover.
- ♦ **Group-3:** Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh, Bhiwani, Rewari and Kaithal fall in the category of 2% to 5% forest cover.
- ♦ **Group-4:** Nine districts namely Hissar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat and they fall in group of 1% to 2% forest cover.
- ♦ **Group-5:** One district namely Fatehabad which has less than 1% area under forest cover. *Refer Figure-3 for further information.*

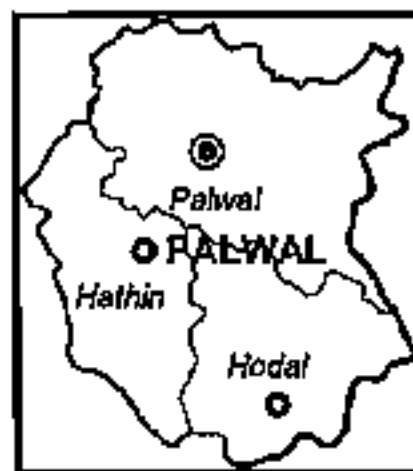


2.2 Profile of Palwal District and Forest Division

- ♦ Palwal is the 21st district of Haryana state in northern India and Palwal city is its headquarter. It is situated at a distance of 60 km from Delhi on the Delhi-Mathura highway (NH-2). It is a place of great antiquity, supposed to figure in the earliest Aryan traditions

under the name of Apelava, part of the Pandava kingdom of Indraprastha, which was later restored by Vikramaditya.

- ♦ Palwal is located at 28.15°N 77.33°E. It has an average elevation of 195 metres (639 ft). Palwal has many temples, Schools, Colleges and banks. It also contains developed areas like Housing board colony, New colony, Main market, shivapuri, Krishna colony, camp colony, Huda sector 2, etc. Government is also putting more emphases toward the economy and development of Palwal as it is situated in mid, of developed cities like Delhi, Gurgaon, Noida, Faridabad, Khair, Mathura at and about an equiv-distance. It consist agriculture based areas as well as commercial areas.



- ♦ The city Palwal got its name from a demon, "Palwasur" who ruled this place during the reign of Pandavas. He was killed by Balarama, elder brother of Shri Krishna. In his memory, every year a festival is organised in palwal which is known as "Baldev Chhat Ka Mela". There is also a temple dedicated to Balaram near Municipal Office chowk. Railway Station of Palwal is the place from where Mahatma Gandhi ji were arrested first time. A historical building "Gandhi Ashram" was made in the memory of Mahatma Gandhi Syed Yusuf Ali Palwal was a noble and rich man from Palwal during the short ruling period of Muhammad Azam Shah and died along with Muhammad Azam Shah on 19 June 1707 at the battle of Jajwan.
- ♦ On 15 August, 1979, Gurgaon district was further divided to form a new Faridabad district, and Palwal became a part of it. Finally Palwal became the 21st district of Haryana on 15 August, 2008. According to the 2011 census Palwal district has a population of 10.40 lakh. This gives it a ranking of 43rd in India (out of a total of 640)[8] The district has a population density of 761 inhabitants per square kilometre (1,970/sq mi). Its population growth rate over the decade 2001-2011 was 25.49%. Palwal has a sex ratio of 879 females for every 1000 males and a literacy rate of 70.3%.
- ♦ District comprises 282 Villages, 237 Gram Panchayats, 1 Municipal Council, 2 Municipal Committee, 3 Sub Divisions, 4 Development Blocks and 3 Tehsils. Sub Division is under the control of sub Divisional Magistrate while each Dev. Block is under the control of Block Development and Panchayat Officer.

2.3 Forest Cover in Palwal District

- ♦ According to India State of Forest Report-2011, Palwal district has 4.32% area under forest cover against 3.64% of state average. Main plant species found and adopted under CAMPA programme in the district were Papri, Shisham, Jamun, Pilkhan, Silveroak, Chakresia, Alesonia, Kajalia, Lesistonia, Malsri, Neem, Pipal, Ber, Kikar, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- 43.40 RKM land was treated under CAMPA by adopting CAMPA-Urban Forestry (30 RKM) and Compensatory Afforestation (13.4 RKM) schemes of plantation during 2012-13. It was implemented in both ranges of the division namely Palwal and Hodal. Refer table-3.1 for detailed information.



Table 3.1 Area Covered/Treated Under CAMPA

Sl No	Range	Plantation/Project Site	Land Category	Scheme of Plantation	Area In RKM	Year of Plantation
1.	Palwal	Panchsrai Road, KM. 0-1, L&R	Road	CAMPA (Urban Forestry)-T.P.	15	2012-13
2	Palwal	Agwanpur Road, KM. 1-2, L&R	Road			
3	Palwal	Asawta Road, KM. 0-2, L&R	Road			
4	Palwal	Police Line, NH-2, KM. 65-66, R/s.	Road			
5	Hodal	Mini Sactrate, Hathin	Ground	CAMPA (Urban Forestry)-T.P.	0.52	
6	Hodal	Govt. School, Hathin	Ground	-do-	0.4	
7	Hodal	Bus Stand, Hathin	Ground	-do-	2	
8	Hodal	Hathin-Cehlab Road, KM. 1-3, L&R	Road	-do-	1.08	
9	Hodal	Hathin-Rindoka Road, KM. 1-2.5, L&R	Road	-do-	0.68	
10	Hodal	Hathin-Kondal Road, KM. 2-2.5, L&R	Road	-do-	0.94	
11	Hodal	Hathin-Lakhnaka Road, KM. 0-1, L&R	Road	-do-	0.32	
12	Hodal	Hathin-Ransika road, KM. 1-2.5, L&R	Road	-do-	0.796	
13	Hodal	Palwal-Hathin road, KM. 16-17, L&R	Road	-do-	0.7	
14	Hodal	Garhi Vinoda Approach road km. 0-1.5, L&R	Road	-do-	0.52	
15	Hodal	Mandi road, Hathin, KM. 0-0.5, L&R	Road	-do-	0.136	
16	Hodal	Uttawa Distributory RD. 68-70, L&R	Canal	-do-	0.908	
17	Hodal	S.T.P. Hodal	Ground	-do-	4.26	
18	Hodal	Govt. Hospital, Hodal	Ground	-do-	1.42	
19	Hodal	Water Supply Ground, Hodal	Ground	-do-	0.16	
20	Hodal	Animal Husbandry Hospital, Hodal	Ground	-do-	0.16	
21	Hodal	Rasulpur-Kusak-Hassanpur road, KM. 24-31, L&R	Road	C.A. T.P.	7	
22	Hodal	Hassanpur-Maholi road, KM. 1-5, L&R	Road	C.A. T.P.	6.4	
Sub Total					43.40	

3.2 Physical and Financial Target and Achievements

- Total expenditure of the entire project during 2012-13 was Rs. 14.66 lakh against the target of same amount. In the programme plantation work was carried out at 22 places in both the forest ranges namely Palwal and Hodal and covered 43.40 RKM land. Refer table 3.2 for detail information.



Table-3.2: Physical and Financial Target and Achievements (2012-13)

Sl. No.	Range	Plantation/Project Site	Physical (Area in RKM)		Financial (Rs. in lakh)	
			Target	Achievement	Target	Achievement
1.	Palwal	Panchwati Road, KM. 0-1, L&R	15	15	4.99	4.99
2.	Palwal	Agwarpur Road, KM. 1-2, L&R				
3.	Palwal	Asawa Road, KM. 0-2, L&R				
4.	Palwal	Police Line, NH-2, KM. 65-66, R/s.				
5.	Hodal	Mini Sctrate, Hathin	0.52	0.52	0.17	0.17
6.		Govt. School, Hathin	0.4	0.4	0.13	0.13
7.		Bus Stand, Hathin	2	2	0.66	0.66
8.		Hathin-Gehlab Road, KM. 1-3, L&R	1.08	1.08	0.35	0.35
9.		Hathin-Rindka Road, KM. 1-2.5, L&R	0.68	0.68	0.22	0.22
10.		Hathin-Kondal Road, KM. 2-2.5, L&R	0.94	0.94	0.31	0.31
11.		Hathin-Lakhnaka Road, KM. 0-1, L&R	0.32	0.32	0.11	0.11
12.		Hathin-Ransika road, KM. 1-2.5, L&R	0.796	0.796	0.26	0.26
13.		Palwal-Hathin road, KM. 16-17, L&R	0.7	0.7	0.23	0.23
14.		Garhi Vinoda Approach road km. 0-1.5, L&R	0.52	0.52	0.17	0.17
15.		Mandi road, Hathin, KM. 0-0.5, L&R	0.136	0.136	0.05	0.05
16.		Uttawa Disty. RD. 68-70, L&R	0.908	0.908	0.30	0.30
17.		S.T.P. Hodal	4.26	4.26	1.48	1.48
18.		Govt. Hospital, Hodal	1.42	1.42	0.47	0.47
19.		Water Supply Ground, Hodal	0.16	0.16	0.05	0.05
20.		Animal Husbandry Hospital, Hodal	0.16	0.16	0.05	0.05
21.		Rasulpur-Kusak-Hassanpur road, KM. 24-31, L&R	7	7	2.43	2.43
22.		Hassanpur-Maholi road, KM. 1-6, L&R	6.4	6.4	2.23	2.23
Sub Total			43.40	43.40	14.66	14.66

3.3 Inventory/ List of Plantation

- A total 0.108 lakh plant species of *Papri*, *Shisham*, *Jamun*, *Pilkhan*, *Silveroak*, *Chakresia*, *Alesteronia*, *Kajelia*, *Lesistonia*, *Molsri*, etc. were planted in the project at 22 places/ sites comprising, 43.40 RKM of land. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table-3.3: Inventory /List of Plantation

Table-3.3: Inventory /List of Plantation							
Sl. No	Range	Plantation/Project Site/Village Name	Scheme /Model	Area (RKM)	No. of plants	Name of Plant Species	Year of Plantation
1	Palwal	Panchwati Road, KM. 0-1, L&R	CAMPA	15	3750	Silveroak, Chakresia, Alesteronia	2012-13
2	Palwal	Agwarpur Road, KM. 1-2, L&R	CAMPA				
3	Palwal	Asawa Road, KM. 0-2, L&R	CAMPA				
4	Palwal	Police Line, NH-2, KM. 65-66, R/s.	CAMPA				
5	Hodal	Mini Sctrate, Hathin	CAMPA	0.52	130	Silveroak, Chakresia, Alesteronia	
6	Hodal	Govt. School, Hathin	CAMPA	0.4	100		
7	Hodal	Bus Stand, Hathin	CAMPA	2	500		
8	Hodal	Hathin-Gehlab Road, KM. 1-3, L&R	CAMPA	1.08	270		
9	Hodal	Hathin-Rindka Road, KM. 1-2.5, L&R	CAMPA	0.68	170	Kajelia	
10	Hodal	Hathin-Kondal Road, KM. 2-2.5, L&R	CAMPA	0.94	235		
11	Hodal	Hathin-Lakhnaka Road, KM. 0-1, L&R	CAMPA	0.32	80	Kajelia	
12	Hodal	Hathin-Ransika road, KM. 1-2.5, L&R	CAMPA	0.796	199	Kajelia	
13	Hodal	Palwal-Hathin road, KM. 16-17, L&R	CAMPA	0.7	175	Kajelia, Lesistonia	
14	Hodal	Garhi Vinoda Approach road km. 0-1.5, L&R	CAMPA	0.52	130	Kajelia, Lesistonia	
15	Hodal	Mandi road, Hathin, KM. 0-0.5, L&R	CAMPA	0.136	34	Lesistonia	
16	Hodal	Uttawa Disty. RD. 68-70, L&R	CAMPA	0.908	227	Kajelia, Lesistonia	
17	Hodal	S.T.P. Hodal	CAMPA	4.26	1065	Shisham, Oakresia	
18	Hodal	Govt. Hospital, Hodal	CAMPA	1.42	355	Chakresia, Silveroak, Molsri	
19	Hodal	Water Supply Ground, Hodal	CAMPA	0.16	40	Silveroak	
20	Hodal	Animal Husbandry Hospital, Hodal	CAMPA	0.16	40	Silveroak	
21	Hodal	Rasulpur-Kusak-Hassanpur road, KM. 24-31, L&R	CA	7	1750	Pilkhan, Papri, Jamun, Shisham	
22	Hodal	Hassanpur-Maholi road, KM. 1-6, L&R	CA	6.4	1600	Pilkhan, Papri, Jamun, Shisham	
Sub-Total				43.40	10850		

3.4 Analysis of Sample Plantation and Survival Assessment

- A sample of 74.65% (32,40 RKM) was drawn for field inspection of plantation area and other aspects of the project and to estimate survival percentage.
- Average survival percentage of seedlings estimated was 67%. The survival percentage was highest (70%) at Palwal-Hathin Road and it was only 65% at Hathin-Kondal Road under Hodal forest Range. Average height of plantation was 6 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.



Table 3.4: Analysis of Sample Plantation sites and Assessment of Survival

Sl No	Range	Plantation Site	Scheme	Area (ha)	No. of Plants	Plants Survived	Survival (%)	Year
1	Palwal	Panchwati road, Agarspur road, Asiwara road, Police Line, Govt. Girls College Palwal and Court Palwal City	Urban Forestry	15	3750	2550	68	2012-13
2	Hodal	Rasulpur Kusak-Hassanpur road	CA	7	1750	1155	66	
3	Hodal	Bui Stahd, Hathin	CA-Urban /TP	2	500	335	69	
4	Hodal	Hathin-Gehlay road	CA-Urban /TP	1.08	270	167	59	
5	Hodal	Hathin-Kondal road	CA-Urban /TP	0.94	235	153	65	
6	Hodal	Palwal-Hathin road	CA-Urban /TP	0.7	175	112	70	
7	Hodal	S.T.P., Hodal	CA-Urban /TP	4.26	1065	692	67	
8	Hodal	Govt. Hospital & Residence	CA-Urban /TP	1.42	355	245	69	
Total				32.4	8100	5409	67	

3.5 Registers/Records Maintained in the Project

- Two types of registers were maintained by project authority namely cashbook and work book. DFO was of the view that plantation journal would be prepared soon for all the plantation sites conducted under CAMPA programme during 2012-13.

3.6 Monitoring and Evaluation System in the Project

- Monitoring and Evaluation (M & E) system of CAMPA and other forestry programmes are conducted by a separate wing called M & E Wing. The last evaluation of state CAMPA Haryana of Palwal Forest Division was conducted in October 2014. The M & E wing consists of one Conservator of Forests (CF) and two Deputy Conservator of Forests (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- The project authority reported that an Independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.

3.8 Bank Account Details and Flow of Funds

- Bank account of CAMPA Programme of Palwal forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Palwal branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- ✦ Main factors in the selection of plant species were nature of topography, soil type, climate, rainfall, suitability of species in the area, economic value of plant species, preference shown by local community, etc. However, the project authority took final decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ✦ There was significant improvement in soil moisture conservation at all those places where plantation carried out under CAMPA programme. However, it was reported that due to limited provision of funds on this head of the programme did not provide much options for the project authority to carry forward additional work.

4.3 Assessment of Survival Percentage

- ✦ Average survival percentage of seedlings estimated was 67%. The survival percentage was highest (70%) at Palwal-Hathin Road and it was only 65% at Hathin-Kondal Road under Hodal forest Range. Average height of plantation was 5 feet. Growth and health of plantation was good. 0.25 ha (50meterx50meter) sample plot was adopted at random location along row counting of plantation to estimate survival percentage. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ✦ There was little natural regeneration of plant species in the plantation area as observed during field inspection. In most part of urban and suburban zone natural regeneration was negligible while on block forestland in rural areas there were some glimpses of it due to presence of other species in and around the new plantation.

4.5 Quality of Work Observed During Field Visit

- ✦ Overall quality of work especially plantation and creation of assets in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ✦ Factors that impacted growth and survival of plantation were grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction caused by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc.

4.7 Protection and Maintenance of Plantation and Project Assets

- There was barbed wire and bush fencing at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ iron/wood gabions were also adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be provision of better care of plantation through elaborate fencing and protection as observed. The process of awareness raising and motivation of local community should be a regular phenomenon in the project.

4.8 Motivation and Technical Competence of Personnel Involved In the Project

- All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) In the Project

- The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

Chapter-5

The Constraints and Limitations of Project

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff

- ✦ During 2012-13 of CAMPA programme implementation there was shortage of frontline staff like foresters and forest guards in the division. It impacted the programme adversely. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and this problem was solved.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force

- ✦ Due to high rate of urbanization and industrialization in the project area as it comes under NCR region. There was high demand of labour force and hence the forest department had to face shortage during peak plantation season.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

Chapter-6

Suggestions and Recommendations

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Viable Measures to Control Grazing by Domestic Animals

- ✦ As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- ✦ The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gabions of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- ✦ All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- ✦ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- ✦ Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Make Four Years of Protection and Maintenance Funding

- ✦ There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- ✦ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF

and two DFOs. Its head office is located at Kamal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Introduce Practice and Concept of Earning Carbon Credits

- The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.11 Interview with Project Authority

- During pre and post field inspection and evaluation of the programme the members of evaluation team interacted interviewed DFO Palwal (Mr. Sunder Sambharya, Mob: +919416776910, Office: +911275248978) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- During the interaction the project authority showed satisfaction on overall outcome of the programme conducted during 2012-13. However, they had to face a number of challenges in protection and maintenance of plantation due to natural and high biotic pressure. Most of the households keep animals and they leave for grazing in open areas. Most part of the division had poor soil locally called kalar/alkaline. Important plant species adopted in the CAMPA were *Papri*, *Shisham*, *Jamun*, *Pilkhari*, *Silveroak*, *Chakresia*, *Alesteria*, *Kajelia*, *Lasistonia*, *Molai*, etc.

6.12 Evaluator's Assessment

- After field inspection and interaction with DFO and other stakeholders of the programme and verification of official records, it was concluded that above statements made by the project authority was true to a great extent. The project authority followed the stated guidelines of programme to a great extent. Modern tools of mass media should be adopted for awareness campaigns. Internal monitoring and evaluation of the programme should be streamlined and carried out effectively on regular basis.

Photographs of Plantation Area: Palwal Forest Division (2012-13)

- Palwal Range: 4 sites (18 RKM)
- Hodal Range: 16 sites (28.4 RKM)

- Main Species: *Popul*, *Shisham*, *Jamun*, *Pithecha*, *Silveroak*, *Chakrasia*, *Alstonia*, *Kajalia*, *Leastonia*, *Mohri*, etc.



Final A.P.O. State CAMPA Scheme of Palwal Forest Division in Palwal District of Haryana (2012-13)

Sl. No	Type of Land (Forest/Non-forest)	Name of Scheme/Component	Name of Range/	Name of Site	Khasra No. KMRD	Plantation Month	Target Achieved		Spacing (m)	Name Of Species	No. of Plants	GPS Coordinates	
							Ha	PKM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Road	CAMPA (Urban Forestry)-T.P.	Palwal	Panchsheel Road, Km. 0-1, L&R	NA	July		15	4x4	Silveroak, Chakresla, Alesteria	15	NA	NA
2.	Road		Palwal	Awarapur Road, Km. 1-2, L&R	NA	July			4x4			NA	NA
3.	Road		Palwal	Adarsh Road, Km. 0-2, L&R	NA	July			4x4			NA	NA
4.	Road		Palwal	Police Line, NH-2, Km. 65-66, R/S	NA	July			4x4			NA	NA
5.	Ground	CAMPA (Urban For)-T.P.	Hodal	Mini Sectors, Hathin	NA	July		0.52	4x4	Silveroak, Chakresla, Alesteria	130	NA	NA
6.	Ground	-do-	Hodal	Govt. School, Hathin	NA	July		0.4	4x4		100	NA	NA
7.	Ground	-do-	Hodal	Bus Stand, Hathin	NA	July		2	4x4		500	NA	NA
8.	Road	-do-	Hodal	Hathin-Gehlab Road, Km. 1-3, L&R	NA	July		1.08	4x4		270	NA	NA
9.	Road	-do-	Hodal	Hathin-Rindka Road, Km. 1-2.5, L&R	NA	July		0.68	4x4		170	NA	NA
10.	Road	-do-	Hodal	Hathin-Kandali Road, Km. 2-2.5, L&R	NA	July		0.94	4x4		235	NA	NA
11.	Road	-do-	Hodal	Hathin-Lakhwala Road, Km. 0-1, L&R	NA	July		0.32	4x4	Kajalia	80	NA	NA
12.	Road	-do-	Hodal	Hathin-Ramraka road, Km. 1-2.5, L&R	NA	July		0.795	4x4	Kajalia	199	NA	NA
13.	Road	-do-	Hodal	Palwal-Hathin road, Km. 16-17, L&R	NA	July		0.7	4x4	Kajalia, Lesiaonia	175	NA	NA
14.	Road	-do-	Hodal	Gaehi Vinoda Approach road km. 0-1.5, L&R	NA	July		0.52	4x4	Kajalia, Lesiaonia	130	NA	NA
15.	Road	-do-	Hodal	Mundi road, Hathin, Km. 0-0.5, L&R	NA	July		0.136	4x4	Lesiaonia	34	NA	NA
16.	Canal	-do-	Hodal	Uttarwar Disty. Rd. 68-70, L&R	NA	July		0.908	4x4	Kajalia, Lesiaonia	227	NA	NA
17.	Ground	-do-	Hodal	S.T.P. Hodal	NA	July		4.26	4x4	Shisham, Chakresla	1065	NA	NA
18.	Ground	-do-	Hodal	Govt. Hospital, Hodal	NA	July		1.42	4x4	Chakresla, Silveroak, Molai	355	NA	NA
19.	Ground	-do-	Hodal	Water Supply Ground, Hodal	NA	July		0.16	4x4	Silveroak	40	NA	NA
20.	Ground	-do-	Hodal	Animal Husbandry Hospital, Hodal	NA	July		0.16	4x4	Silveroak	40	NA	NA
21.	Road	C.A. T.P.	Hodal	Rasulpur-Kusali-Husainpur road, Km. 24-31, L&R	NA	July		7	4x4	Pilkhun, Peppi, Jamun, Shisham	1750	NA	NA
22.	Road	C.A. T.P.	Hodal	Husainpur-Jaholi road, Km. 1-6, L&R	NA	July		6.4	4x4	Pilkhun, Peppi, Jamun, Shisham	1600	NA	NA
Total		-	-	-	-	-	-	43.40	-	-	10850	-	-

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Ministry of Environment & Forests (MOEF)
Government of India, New Delhi



MONITORING AND EVALUATION OF STATE CAMPA HARYANA BEING IMPLEMENTED
BY REWARI FOREST DIVISION IN REWARI DISTRICT OF HARYANA

Duration of Evaluation: 2012-13

Final Report

Submitted to

OFFICE OF PRINCIPAL CHIEF CONSERVATOR OF FORESTS, HARYANA
VAN BHAWAN, C-18, SECTOR-6, PANCHKULA, HARYANA

April, 2015

Conducted by

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**Compensatory Afforestation Fund Management and
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Acknowledgement

The project titled "Monitoring and Evaluation of State CAMPA, Haryana being Implemented by Rewari Forest Division in Rewari District of Haryana (2012-13)" was successfully completed. However, it would not have been possible without the kind support of many individuals and organizations working and associated with Locus Research & Consultants Pvt. Ltd. I would like to extend my sincere thanks to all of them.

First of all, I would like to express my sincere gratitude to PCCF, Haryana, Mr. C.R. Jotriwal and other officials at PCCF office especially DCF, Mr. Garg, Mr. Hembram and office staff Mr. D.P. Tyagi for reposing faith and awarding the honorable task of Monitoring & Evaluation of State CAMPA Haryana to Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency.

I also express my thanks to DFO, ~~Rewari~~ Forest Division, Mr. R. Anand, RFOs of the concerned ranges and other forest staffs. My interaction with them helped in understanding different aspects of CAMPA implementation and its progress during 2012-13.

I take pride in acknowledging wonderful contribution of the resource persons working with Locus Research & Consultants Pvt. Ltd. I am highly indebted to Mr. BKP Sinha (IFS ret'd.), PCCF, UP for his guidance and constant support whenever I approach him. His crucial inputs from time to time helped me in finalization and fine tuning evaluation reports.

Last, but not least, I would like to express my gratitude to Dr. Lakshman P. Semwal, Ajay Rout, Prashant Kumar, Gaurav Kumar and Mr. Kaushal Kishor Singh for assisting me during field visit and collection of primary and secondary data, conducting interviews, data tabulation, drawing of diagrams and graphs, etc.



Dinesh K. Singh

Director
Locus Research & Consultants Pvt. Ltd.
New Delhi, April, 2015

Preface

(Rewari Forest Division-2012-13)

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the following mandates, i.e. a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State

State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchkula.

The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.

Locus Research & Consultants Pvt. Ltd., a Delhi based professional agency was assigned the task of Monitoring & Evaluation State CAMPA Haryana of Rewari Forest Division by PCCF office on professional terms and condition. Locus is registered under Companies Act of 1956. Since its inception on January 4, 2000, it has been empanelled with NAEB/MOEF, GOI, New Delhi to conduct evaluation and monitoring of forestry programmes. Locus has a multi-disciplinary team of research professionals and subject experts with many years of experience.

During 2012-13, Rewari Forest Division treated 127.268 RKM land under CAMPA by adopting CA (37.268 RKM) and NPV (50 RKM) schemes of plantation. Total expenditure incurred in the above activities was Rs. 46.65 lakh. 0.32 lakh plant species of *Aleostona*, *Arjun*, *Chokraisa*, *D. Papri*, *Jamun*, *Leaua*, *Neem*, *P. Papri*, *Pilpai*, *Shisham*, *Siras*, *Ved/Bergad*, etc. were planted at 47 different sites.

Average survival percentage of plants estimated was 69%. It was highest (74%) at Govt. Sr. Sec. School of Bawal range and it was only 69% at Govt. High School, Kathuwas of Bawal range. Average height of plantation was 6 feet. Growth and health of plantation was good. Average grading awarded to the programme was 5.6 (on 1 to 10 scale), which was very good.

Members of evaluation team interacted with forest staff, other stakeholders and local community during field inspection. Local people were happy with the efforts made by forest department at most places. Plantation journal was missing but other records were found in good condition. Selection of species was made in accordance with local factors and needs of the community. Flow of funds was smooth. There was lack of awareness among the local people. Overall outcome of the programme was satisfactory as observed during field inspection.

Some important suggestions and recommendations have been made in this report and I hope that they would receive due consideration in future endeavours of the project implementation.

New Delhi

April, 2015


Dinesh K. Singh

Director

Locus Research & Consultants Pvt. Ltd.

ACRONYMS

ACF	Assistant Conservator of Forests
Affo	Afforestation
APCCF	Additional Principal Chief Conservation of Forests
APOs	Annual Plan of Operations
AR	Artificial Regeneration
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CCF	Chief Conservator of Forests
CEC	Central Empowered Committee
CF	Conservator of Forests
CN	Compartment Number
CPT	Continuous Protection Trench
DCF	Deputy Conservator of Forests
DFO	Divisional Forest Officer
DG-Forests	Director General Forest
DWLD	Divisional Wild Life Officer
ENF	Establishment of Natural Forest
EPA	Entry Point Activity
FDA	Forest Development Agency
FGD	Focus Group Discussion
FTC	Forest and Tree Cover
GOI	Government of India
GPS	Global Positioning System
Ha	Hectare
JFMC	Joint Forest Management Committee
M & E	Monitoring & Evaluation
MFP	Minor Forest Produce
MOEF	Ministry of Environment & Forests
NAEB	National Afforestation & Eco-Development Board
NAP	National Afforestation Programme
NGO	Non-Government Organization
NPV	Net Present Value
NTPP	Non-Timber Forest Produce
OBC	Other Backward Castes
PCCF	Principal Chief Conservator of Forests
PF	Protected Forest
PRA	Participatory Rural Appraisal
RDF	Rehabilitation of Degraded Forest
RED	Research and Evaluation Division
RF	Reserved Forest
RFO	Range Forest Officer
RKM	Row Kilometer
RO	Range Officer
SC	Scheduled Castes
SF	Social Forestry
SNC	Soil & Moisture Conservation
ST	Scheduled Tribes
TOR	Terms of Reference
UF	Un-class Forest
VFC	Village Forest Committee

Local Name and Botanical Name of Plant Species

SL. No.	Common Name	Botanical Name
1.	Alestonia	Indian Mallow/ Devil Tree
2.	Ber	Ziziphus mauritiana
3.	Chakraisa	Chukrasia tabulari
4.	Jamun	Terminalia arjuna
5.	Lesua	Cordia Bixa
6.	Neem	Azadirachta indica
7.	Papri	Holoptelea integrifolia
8.	Pipal	Ficus religiosa
9.	Shisham	Dalbergia sissoo
10.	Siras	Albizia lebbek
11.	Vad/Bargad	Ficus benghalensis

GRADING AND EXECUTIVE SUMMARY

Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Haryana-2012-13

Rewari Forest Division, Rewari District, Haryana

Average Grading on a Scale of 1 to 10

Item/Aspect	Project Components	Value
Quantitative Aspects	Physical	9
	Financial	8
Qualitative Aspects	Survival	6
	Health of Plantation	6
	Maintenance	6
	Sustainability	6
JFM/Social Aspects	Degree of Peoples' Participation	6
	Satisfaction over Perceived Benefits by the Local Population	6
Overall Grading (Very Good)		6.6

Executive Summary**1.0 Introduction**

- Monitoring and evaluation of CAMPA programme of Rewari Forest Division in Rewari district was conducted in the month of April 24-28, 2015 by Locus Research & Consultants Pvt. Ltd., a Delhi based agency. 127.68 RKM land was treated by adopting CA (77.268 RKM) and NPV (50 RKM) schemes of plantation during 2012-13. A sample of 54.65% (69.028 RKM) was drawn for field inspection of plantation area and other assets and to estimate survival percentage.

2.0 Campa: An Overview

- CAMPA meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. On 10th July 2009, Supreme Court issued orders that there would be a CAMPA as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- State CAMPA, Haryana was established on March 3, 2010 for the purpose of management of funds. It will be registered as a Society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests, Van Bhawan, Sector-6, Panchsala.

3.0 Objectives Of The CAMPA

- Important objectives of CAMPA are as follows:
 - Conservation, protection, regeneration and management of existing forests;
 - Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - Compensatory afforestation;
 - Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - Research, training and capacity building.

4.0 Geographic Location / Area of Monitoring & Evaluation

- The study covered the entire Rewari Forest Division in Rewari district of Haryana.

5.0 Reference Period

- ♦ The reference period of monitoring & evaluation of CAMPA is one year, i.e. 2012-13.

6.0 Need of the Study

- ♦ Monitoring & evaluation of CAMPA assesses the process of programme implementation, its progress, impact, and deviation, if any in as per stated guidelines, etc.

7.0 Objectives of the Study

- ♦ Main objectives of the monitoring & evaluation are as follows:
 - To assess physical and financial targets and achievements
 - To evaluate performance of the programme
 - To estimate of survival percentage of plant species adopted in the project.
 - To analyze factors impacting survival of plantation and suggest remedial measures.
 - To assess peoples' participation and assets created
 - To assess the direct and indirect benefits and impact of the programme.
 - To provide recommendations for improvement in future implementation and management.

8.0 Methodology and sample Selection

- ♦ Simple random, systematic, stratified and purposive sampling techniques were adopted for field inspection of the programme and to interview forest project authority and other stakeholders. 54.65% (69,028 RKM) area was sampled to assess the programme and estimate survival percentage. A sample plot of 0.25 ha (50meterx50meter) was adopted on block forest area to count saplings at random location to estimate survival percentage. On row /linear plantation, counting of plants in row was adopted.

9.0 Profile of the Study Area

- ♦ Haryana was created on November 1, 1966 with seven districts. Subsequently 14 other districts were included through restructuring the previous ones. Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. In terms of land use pattern about 3.64% (1395 sq km) area goes to forestland while tree cover in the state is 3.16% (1395 sq km). Thus forest and tree cover together covers 6.80% of the state.
- ♦ Rewari district is located in southern part of Haryana. It is 80 km away from New Delhi. It was accorded the status of a district by the government of Haryana on November 1, 1989. Rewari district has 3.04% area under forest cover against 3.64% of state average.

10.0 Main Findings of the study

10.1 Quantitative Analysis and Findings

- ♦ 127,268 RKM land was treated under CAMPA at 47 places/sites by adopting CA (77,268 RKM) and NPV (50 RKM) schemes of plantation during 2012-13.
- ♦ Total expenditure during 2012-13 was Rs. 46.65 lakh against the target of same amount.
- ♦ 0.32 lakh plant species of Alustona, Arjun, B. Papri, Chokralisa, D. Papri, Jamun, Lesua, Neem, P. Papri, Pipal, Shisham, Siras, Vad/Bargad, etc. were planted in the project at 47 different sites.
- ♦ Average survival percentage of seedlings estimated was 69%. The highest survival percentage was 74% at Govt. Sr. Sec. School of Bawal range and it was 69% at Govt. High School, Kathuwas of Bawal range. Average height of plantation was 6 feet. Growth and health of plantation was good.

- ◆ Cashbook and work registers were maintained in the project. Plantation journal was missing. DFO assured to prepare plantation journal of CAMPA plantation soon.
- ◆ Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate M & E Wing. It is conducted once or twice a year as reported by the project authority. The last evaluation of state CAMPA Haryana at Rewari forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.
- ◆ An Independent agency called **Agricultural Finance Corporation Ltd.** of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.
- ◆ Bank account of CAMPA Programme of Rewari forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Rewari branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

10.2 Qualitative Analysis and Findings

- ◆ Factors impacting choice of species were topography, soil type, climate, rainfall, suitability in the area, economic value, preference by locals, etc. Project authority called the final shot in this regard.
- ◆ Improvement in soil moisture conservation was observed at most plantation sites of CAMPA.
- ◆ Limited natural regeneration of plant species in the plantation area was found. In urban and suburban zone it was negligible while on block forestland there were some glimpses of it.
- ◆ Quality of Work in the programme was found in good shape at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.
- ◆ Open and rash grazing by loose domestic animals, wild animals like, rabbits, blue bull and porcupine, destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. impacted Growth and Survival of Plantation
- ◆ Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. Barbed wire and bush fencing were found at most plantation sites under protection of plantation. In urban areas brick/iron/wood gablons were also adopted along with barbed.
- ◆ Motivation and Technical Competence of Personnel Involved in the Project was found satisfactory. Range Forest Officers (RFO), foresters and forest guards were trained to tackle necessary work. Temporary/daily wages workers, cattle watchers, etc. were lacking these skills to deal with new challenges of the programme.
- ◆ Role of Local People in Project Work was far from satisfactory. There was low participation of local community in the programme. Modern tools of mass media should be adopted for awareness and motivation of community.
- ◆ CAMPA accrued both direct and indirect benefits in the project area. Additional geographical area came under forest cover. It helped in improving quality of ecology and environment as well as micro-climate of the area.
- ◆ Formation of SHG in the Project was optional for the project authority to provide additional benefits of community in the project area. There was no attempt at this front from the project authority.

11.0 Constraints and Limitations of the Project

- ❖ Grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation.
- ❖ There was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation, which impacted the programme adversely.
- ❖ Wage rate in forest department (@Rs.213 per day) was low as compared to local industrial establishments and urban areas (@Rs.400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season.
- ❖ Shortage of Labour Force was reported due to high rate of urbanization and industrialization in some part of the project area and in NCR region.
- ❖ Inadequate Infrastructure at range level offices impacted performance and quality of work as reported by some officials.
- ❖ Biotic and natural factors like wild animals like, rabbits, blue bulls and porcupines, terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. Impacted growth and survival of plantation.

12.0 SUGGESTIONS AND RECOMMENDATIONS

- ❖ Measures should be taken to check grazing in the area. Stall feeding of domestic animals should be promoted among local community through regular awareness and motivation.
- ❖ Project authority should make adequate provision of protection and maintenance of plantation by through multi-pronged strategy. Gabions of iron, brick, wood, etc. should be used in urban and suburban areas and barbed wire fencing in forest region and rural areas.
- ❖ Vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. However, currently there was no shortage of such staff.
- ❖ There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage of plantation, theft to forest wealth, etc.
- ❖ Workshops and capacity building programmes should be organized by involving field level forest staffs, local community to learn new ideas and better knowledge.
- ❖ Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes. It should be carried out regularly.
- ❖ There should be adoption of mass media tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, slogan shouting, rallies, etc. for better impact among local community.
- ❖ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge.
- ❖ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes.

Chapter-1

Project Concept, Strategy, Objective and Methodology

1.1 CAMPA : An Overview

- ◆ Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is meant to promote afforestation and regeneration activities as a way of compensating forestland diverted to non-forest uses. National CAMPA Advisory Council was established as per orders of The Honorable Supreme Court with the mandates, i.e.: a) lay down broad guidelines for State CAMPA, b) facilitate scientific, technological and other assistance that may be required by State CAMPA, c) make recommendations to State CAMPA based on a review of their plans and programmes and d) provide a mechanism to State CAMPA to resolve issues of an inter-state or Centre-State character.
- ◆ About 23% geographical area of India is under forest cover with a number of diverse forest types and reserved areas designated as National Parks and Wildlife Sanctuaries. Forests meet the livelihood needs of people living in and adjoining area in about 1.73 lakh villages. Forests also act as carbon sinks and regulators of water regime. Many development and industrial projects such as erection of dams, mining, and construction of industries or roads require diversion of forestland. Any project proponent, government or private must apply for forest clearance from Ministry of Environment & Forests (MoEF), before the diversion of land takes place. This proposal is to be submitted through the concerned forest department of the state government. If clearance is given, then compensation for the lost forestland is also to be decided by the ministry and the regulators. Due to certain discrepancies in the implementation of compensatory afforestation, some NGOs approached The Hon'ble Supreme Court for relief. On 10th July 2009, Supreme Court issued orders that there would be a Compensatory Afforestation Fund Management and Planning Authority (CAMPA) as National Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- ◆ The Supreme Court passed an order on the CAMPA issue in response to an affidavit filed by the Ministry of Environment & Forests, along with a report by the Ad-Hoc CAMPA Committee and endorsed by the Central Empowered Committee (CEC). These orders finally resolved a crucial matter that had lay frozen for almost 7 years. Since October 2002, about Rs. 9,900 crore of principal amount and Rs.1,300 crore of interest amount has accumulated under the CAMPA account. This is money lying in banks and to be used for compensatory afforestation and other related ecological security enhancing purposes. MoEF, CEC, the Attorney General and the Amicus Curiae of the Supreme Court have been engaged in discussions to break the 7-year deadlock over utilization of CAMPA funds. The July 10th 2009 Supreme Court order directs the following:
 - ◆ That the State CAMPA guidelines prepared by the MoEF for utilizing CAMPA funds should be notified and implemented. These guidelines envisaged the following:
 - i. A state-level CAMPA Governing Body under the chairmanship of the CM;
 - ii. A state-level CAMPA Steering Committee under the chairmanship of Chief Secretary; and
 - iii. A state-level CAMPA Executive Committee under the chairmanship of the Principal Chief Conservator of Forests.
 - ◆ There will be a National CAMPA Advisory Council under the chairmanship of the Union Minister of Environment & Forests for monitoring, technical assistance and evaluation.
 - ◆ That as an interim arrangement to get CAMPA going, 10% of the accumulated principal amount will be released per year (for the next five years) by the Ad-Hoc CAMPA Authority

set up by the Supreme Court Order of May 2006 under the chairmanship of DG-Forests to State CAMPAs. This money will be used for projects identified by the State CAMPA that form part of the state forest department's Annual Plan of Operations (APOs). The State CAMPA guidelines approved by the Supreme Court seek to promote the following:

- i. Conservation, protection, regeneration and management of existing forests;
 - ii. Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - iii. Compensatory afforestation;
 - iv. Environmental services including provision of goods such as non-timber forest products, fuel, fodder and water; and
 - v. Research, training and capacity building.
- ♦ The Ad-Hoc CAMPA, as the name suggests, is a purely temporary arrangement. It will liquidate itself once all systems in states are in place and CAMPA has become fully functional in the framework contained in the Supreme Court Orders of July 10th 2009.
 - ♦ The CEC has already approached the Supreme Court for liquidating the Ad-Hoc CAMPA. The Supreme Court has ordered that the CEC submit progress reports once every six months. It is reasonable to assume that with the Centre and states working together cohesively to implement the Supreme Court orders of July 10th 2009, the Ad-Hoc CAMPA will wind up within the next six to twelve months and State CAMPAs will take over completely.

1.2 Establishment of State CAMPA

- ♦ The details of establishment of State CAMPA are as follows :
- a) The state government may establish the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State. The funds/monies received from various sources would be credited into the account of State CAMPA. It is as follows:
 - ♦ The amount would be transferred to it by the ad-hoc CAMPA.
 - ♦ Receipt of all monies from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV), Catchment Area Treatment Plan or any money for compliance of conditions stipulated by the Central Government while according approval under the provisions of the Forest (Conservation) Act, 1980;
 - ♦ The unspent funds already realized by States from user agencies and not transferred yet to the Adhoc Compensatory Afforestation Fund Management and Planning Authority for crediting into the Fund by respective States;
 - ♦ The funds recoverable from user agencies in cases where forest land diverted falls within the protected areas, that is, areas notified under sections 18, 26A or 35 of the Wildlife (Protection) Act, 1972 for undertaking activities relating to the protection of biodiversity and wildlife, which would be maintained under a separate head; and
 - ♦ Net Present Value of the forest land diverted for non-forestry purposes, collected under the Forest (Conservation) Act, 1980 and the rules and the guidelines made there under and in pursuance of the judgment of the Supreme Court dated the 29th October 2002 from user agencies.
- b) The state government may also credit to the State CAMPA
 - ♦ Grants or aid received if any;
 - ♦ Any loan taken by the Authority or any borrowings made by it; and
 - ♦ Any other sums received by the Authority by way of benefaction, gift or donations.

- c) The monies received in the State CAMPA shall be kept in interest-bearing account(s) in nationalized bank(s) and periodically withdrawn for the works as per the Annual Plan of Operations (APOs) approved by the Steering Committee.

1.3 State CAMPA, Haryana

- ♦ On March 3, 2010, Government of Haryana constituted the State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA), Haryana for the purpose of management of funds. It was registered as a society by the State Government under the Societies Registration Act, 1860 having its registered office at the office of Principal Chief Conservator of Forests (PCCF), Van Bhawan, Sector-6, Panchkula, Haryana.
- ♦ State CAMPA, Haryana will have three bodies, namely a) Governing Body, b) Steering Committee and c) Executive Committee. Chief Minister, Haryana will be the Chairperson of the Governing Body of the State CAMPA, Haryana and Minister of Forests, Minister of Finance, Chief Secretary, Principal Secretary (Finance), Principal Chief Conservator of Forests and Chief Wildlife Warden will be its Members. Principal Secretary, Forests will be Member Secretary of the Governing Body. Chief Secretary, Haryana will be the Chairperson of the Steering Committee and Principal Secretary (Finance), Principal Secretary (Forests), Chief Wildlife Warden, Conservator of Forests (FC) and Nodal Officer (FCA), Haryana, representative of Ministry of Environment and Forests, Government of India, two eminent NGOs nominated by the State Government for a period of two years will be its Members. Principal Chief Conservator of Forests will be its Member Secretary.
- ♦ Principal Chief Conservator of Forests (PCCF), Haryana will be the Chairperson of the Executive Committee and Additional PCCF (Forestry), Chief Wildlife Warden, Chief Conservator of Forests (Protection-I), Chief Conservator of Forests (Protection-II), Conservator of Forests (Planning), representative of Finance Department not below the rank of Additional Secretary and two eminent NGOs nominated by the state government for a period of two years will be its members. Conservator of Forests (FC) and Nodal Officer (FCA) will be its Member Secretary.
- ♦ State CAMPA, Haryana will work as an instrument to accelerate activities relating to conservation of forests and wildlife, development of infrastructure in these sectors and other allied works. It will promote conservation, protection, regeneration and management of forests; conservation, protection and management of wildlife and its habitat within and outside Protected Areas including the consolidation of Protected Areas; Compensatory Afforestation, Acquisition of suitable non-forest lands for afforestation/regeneration to compensate the net loss in forest area, environmental services, plantation activities outside the forests including agro-forestry and farm-forestry to enhance the green cover of the State and forestry research, training and capacity building of forest officials including other stakeholders involved in the protection of forests and wildlife.
- ♦ "State CAMPA is intended to accelerate activities for preservation of natural forests, management of wildlife, infrastructure development in the sector and other allied works. Important mechanisms of CAMPA are as follows:
 - ♦ The State CAMPA would presently receive monies collected from user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, Net Present Value (NPV) and all other amounts recovered from such agencies under the Forest (Conservation) Act, 1980 and presently lying with the Adhoc CAMPA.
 - ♦ The State CAMPA would administer the amount received from the Adhoc CAMPA and utilize the monies collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructure development, wildlife

conservation and protection and other related activities and for matters connected therewith or incidental thereto.

- ♦ State CAMPA would serve as a common repository of funds accruing on account of compensatory afforestation and NPV. It would deploy funds as per guidelines governing the use of funds for conservation, protection and management of forests. The amounts would also be deployed for wildlife preservation and enhancement of wildlife habitats.
- ♦ State CAMPA would provide an integrated framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife. Its prime task would be regenerating natural forests and building up the institution engaged in this work in the State Forest Department including training of the forest officials of various levels with an emphasis on training of the staff at cutting edge level (forest range level). The amount received by it will also be utilized for providing residential accommodation to the field staff and necessary machines and equipments to them. These include appropriate arrangement for their conveyance during inspections and protection duty. In short, the department would be modernized to protect and regenerate the forests and wildlife habitat.
- ♦ The State CAMPA may decide to utilize a minor part of its funds for contractual engagement of personnel wherever there is shortage of personnel. This should be done cautiously to avoid recurring revenue expenditure on the State Government. It may also take up State-specific activity relevant to the State, in keeping with the core objectives.
- ♦ The State CAMPA would also promote a voluntary movement of youth and students for supporting conservation activities initiated/ongoing in the State Forest Department.

1.4 Objectives of the Programme/CAMPA

- ♦ Important objectives of CAMPA are as follows:
 - ♦ Conservation, protection, regeneration and management of existing natural forests;
 - ♦ Conservation, protection and management of wildlife and its habitat within and outside protected areas including the consolidation of the protected areas;
 - ♦ Compensatory Afforestation
 - ♦ Environmental services, which include:-
 - ♦ Provision of goods such as wood, non-timber forest products, fuel, fodder and water, and provision of services such as grazing, tourism, wildlife protection and life support;
 - ♦ Regulating services such as climate regulation, disease control, flood moderation, detoxification, carbon sequestration and health of soils, air and water regimes;
 - ♦ Non-material benefits obtained from ecosystems, spiritual, recreational, aesthetic, inspirational, educational and symbolic; and
 - ♦ Supporting such other services necessary for the production of ecosystem services, biodiversity, nutrient cycling and primary production.
 - ♦ Science, Research, Training and Capacity Building.
 - ♦ Environment Protection and Sustainable Forest Management.

1.5 Geographic Location of Monitoring & Evaluation

- ♦ The study area covers the entire Rewari Forest Division in Rewari district of Haryana.

1.6 Reference Period of Monitoring & Evaluation

- ♦ Reference period of monitoring & evaluation is one year, i.e. 2012-13.

1.7 Components of the Project

- ◆ Main components of CAMPA are as follows:
 - ◆ People's Participation
 - ◆ Afforestation work through Compensatory Afforestation (CA) and Net Present value (NPV)
 - ◆ Monitoring and Evaluation of the programme
 - ◆ Conservation and protection of forests, infrastructure development, wildlife conservation and protection, etc.
 - ◆ Extension and awareness
 - ◆ Monitoring of the programme, etc

1.8 Project Implementing Agency and Proposed Activities of the Programme

- ◆ A brief outline of the project agency and programme implementation is given below in table-1.2

Table 1.2: Implementing Agency and Proposed Activities of the Programme

Project Implementing Agency	
◆ District	: Rewari
◆ Forest Division	: Rewari
◆ Forest Circle	: Gurgaon Circle, Gurgaon
◆ State	: Haryana
Project Location	
◆ Watersheds/Sub-watersheds	: NA
◆ Development Blocks	: NA
◆ Forest Ranges (3)	: 1.Rewari, 2. Bawal and 3. Nahar. CAMPA work conducted in all of them.
◆ Project Sites/Locations	: 47 (Forty Seven)
Assets/ Infrastructure Development Activities, if any	
◆ NA	
Preparation of Plantation Journal and Record Upkeep	
◆ There was not any separate register or Plantation journals for plantation site. However, the project authority maintained cash book, which had the details of plantation and other assets of the programme. During interaction with project authority, the evaluator discussed the importance and benefits of plantation journals.	
Project Duration, Area and Cost	
◆ Project Duration	: 2012-13
◆ Project Area (78.8 RKM)	: Target: 127.268 RKM (CA-77.268 RKM and NPV-50 RKM Schemes). It was achieved cent per cent.
◆ Project Cost	: Target: Rs.46.65 lakh and achievement: Rs. 46.65 lakh
Proposed Strategies and Salient Features of the Project	
◆ There is no provision of VFC in CAMPA	
◆ Plantation was carried out under NPV and CA schemes/components	

1.9 Need of the Study

- ◆ Monitoring & evaluation of CAMPA assesses the process of programme implementation and its progress, impact, deviation, if any from the stated guidelines.

1.10 Scope of the Study

- ◆ Scope of study is confined to Rewari Forest Division in Rewari district of Haryana.

1.11 Objectives of Monitoring & Evaluation

- ❖ Main objectives of the monitoring & evaluation are as follows:
 - ◆ To assess physical and financial targets and achievements
 - ◆ To evaluate performance of the programme
 - ◆ To estimate of survival percentage of plant species adopted in the project
 - ◆ To analyze factors impacting plantation survival and suggest remedial measures.
 - ◆ To assess peoples' participation and assets created
 - ◆ To assess the direct and indirect benefits and impact of the programme.
 - ◆ To provide recommendations for improvement in future implementation and management.

1.12 Research Methodology and Sampling Procedure of the Study

- ◆ Research methodology forms both desk review and field Studies. Both quantitative and qualitative data would be gathered from primary and secondary sources.
- ◆ A combination of simple random, systematic, stratified and purposive sampling techniques were adopted wherever required in the selection of plantation sites, villages, forest officials and community leader for conducting interviews, etc.
- ◆ Sample Selection, Size and its Distribution: A sample of 54.24% (69.028 RKM) was drawn from 12 sites for field inspection of plantation and to estimate survival percentage of plantation. It was drawn from all the three ranges of the division and two plantation schemes (CA and NPV).
- ◆ To estimate survival rate of plantation a sample unit/plot/grid of 0.25 ha (50m×50m) was adopted for counting the plantation at random locations along with row counting keeping view of various factors. Field experience of evaluator, and discussion with stakeholders helped in this regard.

1.13 Chapter-wise organization of Report

- ❖ The report is divided into six chapters. It is as follows:
 - ◆ Chapter-1 introduces the Project Concept, Strategy Objectives and Methodology.
 - ◆ Chapter-2 gives the Profile of the Project Area and its Location
 - ◆ Chapter-3 discusses Quantitative Analysis and Findings of the Study.
 - ◆ Chapter-4 gives Qualitative Analysis and Findings.
 - ◆ Chapter-5 deals with Project Constraints and Limitations
 - ◆ Chapter-6 provides Suggestions and Recommendations.

1.14 Limitations of the Study

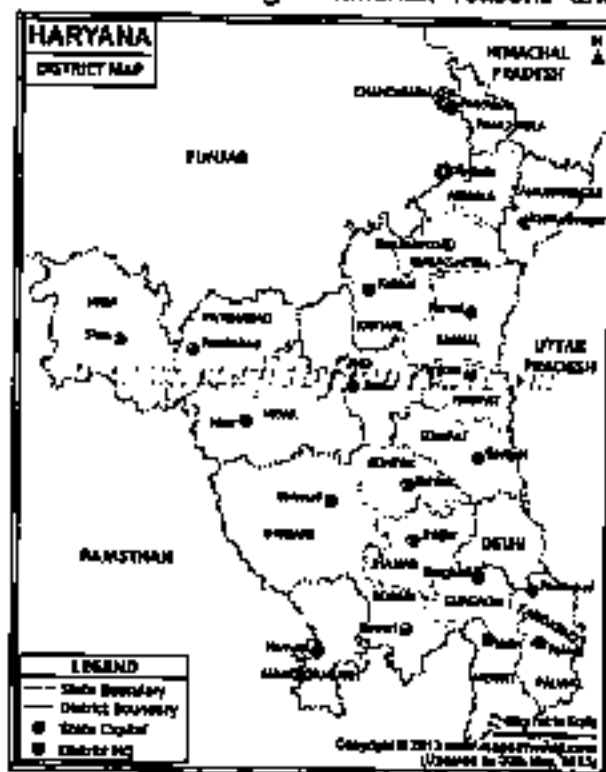
- ◆ Members of evaluation team faced difficulty in finding respondents at most places during field inspection. It was also observed that at many occasions respondents were least interested to reply our query. It showed that they lacked necessary awareness about the issues related to forestry and environment. It impacted the collection of necessary information with regard to CAMPA. However, members of evaluation team put adequate efforts to minimize these limitations and collected vital information keeping in view of prevailing situation. In-depth discussion with various stakeholders of the programme helped a lot in this regard.

Chapter-2

Profile of Project Area

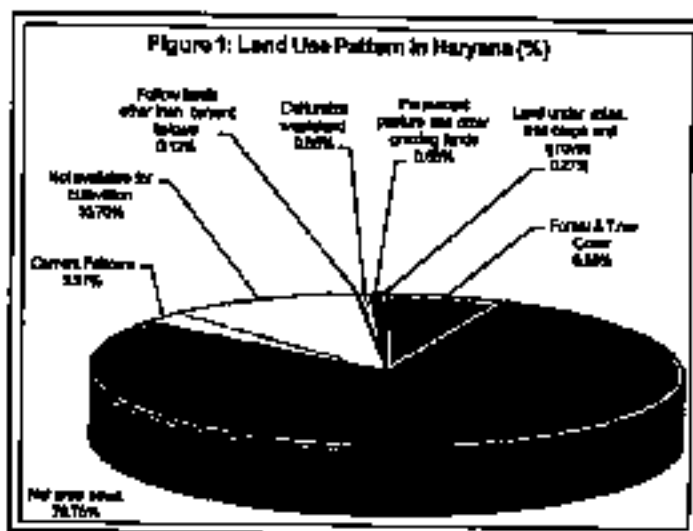
2.1 State Profile

- ♦ The state of Haryana has been grouped into four divisions for governmental reasons and they are Rohtak Division, Ambala Division, Hisar Division and Gurgaon Division. The state comprises 47 subdivisions, 21 districts, 45 sub-tehsils, 67 tehsils/towns and 116 blocks. The state is home to 81 cities and 6759 villages. On November 1, 1966 the state of Haryana was created and there were only seven districts in the state. Subsequently, 14 other districts were carved out through restructuring the previous ones. The state has four administrative divisions. Division wise classification of districts are as follows:
- ♦ Ambala Division has five (5) districts namely Kaithal, Ambala, Panchkula, Kurukshetra, and Yamunanagar.
- ♦ Gurgaon Division has six (6) districts namely Palwal, Rewari, Mahendragarh, Gurgaon, Sonapat, and Sonapat districts in its jurisdiction.
- ♦ Hisar Division consists of five (5) districts namely Fatehabad, Bhiwani, Jind, Hisar and Sirsa districts.
- ♦ Rohtak Division also has five (5) districts namely Karnal, Jhajjar, Rohtak, Panipat, and Sonapat in its jurisdiction.



2.1.1 Land Use Pattern of Haryana

- ♦ Total geographical area of Haryana is 44212 sq km which is 1.35% of the total area of the country. As per land use pattern about 3.64% (1395 sq km) area goes to forestland while area under tree cover is 3.16% (1395 sq km). Thus forestland and tree cover together covers 6.80% of the state geographical area.

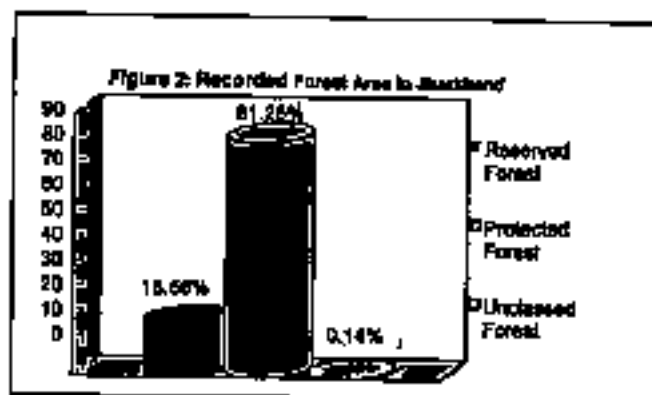


- ♦ Haryana is an agricultural state and about 81.80% land is under cultivation/Net sown area followed by not available for cultivation (13.11%), Current fallows (2.40%). Permanent pasture and other grazing lands (0.69%), Culturable wasteland (0.67%), Land under misc. tree crops

and groves (0.28%), Fallow lands other than current fallows (0.12%), etc. See Figure -1 as given below. Source: Land Use (India State of Forest Report 2011, FSI Dehra Dun)

2.1.2 Recorded Forest Area in Haryana

- The recorded forests area in the state is 3.64% of its geographical area. Reserved Forests constitutes 15.97%, Protected Forests (74.28%) and Un-classed Forests (9.75%). Most of the road side plantations in the state have been notified as Protected Forests.



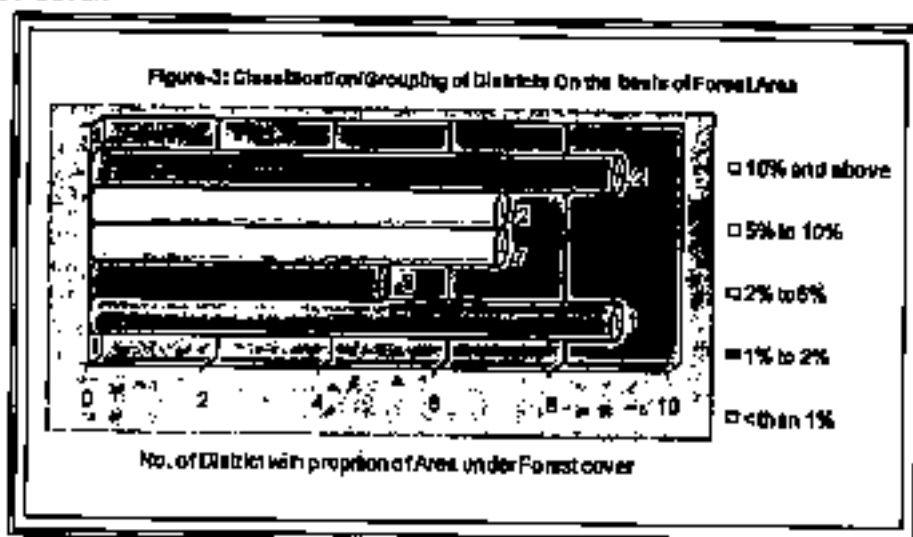
- An area of 303.92 sq. km is being managed as protected area under two National Parks and 8 Wildlife Sanctuaries. This constitutes 0.69% of the state's geographical area. The state has taken an initiative in conserving the depleting population of vultures by establishing a conservation center at Pinjor. Refer Figure-2

2.1.3 District wise Distribution of Forest Area in Haryana

- Distribution of forestland among districts (21) of the state is highly uneven. The entire districts of the state have been clubbed into five groups based on area under forest cover. Group-1: Two districts namely Panchkula (8.35%) and Yamunanagar (10.97%) have more than 10% area under forest cover.

- Group-2: Two districts namely Gurgaon (8.35%) and Rewari (8.35%) and fall in the category of 5% to 10% forest cover.

- Group-3: Seven districts namely Ambala, Palwal, Faridabad, Mahendragarh Bhiwani, Rewari and Kaithal fall in the category of 2% to 5% forest cover.



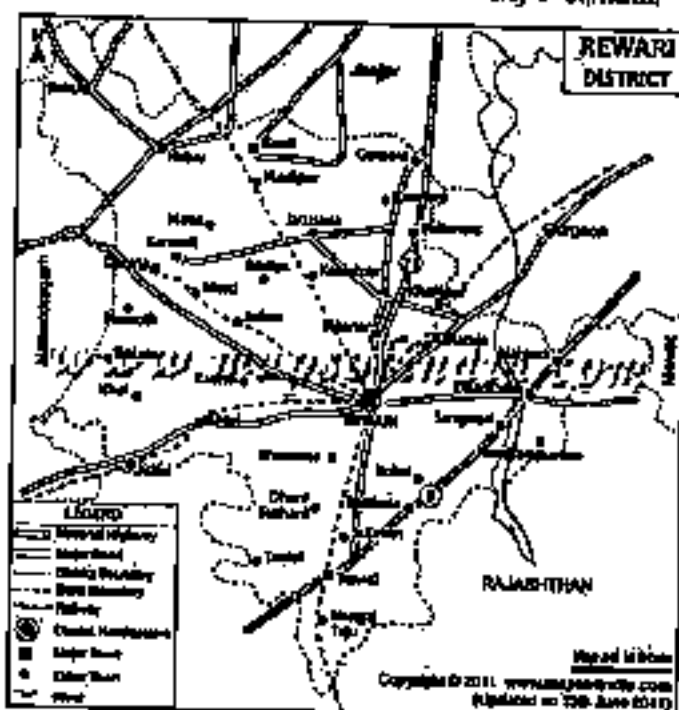
- Group-4: Nine districts namely Hissar, Jhajjar, Karnal, Kurukshetra, Panipat, Rohtak, Sirsa, and Sonapat and they fall in group of 1% to 2% forest cover.
- Group-5: One district namely Fatehabad which has less than 1% area under forest cover. Refer Figure-3 for further information.

2.2 Profile of Rewari District and Forest Division

- Geographic Location & Topography: Rewari district is located in southern part of Haryana. It is 80 km away from New Delhi. It was accorded the status of a district by the government of Haryana on November 1, 1989. As per census 2011 it is the second least populous district of Haryana (out of 21) after Panchkula. Rewari, which forms a part of the National

Capital Region, is adjacent to Rajasthan and, therefore, has dust storms in summer. Rugged hilly terrain of Aravali ranges as well as sand dunes in the district affect the city's climate.

- ✦ **Climate:** Rewari has dry and semi-arid climate. The mean minimum and maximum temperature range from 6°C to 41°C during January (winter) and May-June (summer) respectively. The summer temperature can go up to 46°C from May to July. Winter is from November to February and the temperature can fall to 2°C in December and January. The temperature was recorded as 0°C on 12 January, 2012 and 31 January, 2012. Rainy season is from July to September. A little rain is experienced during winter also. Average annual rainfall in Rewari city is 553 millimeters (21.8 inch). Rain-fed Sahibi River that originates in Rajasthan passes through Rewari and



falls in Najafgarh lake at Delhi. Extremely heavy rains in 1978 flooded Sahibi and Rewari, which in turn flooded Delhi. A barrage was then constructed at Masani village on junction of NH8 and NH71B to impound the water coming from Rajasthan. However, the barrage has hardly collected any water as the rains have not been heavy for the last 30 years and Rajasthan has built check-dams upstream on Sahibi. A canal has been constructed in 2009 to carry excess rain water to the barrage to recharge the ground drinking water for Rewari town. The canal takes off from the existing canal near the Kendriya Vidyalaya, Rewari.

- ✦ **Demography:** As of 2011, Rewari city had a population of 140,864 (compared to 100,946 in 2001 and 75,342 in 1991) showing 40% growth in 2001-11 decade against 34% growth in 1991-2001 decade. Male constituted 53% and females 47% of the population. Overall sex ratio (female/male) was 885 compared to national average 940, and in the 0 to 6 year age group was 785 compared to national average 918. Rewari had an average literacy rate of 78%, higher than the national average of 64.3% for entire population and 74.0% for population excluding 0 to 6 year age group in 2011.[15] Male literacy is 83%, and female literacy is 73% (compared to 79% and 67% respectively in 2001). In Rewari 11.3% of the population is under six years of age.

2.3 Forest Cover in Rewari District

- ✦ According to India State of Forest Report-2011, Rewari district has 3.04% area under forest cover against 3.54% of state average. Main plant species found adopted under CAMPA programme in the district were *Aleostona*, *Arjun*, *B. Papri*, *Chokraisa*, *D. Papri*, *Jamun*, *Lesua*, *Neem*, *P. Papri*, *Pipal*, *Shisham*, *Siras*, *Vad/Bargad*, etc.

Chapter-3

Quantitative Evaluation and Findings

3.1 Classification of Area Covered/Treated

- ♦ 127.268 RKM land was treated under CAMPA at 47 places/sites by adopting CA (77.268 RKM) and NPV (50 RKM) schemes of plantation during 2012-13. It was implemented in all three ranges of the division namely Rewari (97.268 RKM), Nahar (15 RKM) and Bawal (15 RKM). Refer table-3.1 for detailed information.

Table 3.1 Area covered/Treated under CAMPA

Sl. No.	Range	Plantation/Project Site	Land category	Scheme of Plantation	Area in RKM	Year of plantation
1	Rewari	Siha Section 4 & 5	PF- Sec 4 & 5	Campa CA	47.268	2012-13
2	Bawal	RF Jhabua Comp. No. 1 & 2	RF	Campa CA	10	2012-13
3	Bawal	RF Jhabua Comp. No. 7	RF	Campa CA	20	2012-13
4	Rewari	Central School, Kosiawas	Ground	Campa NPV	4.8	2012-13
5	Rewari	Govt. Primary School, Kalaka, Mandhiya	Ground	Campa NPV	0.4	2012-13
6	Rewari	Govt. Boys Sr. Sec. School, Rewari	Ground	Campa NPV	0.8	2012-13
7	Rewari	Govt. Primary School, Rajpura	Ground	Campa NPV	0.4	2012-13
8	Rewari	Govt. Sr. Sec. School & Primary School, Nandrapurba	Ground	Campa NPV	0.4	2012-13
9	Rewari	Govt. Sr. Sec. School, Kharkhara	Ground	Campa NPV	0.2	2012-13
10	Rewari	Govt. Sr. Sec. School, Kalokda	Ground	Campa NPV	0.52	2012-13
11	Rewari	Govt. Primary School, Bhurthal Thauher	Ground	Campa NPV	0.68	2012-13
12	Rewari	Govt. Primary School, Nayaggon	Ground	Campa NPV	0.8	2012-13
13	Rewari	Govt. Sr. Sec. School, Manethi	Ground	Campa NPV	1	2012-13
14	Rewari	Govt. High School, Basduda	Ground	Campa NPV	1	2012-13
15	Rewari	Govt. Middle School, Gothra	Ground	Campa NPV	0.9	2012-13
16	Rewari	Govt. Sr. Sec. School, Pali	Ground	Campa NPV	1	2012-13
17	Rewari	Govt. Primary School, Mamta Ahir	Ground	Campa NPV	0.5	2012-13
18	Rewari	Govt. Primary School, Nangla Dhani	Ground	Campa NPV	0.5	2012-13
19	Rewari	Govt. Sr. Sec. School, Mayan	Ground	Campa NPV	1	2012-13
20	Rewari	Govt. High School, Padla	Ground	Campa NPV	0.5	2012-13
22	Rewari	Siha Section 4 & 5	Ground	Campa NPV	5	2012-13
23	Nahar	Govt. Sr. Sec. School, Bhakli	Ground	Campa NPV	4	2012-13
24	Nahar	Govt. Girl Sr. Sec. School, Juddi	Ground	Campa NPV	2	2012-13
25	Nahar	Gurawana College	Ground	Campa NPV	7	2012-13
26	Nahar	Govt. Girl High School, Bawal	Ground	Campa NPV	2	2012-13
27	Bawal	Govt. Middle School, Kamalpur	Ground	Campa NPV	0.32	2012-13
28	Bawal	Govt. Primary School, Mangleshwar	Ground	Campa NPV	0.68	2012-13
29	Bawal	Govt. Sr. Sec. School, Boini	Ground	Campa NPV	1	2012-13
30	Bawal	Govt. High School, Kethurwa	Ground	Campa NPV	1	2012-13
31	Bawal	Govt. Sr. Sec. School, Asiyaki Pandhar	Ground	Campa NPV	1.2	2012-13
32	Bawal	Govt. Primary School, Ladhuwas	Ground	Campa NPV	1.64	2012-13
33	Bawal	Govt. Sr. Sec. School, Sangwari	Ground	Campa NPV	0.92	2012-13
34	Bawal	Govt. Middle School, Bhudla	Ground	Campa NPV	0.24	2012-13
35	Bawal	Govt. Middle School, Sukhari	Ground	Campa NPV	1.8	2012-13
36	Bawal	Govt. Sr. Sec. School, Prangura	Ground	Campa NPV	0.8	2012-13
37	Bawal	Govt. Primary School, Bhagwanpur	Ground	Campa NPV	0.6	2012-13
38	Bawal	Govt. Sr. Sec. School, Bawal	Ground	Campa NPV	0.58	2012-13
39	Bawal	Govt. High School, Rajgarh	Ground	Campa NPV	0.32	2012-13
40	Bawal	Govt. High School, Sanjharpur	Ground	Campa NPV	0.2	2012-13
41	Bawal	Govt. IT Tankri	Ground	Campa NPV	1.26	2012-13
42	Bawal	Govt. Sr. Sec. School, Moharpur	Ground	Campa NPV	0.24	2012-13
43	Bawal	Govt. Primary School, Jalsinghpurkhara	Ground	Campa NPV	0.16	2012-13
44	Bawal	Govt. High School, Dharan	Ground	Campa NPV	0.24	2012-13
45	Bawal	Govt. Primary School, Khajuri	Ground	Campa NPV	0.3	2012-13
46	Bawal	Govt. Middle School, Gularawas	Ground	Campa NPV	0.78	2012-13
47	Bawal	Govt. Primary School, Jatalpur	Ground	Campa NPV	0.72	2012-13
		Sub Total			127.268	

3.2 Physical and Financial Target and Achievements

- ♦ Total expenditure in the entire project during 2012-13 was Rs. 46.65 lakh against the target of same amount. In the programme plantation work was carried out in all three ranges. There were 47 places where CAMPA plantation was carried out. Refer table 3.2 for detail information.

Table 3.2 Physical and Financial Target and Achievements (2012-13)						
Sl. No	Range	Plantation/Project Site	Physical Area in RKM		Financial (Rs. in Lakh)	
			Target	Achievement	Target	Achievement
1	Rewari	Site Section 4 & 5	47.268	47.268	1752386	1752386
2	Bawal	RF Jhabua Comp. No. 1 & 2	10	10	370734	370734
3		RF Jhabua Comp. No. 7	20	20	741468	741468
4	Rewari	Central School, Kosiawas	4.8	4.8	172800	172800
5		Govt. Primary School, Kalaka, Mandhiya	0.4	0.4	14400	14400
6		Govt. Boys Sr. Sec. School, Rewari	0.8	0.8	28800	28800
7		Govt. Primary School, Rajpura	0.4	0.4	14400	14400
8		Govt. Sr. Sec. School & Primary School, Nandrapurba	0.4	0.4	14400	14400
9		Govt. Sr. Sec. School, Kharkhara	0.2	0.2	7200	7200
10		Govt. Sr. Sec. School, Kalodla	0.52	0.52	18720	18720
11		Govt. Primary School, Bhurthal Thather	0.68	0.68	24480	24480
12		Govt. Primary School, Naysgaon	0.8	0.8	28800	28800
13		Govt. Sr. Sec. School, Manethi	1	1	36000	36000
14		Govt. High School, Basudla	1	1	36000	36000
15		Govt. Middle School, Gothra	0.5	0.5	18000	18000
16		Govt. Sr. Sec. School, Pali	1	1	36000	36000
17		Govt. Primary School, Marnia Ahir	0.5	0.5	18000	18000
18		Govt. Primary School, Mangla Dhari	0.5	0.5	18000	18000
19		Govt. Sr. Sec. School, Mayan	1	1	36000	36000
20		Govt. High School, Padla	0.5	0.5	18000	18000
22		Site Section 4 & 5	5	5	180000	180000
23	Nahar	Govt. Sr. Sec. School Bhadi	4	4	144000	144000
24		Govt. Girl Sr. Sec. School Juddi	2	2	72000	72000
25		Gurawara College	7	7	252000	252000
26		Govt. Girl High School, Bawra	2	2	72000	72000
27	Bawal	Govt. Middle School, Karnalpur	0.32	0.32	11520	11520
28		Govt. Primary School, Mangleshwar	0.68	0.68	24480	24480
29		Govt. Sr. Sec. School, Boini	1	1	36000	36000
30		Govt. High School, Kathuwas	1	1	36000	36000
31		Govt. Sr. Sec. School, Asiyaki Panchor	1.2	1.2	43200	43200
32		Govt. Primary School, Ladhuwas	1.64	1.64	59040	59040
33		Govt. Sr. Sec. School, Sangwari	0.92	0.92	33120	33120
34		Govt. Middle School, Bhudla	0.24	0.24	8640	8640
35		Govt. Middle School Sukheri	1.8	1.8	64800	64800
36		Govt. Sr. Sec. School Prangura	0.8	0.8	28800	28800
37		Govt. Primary School Bhagwanpur	0.6	0.6	21600	21600
38		Govt. Sr. Sec. School Bawal	0.58	0.58	20880	20880
39		Govt. High School Rajauri	0.32	0.32	11520	11520
40		Govt. High School Santharpur	0.2	0.2	7200	7200
41		Govt. IT Tankri	1.26	1.26	45360	45360
42		Govt. Sr. Sec. School Mohanpur	0.24	0.24	8640	8640
43		Govt. Primary School Jalsinghpurkhara	0.16	0.16	5760	5760
44		Govt. High School Oharan	0.24	0.24	8640	8640
45		Govt. Primary School Khijur	0.3	0.3	10800	10800
46		Govt. Middle School Gujarawas	0.78	0.78	28080	28080
47		Govt. Primary School Jalalpur	0.72	0.72	25920	25920
		Total	127.268	127.268	46.65	46.65

3.3 Inventory/ List of Plantation

- A total of 0.32 lakh plant species of *Alstonia*, *Arjun*, *B. Papri*, *Chokrasa*, *D. Papri*, *Jamun*, *Lesua*, *Naam*, *P. Papri*, *Pipal*, *Shisham*, *Siras*, *Vad/Bargad*, etc. were planted in the project at 47 different sites comprising 127.268 RKM of land. Range-wise, year wise, scheme wise and area wise list of plantation is given below in table 3.3.

Table-3.3: Inventory/List of Plantation (2012-13)

Sl. No.	Range	Plantation/Project Site	Scheme	Area in RKM	No. of Plants	Name of Plant Species	Year of Plantation
1	Rawari	SIHA Section 4 & 5	Campa CA	47.268	11817	Naam 1000, Papri 10817	2012-13
2	Bawal	RF Jhabua Comp. No. 1 & 2	Campa CA	10	2500	Naam 120, Papri 2380	2012-13
3	Bawal	RF Jhabua Comp. No. 7	Campa CA	20	5000	Shisham 300, Papri 4700	2012-13
4	Rawari	Central School, Kankhwa	Campa NPV	4.8	1200	Papri, Chokrasa, Naam	2012-13
5	Rawari	Govt. Primary School, Kankhwa, Mangrolya	Campa NPV	0.4	100	Papri, Chokrasa, Naam	2012-13
6	Rawari	Govt. Boys Sr. Sec. School, Rawari	Campa NPV	0.8	200	Papri, Chokrasa, Naam	2012-13
7	Rawari	Govt. Primary School, Rajpura	Campa NPV	0.4	100	Naam 100	2012-13
8	Rawari	Govt. Sr. Sec. School & Primary School, Nangampur	Campa NPV	0.4	100	B. Papri 100	2012-13
9	Rawari	Govt. Sr. Sec. School, Kharhara	Campa NPV	0.2	60	B. papri 60	2012-13
10	Rawari	Govt. Br. Sec. School, Kankhwa	Campa NPV	0.02	130	Papri 130	2012-13
11	Rawari	Govt. Primary School, Bhurhal Thaler	Campa NPV	0.68	170	Naam 100, 70 Papri	2012-13
12	Rawari	Govt. Primary School, Nayagan	Campa NPV	0.8	200	Papri 200	2012-13
13	Rawari	Govt. Sr. Sec. School, Manethi	Campa NPV	1	250	Shisham 100, Papri 100, Naam 50	2012-13
14	Rawari	Govt. High School, Basculda	Campa NPV	1	250	Papri 100, Naam 100, Shisham 50	2012-13
15	Rawari	Govt. Middle School, Gohra	Campa NPV	0.5	125	Shisham 125	2012-13
16	Rawari	Govt. Br. Sec. School, Pali	Campa NPV	1	250	Papri 250	2012-13
17	Rawari	Govt. Primary School, Narmala Ahir	Campa NPV	0.6	125	Papri 125	2012-13
18	Rawari	Govt. Primary School, Nangle Dhan	Campa NPV	0.5	125	Naam 125	2012-13
19	Rawari	Govt. Sr. Sec. School, Mayan	Campa NPV	1	250	Naam 100, Shisham 100, Siras 50	2012-13
20	Rawari	Govt. High School, Palla	Campa NPV	0.5	125	Naam 125	2012-13
22	Rawari	SIHA Section 4 & 5	Sec-4 & 5	5	1250	Naam 700, Shisham 300, Siras 250	2012-13
23	Nahar	Govt. Br. Sec. School Bhadi	Campa NPV	4	1000	Naam 500, D. Papri 300, Shisham 200	2012-13
24	Nahar	Govt. Girl Sr. Sec. School Juddi	Campa NPV	2	500	D. Papri 300, Arjun 80, Naam 120	2012-13
25	Nahar	Gurwara College	Campa NPV	7	1750	Naam 400, D. Papri 300, P. Papri 300, Lesua 200, Arjun 100, Alstonia 50, Siras 400	2012-13
26	Nahar	Govt. Old High School, Bawa	Campa NPV	2	600	Alstonia 60, Naam 100, D. Papri 110, P. Papri 150, Arjun 80	2012-13
27	Bawal	Govt. Middle School, Kamapur	Campa NPV	0.32	80	Papri 40, Shisham 40	2012-13
28	Bawal	Govt. Primary School, Mangleshwar	Campa NPV	0.68	170	Papri 170	2012-13
29	Bawal	Govt. Br. Sec. School, Bohi	Campa NPV	1	260	Papri 130, Naam 100	2012-13
30	Bawal	Govt. High School, Kathwana	Campa NPV	1	250	Papri 220, Jamun 10, Alstonia 20	2012-13
31	Bawal	Govt. Sr. Sec. School, Aulahi Panchor	Campa NPV	1.2	300	Papri 150, Shisham 145	2012-13
32	Bawal	Govt. Primary School, Ladhuwala	Campa NPV	1.84	410	Papri 260, Shisham 150	2012-13
33	Bawal	Govt. Sr. Sec. School, Sangwari	Campa NPV	0.82	230	Papri 120, Shisham 110	2012-13
34	Bawal	Govt. Middle School, Bhudla	Campa NPV	0.24	60	Papri 30, Shisham 30	2012-13
35	Bawal	Govt. Middle School Bulhari	Campa NPV	1.2	460	Papri 150, Shisham 50, Jamun 200, Alstonia 60	2012-13
36	Bawal	Govt. Br. Sec. School Prangura	Campa NPV	0.8	200	Papri 150, Shisham 50	2012-13
37	Bawal	Govt. Primary School Bhagwanpur	Campa NPV	0.5	150	Papri 100, Shisham 25, Jamun 25	2012-13
38	Bawal	Govt. Sr. Sec. School Bawal	Campa NPV	0.68	145	Papri 100, Naam 10, Jamun 20, Alstonia 15	2012-13
39	Bawal	Govt. High School Rajgarh	Campa NPV	0.32	80	Papri 50, Naam 10, Shisham 10, Jamun 10	2012-13
40	Bawal	Govt. High School Sangharpur	Campa NPV	0.2	50	Papri 20, Naam 10, Shisham 10, Jamun 10	2012-13
41	Bawal	Govt. ITI Tanti	Campa NPV	1.26	315	Papri 255, Naam 20, Shisham 20, Jamun 20	2012-13
42	Bawal	Govt. Sr. Sec. School Mohanpur	Campa NPV	0.24	60	Papri 30, Naam 10, Shisham 10, Jamun 10	2012-13
43	Bawal	Govt. Primary School Jaisinghpur	Campa NPV	0.18	40	Papri 10, Naam 10, Shisham 10, Jamun 10	2012-13
44	Bawal	Govt. High School Dhaman	Campa NPV	0.24	60	Jamun 60	2012-13
45	Bawal	Govt. Primary School Khilari	Campa NPV	0.3	75	Papri 75	2012-13
46	Bawal	Govt. Middle School Gulphana	Campa NPV	0.78	195	Papri 100, Shisham 95	2012-13
47	Bawal	Govt. Primary School Jalpur	Campa NPV	0.72	180	Papri 180	2012-13
Total				127.268	31817		

3.4 Analysis of Sample Plantation and Survival Assessment

- In the process of monitoring and evaluation of CAMPA programme of Rewari Forest Division in Rewari District of Haryana a sample of 54.24% (69.028 RKM) was drawn from 12 sites for field inspection of plantation and to estimate survival percentage of plantation.



- Average survival percentage of seedlings estimated was 69%. The highest survival percentage was 74% at Govt. Sr. Sec. School of Bawal range and it was only 69% at Govt. High School, Kathuwas of Bawal range. Average height of plantation was 6 feet. Growth and health of plantation was good. Refer table 3.4 for further information along with photographs.



Table 3.4: Analysis of Sample Plantation and Assessment of Survival

Sl. No.	Range	Plantation Site	Scheme	Area (RKM)	No. of Plants	Plants Survived	Survival (%)	Year
1	Rewari	Siha Section 4 & 5	Campa CA	47.268	11817	8036	68	2012-13
2	Rewari	Govt. Sr. Sec. School, Manethi	Campa NPV	1	250	165	66	
3	Rewari	Govt. High School, Basduda	Campa NPV	1	250	170	68	
4	Rewari	Govt. Sr. Sec. School, Pall	Campa NPV	1	250	173	69	
5	Rewari	Siha Section 4 & 5	Sec-4 & 5	5	1250	875	70	
6	Nahar	Gurwarra Collage	Campa NPV	7	1750	1190	68	
7	Nahar	Govt. Girl High School, Bawa	Campa NPV	2	500	335	67	
8	Bawal	Govt. High School, Kathuwas	Campa NPV	1	250	163	65	
9	Bawal	Govt. Middle School Butcheri	Campa NPV	1.6	450	297	66	
10	Bawal	Govt. Primary School Bhagwanpur	Campa NPV	0.5	100	110	73	
11	Bawal	Govt. Sr. Sec. School Bawal	Campa NPV	0.56	145	107	74	
12	Bawal	Govt. Middle School Gufarwan	Campa NPV	0.78	186	135	69	
Total				69.028	17257	11754	68	

3.5 Registers/Records Maintained In the Project

- Mainly cashbook and work registers were maintained by project authority in this project. Plantation journal was missing. DFO assured the evaluator about the preparation of plantation journal in all the plantation sites conducted under CAMPA soon.

3.6 Monitoring and Evaluation System in the Project

- Monitoring and Evaluation (M & E) of CAMPA and other forestry programmes are conducted by a separate M & E Wing. It is conducted once or twice a year as reported by the project authority. The last evaluation of state CAMPA Haryana at Rewari forest division was conducted in October 2014. The M & E wing consists of one Conservator of Forest (CF) and two Deputy Conservator of Forest (DCF). Its head office is at Karnal in Haryana. It was

also reported that M & E wing conducts evaluation of entire forestry programmes of the state along with CAMPA.

3.7 Involvement of Independent Agency for Evaluation of CAMPA

- An independent agency called Agricultural Finance Corporation Ltd. of Delhi carried out the last monitoring and evaluation of CAMPA work in 2013 for the duration of 2010-11 and 2011-12. Overall findings of the study were satisfactory as reported.

3.8 Bank Account Details and Flow of Funds

- Bank account of CAMPA Programme of Rewari forest division was in the name of Divisional Forest Officer (DFO) with Corporation Bank at Rewari branch. Flow of funds was smooth as per information gathered from various stakeholders of the programme.

Chapter-4

Qualitative Analysis and Findings

4.1 Preference and Basis of Species Selection

- ✦ Topography, soil type, climate, rainfall, suitability of species in the area, preference shown by local community, etc. were main factors in the selection of plant species. However, the project authority took decision in this regard after taking into account of all these factors.

4.2 Soil and Moisture Conservation

- ✦ Wherever the plantation was conducted under CAMPA programme there was some improvement in soil moisture conservation. However, limited provision of funds on this head of the programme did not provide much option to the project authority to carry out additional work related to it.

4.3 Assessment of Survival Percentage

- ✦ Average survival percentage of seedlings estimated was 69%. The highest survival percentage was 74% at Govt. Sr. Sec. School of Bawal range and it was only 69% at Govt. High School, Kathuwas of Bawal range. Average height of plantation was 6 feet. Growth and health of plantation was good. To estimate survival percentage a sample plot of 0.25 ha (50meterx50meter) was adopted at random location and also now counting of plantation was also adopted to count the seedling at random location. Information gathered through interviews with stakeholders of the project, observations and experiences of members of evaluation team, etc. were also taken into account to validate survival percentage.

4.4 Status of Natural Regeneration in the Plantation Area

- ✦ Natural regeneration of plant was not significant as observed during field inspection. In most urban and suburban zone it was negligible while on block forestland zone it was visible to some extent around new plantation areas.

4.5 Quality of Work

- ✦ Overall quality of plantation in the programme was found in good health at majority locations as observed during field inspection. Members of evaluation team covered cent percent project area during field visit.

4.6 Factors Affecting Growth and Survival of Plantation

- ✦ Grazing by loose domestic animals, damage caused by wild animals like, rabbits, blue bull and porcupine, destruction by human beings, tough and unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer low in winter), erratic nature of monsoon rain, etc. were important factors that impacted growth and survival of plantation

4.7 Protection and Maintenance of Plantation

- ✦ Barbed wire and at few places bush fencing were important measures at most plantation sites for protection of plantation. In urban and sub-urban areas brick/ Iron/wood gabions were adopted along with barbed wire in this regard. Foresters and forest guards were responsible for making regular rounds of plantation area in the process of protection and maintenance. There should be better care of plantation through elaborate fencing and regular care. The process of awareness raising and motivation of local community should be adopted in the project at regular intervals.

4.8 Motivation and Technical Competence of Personnel Involved in the Project

- ✦ All the regular forest staffs such as Range Forest Officers (RFO), foresters and forest guards were fully trained to tackle necessary project work of forestry programmes. Temporary or daily wages staffs/workers; cattle watchers, etc. should also be imparted necessary skill to deal with new challenges in the programme. Interactive programmes and meetings were organized on the initiatives of DFO to motivate forest staffs with necessary information on forestry programmes so that they could cope with new challenges in course of performing their duty.

4.9 Role of Local People in Project Work

- ✦ There was low participation of local community in the implementation, protection and maintenance of the programme. Forest officials organized interactive programmes from time to time in project area. However, it was not adequate and needed better efforts. Meetings and awareness raising programmes among local community should be a regular phenomenon for better outcome and sustainable development of the programme. Modern tools of mass media should be adopted for awareness and motivation of community.

4.10 Benefits and Impact of the Programme

- ✦ CAMPA programme accrued both direct and indirect benefits in the project area. Plantation brought additional geographical area under vegetation and forest cover resulting into additional availability of fuel-wood, fodder, other forest produces, etc. It helped in improving quality of ecology and environment as well as micro-climate of the area, which benefitted flora and fauna. Seasonal wage employment during project activity also accrued benefits to local people in earning additional income.

4.11 Formation of Self Help Group (SHG) in the Project

- ✦ The project authority did not take any effort for SHG formation under CAMPA programme. It was reported that there was not any such provision or allocation of funds for it. However, the project authority agreed with our suggestions that such institutions/SHGs would help in extension of the programme and also for better motivation of local community for their active participation during implementation as well as protection and maintenance of the project assets.

Chapter-5

The Constraints and Limitations of Project

There were a number of natural and anthropogenic constraints and limitations faced by project authority during implementation, protection and management of the programme. These factors impacted overall performance of the programme. Some notable constraints and limitations of the project are discussed below.

5.1 Unprotect Grazing by Loose Domestic Animals

- ✦ Open grazing by loose domestic animals was a common problem in most part of the project area. It had adverse impact on survival and growth of plantation. Grazing caused far reaching damage to plantation as the animals' feet loosen the soil and had a cascading detrimental effect on all saplings planted in the area. It led to stunted growth of plants, which survived even after facing these challenges.

5.2 Shortage of Frontline Forest Staff During 2012-13 of Project Work

- ✦ Project authority reported that there was shortage of frontline staff like foresters and forest guards in the division during 2012-13 of CAMPA programme implementation. However, fresh recruitment was conducted in the entire state of Haryana to fill the vacant positions and recently this problem was over. But impacted the programme adversely.

5.3 Low Wage Rate of Forest Department as Compared to Private Sector

- ✦ Wage rate of forest department (@Rs. 213 per day) was much low as compared to local industrial establishments and urban areas (@Rs. 400-500 per day). It caused hardship and limitations to project authority in finding labour forces during peak plantation season and other project work. It impacted quality and outcome of the programme adversely.

5.4 Shortage of Labour Force due to Rapid Urban Sprawl and High wage Rate

- ✦ Due to high rate of urbanization and industrialization in some part of the project area there was high demand of labour force and hence the forest department had to face shortage of labour as reported.

5.5 Inadequate Infrastructure in the Division and Forest Ranges

- ✦ At division level there was not a big issue of basic infrastructure including availability of necessary vehicles but range level offices were facing shortage for day to day activities as reported by the project authority. It impacted performance and quality of work as well as outcome of project.

5.6 Other Biotic and Natural Factors Impacting Survival of Plantation

- ✦ Biotic and natural factors like damage caused by wild animals like, rabbits, blue bulls and porcupines, deliberate destruction by human beings, unfavorable terrain, poor soil condition, extreme nature of climate (very high temperature in summer and low in winter), erratic monsoon rain, rapid urbanization, etc. impacted growth and survival of plantation.

Chapter-6

Suggestions and Recommendations

On the basis of interaction and interviews held with forest officials, other stakeholders as well as above description, analysis and assessment of the programme the following suggestions and recommendations are proposed for improvement in the project output and efficacy. It is as follows:

6.1 Adopt Long Term Measures to Control Grazing by Domestic Animals

- As discussed above time and again about the menace of grazing in most part of plantation area and hence it was needed to adopt some viable measures to check or at least minimize problem. Wild animals like blue bulls and rabbits also caused similar damage to plantation in some part of project areas as they graze green leaves of plants. Stall feeding of domestic animals should be promoted among local community of the area through regular awareness and motivation.

6.2 Make Proper Arrangement of Protection and Maintenance of Plantation

- The project authority should make necessary provisions of protection and maintenance of plantation by adopting multi-pronged strategy. Fencing with barbed wire was there in the project but they were found broken at a number of place. Timely repair or replacement of broken items should be done as per requirement and type of plantation. It is suggested that in urban and suburban areas the project authority should adopt gablons of iron, brick, wood, etc. as barbed wire fencing was not successful.

6.3 Vacant Posts of Frontline Staff Should be Filled on Time

- All vacant posts of forest guards and foresters should be fulfilled on time by fresh recruitment of staff to ease the pressure. For effective implementation and management of afforestation programme adequate number of staff was prerequisite. However, currently there was no shortage of such staff but it was during 2012-13 of project work.

6.4 Provision of fine /punishment be Made Against Wrong Doing with Forest Resources

- There should be provision of fine/punishment or both against all persons involved in unprotected grazing, deliberate damage to plantation, theft to forest wealth, etc. Such punishments or fines could work as deterrent among local community. However, the project authority said that such provisions are in the division and they are applied as per the forest rules and guidelines.

6.5 Run Capacity-Building Programme to Impart Knowledge and Hone Skills

- Workshops and Capacity building programmes should be organized by involving field level forest staffs, local community to learn for new ideas and knowledge. In the opinion of project authority, foresters and forest guards were already trained to handle project related work.

6.6 Protection and Maintenance Funding should be of Four Years

- There should be provision of funding for 4 (four) consecutive of protection and maintenance of CAMPA plantation. It will improve quality and survival of the plantation.

6.7 Make Monitoring and Evaluation Regular, Systematic and Effective

- Monitoring and evaluation is a critical component of most administered programmes, and their significance is more pronounced for mass plantation programmes because the latter are all about sequential growth (organic). As per the project authority M & E wing of forest department take care of this work for the entire forestry programme. It consists of one CF

and two DFOs. Its head office is located at Karnal. CAMPA programme along with other forestry projects were monitored and evaluated once a year as reported. The project authority should pay more attention to increase its effectiveness.

6.8 Intensive Awareness Campaign to Motivate Local Community

- ★ There should be adoption of mass communication tools like electronic media (mainly visual), leaflets, pamphlets, posters, wall writings, *nukkad natak*, slogan shouting, rallies, advertisement in local newspapers, etc. for better and long lasting impact among local community.

6.9 Organize Exposure Visit for Staff Member and Local Community

- ★ Project authority should organize exposure visits of forest staffs to advance nursery and plantation areas within and state outside for better understanding and learning new ideas and knowledge. These are important tools and methods of development process and also to improve quality and outcome of the programme.

6.10 Introduce Practice and Concept of Earning Carbon Credits

- ★ The concept and practice of carbon credits is part of the global efforts to tackle greenhouse warming and rising temperatures. It should be introduced forthwith in the project area at village level for environment-related mass participatory programmes. Carbon credit is earned by planting new trees and maintaining the old ones. The system will help generate not only a healthier environment but also a regular source of income for local community people. Rewarding villagers for their contribution to the greening process in ways other than carbon credits is related option. If a sense of healthy competition for reward and name can be made to build up among villagers in relation to plantation activities within the programme area, the results are bound to be positive.

6.11 Interview with Project Authority

- a) During pre and post field inspection and evaluation of the programme the members of evaluation team interacted interviewed DFO Rewari (Mr. R. Anand, Mob:+91-946604386, Office: +91-1274254568) along with RFOs, Foresters and Forest Guards. A brief summary of interviews is as follows.
- ★ The members of evaluation team interacted with project authority during pre and post evaluation of CAMPA programme. They were satisfied with overall outcome and progress of CAMPA work conducted during 2012-13. About selection plant species soil type, climate, survival factor in the locality, biotic factor, species not prone to grazing, preference by local people, etc. were main factors as replied by the. Most preferred plant species in the division were *Alustona*, *Arjun*, *B. Papri*, *Chokrasa*, *D. Papri*, *Jamun*, *Lesua*, *Neem*, *P. Papri*, *Pipal*, *Shisham*, *Siras*, *Vad/Bargad*, etc. Open grazing, rocky terrain, poor soil, erratic and low rain fall were main factors plantation casualty. The project authority further said that all the field staffs were hard working and they owned responsibility and performed their duty well. There was needed to pay adequate attention to improve protection and maintenance of plantation.

6.12 Evaluator's Assessment

- ★ After field inspection and interaction with project authority and other stakeholders of the programme and verification of official records, it was concluded that above statements made by them was true to a great extent. The project authority followed the stated guidelines of programme. Modern tools of mass media should be adopted for awareness campaigns for better impact. Internal monitoring and evaluation in the programme should be updated and carried out effectively.

Photographs of Plantation Area: Rewari Forest Division (2012-13)

4 Rewari Range: 19 site

4 Bawal Range: 23 sites

4 Nahar Range: 4 Sites

4 Main Plant Species: Alustora, Arjun, B. Papri, Chokrasa, D. Papri, Jamun, Lesua, Neem, P. Papri, Pipal, Shisham, Siras, Vad/Bargad, etc



Final A.P.D. State CAMPA Scheme of Revenue Forest Division in Revenue District of Haryana (2012-13)

Sl. No.	Type of land (Forest/non-forest)	Name of Scheme/ component	Name of Range	Name of Site	Khasra No. KWRD	Plantation Month	Target Achieved		No. of Plants	Name of Species	Spacing (m)	GPS Coordinates	
							Ha	PLM				Longitude	Latitude
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	PF	Campa CA	Revenue	Site Section 4 & 5	NA	July	NA	47.268	11817	Neem 1000, Paper 10017	4x4	NA	NA
2.	PF	Campa CA	Bawal	RF Jhalas Camp. No. 7 & 8	NA	July	NA	10	2300	Neem 120, Paper 2200	4x4	NA	NA
3.	PF	Campa CA	Bawal	RF Jhalas Camp. No. 7	NA	July	NA	20	5000	Shisham 200, Paper 4700	4x4	NA	NA
4.	School Ground	Campa NPV	Rohini	Central School, Kankhwa	NA	July	NA	4.5	1200	Peel, Chitrakoot, Neem	4x4	NA	NA
5.	School Ground	Campa NPV	Rohini	Govt. Primary School, Kankhwa, Mandhwa	NA	July	NA	0.4	100	Peel, Chitrakoot, Neem	4x4	NA	NA
6.	School Ground	Campa NPV	Rohini	Govt. Boys Br. Sec. School, Rohini	NA	July	NA	0.8	200	Peel, Chitrakoot, Neem	4x4	NA	NA
7.	School Ground	Campa NPV	Rohini	Govt. Primary School, Rajpura	NA	July	NA	0.4	100	Peel, Chitrakoot, Neem	4x4	NA	NA
8.	School Ground	Campa NPV	Rohini	Govt. Sr. Sec. School & Primary School, Nangraipuram	NA	July	NA	0.4	100	Neem 100	4x4	NA	NA
9.	School Ground	Campa NPV	Rohini	Govt. Sr. Sec. School, Khartham	NA	July	NA	0.2	50	B. Paper 100	4x4	NA	NA
10.	School Ground	Campa NPV	Rohini	Govt. Br. Sec. School, Kankhwa	NA	July	NA	0.52	130	Peel 120	4x4	NA	NA
11.	School Ground	Campa NPV	Rohini	Govt. Primary School, Bhurthi Thaher	NA	July	NA	0.88	170	Neem 100, 70 Paper	4x4	NA	NA
12.	School Ground	Campa NPV	Rohini	Govt. Primary School, Nangraipuram	NA	July	NA	0.8	200	Peel 200	4x4	NA	NA
13.	School Ground	Campa NPV	Rohini	Govt. Br. Sec. School, Mandhwa	NA	July	NA	1	250	Shisham 100, Paper 100, Neem 50	4x4	NA	NA
14.	School Ground	Campa NPV	Rohini	Govt. High School, Bhandra	NA	July	NA	1	250	Peel 100, Neem 100, Shisham 50	4x4	NA	NA
15.	School Ground	Campa NPV	Rohini	Govt. Middle School, Gathra	NA	July	NA	0.5	125	Shisham 125	4x4	NA	NA
16.	School Ground	Campa NPV	Rohini	Govt. Sr. Sec. School, Pal	NA	July	NA	1	250	Peel 200	4x4	NA	NA
17.	School Ground	Campa NPV	Rohini	Govt. Primary School, Mandhwa Ahir	NA	July	NA	0.5	125	Peel 120	4x4	NA	NA
18.	School Ground	Campa NPV	Rohini	Govt. Primary School, Nangra Dhar	NA	July	NA	0.5	125	Neem 120	4x4	NA	NA
19.	School Ground	Campa NPV	Rohini	Govt. Br. Sec. School, Mayan	NA	July	NA	1	250	Neem 100, Shisham 100, Neem 50	4x4	NA	NA
20.	School Ground	Campa NPV	Rohini	Govt. High School, Palla	NA	July	NA	0.5	125	Neem 125	4x4	NA	NA
21.	School Ground	Sec- 4 & 5	Rohini	Site Section 4 & 5	NA	July	NA	8	1250	Neem 700, Shisham 300, Neem 250	4x4	NA	NA
22.	School Ground	Campa NPV	Nahar	Govt. Br. Sec. School Bhalid	NA	July	NA	4	1000	Neem 500, D. Paper 300, Shisham 200	4x4	NA	NA
23.	School Ground	Campa NPV	Nahar	Govt. Qrt. Br. Sec. School Judd	NA	July	NA	2	500	D. Peel 300, Neem 10, Neem 100	4x4	NA	NA
24.	School Ground	Campa NPV	Nahar	Gurwara College	NA	July	NA	7	1750	Neem 100, Shisham 100, Neem 50	4x4	NA	NA
25.	School Ground	Campa NPV	Nahar	Govt. Old High School, Bawa	NA	July	NA	2	500	Neem 100, Shisham 100, Neem 50	4x4	NA	NA
26.	School Ground	Campa NPV	Bawal	Govt. Middle School, Kamalpur	NA	July	NA	0.32	80	Peel 40, Shisham 40	4x4	NA	NA
27.	School Ground	Campa NPV	Bawal	Govt. Primary School, Mangrothwar	NA	July	NA	0.68	170	Peel 170	4x4	NA	NA
28.	School Ground	Campa NPV	Bawal	Govt. Br. Sec. School, Bawal	NA	July	NA	1	250	Peel 150, Neem 100	4x4	NA	NA
29.	School Ground	Campa NPV	Bawal	Govt. High School, Kankhwa	NA	July	NA	1	250	Peel 220, Neem 10, Neem 30	4x4	NA	NA
30.	School Ground	Campa NPV	Bawal	Govt. Br. Sec. School, Auliyah Pandhar	NA	July	NA	1.2	300	Peel 140, Shisham 140	4x4	NA	NA
31.	School Ground	Campa NPV	Bawal	Govt. Primary School, Lathwara	NA	July	NA	1.64	410	Peel 200, Shisham 150	4x4	NA	NA
32.	School Ground	Campa NPV	Bawal	Govt. Br. Sec. School, Bangra	NA	July	NA	0.82	230	Peel 130, Shisham 100	4x4	NA	NA
33.	School Ground	Campa NPV	Bawal	Govt. Middle School, Bhandra	NA	July	NA	0.24	60	Peel 30, Shisham 30	4x4	NA	NA
34.	School Ground	Campa NPV	Bawal	Govt. Middle School, Bhandra	NA	July	NA	1.8	450	Peel 150, Shisham 100, Neem 200, Shisham	4x4	NA	NA
35.	School Ground	Campa NPV	Bawal	Govt. Br. Sec. School Pringra	NA	July	NA	0.5	200	Peel 100, Shisham 50	4x4	NA	NA
36.	School Ground	Campa NPV	Bawal	Govt. Primary School Bhagwanpur	NA	July	NA	0.6	150	Peel 100, Shisham 20, Neem 20	4x4	NA	NA
37.	School Ground	Campa NPV	Bawal	Govt. Br. Sec. School Bawal	NA	July	NA	0.55	145	Peel 100, Neem 10, Neem 20, Shisham 10	4x4	NA	NA
38.	School Ground	Campa NPV	Bawal	Govt. High School Rajpura	NA	July	NA	0.32	80	Peel 50, Neem 50, Shisham 10, Neem 10	4x4	NA	NA
39.	School Ground	Campa NPV	Bawal	Govt. High School Bangra	NA	July	NA	0.2	50	Peel 20, Neem 10, Shisham 10, Neem 10	4x4	NA	NA
40.	School Ground	Campa NPV	Bawal	Govt. P. T. Tandi	NA	July	NA	1.25	315	Peel 150, Neem 20, Shisham 20, Neem 20	4x4	NA	NA
41.	School Ground	Campa NPV	Bawal	Govt. Br. Sec. School Mohanpur	NA	July	NA	0.24	60	Peel 30, Neem 10, Shisham 30, Neem 10	4x4	NA	NA
42.	School Ground	Campa NPV	Bawal	Govt. Primary School Jalpaurpur	NA	July	NA	0.15	40	Peel 10, Neem 10, Shisham 10, Neem 10	4x4	NA	NA
43.	School Ground	Campa NPV	Bawal	Govt. High School Dhan	NA	July	NA	0.24	60	Peel 30	4x4	NA	NA
44.	School Ground	Campa NPV	Bawal	Govt. Primary School Kankhwa	NA	July	NA	0.3	75	Peel 75	4x4	NA	NA
45.	School Ground	Campa NPV	Bawal	Govt. Middle School Quthra	NA	July	NA	0.75	195	Peel 100, Shisham 50	4x4	NA	NA
46.	School Ground	Campa NPV	Bawal	Govt. Primary School Jhalpur	NA	July	NA	0.72	180	Peel 180	4x4	NA	NA
Total							12.268	31817					