



Workshop for
Preparation of Haryana State Biodiversity Strategy and Action Plan
(HR-SBSAP) 2021:
Red Bishop Tourist Complex, Panchkula
30.07 2021

Date /Day/ Time	Topic	Details
10:00 – 10:30	Registration	
10.30 – 10:40	Welcome and Opening remarks	Sh. Vineet Kumar Garg, IFS, Chairman, HSBB
10.40 – 10:45	Introductory remarks	Sh. V.S.Tanwar, IFS PCCF (HoFF), Haryana
10:45– 11:15	Overview of HR-SBSAP and Schedule	Dr. V.P Uniyal, Scientist- G,WII
11:15 – 11:30	Inaugural Speech	Dr. G.Anupama, IAS, PS to GoH, Forest & Wildlife Department (Chief Guest)
11.30 -11.45	Tea Break and Group Photo	
Session I Rapporteur: Mona Chauhan		
11:45 – 12:00	Input on HR-SBSAP - Status of Forests and Wildlife in Haryana	Sh. Jagdish Chander, IFS, PCCF(WL), Haryana
12:00 – 12:15	Input on HR-SBSAP - Status of Biodiversity in Aravallis	Sh. M.D.Sinha, IFS, PS to GoH, Tourism Department
12:15 – 12:30	Input on HR-SBSAP - Status of Animal Husbandry and Dairying	Dr. Sukhdev Rathee, Deputy Director, AH &D Department
12:30 – 12:45	Input on HR-SBSAP - Status of Fisheries	Sh. P.S.Malik, Director Fisheries Department, Haryana
12:45 – 13:00	Input on HR-SBSAP - Status of Environment	Dr. R.K.Chauhan, Joint Director O/O Director, Environment Deptt.
13:00 – 14:00	Lunch Break	
Session II Rapporteur: Vikram Delu		
14:00 – 14:15	Input on HR-SBSAP - Status of Agriculture	Dr. Suresh Gahlawat, DDA O/o DG, Agriculture &FW
14:15 – 14:30	Input on HR-SBSAP - Status of Horticulture	Sh. Manoj Kundu O/o DG, Horticulture Department
14:30 – 15:00	Open discussion (All participants)	
15:00 -15:30	Summary of consultation and discussion	
15:30 – 15:45	Wrap-up: Closing Remarks	Sh. Vineet Kumar Garg, IFS, Chairman, HSBB
15:45 – 16:00	Vote of Thanks	Sh. Gurmeet Singh, SO, HSBB

Introduction to HR-SBSAP

India is a megadiverse country harbouring nearly 7-8% of all recorded species including over 45000 species of plants and 91,000 species of animals on only 2.4% of the world's land area. It has a long history of working for conservation of its unique biodiversity with multi-stakeholder participation. As a party to the Convention on Biological Diversity (CBD), the Government of India, developed a National Policy and Macro Level Action Strategy on Biodiversity in 1999 within five years of ratifying the CBD. Following India's adoption of the National Environment Policy in 2006, a National Biodiversity Action Plan (NBAP) was prepared by updating the 1999 document of the Ministry by using the final technical report of the NBSAP project, in order to achieve consonance between the NBAP and the NEP 2006. India's NBAP, formulated through a comprehensive inter-ministerial process, was approved by Government of India in 2008 (<http://nbaindia.org/uploaded/Biodiversityindia/NBAP.pdf>). In 2013-14, India undertook the process of updating the NBAP in order to harmonize it with the global Strategic Plan for Biodiversity 2010-2020 and the Aichi Biodiversity Targets, adopted under the aegis of CBD in 2010. Currently, the Government of India, through the Ministry of Environment, Forest and Climate Change (MOEFCC) is actively pursuing the achievement of these targets. In order to meet the NBTs by 2020, it is mandatory that an effective, participatory and updated NBAP is made operational at different levels of governance. In this context, various States and Union Territories are required to prepare their own State Biodiversity Action Plans in alignment with the updated NBAP and implement the activities envisaged under these plans.

The Haryana State Biodiversity Board has sought the help of Wildlife Institute of India, to prepare the State Biodiversity Strategy and Action Plan of the State. Wildlife Institute of India would like to develop the Project Proposal for the preparation of SBSAP of Haryana State. The primary aim of the project is to develop the Haryana SBSAP in consultation with the all relevant departments and agencies of the Government of Haryana. State Biodiversity Strategy and Action Plan of Haryana would be prepared as per objectives of Convention on Biological Diversity and mainstreaming of biodiversity in all sectors of the Government of Haryana. The document will be made as per guidelines of India's Biological Diversity Act, 2002 and India's Biological Diversity Rules 2004 of the National Biodiversity Authority, Ministry of Environment, Forest and Climate Change, Govt. of India.

Strategy to formulate Biodiversity Action Plan: An Overview

Biodiversity Action Plan (BAP): A Biodiversity Action Plan (BAP) provides guidance in designing and implementing concrete practices on sustainable use and conservation of biodiversity when growing and sourcing natural raw materials.

Purpose: To provide guidance on how to formulate and implement a Biodiversity Action Plan, including measures for biodiversity in all the ecosystems, to improve the sustainable use and conservation of biodiversity.

Structure: These guidelines contain three sections:

- I. **Biodiversity Action Plans** - Describes what a BAP is, the different scopes it might have, the key content it should include, the main roles and responsibilities it should assign, and the adaptive management approach it favours.
- II. **BAP Content** : Baseline information, Goal & Targets, Measures, Work plan, M&E System.
- III. **BAP Process** - The steps to be taken when formulating a BAP -(i) conducting a baseline assessment, (ii) setting goals, targets and possible measures, (iii) selecting and planning measures at ecosystem level, (iv) designing a M&E system, and (v) integrating the BAP, as well as some considerations and responsibilities to be considered when implementing the BAP.

Biodiversity Components: Biodiversity has different components. A BAP can address some or all of them.

- **Genetic diversity** - The diversity of material of plant, animal, microbial or other origin containing functional units of heredity.
- **Species diversity** - The diversity of plants, animal, microbial and other organisms with the same genetic composition.
- **Ecosystems and habitats diversity and conditions** - The diversity and status of Ecosystems (community of organisms and their physical environment interacting together, including forests, wetlands and mountains) and Habitats (sites where species and populations naturally occur, including fallow land, hedges, shrubs and trees)
- **Conditions of natural resources** - Status of water and soil

Action Areas:

- Conservation of biodiversity
- Sustainable use of biodiversity

Approaches: Reducing negative impacts - Negative impacts include all drivers of Biodiversity loss.

Promoting positive impacts - Positive impacts include all drivers of Biodiversity restoration, maintenance and promotion.

Areas of Intervention: On Farms & In landscapes

Proceedings of Workshop

on

**Preparation of Haryana State Biodiversity Strategy and Action Plan
(HR-SBSAP) 2021**

Organized by

**Wildlife Institute of India, Dehradun
&
Haryana State Biodiversity Board, Panchkula**



Introduction to HR-SBSAP

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Action Areas:

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- **Approaches:** Reducing negative impacts- Negative impacts include all drivers of Biodiversity loss.
- **Promoting positive impacts** - Positive impacts include all drivers of biodiversity restoration, maintenance and promotion.

Areas of Intervention: On Farms & in landscape.



Workshop for Preparation of Haryana State Biodiversity Strategy and Action Plan (HR-SBSAP) 2021

July 30, 2021

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10:00–10:30	Registration	
10:30–11:00	Welcome and Opening remarks	Sh. Vineet Kumar Garg, IFS Chairman, HSBB
11:00–11:10	Introductory Remarks	Sh. V. S. Tanwar, IFS PCCF (HoFF), Haryana
11:10–11:30	Overview of HR-SBSAP	Dr. V. P. Uniyal Scientist - G, WII
11:30–11:45	Inaugural Speech	Dr. G. Anupama, IAS PS to GoH, Forest & Wildlife Department (Chief Guest)
11:45-12:00	Tea Break and Group Photo	
SESSION I Chairman: Sh. V.S. Tanwar, IFS, PCCF Rapporteur: Dr. Mona Chauhan		
12:00–12.45	Input on HR-SBSAP-Status of Forests and Wildlife in Haryana	Sh. Jagdish Chander, IFS PCCF (WL), Haryana
12:45–13:30	Input on HR-SBSAP-Status of Biodiversity in Aravallis	Sh. M. D. Sinha, IFS PS to GoH, Tourism Department



Time	Topic	Details
13:30–14:15	Input on HR-SBSAP-Status of Animal Husbandry and Dairying	Dr. V.S. Rathee Deputy Director, Animal Husbandry & Dairying Department
14:15–14:30	Input on HR-SBSAP-Status of Agriculture	Dr. Rohtash Singh Additional Director, Agriculture Department
14:30 - 15:00	Lunch Break	
Session II Chairman: Sh. Jagdish Chander, IFS, PCCF (WL) Rapporteur: Sh. Vikram Delu		
15:00–15:30	Input on HR-SBSAP-Status of Environment	Dr. R.K. Chauhan Joint Director, Department of Environment
15:30–16:00	Input on HR-SBSAP-Status of BMC(s) in Haryana	Dr. S. S. Grewal President, SPACE
16:00-16:30	Input on HR-SBSAP-Status of Fisheries	Dr. Ishwar Singh Deputy Director, Fisheries Department.
16:30–17:00	Input on HR-SBSAP-Status of Horticulture	Sh. Manoj Kundu Joint Director, Department of Horticulture
17:00–17:20	Wrap-up: Open Discussion & Closing Remarks	Sh. Jagdish Chander, IFS Sh. Vineet Kumar Garg, IFS
17:20–17:30	Vote of Thanks	Sh. Gurmeet Singh SO, HSBB



Inaugural Session



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- Sh. Vineet Kumar Garg, IFS, Chairman, HSSB, and Dr. V. P. Uniyal Scientist – G, WII welcomed Chief Guest, Dr. G. Anupama, IAS, Principal Secretary to Govt. of Haryana, Forest & Wildlife Department, all senior Officers of Forest & Wildlife and other line departments.
 - Workshop was inaugurated by Dr. G. Anupama, IAS, Principal Secretary to Govt. of Haryana, Forest & Wildlife Department.
 - Sh. Vineet Kumar Garg, IFS, Chairman, HSSB on behalf of HSSB, welcomed all the participants and highlighted the biodiversity of state, status of Biodiversity Management Committee and guidelines to formulate Haryana State Biodiversity Strategy and Action Plan.



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- Sh. V.S. Tanwar, IFS, PCCF (HoFF), Haryana gave introductory remarks on sustainable use of biodiversity and its conservation. He focused on Ecoregion and landscape level problems related to biodiversity and other sectors dependent on the same for ex: livelihood, health, food security, water security etc. He stressed that these issues should be discussed in the SBSAP and should be aptly documented and actions should be framed accordingly to address the issues of biodiversity conservation and the co-benefits generated out of the same.
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- Dr. G. Anupama, IAS, Principal Secretary to Govt. of Haryana, Forest & Wildlife Department requested all the line departments, stakeholders to contribute in full capacity for the preparation of Haryana State Biodiversity Strategy & Action Plan (HR-SBSAP). She highlighted that a comprehensive and convergent Community Action Plan should be made by involving the lowest elective unit i.e., Panchayat/Biodiversity Management Committee to the highest administrative unit including all the line departments. She advised, WII and HSSB officials to include Haryana Pond and Waste-Water Authority., and State-Wetland Authority in preparation of State Biodiversity Strategy & Action Plan (HR-SBSAP).





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- **Dr. V. P. Uniyal, Scientist - G**, Wildlife Institute of India, on behalf of implementing agency of this project, delivered a detailed presentation on guidelines, strategies, role of stakeholders and future Workshop schedule for the preparation of Haryana State Biodiversity Strategy & Action Plan (HR-SBSAP).
 - He highlighted the strength of WII on various aspects like biodiversity conservation through implementing biodiversity related policies and programmes of Government of India in collaboration with National Biodiversity Authority (NBA) from long time, UNDP Biodiversity Finance Initiative (BIOFIN) Project from 2015 in collaboration with MoEFCC, NBA and successfully submission of the India's Fifth National Report to CBD in 2014. WII was instrumental in developing the National Biodiversity Targets (NBT) and updation of National Biodiversity Action Plan (NBAP) in 2014, he added.
 - Dr. Uniyal also stated that Haryana state will be divided into four divisions according to Forest Circles and four consecutive Workshops will be organized to gather baseline information for the preparation of HR-SBSAP.
 - Furthermore, he requested all dignitaries participating in the Workshop for future contribution from all line departments for preparation of HR-SBSAP.
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Strength of Wildlife Institute of India (WII) for the Proposed Activities

- ✚ WII has been involved in biodiversity conservation through implementing biodiversity related policies and programmes of Government of India in collaboration with National Biodiversity Authority (NBA) from long time.
- ✚ WII has successfully submitted the India's Fifth National Report to CBD in 2014 and was instrumental in developing the National Biodiversity Targets (NBT) and updation of National Biodiversity Action Plan (NBAP) in 2014.
- ✚ WII has also been working in the UNDP Biodiversity Finance Initiative (BIOFIN) Project from 2015 in collaboration with MoEFCC and NBA. Currently, WII is working on following projects related to biodiversity:
 - WII-UNDP Biodiversity Finance Initiative (BIOFIN) Project
 - Preparation of Meghalaya State Biodiversity Strategy and Action Plan
 - Preparation of Assam State Biodiversity Strategy and Action Plan
 - Preparation of Uttar Pradesh State Biodiversity Strategy Action Plan (In Progress)
 - Preparation of Haryana State Biodiversity Strategy Action Plan (In Progress)

Methodology for implementing HR-SBSAP

- ✚ Taking stock of the flora and fauna, current status and trends in biodiversity.
- ✚ Identification of the existing threats/pressures to biodiversity and ecosystem.
- ✚ Documentation of traditional knowledge and practices for conservation
- ✚ Management of biodiversity, ecosystem services and natural resource governance.
- ✚ Preliminary mapping of priority thematic areas for developing the SBSAPs based on review of existing reports, policy documents and initial outcomes of status, trends and threat assessment.
- ✚ Appraisal of biodiversity relevant programme and schemes of sectoral line departments in priority thematic areas through review of policy documents and state appropriation accounts for multiple years.



Tentative workshop schedule

S. No.	Stakeholders	Forest Circles wise tentative timeline for workshops
1.	State Line Departments	North Circle (10 - 15 August) Central Circle (25 - 30 August) West Circle (05 - 10 September) South Circle (15 - 20 September)
2.	State Science and Technology Department	
3.	State Planning Board	
4.	State NGOs	
5.	State Finance Department	
6.	State Universities, Research organizations	
7.	Panchayati Raj (BMCs)	





SESSION - I

Chairman of the session : Sh. V.S. Tanwar, IFS, PCCF (HoFF), Haryana

Rapporteur : Dr. Mona Chauhan

Agenda : Input on HR-SBSAP-Status of different line
Departments/Organizations/TSG

Input on HR-SBSAP	Speakers
Status of Forests and Wildlife in Haryana	Sh. Jagdish Chander, IFS PCCF (WL), Haryana
Status of Biodiversity in Aravallis	Sh. M.D. Sinha, IFS PS to GoH, Tourism Department
Status of Animal Husbandry and Dairying in Haryana	Dr. Virender Singh Rathee Deputy Director, AH&D Department
Status of Agriculture in Haryana	Dr. Rohtash Singh Additional Director, AFW Department



Presentation on Status of Forests and Wildlife in Haryana



Sh. Jagdish Chander, IFS, PCCF (WL), Haryana, gave detailed remarks on the current scenario of the biodiversity in Haryana. He also highlighted the threats rising due to invasive alien species in Aravalli, Shiwalik and other regions of Haryana. He focused on grassland ecosystem in southern part of Haryana and emphasized on their conservation. He discussed endangered plant species like *Salvadora oleoides*, *Terminalia chebula*, *Prosopis cineria*, *Ziziphus*, *Capparis deciduas*, *Senegalia senegal*, *Butea monosperma*, currently facing habitat destruction and loss of genetic diversity. He also focused on habitat loss of some species like Chitkabari Bakari from Rajpura and Morni Hills, Mahseer, *Tor putitora*, and bee species *Apis dorsata* and *Apis cerana*. After that, he gave answers to the questions asked by Dr. S. S. Grewal on the loss of vegetation from the region and the threat arisen due to the invasive plant species *Lantana camara* on endemic plant species in Shiwalik region of Haryana. He answered that a detailed study is required to find out the negative impact of Lantana on plant communities and found it as a serious concern for the ecosystem as this plant has completely adapted to the climatic conditions of the region.



Natural Forest and Ecosystem of Haryana

✚ Transitional Shiwalik Sal Forests of Kalesar, Yamunanagar.

✚ Transitional Shiwalik Chir Forests of Morni, Panchkula.

✚ *Anogeissus pendula* forests of Jhir area in Firozpur - Zhirka of Gurgaon District.

✚ *Terminalia chebula* forests of Mandhna Hathia – Udhon - Panchkula District.

✚ *Dendrocalamus strictus* or stick bamboo forests of Thadugarh- Pinjore - Panchkula District.

✚ *Salvadora oleoides* forests of Nimbi - Duloth, Mgrh with *Capparis sepiara* and *Acacia senegal* in Mahendergarh District.

✚ *Commiphora wightii* Gugal (endangered) forests of Madhogarh - Mahendergarh.

✚ *Sterculia urens* and *Senegalia Senegal* forests in Khol of Rewari District.

✚ *Phoenix* forest of Faridabad.

✚ *Prosopis cineraria*, *Tamarix articulata* forests of Sohlabudin - Mahendergarh district.

✚ Shiwalik Hill forests of *Anogeissus latifolia*, *Lannea coromandelica*.

✚ *Acacia catechu* in Panchkula and Yamunanagar.

Presentation on the Status of Biodiversity in Aravallis



Sh. M.D. Sinha, IFS, PS to GoH, Tourism Department, Haryana described the status and conservation issues in Aravallis region of Haryana and focused on the fact that the conservation of habitat is much more important than conserving species. In the agriculture dominated state like Haryana, forest cover has decreased drastically due to intensive agricultural practices and ever increasing human population and urbanization. He told that in 6 Districts of South Haryana, essentially it is only the Aravallis which constitute actual forest cover. Take out the Aravallis (which includes the PLPA areas) and there is exactly 4310 Ha. of actual Block Forests and this constitutes only 0.5 % of the Geographical Area of these 6 Districts.

He further discussed about a small patch of forest in the heart of cyber city Gurugram which are natural lungs of the city and shared success story of development of Chakkarpur Ghata Wazirabad Bundh under PPP model with the help of local organizations, women and volunteers. Urban landscape management focusing on urban biodiversity is the need of the hour for Indian cities and this must be kept in mind while preparing SBSAP, he added.



Sr. no.	State Forest Profile	Area in Ha.
1.	Geographical Area of State	44 Lakh Ha.
2.	Block Forests	59654 Ha.
3.	Strip Forest	83765 Ha.
4	PLPA	29682 Ha.
5.	Others	2703 Ha.
6.	Total Recorded Forest Area	1.75 Lakh Ha. (3.9%)



Presentation on status of Animal Husbandry and Dairying



Dr. Virender Singh Rathee, Deputy Director, A H & D, Department, Haryana, delivered a detailed account on the present status of animal husbandry, milk and meat production, contribution in GDP of Haryana by the department, institutions, schemes and achievements. He told that Haryana is 2nd largest state in Per Capita milk availability, 5th largest Egg Producer State, 6th largest Poultry Meat Producer State in country. It contributes 41% in Agriculture and 6.1% in state GDP. He also discussed the breed of buffaloes, cattle, poultry and sheep with special emphasis on the famous buffalo breed *Murrah*. He highlighted, veterinary facilities in the state with Artificial Insemination (AI) program, vaccination program and other beneficial schemes for the dairy farmers. He further added that department and Lala Lajpat Rai University of Veterinary & Animal Sciences (LUVAS), Haryana are working to strengthen research facilities with aiming to conservation and development of indigenous breeds of livestock and their sperm storage facilities. He ensured the participation of the department for the preparation of HR-SBSAP.



Animal Husbandry and Dairying Data Statistics

Annual Milk Production in Haryana (2019-20) :	117.37 Lakh tones
Per Capita Milk Availability (2019 - 20) :	1142 gm /day
Daily milk production in Haryana (2019 - 20)	2.94 crore litres
Daily domestic consumption of milk in Haryana (40%)	1.18 crore litres
Surplus marketable milk (60%)	1.76 crore litres /day
Milk procurement in organized sector (25% of marketable surplus milk)	0.44 crore litres /day
Milk procurement in un-organized sector (75% of marketable surplus milk generally procured by Dudhias & Halwaies)	1.32 crore litres /day
Annual Egg Production (2019 - 20)	66123 lakh eggs
Annual Poultry Meat Production (2019 - 20)	5.40 lakh tonnes



Livestock in Haryana		
Sr.No.	Particular	Figures
1	Livestock Population (In Lakhs)	71.26
2	Buffalo Population (In Lakhs)	43.77
3	Cattle Population (In Lakhs)	19.32
4	Sheep (In Lakhs)	2.89
5	Goat (In Lakhs)	3.36
6	Pigs (In Lakhs)	1.08
7	Total Livestock (In Lakhs)	71.26
8	Poultry	428.21



Veterinary infrastructure in Haryana	
Govt. Veterinary Hospitals	1042
Govt. Veterinary Dispensaries	1818
Polyclinics	7
Semen Production Stations	3
Semen Banks	10
Govt. Livestock Farm	1
Bull Mother Farm	1
Pet Animal Medical Centre-cum-Teaching Hospital	1
Haryana Veterinary Vaccine Institute	1
Trainers Training Institute	1
Dist. Diagnostic Labs	22
Total	2876



Presentation on the status of Agriculture



Dr. Rohtash Singh, Additional Director, Agriculture, gave brief remarks on the status and schemes of the agriculture department for the welfare of the farmers in the state. He further discussed about the schemes like Pradhan Mantri Fasal Bima Yojana (PMFBY) on crop insurance, drip system in semi-arid regions and '*Mera Pani Meri Virasaat*' to motivate farmers to grow other crops instead of paddy crop for the conservation of water resources in the state. He explained about the different extension activities implemented by the department for farmers such as Awareness Camps, Kisan Gosthis, Kisan Melas, Training Camps, Exposure Visits, and Demonstrations/Minikits etc. Plant tissue culture facility by Chaudhary Charan Singh Haryana Agricultural University, Haryana facilitates conservation of indigenous crops, he added.

To a question regarding excessive use of herbicides, being a threat to agro biodiversity, he answered that the department has started low budget farming and Integrated Pest Management through its various KVK(s) to reach out and train farmers for better yield.



Haryana : Agriculture Scenario	
Cultivated Area	3.78 million Ha
Irrigated Area	3.26 million Ha
Total Gross Production	32.57 million MT
Agriculture Households	1.62 million
Average Land per Farming Family	2.2 Ha
50% Farmer's Land Holding	< 1Ha

Chairman of this session
Sh. V.S. Tanwar, IFS PCCF
(HoFF), Haryana gave
 comprehensive remarks on
 conservation issues of biodiversity,
 medicinal plant cultivation and use
 of modern techniques for enhancing
 productivity of agriculture.

 **WILDLIFE INSTITUTE OF INDIA**
WORKSHOP
for
**Formulation of Haryana State Biodiversity
Strategy & Action Plan (HS-SASAP)**
Wildlife Institute of India, Dehradun
30th July 2021
Organized by
Wildlife Institute of India, Dehradun
Haryana State Biodiversity Board



SESSION - II

- Chairman of the session** : Sh. Jagdish Chander, IFS, PCCF (WL), Haryana
- Rapporteur** : Mr. Vikram Delu
- Agenda** : Input on HR-SBSAP - Status of different Line Departments/Organizations/TSG

Input on HR-SBSAP	Speakers
Status of Environment in Haryana	Dr. R. K. Chauhan, Joint Director, Environment Department
Status of BMC(s) in Haryana	Dr. S.S. Grewal, President, SPACE
Status of Fisheries in Haryana	Dr. Ishwar Singh, Deputy Director, Fisheries Department
Status of Horticulture in Haryana	Sh. Manoj Kundu Joint Director, Horticulture Department
Wrap-up: Open Discussion & Closing Remarks	Sh. Jagdish Chander, IFS Sh. Vineet Kumar Garg, IFS
Vote of Thanks	Sh. Gurmeet Singh, SO, HSBB



Presentation on the Biodiversity and Climate Change



Dr. R.K. Chauhan, Joint Director, Department of Environment & Climate Change, Haryana, discussed a systematic plan to formulate state biodiversity plan and highlighted on the current progress of State Action Plan on Climate Change. He further added that State Government, Haryana had constituted the State Level Steering Committee (SLSC) and State Advisory Group (SAG) for the preparation, monitoring and implementation of State Action Plan on Climate Change under the Chairmanship of Chief Secretary.

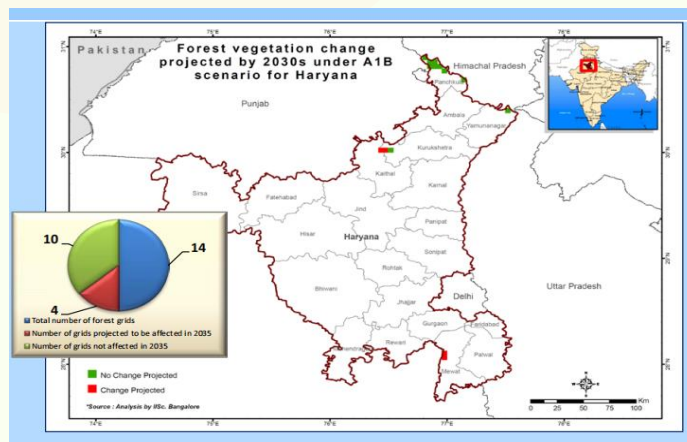
Dr. Chauhan said that biodiversity is threatened by climate change, but proper management of biodiversity can reduce the impacts of climate change and highlighted the drivers of change like land- use changes, expansion of urban area, deforestation for agriculture and livestock, species introduction or removal, weed invasion, resource consumption, climate change and natural physical disasters. He stressed that these issues must be considered while preparing state biodiversity plan.

He suggested to constitute an interdepartmental steering committee on HR-SBSAP and to include State Wetland Authority in it. He further added that integrating biodiversity with climate change should be a focus area for better conservation strategies. He also discussed about City Biodiversity Index and suggested to add this concept while preparing HR-SBSAP.



State Action Plan on Climate Change

- ✚ State Government, Haryana had constituted the State Level Steering Committee (SLSC) and State Advisory Group (SAG) for the preparation, monitoring and implementation of State Action Plan on Climate Change under the Chairmanship of Chief Secretary.
- ✚ State Steering Committee and National Steering Committee on Climate Change approved state Action Plan on Climate Change for Haryana.



Action Plan of Forest Sector in SAPCC

Forest vegetation change projected by 2035 and 2085 under A1B scenario in Haryana (SAPCC, Haryana)

Forest Sector	Action Plan
Sub Mission 1: Enhancing quality of forest cover and improving ecosystem services.	<ol style="list-style-type: none"> 1. Moderately dense forest cover, but showing degradation. 2. Eco- restoration of degraded open forests. 3. Restoration of Grasslands.
Sub- mission 2: Enhancing tree cover in Urban and Peri - urban areas.	<ol style="list-style-type: none"> 1. Avenue, city forests, municipal parks, gardens, households, institutional lands, etc.
Sub Mission 3: Agro - forestry and Social Forestry (increasing biomass and creating carbon sink).	<ol style="list-style-type: none"> 1. Agro forestry. 2. Community and Panchayat land are under tree cover. 3. Corridors.

Presentation on status of BMC(s) in Haryana



Dr. S.S. Grewal, Director, SPACE (TSG), gave detailed remarks on the strength and achievements of Technical Support Group engaged by HSBB for training, awareness generation of Biodiversity Management Committees (BMCs) and preparation of People's Biodiversity Registers (PBRs). He also highlighted the difficulties arisen during the constitution of BMC(s) and preparation of PBRs and suggested that coordination among all the line departments is a prerequisite for preparation of such Action Plans.

Dr. Grewal described detailed procedure for constituting BMC(s) as: message was conveyed through the Gram Panchayat Sarpanch for holding Meeting. The Meeting was held under the Chairmanship of Gram Panchayat Sarpanch where Gram Panchayat members, prominent farmers, local leaders, teachers were invited for discussions on the importance of Biodiversity Conservation. After discussions, Biodiversity Management Committee was constituted with Gram Panchayat Pradhan as President and other prominent persons as members.

He highlighted 3 possible reasons for the loss of biodiversity in the Shiwaliks i.e.,

(i) Hadbandi/ Acrebandi of land (ii) Irrigation in the region (iii) Introduction of Eucalyptus and poplar. Further, he added that crop damage due to wildlife is an issue of concern and it should be managed sustainably. He also highlighted the negative impact of Lantana plant and raised concern over ever decreasing ground water level in foothill of Shiwaliks and Aravallis.



Methodology of forming BMC and filling PBR

- ✚ A message was conveyed through the Gram Panchayat Sarpanch for holding the General House Meeting on a convenient date.
- ✚ The General House Meeting was held under the Chairmanship of Gram Panchayat Sarpanch mostly at Panchayat Ghar where members, prominent farmers, local leaders, teachers were invited for discussions on the importance of Biodiversity Conservation.
- ✚ The importance of Biodiversity Conservation and the need of active participation of Gram Panchayats and knowledge holders were deliberated in detail.
- ✚ After discussions, a working group / Biodiversity Management Committee was constituted with Gram Panchayat Pradhan as President and other prominent persons as members.

Progress Report of Yamunanagar district by SPACE Group to formulate BMC(s)

S. No	Activity	Achieved
1	Total No. of GPs	472
2	GPs Visited	472
3	Number of BMC meeting conducted	472
4	Number of BMC reformed	472
5	No. of bank accounts opened for BMC	472
6	Total No of PBRs computerized	256



Dr. Sangeeta Nehra, Director, AYUSH, provided her views on the importance of cultivation and conservation of medicinal plants in rural areas. She also gave idea of plantation of Panchvati and formulation of awareness and capacity building modules/programs for citizens. She suggested supporting the cultivation of medicinal plants by adopting Good Agricultural Practices (GAPs) with aiding the establishment of clusters through the convergence of cultivation, value addition, warehousing, marketing and developing infrastructures for budding entrepreneurs/farmers/NGOs. She highlighted the importance of Ayurveda and its traditional knowledge for the current health scenario of the world and stressed on wide implementation of this ancient science throughout the globe.

Genetic variability in Roheda (*Tecomella undulata*)



AYUSH Department Haryana: At a glance

- ✚ AYUSH Department Haryana is providing Medical Relief, Medical Education and Health Awareness through AYUSH to the masses particularly in the rural areas of Haryana State.
- ✚ For this purpose 4 Ayurvedic Hospitals, 1 Unani Hospital, 6 Ayurvedic Prathmic Swasthya Kendras, 513 Ayurvedic Dispensaries, 19 Unani Dispensaries, 25 Homoeopathic Dispensaries and 1 Institute of Indian Systems of Medicine and Research (IISM&R), Panchkula are functioning including 33 AYUSH dispensaries (29 Ayurvedic, 2 Unani & 2 Homeopathic) and 3 Specialty Clinics of AYUSH (Gurgaon, Hisar, Ambala) & 1 Specialized Therapy Centre (Jind) have been relocated and upgraded as AYUSH Wing in 2009-10.
- ✚ 21 AYUSH Wings at District Hospitals & 98 AYUSH IPD (Polyclinic) at CHCs, 109 AYUSH OPD at PHCs, are providing medical relief to the masses and also participation in National Health Programme in the Haryana State.
- ✚ Establishment of Govt. Homeopathic Dispensary at Village Barwa at Kurushetra and Garanpura at Bhiwani.
- ✚ 6th International Yoga Day was celebrated on 21 June 2020 at State/District/Block Level.

Presentation on the status of Fisheries



Dr. Ishwar Singh, Dy. Director, Fisheries Department, Haryana, gave detailed presentation on the status and achievements of Fisheries sector. He also focused on the vulnerability of pond ecosystem in villages due to anthropogenic activities in this sector. He said that last study on fish biodiversity of Haryana state was carried out during 2011 to 2014. A decline in fish diversity has been recorded from 82 species in 2004 to 59 species in the year 2014. Out of 59 fish species, 2 are endangered, 11 vulnerable, 28 have lower risk of threat, 8 exotic and 4 fish species have lower risk of least concern while conservation status of 6 species were unknown. He also admitted that legislation is very poor for fisheries in India to deal with illegal activities in this sector. Dr. Singh added that no regular fish biodiversity survey has been conducted in the state so far. He also suggested that periodic ichthyological survey should be conducted to monitor status of fish diversity. He ensured full contribution of his department in future schedule for the preparation of HR-SBSAP.

Fish Culture area and production in Haryana			
Sr. No.	Year	Area under Fish Culture (Ha.)	Fish Production (In Tones)
1	2014-15	16993.65	100677.35
2	2015-16	17800.00	121000.00
3	2016-17	18975.00	144210.00
4	2017-18	18955.00	190000.00
5	2018-19	17935.00	184114.40
6	2019-20	17246.00	173000.00
7	2020-21	18207.00	203160.00



Fish Resources of Haryana		
Sr. No.	Item	Unit
1.	No. of Ponds	11800.00
2.	No. of Farmers	16393.00
3.	Saline/Water logged Area (Ha)	145054.00
4.	Critically Saline Area (Ha)	20000.00
5.	Rivers and Tributaries (Km)	5000.00
6.	Govt. Fish Seed Farms No.	15
7.	Private Fish Hatcheries No.	16
8.	Research & Training Institutes	1
9.	Training sub Centre	1
10.	Fish Market	4
11.	Field Offices	114



Presentation on status of Horticulture



Dr. Manoj Kumar, Joint Director, Horticulture Department, Haryana, gave a presentation on the status and growth of the horticulture department since it came into existence. He described various Centre of Excellence, Plant Tissue Culture units, CSTF, IBDC, and FPO(s) working in different districts in the state to strengthen horticulture facilities and capacity building. He stated that Haryana has four Centres of Excellence (CoE) under Indo Israel collaboration namely CoE for Vegetables, Gharaunda (Karnal), CoE for Fruits, Mangiana (Sirsa), CoE for Sub Tropical Fruits, Ladwa (Kurukshetra) and Integrated Beekeeping Development Centre, Ramnagar (Kurukshetra). Keeping in view the decreasing holdings and increasing expenditure on agriculture, the government has decided to establish 5th CoE at Gignau village in Bhiwani with an aim to double the income of farmers. He added that these Centres of Excellence are among the best centres in India to promote the farming of high pricing fruits with the help of sophisticated technological methods. He ensured full contribution of his department while preparing HR-SBSAP.



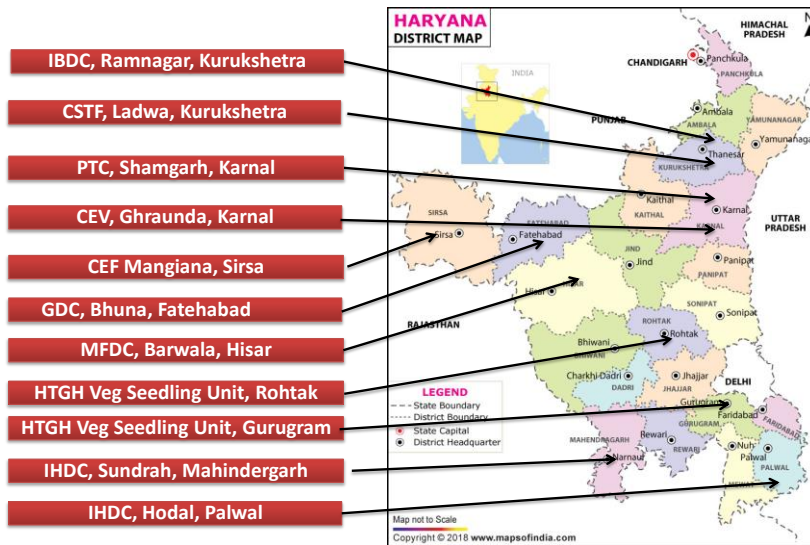
Productivity Enhancement: Focus Area of Horticulture in Haryana

Productivity enhancement, Diversification and Nutritional Security through holistic horticulture development as indicated in table below:

Parameters	Present Status(upto 2019-2020)	Projections(2030)
Area (lac Ha.)	4.78	9.77
Production (lac MT)	80.68	207.42
Productivity (MT/ Ha.): Fruits	20.20	22.00
Productivity (MT/ Ha.): Vegetables	16.96	20.00



Centre of Excellence (Horticulture) Projects Locations



Chairman of this session
Sh. Jagdish Chander, IFS, PCCF
(WL), Haryana gave a
comprehensive remarks regarding
various perspectives and issues
related to biodiversity and its
sustainable utilization.

Based on the deliberations held in this Workshop, it was decided that 4 more such Workshops will be held at Regional level (at Forest Circle H.Q) and a detailed document will be prepared by involving all relevant stakeholders by the end of March, 2022 to guide the state.



List of participants attended the workshop - HR-SBSAP

Sr. No.	Name of Officer(s)	Designation	Name of Department/Organization
1.	Dr. G. Anupama, IAS	Principal Secretary to GoH	Forest & Wildlife Department
2.	Sh. V. S. Tanwar, IFS	PCCF (HoFF)	Forest Department, Haryana
3.	Sh. Jagdish Chander, IFS	PCCF & CWLW	Forest Department, Haryana
4.	Sh. Vineet Kumar Garg, IFS	Chairman	Haryana State Biodiversity Board
5.	Sh. Pankaj Goel, IFS	CEO CAMPA	Forest Department, Haryana
6.	Sh. M. D. Sinha, IFS	Principal Secretary to GoH	Tourism Department, Haryana
7.	Sh. G.Raman, IFS	CCF (Development)	Forest Department, Haryana
8.	Sh. Suresh Dalal, IFS	Managing Director	Haryana Forest Development Corporation
9.	Sh. K.C. Meena, IFS	APCCF (Budget & Planning)	Forest & Wildlife Department
10.	Sh. Ghanshyam Shukla, IFS	APCCF (Forestry)	Forest Department, Haryana
11.	Sh. D. Hembram, IFS	APCCF (FC)	Forest Department, Haryana
12.	Dr. T. P. Singh, IFS	Secretary to GoH	Forest & Wildlife Department
13.	Ms. Niveditha Bojarajan, IFS	CF (Publicity & Education)	Forest Department, Haryana
14.	Sh. R.P. Gupta, IAS	Director	Environment Department, Haryana
15.	Dr. R. K. Chauhan	Joint Director	Environment & Climate Change Department
16.	Dr. Sangeeta Nehra	Director, AYUSH	AYUSH Department, Haryana



Sr. No.	Name of Officer(s)	Designation	Name of Department/Organization
17.	Dr. Ishwar Singh	Deputy Director, Fisheries	Fisheries Department, Haryana
18.	Dr. S.S. Grewal	President, SPACE	SPACE (NGO)
19.	Dr. Virender Singh Rathi	Deputy Director	Animal Husbandry & Dairying Department
20.	Dr. Manoj Kumar	Joint Director	Horticulture Department, Haryana
21.	Dr. Rohtash Singh	Additional Director	Agriculture & Farmers Welfare Department, Haryana
22.	Dr. Ranjeet Kaur	Technical Expert	Environment & Climate Change Department
23.	Smt. Kulbir Kaur	Assistant Director	Development & Panchayat Department
24.	Dr. V.P. Uniyal	Scientist- G	Wildlife Institute of India (WII), Dehradun
25.	Dr. Amit Kumar	Scientist- C	Wildlife Institute of India (WII), Dehradun
26.	Dr. Mona Chauhan	Senior Research Biologist	Wildlife Institute of India (WII), Dehradun
27.	Mr. Vikram Delu	Senior Research Biologist	Wildlife Institute of India (WII), Dehradun
28.	Ms. Natasha Chand	Project Intern	Wildlife Institute of India (WII), Dehradun
29.	Sh. Gurmeet Singh	Scientific Officer	HSSB, Panchkula

