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Fwd: Report of Neori GP

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Dear Sir,

I am sending you a soft copy of the report of Neori GP as an attachment

[Final report Neori GP.pdf](#)

Thanks and best regards

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GRAM PANCHAYAT SPATIAL DEVELOPMENT PLAN,

NEORI GRAM PANCHAYAT, RANCHI DISTRICT

for

**Ministry of Panchayati Raj,
Government of India**

SEPTEMBER 2020



DEPARTMENT OF ARCHITECTURE

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

**GRAM PANCHAYAT
SPATIAL DEVELOPMENT
PLAN,
NEORI GRAM PANCHAYAT ,
RANCHI DISTRICT**

**for
Ministry of Panchayati Raj,
Government of India**

OCTOBER 2020



**DEPARTMENT OF ARCHITECTURE
BIRLA INSTITUTE OF TECHNOLOGY,
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Study Team

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CHAPTER 1: INTRODUCTION & REGIONAL LINKAGE

1.1 INTRODUCTION

Panchayati Raj Institutions (PRIs) are rural local governments entrusted with the responsibilities to prepare plan and implement schemes for economic development and social justice in rural India. The Directive Principles of State Policy contained in the Constitution of India provides for the Panchayati Raj System. Following the 73rd Amendment of the Constitution, (73rd CAA), 1992 which came in to force on 24th April 1993, the three tier Panchayati Raj Institutional (PRI) system was institutionalized through Part IX of the Constitution. Key features of this three tier basic framework, includes: three tiers of panchayats (Gram Panchayat, Intermediate Panchayat, District Panchayat), Gram Sabha, five year term, reservation for SC, ST and Women, State Election Commission, State Finance Commission. The States are required to entrust these bodies with such powers, functions and responsibilities so as to enable these institutions function as institutions of self-government. In particular, the PRIs are required to prepare plans and implement schemes for economic development and social justice including those enumerated in the Eleventh Schedule of the Constitution.

1.2 INTEGRATING SPATIAL PLANNING AND GRAM PANCHAYAT DEVELOPMENT PLAN

As per the Census, 2011, rural areas in India cover 94% of land and 69% of population while urban area holds only 6% of land and 31% of its population. The Father of the Nation, Mahatma Gandhi, had rightly suggested that independence must begin at the bottom, and that every village ought to be a republic or panchayat with the right authority and resources to realize its full potential for economic and social development. There are 6.4 lakh villages in the country. Though the problems in villages don't seem so intense in comparison to cities they cannot be ignored. Rapid rate of urbanization and growth of population in cities, the out migration of rural population for employment, disinterest of farmers towards agriculture, and changing character of villages in the vicinity of cities and declining rural poverty are some of the inevitable occurrences that India as a country is witnessing today which is very alarming.

A review of the prominent pre-independence rural development initiatives in India reveals that they were sector specific and community centric. Also, Post-

independence various rural development initiatives were taken up by Government of India during each of the Five Year Plan periods. The 73rd amendment to the constitution has given way to democracy in rural areas. Taking it further ahead, the XIV Finance Commission award created an opportunity for responsive local governance at institutional level of the Gram Panchayat. The guidelines issued by Ministry of Finance instruct that proper plans i.e. Gram Panchayat Development Plan (GPDP) is to be prepared by the Gram Panchayat for the basic services within the functions devolved to them as per State laws. These plans have to be participatory plans involving the community, particularly the Gram Sabha, in the formulation of priorities and projects and will also have to ensure the mandates of social justice and economic development mentioned in Article 243G.

The GPDP is a comprehensive plan for effective development of a village panchayat area. GPDP aims to expand governing space of a village panchayat and to empower it as a development institution. GPDP is generally aimed at:

- Improving basic amenities in a village panchayat. This includes sanitation, connectivity, drinking water, storm water drainage, burial grounds, etc.
- Improving standard of living of poor families in a panchayat area.
- Eradication of absolute and relative poverty through convergence of government programmes and policies.
- Prevention and control of communicable diseases with the support of the health department.
- Providing social security to all sections of marginalized communities.
- Effective management of natural resources and sustainable development of livelihoods.
- Conserving soil and water.
- Ensuring 100 per cent enrolment in schools.
- Ensuring gender equality and equity in all aspects of development.
- Development of governing capability of village panchayats.
- Strengthening a gram sabha and improving the quality of a gram sabha.

GPDP has a clear component addressing vulnerabilities of poor and marginalized people and their livelihood opportunities through an integrated poverty reduction plan. It allows for different local models and innovations that are locally appropriate and cost effective. It helps to transform GPs into institutions of local self-governance and to cement the GP's identity as development institution. Overall the process of participatory planning for a Gram Panchayat Development Plan is expected to improve service delivery, enhance citizenship, motivate volunteerism, create space for

an alliance of people’s institutions and groups, and improve governance at the local level. The above contents mentioned only refer to the sectoral development of the villages/Gram Panchayats, but the spatial dimension is not incorporated in these programmes. Today, the flagship rural programmes of Government of India are utilizing IT and geo-spatial technology and have in-built convergence mechanisms; however the pressing need is to integrate these into a spatial planning framework that will take into consideration the dynamic settlement characteristics of India’s villages.

Contents of Gram Panchayat Spatial Development Plan

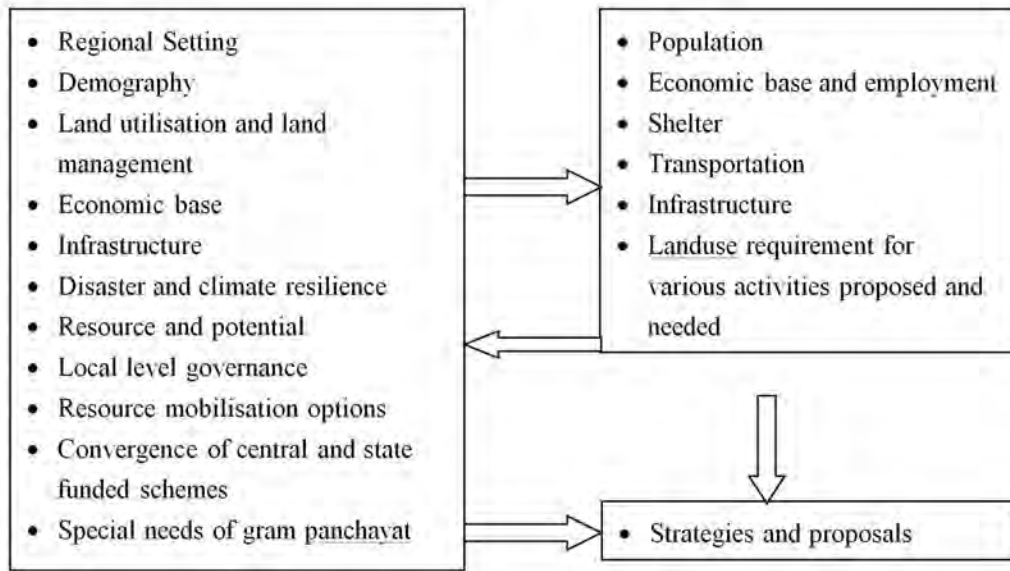


Fig. 1.1: Contents of Gram Panchayat Spatial Development Plan

Spatial plans are prepared for cities and towns popularly known as Master Plans and Development Plans and notified under the respective State Town and Country Planning Acts and Urban Development Acts. These Acts in their title include *Country Planning*, but in actual terms, there is no provision of preparing Master/Development Plans for *countryside* village, nor has much attention been given by the State Governments to prepare the same. There has been no serious attempt to prepare Spatial Plans for rural areas and taking into account the vast rural population of the country who have been deprived of the access to basic facilities. Herein lays the importance of preparing a template for a spatially integrated version of the GPDP, namely the GPSDP (Gram Panchayat Spatial Development Plan). Fig 1.1 presents the contents of Gram Panchayat Spatial Development Plan.

Further, the situation during the COVID-19 pandemic, the lockdown and the resultant ‘reverse migration’ of lakhs of daily wage labours, employed mainly in the informal sector; pose a huge socio-economic problem and challenge to government and administration. So the major challenge now is to provide gainful employment to these reverse migrants in the rural areas, provide them better infrastructure to grow and sustain.

Many governments across the country have taken various stop-gap initiatives like leverage MGNREGA to provide congenial living environment to these people but long term planning in the need of the hour. Pockets, where tribal communities predominate, are particularly the most vulnerable in terms of food and nutritional security and require special attention. With the Government of India in these trying times under our Hon’ble Prime Minister Shri Narendra Modi launching ‘Atmanirbhar Bharat’ to address the situation, the seeds of it must be planted at the grass-root level. The proposed Gram Panchayat Spatial Development Plan (GPSDP) has been conceived to address the issue and make the GP a small hotspot for future migration and better work and living opportunities. By virtue of its location on NH the GPs have huge potential for economic development in near future. Proper planning of the GP will allow for rational and sustainable use of land catering to various needs, including social, economic, developmental and environmental needs. Hence the Panchayat needs to be capacitated to take over the larger canvas of local economic development in all spheres amongst their constituent villages so as to elevate them to level of a growth center in near future.

1.3 MISSION OF GRAM PANCHAYAT SPATIAL DEVELOPMENT PLAN (GPSDP)

Mission of the GPSDP is to:

“To build and sustain a Panchayat of having vibrant economy and diversity through strong partnership with stakeholders to provide better Quality of Life.”

1.4 VISION OF GPSDP

The vision of the Spatial Planning initiative is to create

A rural base of diverse, vibrant, and inclusive economy;

A panchayat characterized by sustainable infrastructure and resource management;

A congenial place for living and growth with affordable homes and neighbourhoods;

A panchayat having happy and healthy residents;

An area of endearing character and local identity.

1.5 STUDY OBJECTIVES

The study objectives thus include:

Laying down broad policies and directions for growth in the desired direction so as to transform the GP into a Growth node

Determining the hierarchy of roads and access ways.

Establishing the zoning of land use with specific zoning for lands abutting to NH.

Determining the standards for common facilities for education, health & social needs of the resident population and planning for provision of the same;

Identifying the social and physical infrastructure requirements of the GP and planning for the same in convergence with Central and State initiatives and schemes.

Developing a mechanism for sustainable developments that harmonize both the needs of the environment and of development, as well as guidelines for such developments.

Identifying the requirement of investments, finance mobilization and avenues for economic revitalization of the area.

Suggesting policies for integrating the neighbouring cities, town and villages so that a holistic integrated development can happen on ground.

1.6 SCOPE OF WORK

The Gram Panchayat Spatial Development Plan/Master Plan will be primarily planning for Agriculture and Farms, residential purposes, local markets and commercial, Institutional area (for Banks, Post Office, Anganwadis, PHC, Schools etc), Parks and Gardens, Water bodies, Industries (Agro-based or MSMEs), and for making Resto or Service areas or Lay-by areas along the Highway. The salient parts of the Gram Panchayat Spatial Development Plan / Master Plan include:

Preparation of Vision Statement

Current state assessment & gap analysis in term of socio-economic factors, social and physical infrastructure;

Map preparation and spatial analysis with respect to housing typology, household income, road network, infrastructure and land holding
Spatial indices including socio-demographic indicators, housing, environmental determinants, infrastructural attributes and natural resource management;
Analysis of the economic situation of the Panchayat and identification of drivers of economy, proposals for economic revitalization of the area;
Investment and implementation planning for proposed activities and structures;



Fig. 1.2: Panchayat Bhawan of Neori Gram Panchayat

(Source: author)

1.7 METHODOLOGY FOR THE PREPARATION OF GPSDP OF NEORI GRAM PANCHAYAT

The gram Panchayat of, Neori in Kanke Community Development (C.D.) Block of Ranchi district in the State of Jharkhand was selected and considered for Gram Panchayat Spatial Development Plan as it exemplifies a typical peri urban character. The proximity of the gram panchayat to the state capital Ranchi, its inclusion in the planning area of Ranchi as per the notified Master Plan of Ranchi 2037, and its location along the National Highway 33, has propelled significant development in the gram panchayat making it prone to intense transformation due to the significant and

fast approaching urbanization. Fig 1.2 shows an image of the Panchayat Bhawan of Neori Gram Panchayat.

The GPSDP will incorporate the spatial layers corresponding to attributes like physical features, land holding and land ownership of revenue lands, land use in Abadi area, overall physical and social infrastructure, built environment parameters like housing typology, building height, building age, etc.; economic parameters like landholding wise cropping pattern, etc. It will also integrate the non-spatial attributes like socio-economic condition, skill level, governance dimensions, etc. The outcome is in the form of zoning system and prescriptions for rural settlements. The study was therefore intensively based on primary survey and Census data 2011. Spatial and Non Spatial data was collected by study team comprising of faculty members of BIT Mesra, Ranchi who made necessary number of visits to the gram panchayats in question.

Fig 1.3 captures the interaction of the planning experts from BIT Mesra, Ranchi with the Panchayat Samiti Members and the youth of the village who were engaged in household survey activities.



The data related to demography was procured from Census 2011 but rest of the data regarding Land use, socio-economic condition of population, services, infrastructure, housing condition etc. was collected on ground. During the visit meetings were conducted with the Mukhiya, Gram Samiti members and villagers in subgroups of women, children and youth. Visit of NIRD & PR official too took place for the appraisal of the project during surveys. Comments and expectations of the focused group discussion were noted to be considered during the proposal. The data collected

reflects interest of residents as most of it was procured through open ended personal interviews, questionnaire based interviews, focus group discussion etc. Considering spatial emphasis of the project pertinent spatial data related to land use, cropping pattern, infrastructure, housing etc. was collected on ground and then transferred to map through GIS. Maps depicting combined indices have also been produced for rational approach.

Gram Panchayat Development Plan preparation exercise would thus involve the study of:

- Regional setting
- Demography
- Land Utilisation and Land management
- Economic Base
- Infrastructure
- Disaster and Climate Resilience
- Resources and Potential
- Local level governance
- Resource Mobilisation options
- Convergence of Central/State funded schemes
- Special needs of Gram Panchayat

Rural Disaster Resilience Strategy and Plan

- Resilience Assessment
- Building a resilience plan
- Plan Implementation

1.8 PANCHAYATI RAJ LEGISLATIONS IN JHARKHAND (JHARKHAND PANCHAYATI ACT, 2001)

This section presents about the Panchayati Raj Legislation of Jharkhand. The State Government of Jharkhand enacted the Jharkhand Panchayat Raj (JPR) Act, 2001 to establish a three-tier PRI system in the State and framed Jharkhand Panchayat Raj (Budget and Accounts) Rules, 2010, to ensure smooth functioning of PRIs. The JPR Act, 2001 was enacted in accordance with the provisions of the 73rd amendment to the Constitution and that of the Panchayat Extension to the Scheduled Areas Act (PESA) 1996 which is applicable to this state.

Following the recommendations of the Bhuria Committee, the Centre enacted PESA on 24th December 1996. PESA grants special status to Adivasis in scheduled areas. Under PESA, the village council is given the right to intervene in the process of appropriation of land and Clause 4. (m) of PESA endows the Gram Sabha with ‘the ownership of minor forest produces’. Also all the positions at the three levels in the Panchayat system, the posts of Mukhia, President in Panchayat Samiti and Chairman in Zila Parishad, are reserved for tribal. Since there are 32 tribal groups in Jharkhand and nine primitive tribal groups which together comprise 26 per cent of the population some districts are listed under schedule V. Thus, under PESA, 12 out of 24 districts (113 blocks in 24 districts) have been identified as scheduled areas which enjoy a minimum of 60% reservation for tribal in overall seats and full reservation, and Gram Sabhas take on more importance than Gram Panchayats and become coordinating bodies in Scheduled Areas. The following districts, blocks and panchayats of the state are completely under PESA: Ranchi, Lohardaga, Gumla, Simdega, Latehar, East - Singhbhum, West - Singhbhum, Saraikela - Kharsawan block, Sahebganj, Dumka, Pakur, Jamtara, Palamu - Rabda and Bakoriya Panchayats of Satbarwa block, Godda-Sunderpahari and Boarijor blocks.

1.9 PANCHAYATI RAJ INSTITUTIONAL AND ORGANISATIONAL SET-UP IN JHARKHAND AND THE STUDY AREA OF NEORI GRAM PANCHAYAT

The state of Jharkhand with an area of 74, 677 sq. km, was constituted as an independent state on 15 November 2000 by carving out portions from southern Bihar. Situated in east India, the state shares its borders with Bihar in the north, West Bengal, Uttar Pradesh, and Chhattisgarh in the east, and Odisha in the south. Jharkhand has abundant natural resources, a large part of which are still untapped. It is the largest producer of coal in the country and a rich source for other minerals. Almost 30 per cent (29.61 per cent) of the state’s landmass is under forest cover, accounting for 3.1 per cent of the forests in the country.

Jharkhand is the thirteenth largest state in terms of population, and has population of 3.3 crore, which is a 22.42 percent increase from figure of 2.69 Crore persons as per 2001 Census.

Out of total population of Jharkhand, 75.95% people live in rural regions. The total figure of population living in rural areas is 25055073 of which 12776486 are males and while remaining 12278587 are females reflecting a Sex Ratio of 961 females per

1000 males in rural regions of Jharkhand. The comparative demographic and developmental picture of the State is presented in table 1.1 and fig 1.4.

Table 1.1: Important Statistics of Jharkhand State

Particulars	State	Rural
Population Size	32988134	25055073
Population (Male)	16930315	12776486
Population (Female)	16057819	12278587
Sex Ratio	949	961
Literacy Rate (7+ Years) (per cent)	66.4	61.1
Literacy Rate (Female) (7+ Years) (per cent)	55.4	48.9

(Source: Census 2011)

The Panchayati Raj Department (PRD) in Jharkhand came into existence in 1999. It mainly interacts with two ministries at the central level; the Ministry of Rural Development (MoRD) and the Ministry of Panchayati Raj (MoPR). It is considered an important department not only because of the quantum of funds that it handles but also because its activities have a direct bearing on rural development and poverty alleviation. It is also the nodal department through which an endeavor is made for grassroots democracy and decentralization of power through PRIs. PRD implements centrally sponsored schemes like the Backward Region Grant Fund (BRGF), Panchayat Mahila Evam Yuva Shakti Abhiyan (PMEYSA), and RGSY. PRD also plans and implements schemes from the state budget which include construction of Panchayat Bhawans, capacity building, special grant/prizes for PRIs, and strengthening regional offices.

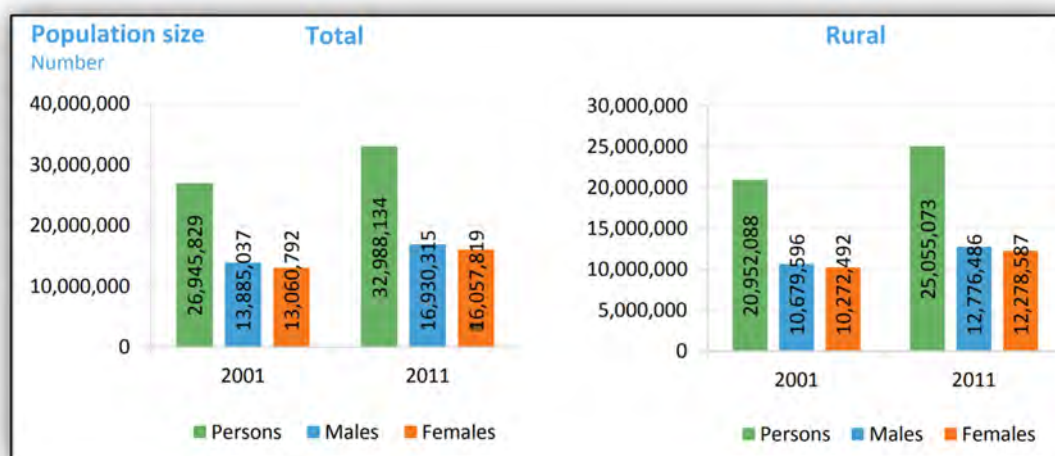


Fig. 1.4: Demographic and developmental picture of Jharkhand

(Source: https://censusindia.gov.in/2011census/censusinfodashboard/stock/profiles/en/IND020_Jharkhand.pdf)

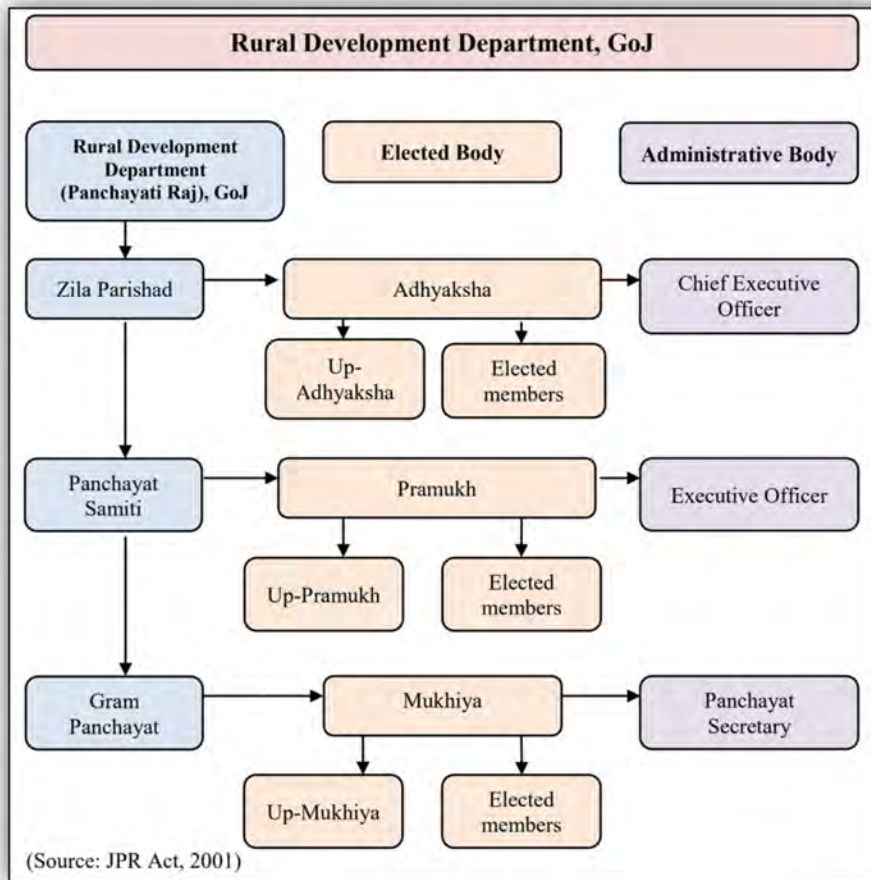


Fig. 1.5: Organizational Structure of Rural Development Department, GoJ

Source: https://cag.gov.in/sites/default/files/audit_report_files/Chapter_1_An_Overview_Of_The_Functioning%2C_Accountability_Mechanism_And_Financial_Reporting_Issues_Of_Panchayati_Raj_Institutions_of_Annual_Technic.pdf

The JPR Act, 2001 and Rules/byelaws made thereunder therefore provide for elected body also in addition to the Executive/Administrative body to deliver the mandate and manage administration of PRIs. Therefore, the Deputy Development Commissioner cum Chief Executive Officer (CEO) or the *Adhyaksha* is the executive head at the Zilla Parishad (ZP) or the district level. The Block Development Officer cum Executive Officer (EO) or the *Pramukh*, is the executive heads of the Panchayat Samiti (PS) at the block level, and the Panchayat Secretary or the *Mukhia* is in-charge of the office of the Gram Panchayat (GP).

The first elections of the PRIs in Jharkhand State were held in December 2010 followed by the second in December 2015. The organizational structure of PRIs is depicted in Fig 1.5 below.

In Jharkhand the PRIs at the district, block and village level are the Zilla Panchayat (ZP), Panchayat Samiti (PS), and the Gram Panchayat (GP) respectively. In 1991, there were only 13 districts which increased to 18 districts in 2001. Thus in 2001, there were 18 districts and 210 C.D. Blocks in Jharkhand, that increased to 24 districts in 2011. The Census of India 2011 in Jharkhand state was undertaken on the basis of 24 districts and 5 divisions of the state. Table 1.2 presents the administrative setup and Panchayati Raj Institutions present in India and Jharkhand.

Table 1.2: Administrative Setup and Panchayati Raj Institutions present in India and Jharkhand.

India			Jharkhand		
	2001	2011		2001	2011
State&UTs	35	35	Divisions	05	05
Districts	593	640	Districts/ ZilaParishads	18	24
Sub-Districts	5470	5924	Sub-Districts/ C.D. Blocks/ (Panchayat Samitis)	210	260
Town	5161	7936	Town	152	228
Gram Panchayats	6374	255547	Gram Panchayats/ (Gram Panchayats)	4118	4359
Total No. of Villages	638588	6.41 Lakh	Total No. of Villages	32615	32394
Inhabited Villages	593732	640930	Inhabited Villages	29354	29,492
Uninhabited Villages	44856		Uninhabited Villages	3261	2,902

Source: Report on Status of Panchayati Raj- State Profile – Jharkhand

Thus, as per the Census 2011, there are 4689 units of PRIs in Jharkhand which includes 24 Zila Parishads (ZPs) at the district level, 263 Panchayat Samitis (PSs) at the block level and 4402 Gram Panchayats (GPs) at the village level. A summary of PRIs formed after the 2015 elections, is given in Table 1.3. Therefore, the Panchayati Raj Department and institutions in the State of Jharkhand implement the centrally sponsored schemes like the Backward Region Grant Fund (BRGF), Panchayat Mahila Evam Yuva Shakti Abhiyan (PMEYSA), and RGSY.

Table 1.3: Panchayati Raj Institutions in Jharkhand with number of Elected Representatives

Panchayati Institutions	Total No. of PRIs	Number of Elected Representatives
Gram Panchayats	4402	43475
PanchayatSamitis	263	4,384
ZillaParishads	24	349

Source: Report on Status of Panchayati Raj- State Profile – Jharkhand

1.9.1 ADMINISTRATIVE SETUP AND PRIS IN RANCHI DISTRICT AND THE STUDY AREA

Consequent upon the creation of Jharkhand state on 15th November 2000, Ranchi got the privilege of becoming the capital of the state. As a result, the destiny of the district of Ranchi changed drastically and all round development started to take place. Once upon a time Ranchi also used to be the summer capital of erstwhile Bihar state.

The district of Ranchi is one of the units comprising the south Chotanagpur division and forms the central part of it. The jurisdiction of the district has undergone many changes during the last two decades because of creation of new districts such as Loardaga, Gumla and recently Simdega bifurcating old Ranchi district. The district is bounded on the north by Ramgarh district, on the south by the district of Khunti, on the east by Purulia district in West Bengal and Saraikela-Kharsawan district and on the west by the districts of Gumla, Lohardaga and Latehar. The district of Ranchi at present consists of 2 subdivisions viz., Ranchi and Bundu and 18 Community Development Blocks, viz., Burmu, Mandar, Chanho, Bero, Lapung, Ratu, Namkum, Kanke, Ormanjhi, Angara, Khelari, Nagri, Itki, Silli, Rahe, Sonahatu, Tamar-I, Bundu. Presently there are 15 towns in the district. Ranchi (M.Corp.) is the principal town and the headquarters of the district as also of the South Chotanagpur division as well as Jharkhand state. Among the 24 districts of the state it occupies first position with respect to population and fourth position with respect to area. The district has total geographical area of 4962.82 sq. km. According to 2011 Census, the present Ranchi district with a population of 2914253, is divided into 18 Community Development Blocks comprising 1311 villages (inhabited- 1296, uninhabited - 15) and 15 towns including two statutory and 13 Census Towns.

Ranchi is a big sized district with 8.83 percent of the total population of the State comprised within the district and ranks 1st in the state in order of population. The

population of males and females are 1494937 and 1419316 with density of population in 2011 is 572 (per sq. km.) of the district. Proportion of rural and urban population: 2011 of Ranchi district are 56.9 (rural) and 43.1(urban). According to 2011 Census, Ranchi district has a population of 2914253, and is one of the most urbanized districts of Jharkhand state. The district recorded a change of 23.98 per cent in the population compared to 2001 population of 18 lakh 7 thousand. This was less than the increase of population from 1991 at 28.58 per cent. With 8.83 percent of the total population of the State comprised within the district, Ranchi is a big sized district and ranks 1st in the state in order of population. Thus, among the 24 districts of the state, Ranchi district occupies first position with respect to population and fourth position with respect to area.

Ranchi (M. Corp.) is the principal town and the headquarters of the district as also of the South Chotanagpur division as well as Jharkhand state. Fig 1.6 presents the map showing the administrative divisions of Ranchi District.

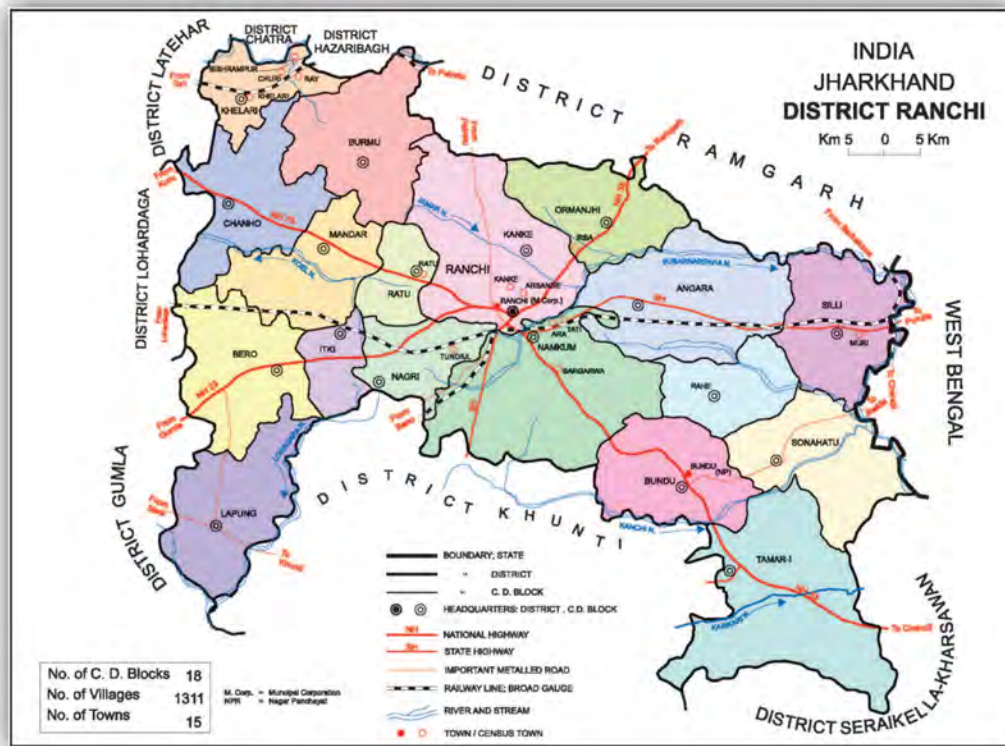


Fig. 1.6: Map showing the District Level Administrative Setup of Ranchi District.

Source: <https://ranchi.nic.in/map-of-district/>

Under Ranchi Sub-Division, there are 14 C.D. Blocks (Kanke, Ratu, Chanho, Mandar, Lapung, Burmu, Bero, Namkum, Ormanjhi, Angara, Silli, Khelari, Nagri, Itki) and, the Bundu Sub-Division consists of 4 C.D. Blocks (Rahe, Bundu, Sonahatu, Tamar I).

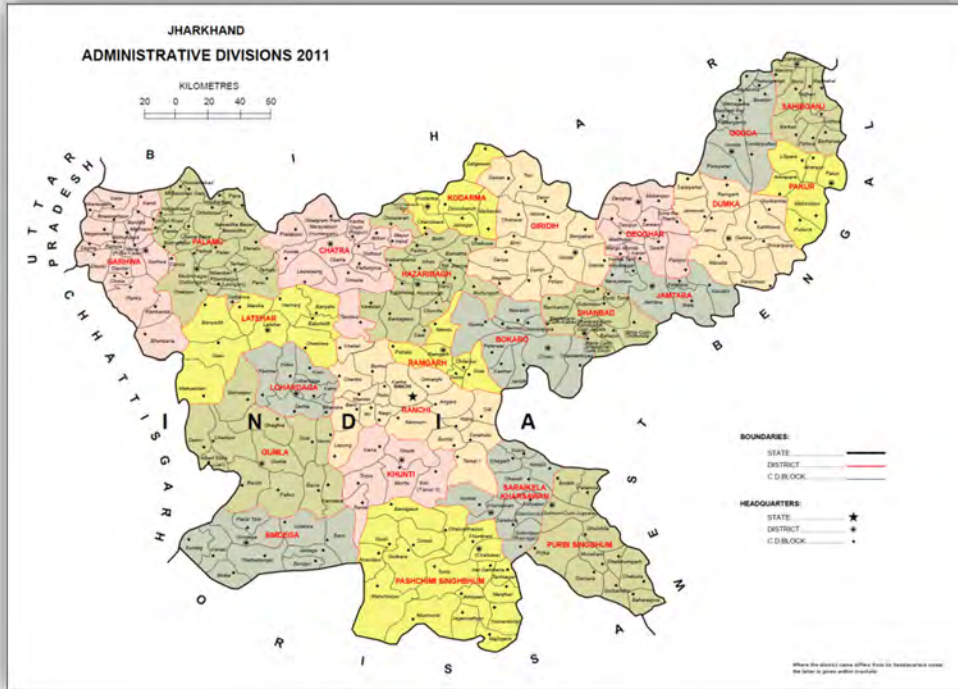


Fig. 1.7: Map showing the Community Development Block Level Administrative Setup of Jharkhand State. Source: <http://vlist.in/map/20.html>

As per 2011 Census there are eighteen community development blocks in Ranchi District, which was reduced from twenty in 2001. In 2001 the total number of villages in Kanke CD Block was 104 of which four were un-inhabited. Fig 1.7 shows the community development block level administrative setup of Jharkhand State and Table 1.4 presents the PRI structure present in Jharkhand state and Ranchi District.

Table 1.4: PRI structure present in Jharkhand state and Ranchi District

States/ institutions	District/ PRI	Jharkhand State		Ranchi District	
		2001	2011	2001	2011
Area (sq. Km)		79714	79716	7698	5097
Total Number of Villages		32615	32394	2076	1311
Villages (Inhabited)		29354	29492	2052	1296
Villages (Uninhabited)		3261	2902	24	15
Village Panchayat		4118	4402	384 (2006)	305
Number of Statutory Towns		44	40	03	02

Number of Census Towns	108	188	05	13
Intermediate Panchayat	210	263	20	18
District Panchayat	18	24	-	-

Source: Report on Status of Panchayati Raj-State Profile-Jharkhand

Table 1.5 presents the number of gram panchayats and villages in each block of Ranchi District. Ranchi District has 1311 Revenue Villages under 305 Panchayats. Kanke community development block has total 32 gram panchayats and 135 villages. Neori Gram panchayat comprises of one revenue village of Neori. The distance from CD Block headquarter Kanke to the district headquarter and, in this case, also the state capital, by road is 5 kms. Table 1.5 presents the number of gram panchayats and villages in the C. D. block of Ranchi District as per Census 2011.

Table 1.5: Number of Gram Panchayats and Villages in the C. D. blocks of Ranchi District as per Census 2011

Sl. No.	BLOCK NAME	NO. OF PANCHAYATS	NO. OF VILLAGES
1	Angara	21	83
2	Bero	17	84
3	Bundu	11	88
4	Burmu	14	77
5	Chanho	17	67
6	Itki	9	46
7	Kanke	32	135
8	Khelari	14	25
9	Lapung	11	79
10	Mandar	19	69
11	Nagri	13	46
12	Namkum	23	110
13	Ormanjhi	18	91
14	Rahe	9	59
15	Ratu	20	51
16	Silli	20	102
17	Sonahatu	14	64
18	Tamar	23	144
Total Count		305	1420

Source: Report on Status of Panchayati Raj-State Profile-Jharkhand

1.9.2 ADMINISTRATIVE SETUP AND PRIS IN KANKE BLOCK

Kanke C. D. Block is a sub district administrative division in Ranchi District of Jharkhand State, India. It has total area of 432 km² including 247.74 km² of rural area and 184.66 km² of urban area. It has a population of 13,17,499 including 684804 males and 632695 as females. Sex ratio is 924 per 1000 male and the literacy rate is 84.92%. There are total 2,53,026 houses in the sub-district. Ranchi CD block has 135 villages and 3 towns. Out of 135 villages in Kanke block, Sukurhuttu is most populated village with population of 11862 and least populated village is Bariatu having population only 139. There are 3 towns in Kanke sub-district which lies in Kanke administrative division. Most populated town in Kanke C.D. Block is Arsande (CT) with population of 9582.

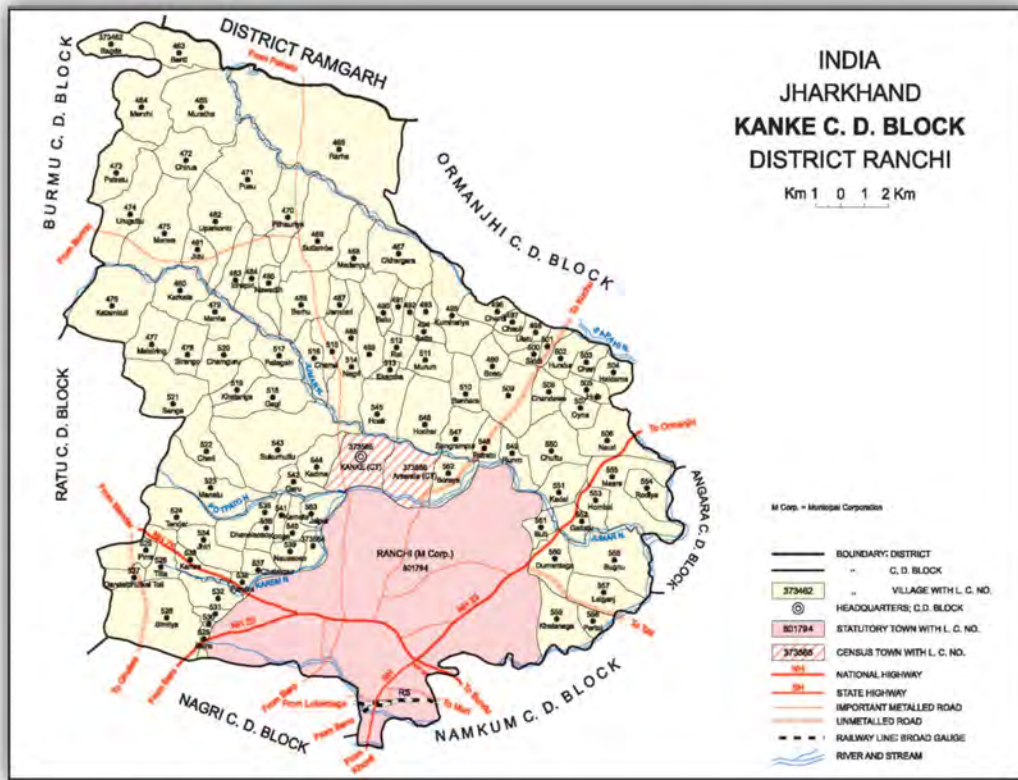


Fig. 1.8: Map showing the administrative divisions of Kanke C. D. Block

Source: <https://www.censusindia.gov.in/2011census/maps/atlas/20part31.pdf>

Table 1.6 presents the particulars of settlements in Ranchi district and Kanke C.D. Block and Figure 1.8 Presents the administrative divisions of Kanke C. D. Block.

Table 1.6: Particulars of Settlements in Ranchi District and Kanke C. D. Block

Particulars	Ranchi District		Kanke C.D. Block	
	2001	2011	2001	2011
Area (in sq. Kms)	7698	5097	524.1	347.11
Number of Sub-division	02	02	-	-
Number of CD Blocks	20	18	-	-
Number of Towns	08	15	2	3
Statutory Towns	03	02	1	1
Census Towns	05	13	1	2
Number of Panchayats	384	305	36	32
Number of Villages	2076	1311	104	135
Inhabited	2052	1296	101	103
Un-inhabited	24	15	03	32
Total Population	27,85,064	29,14,253	1026448	1317499
Total Urban Population	977821	1257335	863495	1100569
Total Rural Population	1807243	1656918	162953	216930
Percentage of Rural population to total population	64.9%	56.9%	841	56.86

Source: Census India

The following are the various committees formulated at the Kanke Block level to carry out and monitor various development plans in the community development block.

- committee for agriculture
- committee for communication and works
- committee for finance, audit, planning and development
- committee for health and environment
- committee for woman, children and social welfare
- committee for woman, children social welfare
- co-operative committee
- development committee
- e-panchayat committee
- general administrative committee
- general administrative committee for zp and panchayat samittee
- government estate committee
- gram panchayat standing committee
- gram raksha samittee
- health and education committee

infrastructure committee

1.10 INTRODUCTION TO STUDY AREA: NEORI GRAM PANCHAYAT, C.D. BLOCK KANKE, RANCHI DISTRICT

This section introduces the study area of Neori Gram Panchayat which is located in the Kanke Community Development (C.D.) Block of Ranchi district in the State of Jharkhand.

1.10.1 LOCATION AND REGIONAL SETTING OF NEORI GRAM PANCHAYAT

Neori gram panchayat has a geographical area of 388.98 hectares and is situated in Kanke C.D. Block of Ranchi district in Jharkhand. It is located 15 Km in the north-east direction from the district headquarter and State capital Ranchi, along the National Highway-33 (Hazaribagh Road) and, at 10 km from Kanke, the C. D. Block comprising the gram panchayat. The gram panchayat of Neori is surrounded by Angara Block towards East, Kanke Block towards west, Namkum Block towards South, and the state capital Ranchi towards west. Nearby villages to Neori are Karma, Kedal, Mesra (east), Mesra (west), Chandwe, Gobarhappa, Hundur, Chari, Haldama, Hujir, Oyna, Dubliya, Banhara, Murum, and Ral. Figure 1.9 shows the location of Neori Gram Panchayat with respect to Kanke C. D. Block and Ranchi, the district headquarter and the State capital.

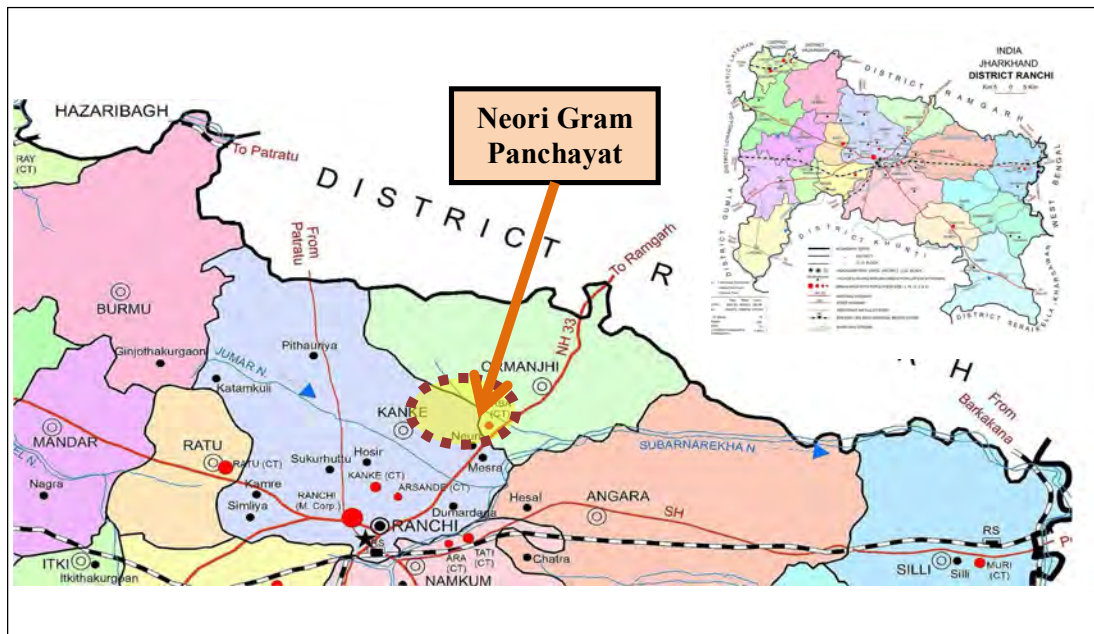


Fig. 1.9: Location map of Neori GP (Source: Census 2011)

The gram panchayat is bifurcated by the National Highway 33 and the Ring Road. Vikas Vidyalaya prominent school is located within the gram panchayat along the highway. Fig 1.8 presents the map showing the regional setting of Neori. Other prominent institutions in the vicinity of Neori are educational institutions like BIT Mesra which is a prominent technical university, Medanta Hospital, HCG-Curie Abdur Razak Ansari Cancer Hospital. The Birsa Biological Park is located 3 Kms from Neori Chowk. Figure 1.10 presents the map showing the regional setting of Neori Gram Panchayat.

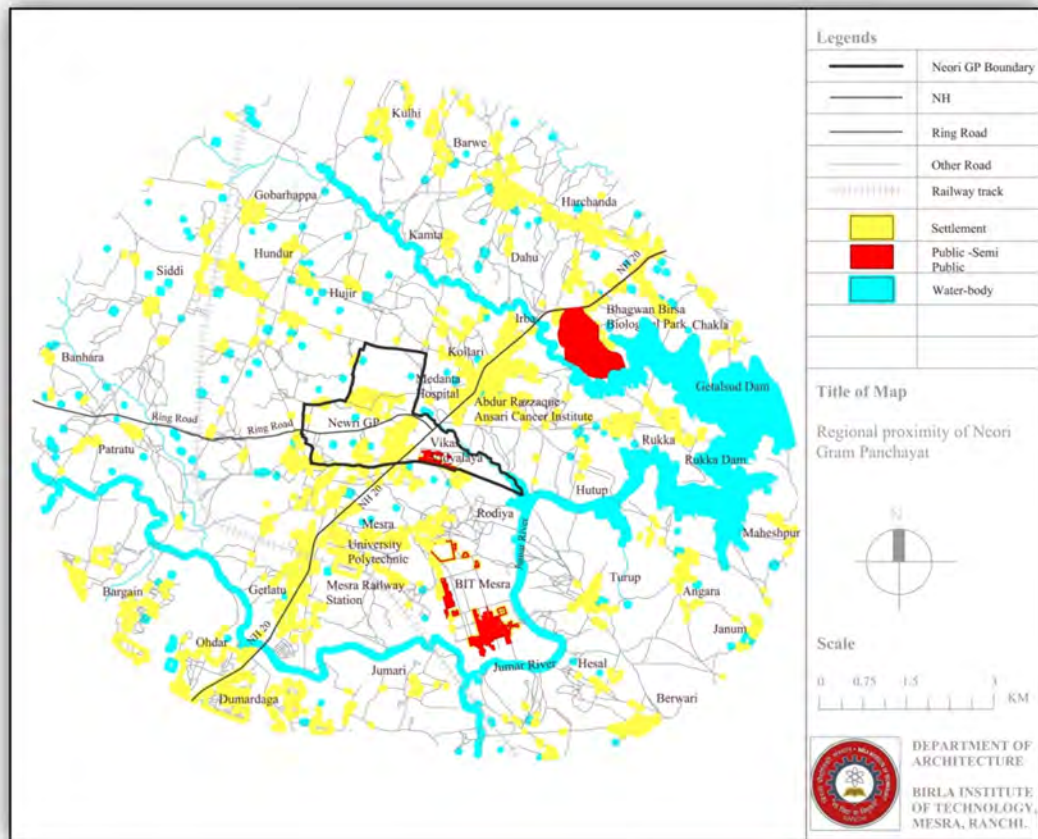


Fig. 1.10: Map showing the Regional setting of Neori Gram Panchayat

Source – prepared by the BIT Mesra Team

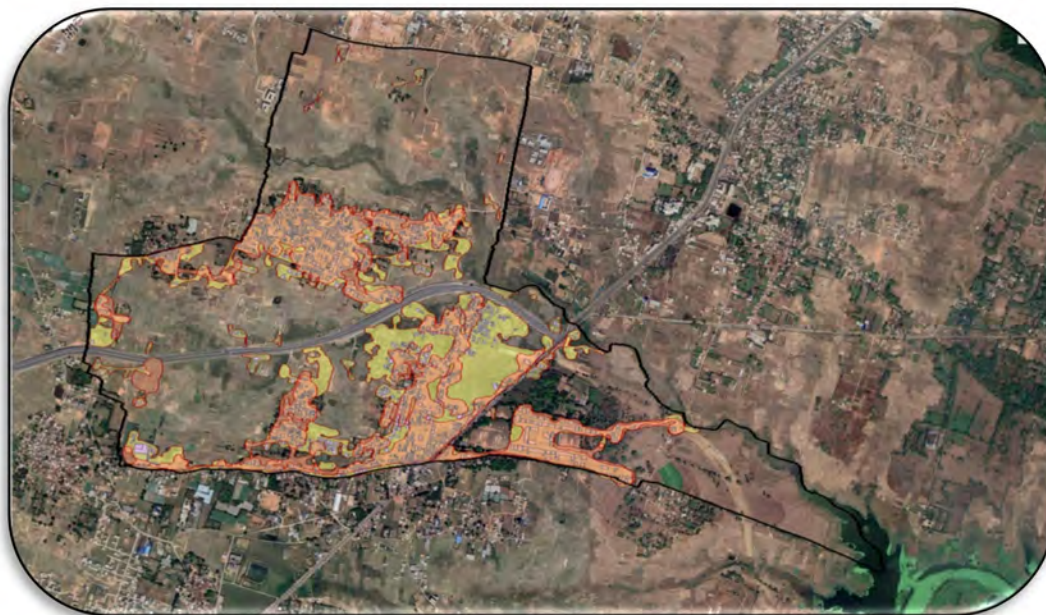


Fig. 1.11: Map showing the profile of settlement area within Neori Gram Panchayat in 2005

Source: Google-earth

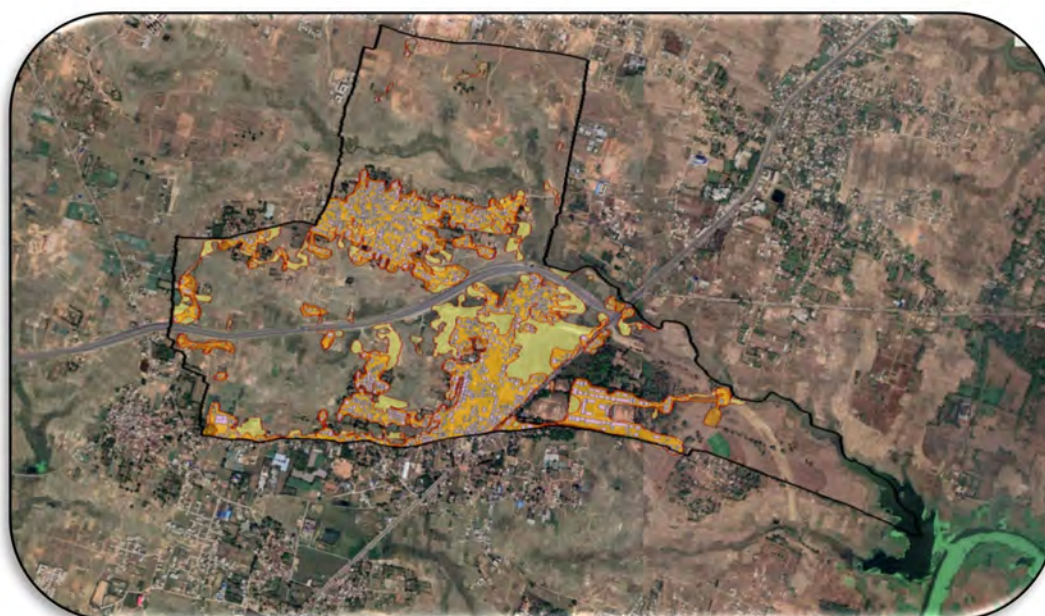


Fig. 1.12: Map showing the profile of settlement area within Neori Gram Panchayat in 2013

Source: Google-earth

1.10.2 DEMOGRAPHIC PROFILE OF NEORI

Neori gram panchayat situated in Kanke block of Ranchi district in Jharkhand has population density of 18 persons per hectare. As per the Census 2011, there are total 1,230 families residing in Neori. The total population of Neori is 6,907 out of which 3,700 are males and 3,207 are females. Thus the Average Sex Ratio of Neori is 867, which is less than that of Kanke block (924) and Ranchi District.

The population of children of age 0-6 years in Neori village is 1072 which is 16% of the total population. There are 529 male children and 543 female children between the ages 0-6 years. Thus as per the Census 2011 the Child Sex Ratio of Neori is 1,026 which is greater than Average Sex Ratio (867) of Neori village.

Schedule Caste (SC) constitutes 2.1% (144) while Schedule Tribe (ST) was 16.7% (1155) of total population in Neori village. Table presents the area and demographic details of Neori Gram Panchayat as per Census 2011 along with that of Kanke Block and Ranchi District. Table 1.7 presents the area and demographic details of the Neori Gram Panchayat as per Census 2011, and figure 1.11 shows the population of Neori Gram Panchayat and its composition.

Table 1.7: Area and Demographic details of the Neori Gram Panchayat as per Census 2011

PRI Level/ Unit	Census Code	Area (Sq. Km)	Household	Population	Male Population	Female Population	Schedules Caste	Scheduled Tribe	Density (P/Sq. Km)	Sex Ratio	Literacy Rate
Jharkhand	20	7971	623714	32,988,134	16,930,315	16,057,819	3,985,644	8,645,042	414	948	66.41
Ranchi District	364	5097	566575	2914253	1494937	1419316	152,943	1042016	572	949	76.06
Kanke Block	0190	347.10	45,390	244072	125932	118140	9364	81280	3047	924	84.92
Neori	373506	3.89	1230	6907	3700	3207	144	1155	18	867	75.73

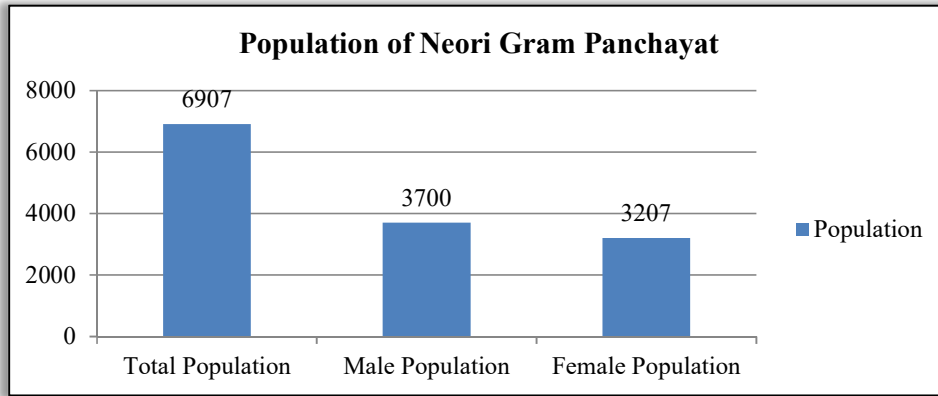


Fig 1.13: Population and population composition of Neori Gram Panchayat

(Source - census of India 2011)

As per the Census 2011, the literacy rate of Neori is 75.7%. Thus Neori village has higher literacy rate compared to 65.6% of Ranchi district. The male literacy rate is 86.85% and the female literacy rate is 62.5% in Neori village. Figure 1.12 presents the percentage of literate and illiterate population of Neori and figure 1.13 presents education level of literate population of Neori Gram Panchayat.

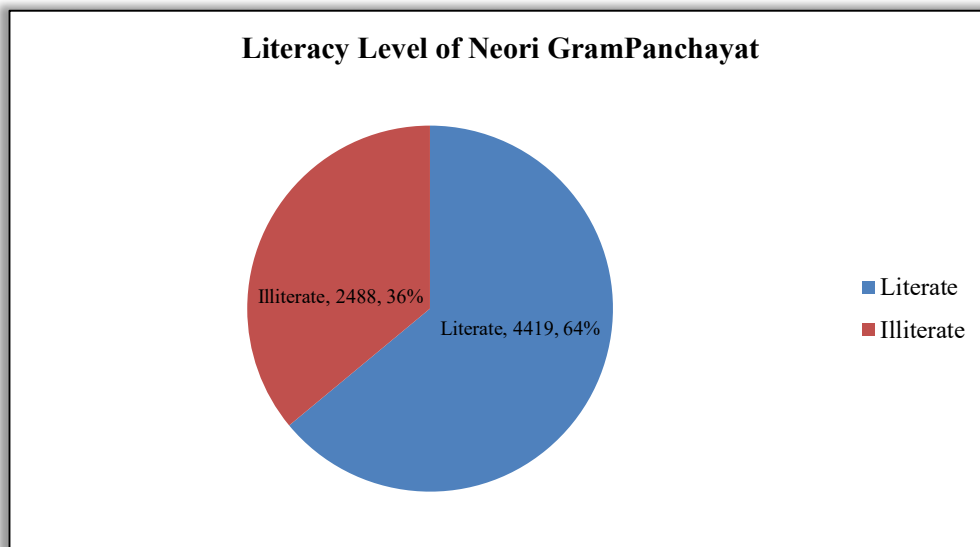


Fig. 1.14: Literacy Level of Neori Gram Panchayat

(Source: Socio Economic and Caste Census, Ministry of Rural Development)

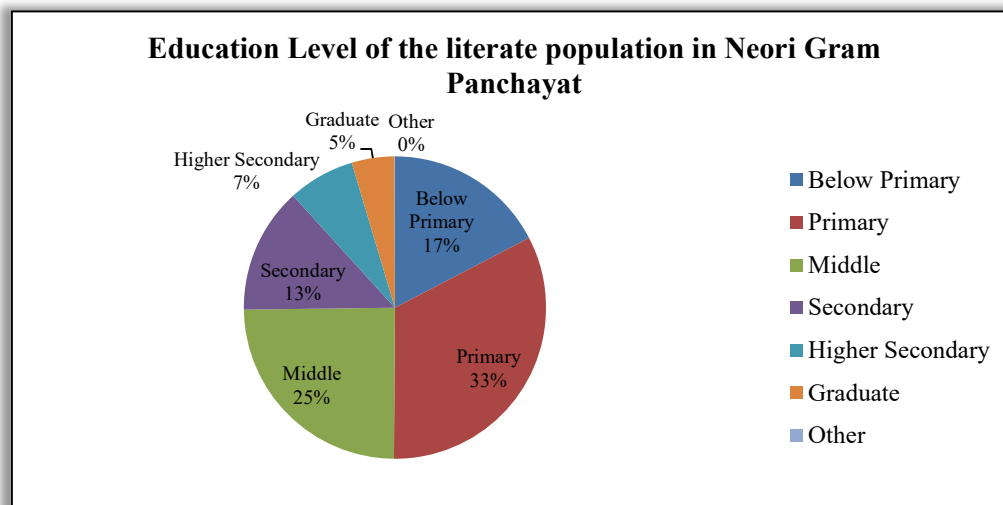


Fig. 1.15: Education levels of literate population of Neori Gram Panchayat

(Source: Socio Economic and Caste Census, Ministry of Rural Development)

1.10.3 OCCUPATIONAL PATTERN, WORKERS PROFILE AND SOCIO-ECONOMIC STATUS OF NEORI GRAM PANCHAYAT

In Neori only 1,938 people out of the total population are engaged in work activities, while the rest 72% are non-working persons. Of the total working population 1545 are male and 393 are female workers. Fig 1.14 presents the distribution of working population.

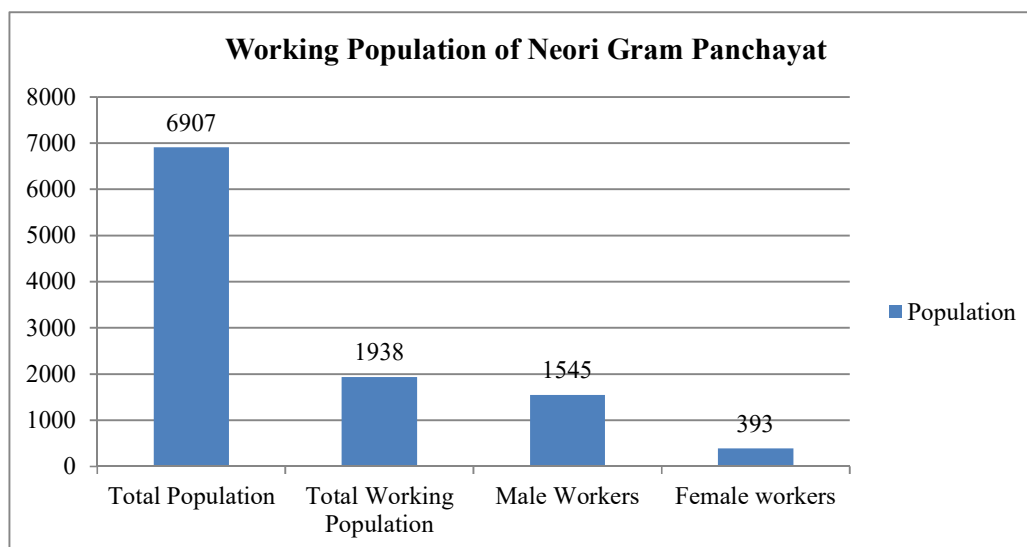


Fig. 1.16: Working Population of Neori Gram Panchayat

(Source: Census 2011)

Of the total working population, 32.8% or 635 persons are main workers and have an employment or earning for more than 6 months; while 67.2% (1303) are involved in marginal activity or have livelihood for less than 6 months. Of the 635 main workers, 8 % (49) were main cultivators (owner or co-owner) while 6% (39) were engaged as agricultural laborer. The occupational pattern suggests that only 14% of the working population is engaged in agricultural activities and 83% of the working population is engaged in other non-agricultural activity. This is predominantly due to the proximity of the gram panchayat to the state capital and district head quarter Ranchi. Relatively greater proximity to the city seems to be linked to the high share of non-agriculture related occupations in the gram panchayat.

Table 1.8 presents the occupational pattern and composition of working population of Neori Gram Panchayat as per Census 2011. Fig 1.15 presents percentage distribution of Main Workers of Neori Village, respectively.

Table 1.8: Occupational Pattern and composition of working population of Neori Gram Panchayat as per Census 2011

Item Name	Total	Male	Female
Total Population	6907	3700	3207
Total Workers	1938	1545	393
Total Main Workers	635	549	86
Main Workers Cultivators	49	44	05
Agriculture Labourer	39	22	17
Household Industry workers	17	13	04
Other workers	530	470	60
Total Marginal Workers	1303	996	307
Cultivators	86	72	14
Agriculture Labourer	178	57	121
Household Industry workers	38	27	11
Other workers	1001	840	161

Non-Workers	4969	2155	2814
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(Source: Census 2011)

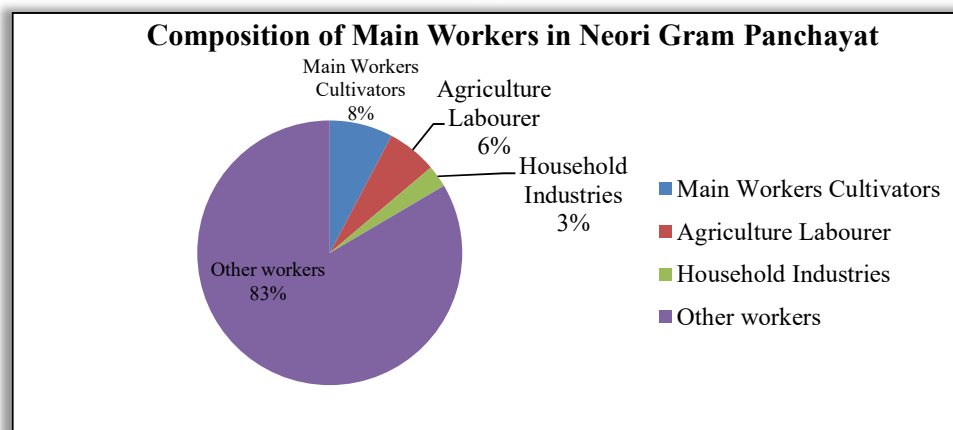


Fig. 1.17: Percentage distribution of Main Workers of Neori GP

(Source: Census 2011)

1.10.4 SOCIO-ECONOMIC STATUS OF NEORI GRAM PANCHAYAT

This section presents the socio-economic status of Neori Gram Panchayat. As per the Socio-Economic and Caste Census of Ministry of Rural Development as presented in Table 1.9 which presents the distribution of households as per ownership, land ownership and monthly income, of the total 1144 households in Neori GP, 1038 units are owned by the residents, whereas 59 are rented. Only four households own five acres or more land that is irrigated for two or more crop seasons and only one household owns 7.5 acres land with at least one irrigation equipment. Whereas, as per the Mission Antyodaya Baseline Survey (2018), out of the total land area in the gram panchayat of 388.98 hectare (ha), 97.98 ha was the net sown area, which increased substantially from 52.81 ha of 2011. Also, 97 ha was irrigated land which saw an increase from 7.85 ha, whereas 194 ha were un-irrigated. Of the total 1230 households in the gram panchayat, 165 households own land. The survey further suggests that 70% of households were exclusively engaged in farm activities; only 39 persons are engaged as agricultural workers, whereas 17 work in household industries. There is only one household which owns 2.5 acres or more irrigated land with at least one irrigation equipment, and four households which own five acres or more land irrigated for two crops or more crop seasons. There is just one household which owns 7.5 acres of land with one irrigation equipment. There are no households which have availed Kisan credit card with credit limit of Rupees 50,000/- and above.

Table 1.9: House ownership, Land ownership and Monthly Income

Gram Panchayat	House Ownership			Land Owned			Households with highest earning member Income as		
	Owned	Rented	Any Other	Total unirrigated land (in hectares)	Total irrigated land (in hectares)	Total other irrigated land (in hectares)	Less than Rs. 500	Between Rs. 5,000 and 10,000	Rs. 10,000
Neori	1038	59	47	65.50	184.84	1.00	962	116	66

Source - SECC Data, Neori Gram Panchayat, Ministry of Rural Development

Sixty-six households have atleast one family member earning more than INR 10,000 rupees. 376 households have three or more rooms with pucca walls and roof, and 23 households have one room with kutcha walls and kutcha roof. Table 1.10 presents the main source of household income in Neori GP, where 21 households have a regular income from agricultural activities, whereas 1103 households are engaged as manual casual labour. There are 545 landless households which derive major part of their income from manual casual labour. Table 1.11 presents the economic status of Neori and the number of ration card holders in the gram panchayat. Total 687 persons are above poverty line while 447 persons are below the poverty line.

Table 1.10: Source of Household Income in Neori GP

Gram Panchayat	Cultivation	Manual Casual Labour	Part-time of Full Time Domestic Service	Foraging Rags Picking	Non-agricultural Own Account Enterprise	Begging/Charity/Alms collection	Others
Neori	21	1103	5	0	1	1	13

Source: SECC Data, Neori Gram Panchayat, Ministry of Rural Development

Table 1.11: Ration Card Holders of Neori Gram Panchayat

S. No:	Name of Panchayat	A.P.L	B.P.L	Antodaya	Others B.P.L	Total
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1	Neori Gram Panchayat	687	447	1	0	1135
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Source: <https://aahar.jharkhand.gov.in/panchayats/panchayatCardholderCount/MTg=/MTkz>

1.10.5 DEVELOPMENT INDICATORS FOR NEORI GRAM PANCHAYAT

Neori gram panchayat, due to its close proximity to Ranchi, the State capital, hosts a good level of social infrastructure and physical infrastructure, however there is still lot of scope of further improvement which can be aimed and focussed upon in this Gram Panchayat Spatial Development Plan exercise. This section therefore identifies and highlights some of those gaps, which the GPSDP can aim at improving. Number of indicators under different categories has been chosen to represent the status of the Neori gram panchayat as shown in Table 1.12.

Table 1.12: Development indicators of Neori Gram Panchayat

Sl. No	Census Indicators (2011)		Neori Gram Panchayat
1	Population		6907
2	Total Household		1230
DEMOGRAPHIC			
3	Density (pph)		18 ppHa
4	Population Growth Rate		
ECONOMIC			
5	% households engaged exclusively in Farm activities		70%
	% households engaged exclusively in Farm activities		30%
6	Land holding Sizes	Less than 5 acre in percentage	99.4% households
7	Land Values (Lakh/Ha)	Market rates (Near Road)	4.5 lakh per decimal
		Market Rates (away from Road)	2.5 to 3.0 lakh per decimal
SOCIAL			
8	Literacy Rate (%)		75.73%
9	Male- Female differential in literacy rate (%)		22% more males are literate than females
SPATIAL			
10	Percentage of non-residential area		88.33%

11	Extent of Commercial Space	Percentage area	0.04%
		No. of commercial establishments	85
KEY INFRASTRUCTURAL PARAMETERS			
12	Physical Condition	Percentage of household having pucca houses	30%
		No. of Telephone towers	Mobile service
		Percentage of Pucca streets	47.8% bituminous; 48% PCC road
		No. of street light	236
13	Physical Infrastructure	Tap water	None
		Households with toilets	40%
		Sewer System	22% households have septic tank
		Electricity	Available for 8-12 hrs
		Drainage on streets (percentage)	14.2%
		No. of household using clean energy (LPG/ Bio gas)	500
14	Social Infrastructure (numbers)	Availability of Sub-centre/ PHC/CHC (Govt.)	Community Health Centre (CHC); health sub-centre
		Medical Pvt.	Vikas nursing home
		Veterinary Clinic Hospital	Yes
		Education - Govt.	2 Nos. of Primary Govt. school and 01 No. Senior Secondary School
		Education - Pvt.	1 No. Primary Pvt school; 4 Nos. Secondary Pvt. School, 1 No. Senior Secondary School VikasVidyalaya
		Availability of vocational	No vocational centre

		educational center/ ITI.	is present in the gram panchayat; nearest polytechnic is within 5 kms distance
		Anganwardi	04
		Pragya Kendra	03
15	Connectivity with Town	Approach Road- Metalled/ un-metalled	All-weather metalled road; Gram Panchayat is along NH 33 and is bifurcated by a Ring Road.
		Distance from Town	15 Kms from Ranchi
		Frequency of Bus/Pvt. Vehicle	Connectivity with auto service
16	No. of Banks/ Credit Societies		Two Banks
17	Communication facilities	Telephone exchange	Nil
		Internet Café/ Common Service Centre	01 Yes
18	Percentage of HHs having assets	T.V	55.7%
		radio service	20.6%
		computer	20.5%
		Two-wheeler	25.4%
		Four wheeler	3.85%
		Mobile Phones	73.45%
		LPG	15.8%
Households having all above mentioned assets	4.1%		

Source – Primary survey

Of the total gram panchayat area of 388.98 ha, as per Census 2011 only 52.81 ha were net sown area which increased to 97.98 ha in 2017 according to a survey conducted in the same year. Also the extent of irrigated area increased from 7.85 ha in 2011 to 97 ha in 2017. Since, 70% of the households, in the gram panchayat, are engaged in farm activities and 99% of the area is irrigated, therefore, soil testing facility and fertilizer shop are located to further support agricultural activities. However the gram

panchayat does not have a government seed center and this facility is located at a distance of more than 10kms from the panchayat.

The gram panchayat is connected to all weather road and also a National Highway, rather the highway bifurcates it in two sections. The gram panchayat also has autos as the available form of public transport and is connected by it with the State and district headquarter, Ranchi. The gram panchayat has some 8 to 12 hrs of electricity supply for domestic purposes and 41% of households depend upon and use clean energy sources like LPG or Bio-gas.

With regards to health and sanitation aspects the Gram panchayat is not yet free of open defecation and thus more toilets have to be constructed at the community and household level. Also there is no community waste disposal system, drainage facility, nor availability of piped water supply in the gram panchayat. Therefore there is immense scope of development and construction of these facilities and amenities in the panchayat to provide a better quality of life in it.

Neori gram panchayat has significant level of social infrastructure with the availability of a primary school, senior secondary school, and primary and community health centers. A veterinary clinic hospital is also present in the gram panchayat since the year 2017. To further support the functioning of the gram panchayat, it has a Post Office, banks and ATMs, and also an internet café common service center. But the gram panchayat lacks any vocational training center. The gram panchayat has a well-functioning Public distribution system and an Aanganwadi center. There are some poverty alleviation and women empowerment programmes which have been considered in the Gram Panchayat. Around 138 or 11% of households have been mobilized into SHGs, 16.26% of households are supported by village based agricultural extension workers, and 250 households are supported by livestock extension workers. However none of the households have been mobilized into producer groups.

1.10.6 PLANNING FRAMEWORK AND EXISTING PLANS FOR THE GRAM PANCHAYAT

The Ranchi Master Plan (2037), which was notified on 13.08.2014, has 7 Planning Districts (Zones) in Ranchi i.e. A, B, C, D, E, F, G H. The Neori Gram Panchayat, which is a revenue village of Kanke C. D Block, is included in Unit 6 of Planning district or Zone 'C' of Ranchi Planning area and thus the provisions of statutory Ranchi Master Plan of 2037 for the respective Zone is applicable to it. Zone C is

located on north-eastern side of Ranchi City, and is bounded by Morabadi Road from west and Hazaribagh road from east. It grows in a linear pattern along the two major roads named Hazaribagh road and Morabadi road.

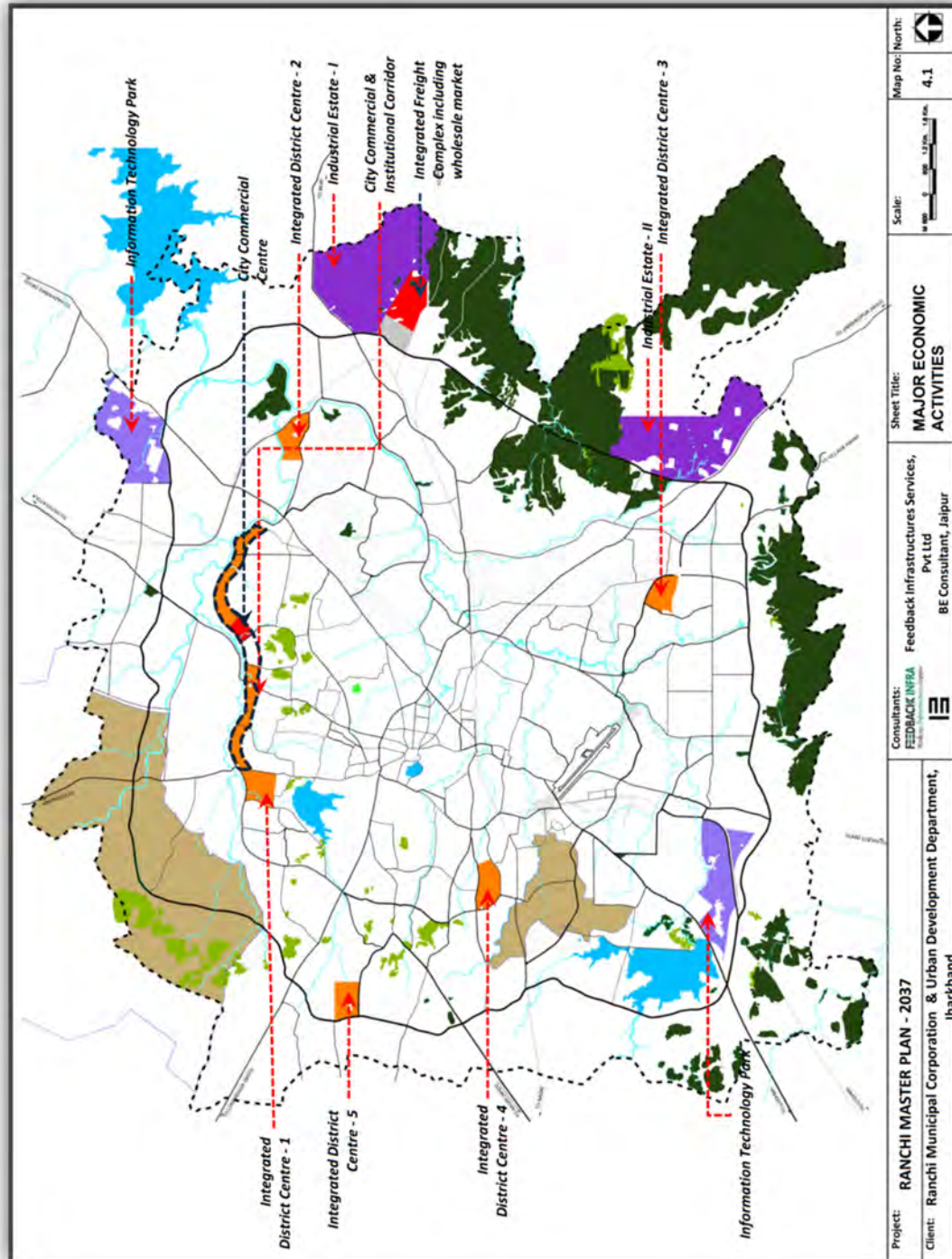


Fig. 1.18: Proposed development as per Ranchi Master Plan 2037

(Source: Ranchi Master Plan 2037)

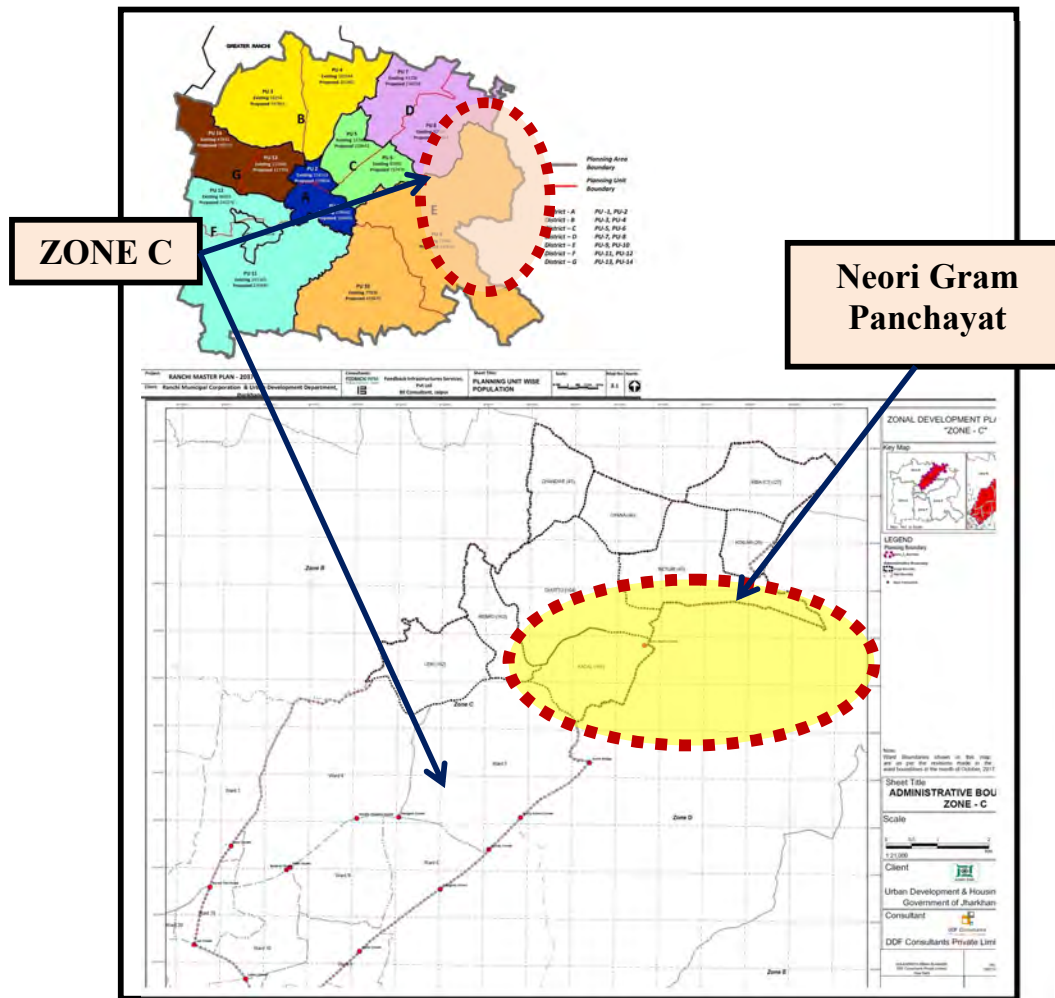


Fig. 1.19: Location of Neori Gram Panchayat with respect to Planning Area of Ranchi.

(Source: Ranchi Master Plan 2037)

The Master Plan of Ranchi, 2037 has proposed a new city center and a corridor of whole commercial on inner circular road present Ring road in this zone, such that the other zones will be dependent on Zone C for the new C.B.D. Thus the TOD Zone, New City Centre and IT Park are key planning challenges in this zone as per Master plan guidelines to support the development of this area. Fig 1.16 shows the proposed development in planning area of Ranchi as per Ranchi Master Plan 2037. Fig 1.17 shows the location of Neori Gram Panchayat with respect to planning Area of Ranchi.

Following its Constitution as a separate State, Jharkhand enacted its Panchayati Raj Act. This has been done in accordance with the provisions of the 73rd Amendment to

the Constitution and that of the Panchayat Extension to the Scheduled Areas) Act, 1996. As per section 10 of Chapter II of the JPR Act 2001, The Gram Sabha has the power to approve all plans including Annual Plans, programmes and projects for social and economic development before such plans, programmes and projects are taken up for implementation by the Gram Panchayat. It is also mentioned that it has the power to control local schemes, and over sources and expenditure of such schemes. Details of powers of the Gram Sabha as per the JPR Act are given in the box below:

Box 1.1

Powers and functions of Gram Sabha: Gram Sabha shall perform the following functions (as stated under rules prepared by the State Government)

- i) Identification of economic development schemes for the village and formulation of criteria for fixing their priorities.
- ii) Approval of schemes for social and economic development including all the annual schemes pertaining to the Gram Panchayat, before implementation of programmes and projects.
- iii) Discussions on annual budget of the Gram Panchayat and making recommendations thereto;
- iv) Deliberations on audit report and annual accounts of the Gram Panchayat;
- v) Deliberations and confirmation of appropriate utilization of funds for the schemes, programmes and projects specified under section 10 (a) a (2) by the Gram Panchayat;
- vi) Identification and selection of persons as beneficiaries under poverty alleviation and other programmes;
- vii) Assuring distribution of funds or resources among beneficiaries and their proper use.
- viii) Activating people towards community welfare programmes and receiving contributions in cash or kind or in both and participation of voluntary worker;
- ix) Enhancing general conscience unity and amity among people in general;
- x) Keeping control through Gram Panchayat over such organisations and such functionaries in social sectors, as have been transferred to the Gram Panchayat or appointed by the Gram Panchayat;
- xi) Managing natural sources as land, water, forest falling within the limits of the village area according to the constitution and other relevant laws then in force;
- xii) Giving advice of the Gram Panchayat as to regularization and utilization of small reservoirs;
- xiii) Keeping watch over local schemes and over sources and expenditure of the said schemes;
- xiv) Sanitation and conservancy as well as prevention and solution of nuisance;
- xv) Construction, repairs and maintenance of public wells and ponds as well as making available drinking water for domestic use;
- xvi) Making available and maintenance of rural roads, culverts, bridges, embankments and other works and buildings of public utility.
- xvii) Construction and maintenance of rural roads, culverts, bridges, embankments and other works and

buildings of public utility.

xviii) Construction, maintenance and conservancy of public roads, cess-pits, drains and other public places;

xix) Filling up of wells not in sanitary ponds, ditches and holes;

xx) Providing light on village paths and other public places;

xxi) Removal of hindrances and projections to public streets and places as well as the spaces which are not private properties or which are open for public use whither such places are vested in the Panchayat or belong to the State Government.

xxii) Regulating and controlling recreations, games-shows, sops, eating houses and vendors of beverage, sweets, milk and similar other articles;

xxiii) Regulating construction of houses, cess-pits urinals, drains and flush latrines;

xxiv) Management of public land and management, extension and development of village site;

xxv) Disposal of corpses, carcasses (including those unclaimed) and other obnoxious articles in such a way that the same may not be injurious to health;

xxvi) Providing places separately for dumping rubbish;

xxvii) Responsibility for sale and Test of meat;

xxviii) Taking care of the Gram Sabha-properties;

xxix) Establishment and management of pounds and maintenance of records regarding cattle;

xxx) Taking care of ancient and historical monuments excepting those which have been declared to be of national importance and maintaining grazing ground and other lands lying within control of the Gram Sabha;

xxxi) Maintaining records of births, deaths and marriages;

xxxii) Assisting in census or other surveys done by centre, state or other organisation constituted lawfully;

xxxiii) Giving assistance in control of contagious disease, vaccination etc. work;

xxxiv) Helping the disables and destitute (including women and children);

xxxv) Expansion of youth welfare, family welfare and sports;

xxxvi) Afforestation and conservation of village forestry;

xxxvii) Abolition of dowry like social evils;

xxxviii) Implementation of orders of the State Government or other competent officers to improve the condition of scheduled castes, scheduled tribes, backward classes and to prevent un-touchability;

xxxix) Preparing schemes for basic amenities and making arrangements therefore;

xl) Helping disabled women/children;

xli) Execution of work assigned of construction work as per specified schemes within the Gram Sabha area;

xlii) Exercise and discharge of powers and functions assigned by the State Government under this Act or any other law in force in the State for the time being

As far as spatial planning is concerned, there is no such land use plan prepared for Neori Gram Panchayat, and Planning is restricted to sectoral planning at present in the form of the GPDP. The current GPDP of the gram panchayat only talks about infrastructure projects, as can be seen in Table 2-8, there is no attention to the spatial expansion of the abadi area and its implications on the quality of life, or the changing spatial character caused by the recent land diversions. There is a need to relate these funds phase wise with the development priorities of the village. In dynamic peri-urban areas, these aspects are very much required to be considered and incorporated in a statutory planning framework for rural settlements. Hence there is need for a GPSDP for the gram panchayat, which may serve as a template or model GPSDP for all such rural settlements in the state of Jharkhand.

1.10.7 CONSTITUTION AND IDENTIFICATION OF GRAM PANCHAYAT

Neori Gram Panchayat is a revenue village in Kanke C. D. Block. The three-tier panchayat elections, for the first time in the State of Jharkhand were held in the December of 2010. As per the 2010 Gram Panchayat elections the gram panchayat had 10 Wards or Tolas which increased to 14 wards in the year 2015. Each ward has a population of approximately 500 people.

Table: 1.13: Wards/ Tolas in Neori Panchayat

Ward No:	Ward Name/ Tola	Population
1	Ban Toli	498
2	Butgoda	475
3	MahtoTola	501
4	SardarTola	480
5	ChandniTola	487
6	School Mohalla	521
7	Nayi Masjid Mohalla	447
8	MahuaToli	495
9	BargadhaTola	527
10	KaramTaand	515
11	KenduaToli East	500
12	KenduaToli West	471
13	Bazaar Taand	540
14	VikasVidyalaya	450

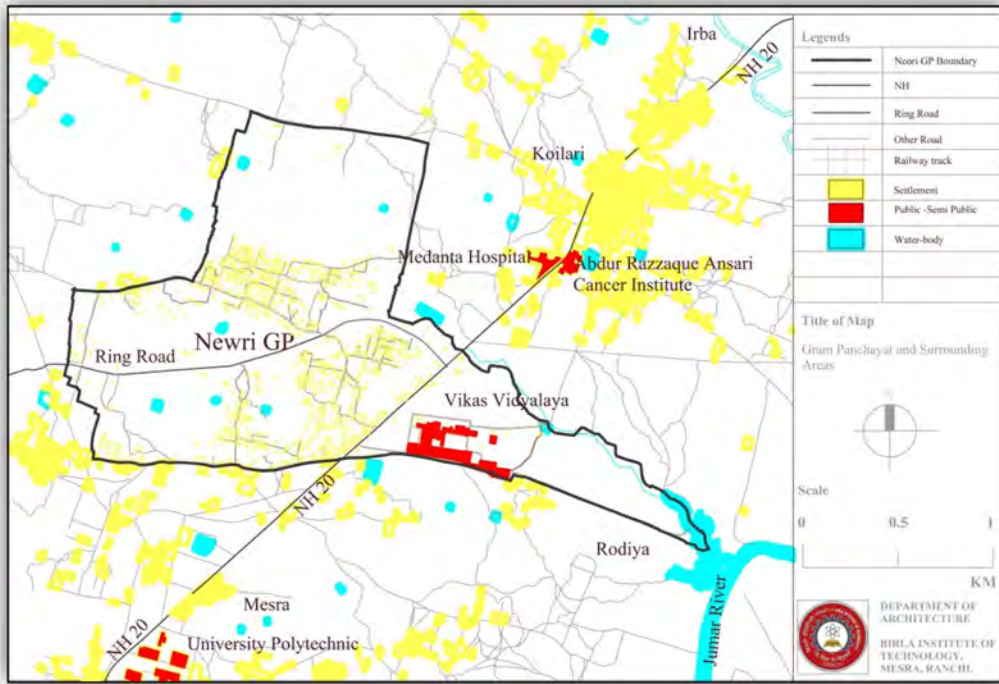


Fig. 1.20: Map showing the administrative boundary of Neori Gram Panchayat

Source: Prepared by the BIT Mesra Team

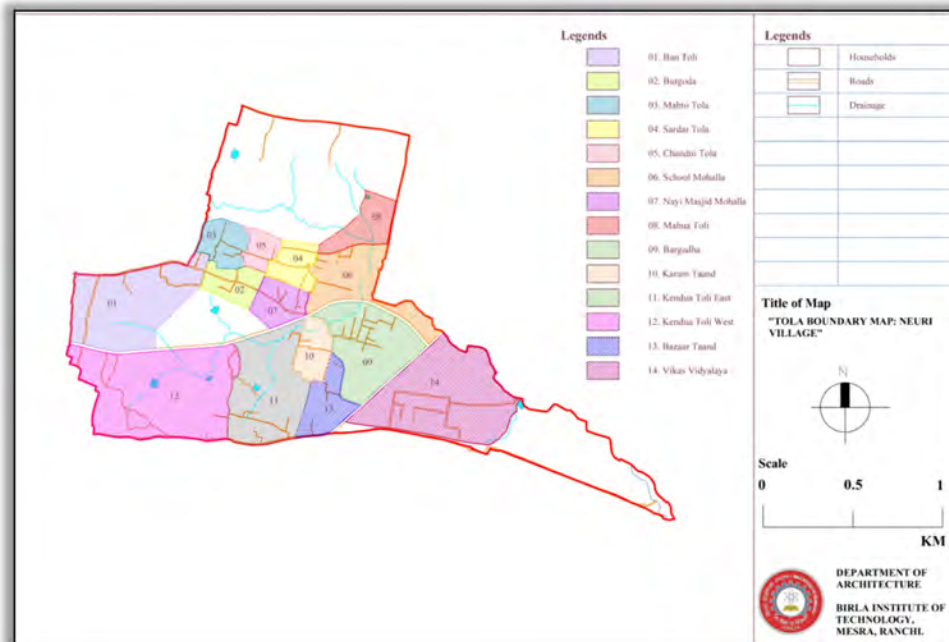


Fig. 1.21: Ward Map of Neori Gram Panchayat

Source: Prepared by the BIT Mesra Team

Fig 1.20 presents the map showing the boundary of Neori Gram Panchayat. Table 1.13 presents the different wards/ tolas in Neori gram panchayat with their respective population size and figure 1.21 presents the ward map.

1.10.8 CURRENT FLAGSHIP PROGRAMS OF GOVT. OF INDIA AND GOVT. OF JHARKHAND IN NEORI GRAM PANCHAYAT

PRIs are implementing agencies of the Centrally Sponsored Schemes. In the state of Jharkhand, the major schemes being implemented by the Panchayati Raj state department are Backward Region Grant Fund (BRGF) and Rajiv Gandhi Panchayat Sashatrikaran Abhiyan (RGPSA), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Grants received under Fourteenth Finance Commission (14FC) and State Plans. Under these schemes, construction of buildings, roads, culverts, drains, ponds, wells, chapakal, chabootara etc. are done by the PRIs.

The Ranchi District has the following major programmes being operated by the Ministry of Rural Development in rural areas,

- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) for providing wage employment,
- DAY-NRLM
- Pradhan Mantri Aawaas Yojna-Gramin
- Pradhan Mantri Gram Sadak Yojana (PMGSY) for construction of quality roads
- National Social Assistance Programme (NSAP) for social pension
- Integrated Watershed Management Programme (IWMP) for improving the productivity of the land
- Sansad Adarsh Gram Yojna
- RuRBAN mission
- Water Conservation Stories
- Sabki Yojana Sabka Vikas
- Gram Swaraj Abhiyan
- DISHA
- Mission Antyodaya
- DDUGKY
- PMGSY
- DIKSHA
- SWACHH Gram

1.10.9 STATE OF CENTRAL AND STATE FUNDED SCHEMES AND DEVELOPMENT PLANS IN NEORI GRAM PANCHAYAT

Under the Fifteenth Finance plan Rupees Seven Lakh Forty Eight Thousand Six Hundred and Fifty Eight (Rs. 7, 48,658) were allocated in 2020-21 as first phase allotment for the Neori GP.

The Gram Panchayat of Neori is supported by various Central and State Government Schemes. In 2015-16, Yojana Banao Abhiyan for the first time gave opportunity to the Gram Panchayats for preparing the holistic development plan for the panchayat. The recommendation of the 14th and 15th Finance Commission for Gram Panchayat also became a driving force for the preparation of the plans. Thus, the State of Jharkhand was the first state to prepare Gram Panchayat Development Plan (GPDP) based on convergence in the year 2019-2020. The GPDP for Neori GP is largely piecemeal and project based where integration of the whole GP in the developmental process has not been conceived.

For the GP of Neori, various schemes like Pradhan Mantri Gramin Awas Yojna (PMAY), Pradhan Mantri Gram Sadak Yojana (PMGSY), Mukhya Matri Gram Sadak Yojana (MMGSY) National Rural Livelihoods Project (NRLP) which is a component of NRLM, Mahila Kisan Sashaktikaran Pariyojna is a sub component under NRLM, Mahatma Gandhi National Rural Employment Guarantee (MNREGA), Mukhyamantri Samagra Gram Yojana (MMSGY), Pradhan Matri Ujjwala Yojana (PMUY), Pradhan Matri Fasal Bima Yojana (PMFBY), Pradhan Matri Suraksha Bima Yojana (PMSBY), Sarva Shiksha Abhiyan Pradhan Matri Kisan Samman Nidhi (PMKSN) have been initiated. The stakeholders and residents are availing the benefit of them.

Further, the State Government of Jharkhand is planning to launch a new scheme called “ARYA” to attract rural youth in agriculture by making them skilled and make the state self-dependent in agriculture.

Apart from the above mentioned schemes and programs, the Government of Jharkhand has initiated many social welfare schemes for the people of the Gram Panchayat including Student Scholarship Scheme, Tribal School Scheme, Birsa Awas Yojana, and various other schemes for Scheduled Caste, Schedule Tribes and Citizen Protection Schemes which are there in practise in Neori GP.

Table 1.14: Details of GPDP in Neori Gram Panchayat over the past five years

Sl. No.	Work Name	Number of Works in the category (ongoing or completed)	Financial Year	Work Category
1	Construction of IAY	21	2015-2016	Works on Individuals Land (Category IV)
2	Construction of Well	08	2015-2016	Works on Individuals Land (Category IV)
3	Road Cons. Work	02	2016-2017	Rural Connectivity
4	Construction of Shed (Cow, Hen, Pig, Goat)	21	2016-2017	Works on Individuals Land (Category IV)
5	Construction of Dobha	08	2016-2017	Works on Individuals Land (Category IV)
6	Construction of Well	01	2016-2017	Works on Individuals Land (Category IV)
7	Construction of Nadep Tank	20	2017-2018	Works on Individuals Land (Category IV)
8	Construction of IAY	10	2017-2018	Works on Individuals Land (Category IV)
9	Construction of Well	01	2017-2018	Works on Individuals Land (Category IV)
10	Construction of Shed (Cow, Hen, Pig, Goat)	03	2017-2018	Works on Individuals Land (Category IV)
11	Cons. of Irrigation Well	06	2017-2018	Works on Individuals Land (Category IV)
12	Work of TCB Village	01	2018-2019	Works on Individuals Land

				(Category IV)
13	Land Leveling	03	2019-2020	Works on Individuals Land (Category IV)
14	Construction of TCB	06	2019-2020	Works on Individuals Land (Category IV)
15	Construction of Field Bund	06	2019-2020	Works on Individuals Land (Category IV)
16	Construction of BSBRAAY	03	2019-2020	Works on Individuals Land (Category IV)
17	Construction of PMAY-G House for Individuals	07	2018-2019	Works on Individuals Land (Category IV)
		13	2019-2020	
18	Soak Pit for individual household	10	2020-2021	Rural Sanitation
19	CM Harit Gram Yojna	05	2020-2021	Works on Individuals Land (Category IV)
20	Construction of Field Bund	05	2020-2021	Works on Individuals Land (Category IV)
21	Construction of Rain water harvesting at Neori Gram Panchayat Bhawan	02	2020-2021	Water Conservation and Water Harvesting

Source: Review of Previous years GPD – Neori GP and current updates from survey.

Table 1.14 presents the details of the development projects planned by the Gram Panchayat of Neori in support of the State Government. This further establishes the urge of the local self-government to bring about changes in the infrastructure and improving the Quality of Life of the people here. But due to various reasons, some of the projects are still in the conceptual stage and are yet to take wings.

1.10.10 ADMINISTRATIVE HIERARCHY IN NEORI GRAM PANCHAYAT

Neori Gram Panchayat is a revenue village which as per the 2015 Gram Panchayat elections has 14 wards. Each ward has a population of approximately 500 people. Prior to it during the 2010 panchayat elections there were only 10 wards and hence there was one Mukhiya or Gram Pradhan or the Panchayat Secretary, and one Panchayat Samiti Sadasya. Presently there is one Gram Pradhan Mukhiya and two panchayat samitis. Table 1.15 presents the administrative structure of Neori GP and table 1.15 lists the names of the elected representatives of the fourteen wards of the gram panchayat.

Table 1.15: Administrative Structure of Neori Gram Panchayat

Year of Panchayat Elections	Number of Wards	Nomenclature of Panchayat Administrative Structure and Heads	Number of members	Name of the Elected Representative
2010	10	Panchayat Secretary (Mukhiya)	01	Sadho Oraon
		Panchayat Samiti Sadasya	01	Madan Mahto
2015	14	Panchayat Secretary (Mukhiya)	01	Shanti Devi Munda
		Up Mukhiya	01	Md. Nadeem Ansari
		Panchayat Samiti Sadasya	02	Tarkeshwari Devi/ AashaKumari

Source: Neori GP office records

Table 1.16: Elected Representatives (Ward Sadasya) of different Wards in Neori Gram Panchayat

Ward No:	Ward Name/ Tola	Population	Name of Ward Sadasya (Member)
1	Ban Toli	498	Meena Devi
2	Butgoda	475	Seema Kumari
3	MahtoTola	501	Madhu Kumari
4	SardarTola	480	Md. Nadeem Ansari
5	ChandniTola	487	Md. Ezaz Ansari
6	School Mohalla	521	MominaKhatoon

7	Nayi Masjid Mohalla	447	Savita Devi
8	MahuaToli	495	Nazneen Parveen
9	BargadhaTola	527	SandeepPahan
10	KaramTaand	515	Anil Gorain
11	KenduaToli East	500	Firdaus Ansari
12	KenduaToli West	471	Sukro Devi
13	Bazaar Taand	540	Bharti Devi
14	VikasVidyalaya	450	KusheshwarMunda

Source: Neori GP office records

1.10.11 STATUS OF PARALLEL BODIES AT THE GRAM PANCHAYAT LEVEL

As per the JPR Act 2001, a GP can constitute eight Standing Committees for discharge of its functions and duties, and such committees are under general control of the GP and exercise powers as may be conferred on them by the GP.

The JPR Act of 2001 has set the provision of constituting eight standing committees (SCs) for discharging Gram Sabha functions and duties. The committees are namely: (i) Village Development committee, (ii) Government estate committee, (iii) Agriculture committee, (iv) Health Committee, (v) Gram Raksha Samiti, (vi) Infrastructure committee, (vii) Education committee and social justice committee, (viii) Vigilance committee. The Village Development Committee prepares a scheme for all-round development of the village and it is presented before the Gram Sabha for its approval. Table 1.17 presents the list of standing committees and committee members of Neori Gram Panchayat.

Table 1.17: Eight Standing Committees and Committee Members of Neori Gram Panchayat

S. No	Name of the Committee	Name of Committee Members
1	Health Committee (SwasthyaSamiti)	Lalo Devi (Chairman)
		Amrendra Kumar (Secretary)
		Manju Devi (Member)
		Basanti Devi (Member)
2	Agricultural Committee (KrishiSamiti)	Chandrika Devi (Chairman)
		Rupa Devi (Secretary)
		Pramila Devi (Member)
		Anu Devi (Member)

3	Government estate committee (SarvajanikSampada)	Sushma Devi (Chairman)
		Saraswati Devi (Secretary)
		Balmati Devi (Member)
		Pammi Devi (Member)
4	Village Development committee (Gram VikasSamiti)	Haseeb Ansari (Chairman)
		Naushaad Ansari (Secretary)
		Asad Ansari (Member)
		Alam Ansari (Member)
5.	Vigilance committee (NigraniSamiti)	Baalmuni Devi (Chairman)
		Md. Aslam Ansari (Secretary)
		Mukesh Thakur (Member)
		Md. Aamir Ansari (Member)
6.	Education committee and social justice committee (SikshaavamSamajikSamiti)	Anil Kumar (Chairman)
		Krishna Thakur (Secretary)
		Satish Singh (Member)
		TausifAalam (Member)
7.	Infrastructure Development Committee (Aadhaar bhoot Sanrachna Samiti)	Meera Devi (Chairman)
		Lalita Devi(Secretary)
		PoonamKumari (Member)
		Anita Devi (Member)
8.	Gram RakshaSamiti	Anil Gaurait (Chairman)
		Aazad Ansari (Secretary)
		Rickey Singh (Member)
		Wasim Ansari (Member)

Also at the village level, various committees have been are set up by departments as part of their schemes. For example, Rogi Kalyan Samitis have been set up under the National Rural Health Mission (NRHM) in every village. Sarva Shiksha Abhiyan (SSA) requires the setting up of village education committees or parent teacher committees.

Moreover, Jharkhand is the only State where the Act states that every Gram Sabha has to establish a Gram Kosh (Village fund) consisting of the following four parts: (i) Grain Fund, (ii) Labour Fund, (iii) Commodity Fund, and (iv) Cash Fund. Donations, incentive amounts, and other incomes can be deposited in this fund. Donations, incentive amounts and other incomes can be deposited in Gram Kosh.

1.10.12 LAND-USE AND LAND-USE DISTRIBUTION IN NEORI GRAM PANCHAYAT

Table 1.18 presents the land-use dostrubtion in Neori Gram Panchayat under different categories. Of the total gram panchayat area of 388.98 ha, 11.67% is under residential use which is majorly distributed on the north and south of the east west alligned Ring Road. Commercial activites with merely 0.04% distribution of land in this activity is mostly located along the National Highway 33. Major land-use with 60.07% coverage is seen under agricultural use. 14% of land is occupied by public and semi-public uses. A large chunk of it is occupied by Vikas Vidyalaya. Around 10.6% of the land is under vacant category and some 3.08% is occupied by the transportation networks. Figure 1.22 presents the land-use distribution in the gram panchayat and figure 1.23 presents the Land-use map.

Table 1.18: Land-use distribution in Neori Gram Panchayat

S. No:	Land-use Category	Area in Hectares	% of Land-use distribution
1	Residential	45.45	11.67
2	Commercial	0.16	0.04
3	Public/semi-public	54.55	14.00
4	Water bodies	2.03	0.52
5	Industries	0.06	0.02
6	Transportation	12.01	3.08
7	Agriculture	234.04	60.07
8	Vacant land	41.32	10.60
9	Total Area	389.61	100

Source: Computed by Team of BIT Mesra based on satellite maps

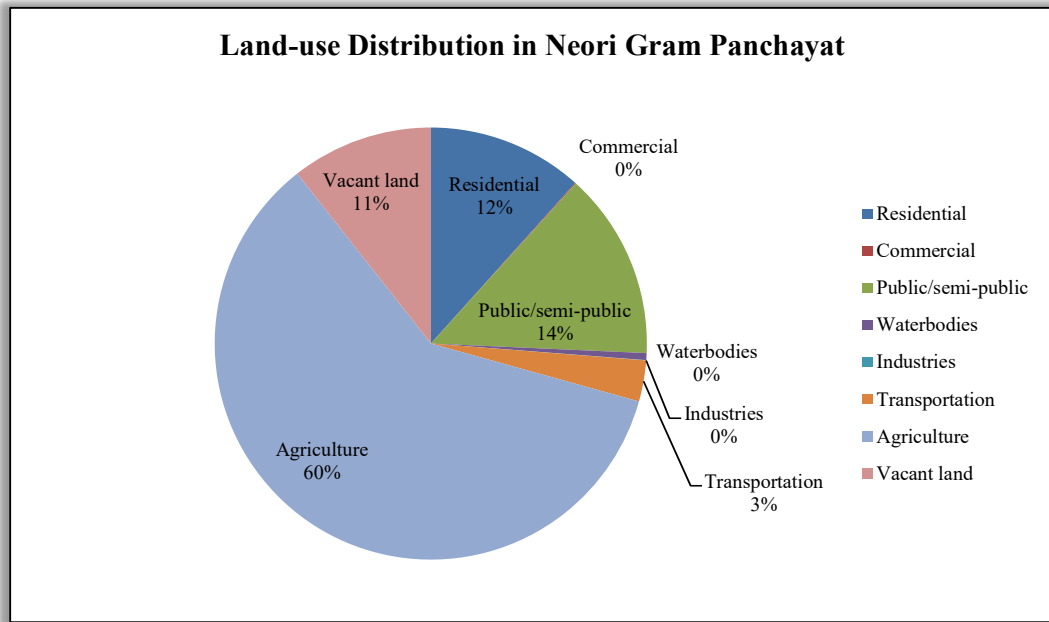


Fig. 1.22: Land-use distribution in Neori Gram Panchayat

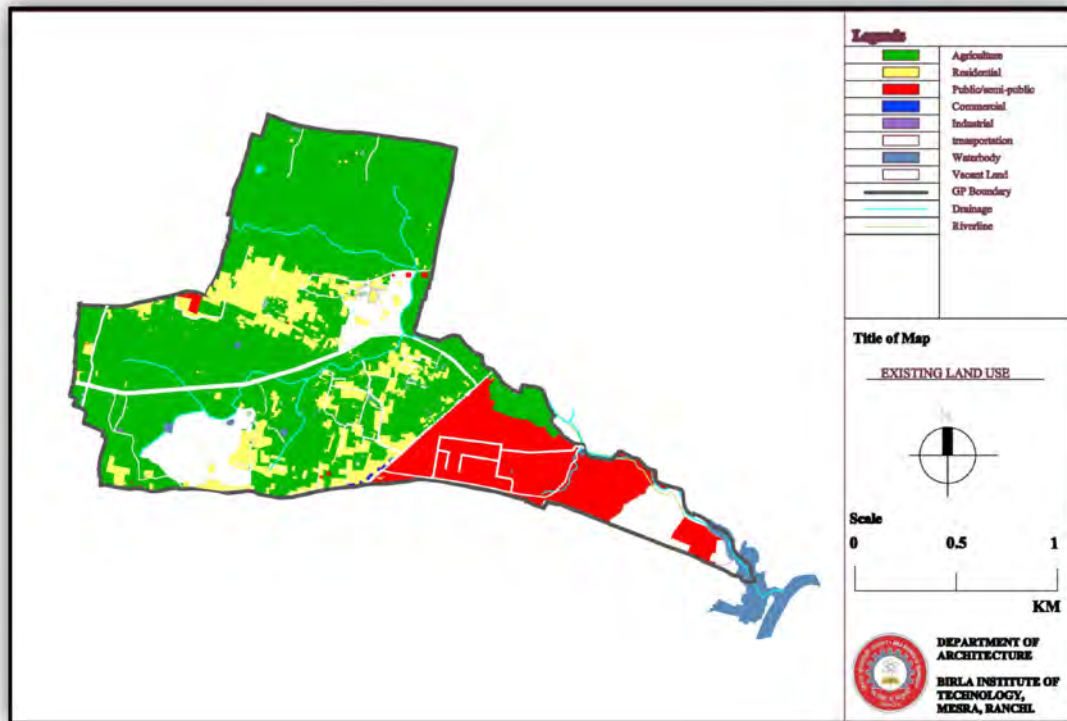


Fig. 1.23: Existing Land-use Map of Neori Gram Panchayat

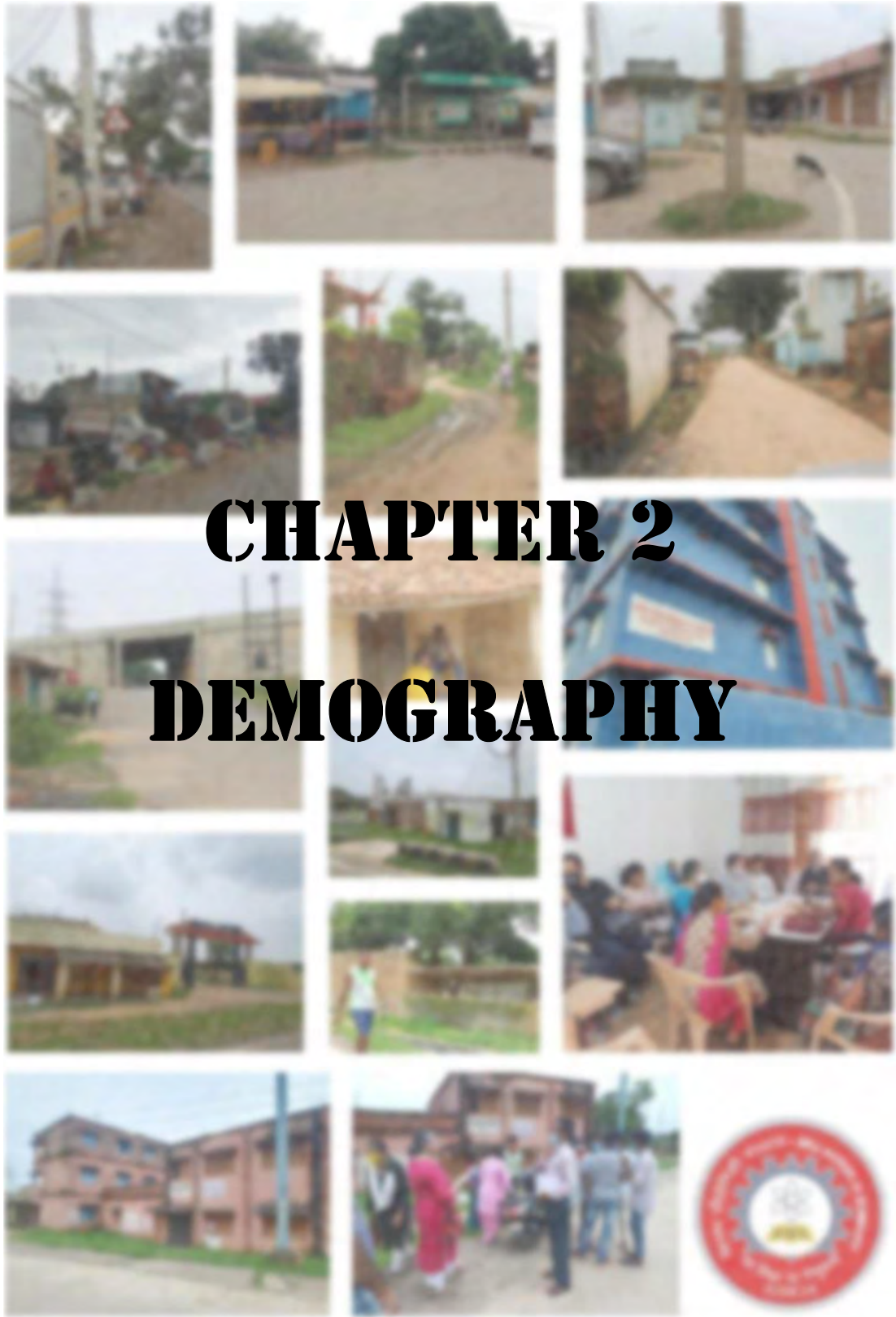
(Source: Prepared by the BIT Mesra Team)

1.11 SWOT ANALYSIS

Strength	<ul style="list-style-type: none"> • The major strength of the GP is its locational advantage along NH 33 and intersected by Ring Road of Ranchi • Proximity to the capital city identifies this GP as a source of casual labour for it • 55% of the population are within working age group of 16 to 55 years • Formidable percentage are employed as manual casual labour who can be redirected to thriving profession through skill development • High land value appreciation of land pockets abutting to NH 33 and Ring Road, thereby creating opportunities for inflow of funds to individuals / groups / societies. • Availability of land for development. • Interest and willingness of stakeholders in participatory planning • Very vibrant elected members willing to bring air of development within the GP. • State government's financial support for various convergence schemes. • The GP historically has never been affected with regular occurring natural calamities and disasters like earthquake, flood, avalanches, famine, ground subsidence, arsenic contamination, droughts etc.
Weakness	<ul style="list-style-type: none"> • Lack of basic infrastructure at the ground level including piped potable water supply, sanitation system, solid waste management. • Electric supply to various household and institution lacks continuity and remains for 10-12 hours per day. • Lack of maintenance of basic infrastructure like roads etc. • Adhoc selection of street lighting schemes. • Lack of secondary and higher secondary level institutions. • Large sections of the population are illiterate or have very elementary level education. • Only 3.38 % of the population are graduates and above. • Only 6 households own more than 2.5 acres of irrigable

	<p>land which signifies presence of only few affluent families in the GP.</p> <ul style="list-style-type: none"> • A stunning 84% of the population earns less than Rs. 5000 a month which indicates a very high poverty index. • In spite of close proximity to capital city and presence of NH 32 flanking it and Ring Road intersecting it, such high poverty level indicates lack of guidance for channelization of resources. • Most of the development projects taken in the last few years (Rs. 1.2689 crore) have not started in spite of planning and fund allocation. This shows existence of gap between conceptualisation and implementation and severe lack of supporting machinery and apathy of line departments. • Lack of large scale development initiatives in the GP in spite of presence of NH and Ring Road flanking / intersecting it. • Lack of use of complete ICT technologies prescribed by Government of India • Lack of implementation of all Rural India upgradation initiatives of Government of India. • The GP has sometimes been affected with cyclonic storms though of less intensity.
<p>Opportunities</p>	<ul style="list-style-type: none"> • The presence of NH 33 and Ring Road around the GP is a large opportunity for massive development of the GP. • There are chances of high land value appreciation of lands abutting to NH and Ring Road due to increase in the peripheral limits of Ranchi Municipal Corporation. • It can serve as base for supply of skilled labour in future for the city of Ranchi if training and skill upgradation facilities are imparted. • With increased effects of urbanisation for the city of Ranchi, the GP has opportunity to foster growth of its non-agrarian economy • High percentage of working class in the age group of 16 to 55 years can provide opportunity for starting of various entrepreneurship program to suffice the demand of NH based activities.

	<ul style="list-style-type: none">• With so less development on records (as per Mission Antodaya data), there are opportunities to bring about integrated holistic development of the GP.
Threats	<ul style="list-style-type: none">• The development scenario of the GP is largely hit with managerial apathy, fund crunch and piece-meal development. Lack of sustainable and integrated planning approaches may poses threat to the Neori GP to fall in the category of backward GP in the country.• With the price appreciation of land pockets abutting to NH and Ring Road, there are threats of great economic divide between inhabitants of these land pockets and inhabitants of interiors of the GP.• High poverty index and formidable percentage of illiterates in the GP threatens appreciation of development initiatives and participatory planning specially with respect to managing of funds and resources to be made available for planning process.



CHAPTER 2

DEMOGRAPHY

CHAPTER 2: DEMOGRAPHY

2.1 INTRODUCTION

Demographic profile of a habitation forms a very important segment of analysis. The present profile of Neori GP is diversified and is characterized by proportionate distribution of people of various age, sex, religion, caste and occupation.

2.1.1 DEMOGRAPHIC ASPECTS OF THE NEORI GP

The total geographical area of the Neori village is 388.98 hectares. Neori village is having a population 6907(As per Census 2011). Out of which there are 3700 male population and 3207 female population. The up gradation of the village requires co-ordination of all organizations and service providers. The holistic development needs to be integrated in the Spatial Development Plan through several policy and project level interventions considering all the physical, social, cultural, economic and environmental aspects of the village. There is a need for widespread reform in the governance and service delivery framework with a focus on economic development of the community. The population distribution and the economic profile of the people engaged in different sectors needs to be integrated in the proposals for the upliftment of the village.

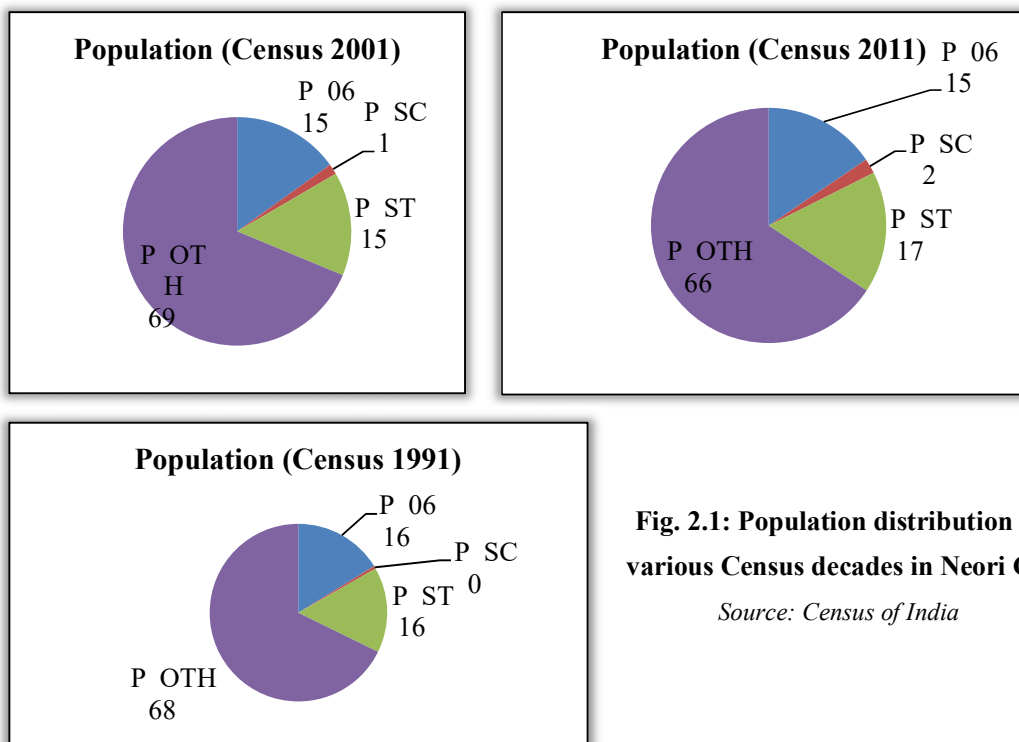


Fig. 2.1: Population distribution in various Census decades in Neori GP

Source: Census of India

2.2 AGE STRUCTURE, SEX RATIO AND LITERACY

Sex Ratio in Neori Village is 940 as per Census of India, 2011. The population below six years of age in 2011 was 1072 which constitutes to 15.5% of total population. This assumes significance, as amenities have to be planned for this age group to ensure a safe and healthy living. The general literacy rate of the village is 63.97% as per Census of India (2011). The general literacy and female literacy rate has improved for Neori Village based on the Census of India 2001 & 2011. Literacy rate in women is still considerably low (51.9%). This is because of the lack of awareness and adequate social infrastructure.

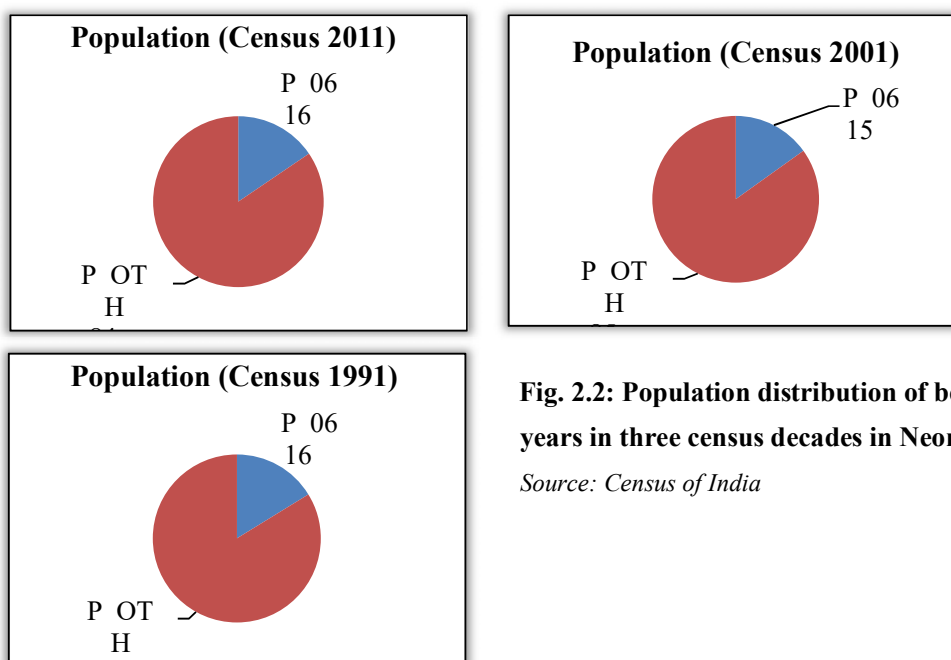


Fig. 2.2: Population distribution of below 6 years in three census decades in Neori GP

Source: Census of India

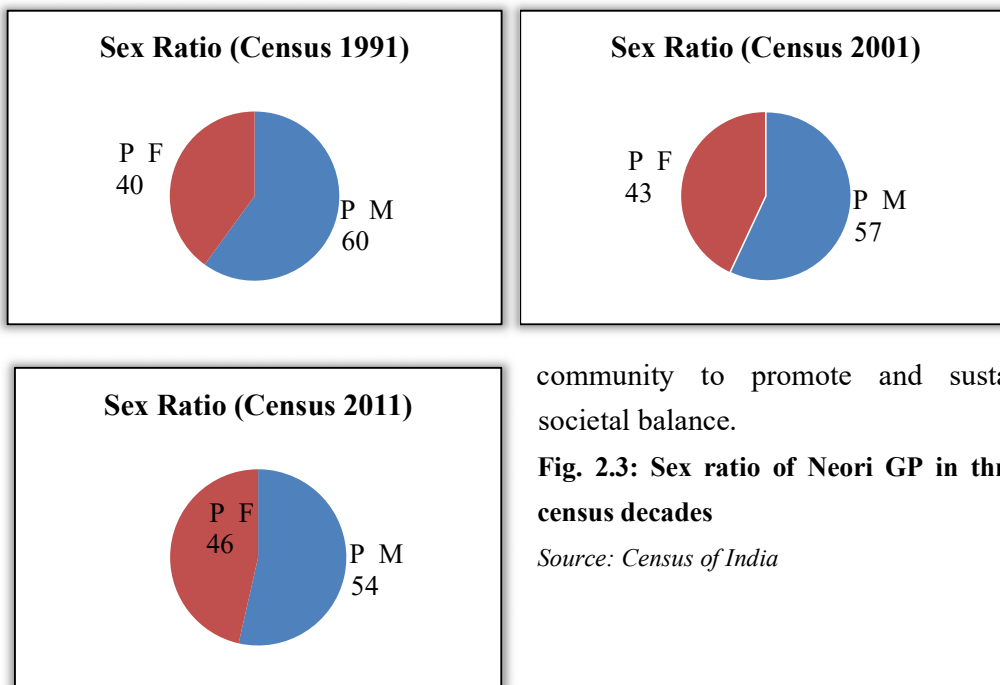
2.2.1 AGE STRUCTURE

The population distribution as per age has remained more or less constant in the village as per the Census of India data. The pie-charts below show the age structure in the village as per last three decades.

2.2.2 SEX RATIO

Sex Ratio in Neori Village is 940 as per Census of India 2011. The sex ratio in the Village has increased in the last three decades but still; the proportion is not at all

close to one. This gap is supposed to be filled through education and awareness in the



community to promote and sustain societal balance.

Fig. 2.3: Sex ratio of Neori GP in three census decades

Source: Census of India

2.2.3 LITERACY RATE

The general Literacy Rate of the village is 63.97 as per Census of India 2011.

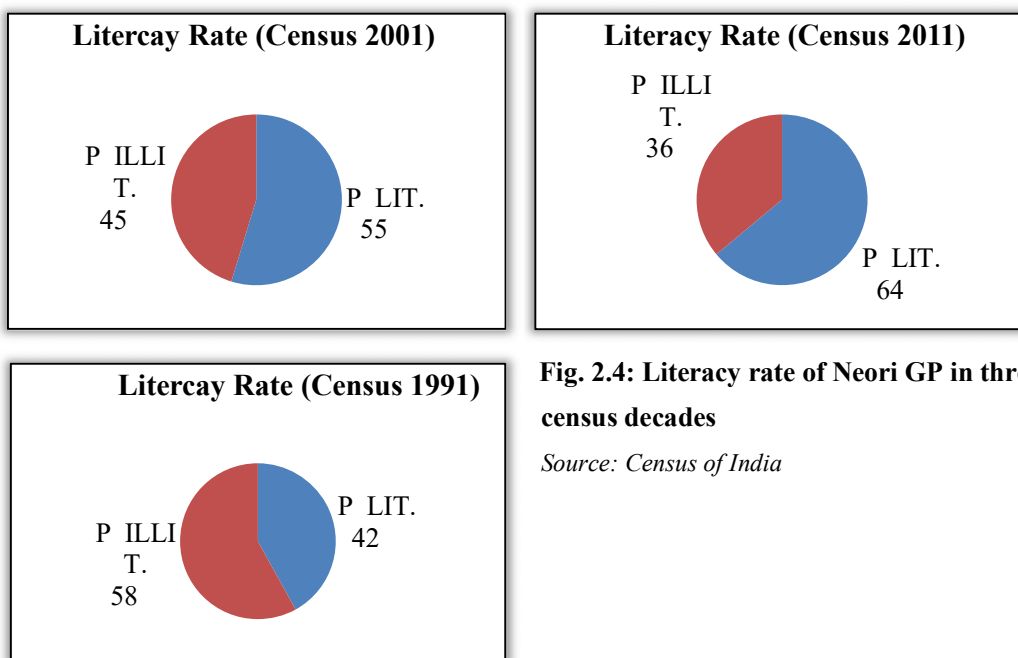


Fig. 2.4: Literacy rate of Neori GP in three census decades

Source: Census of India

The Literacy Rate in the Village has considerably increased in the last three decades. But the overall literacy rate and specifically female literacy rate is considerably low in the Village.

Sl.No.	Census (Year)	Total Female Population	Female Literate Population	Percentage
01	1991	1473	263	17.8
02	2001	2218	769	34.6
03	2011	3207	1665	51.9

(Source: Census of India)

This is basically because of the lack of awareness and absence of adequate social infrastructure. This gap is required to be filled to achieve the goals of community development and up gradation of Village.

2.3 FACTORS FOR THE GROWTH OF POPULATION

The Ring Road (NH) divides the village in two parts and this ring road is connected to the parent city and other major towns and villages in Jharkhand. The village has this spatial advantage of connectivity which has led to the increase in residential as well as commercial activities in the village. The village is in close proximity to the Ranchi city's high profile healthcare services (Medanta Hospital) and Educational facilities (BIT, Mesra) which has led to the increase in demand and price of the property in the village. The growth of the city is towards the village and major changes have been witnessed in the land use pattern of the village and surrounding areas.

It is projected that by 2030 the Population of the Village will grow by almost 75% of the total current population of the Village. So in development plan amenities and facilities for community development has to be proposed keeping in mind the projected population growth by 2030.

Year	Population	Growth Rate (%)
1991	3684	--
2001	5157	40
2011	6907	34
2021 (Projected)	9449	Geometric Increase Method

2026 (Projected)	11,051	Geometric Increase Method
2030 (Projected)	12,930	Geometric Increase Method

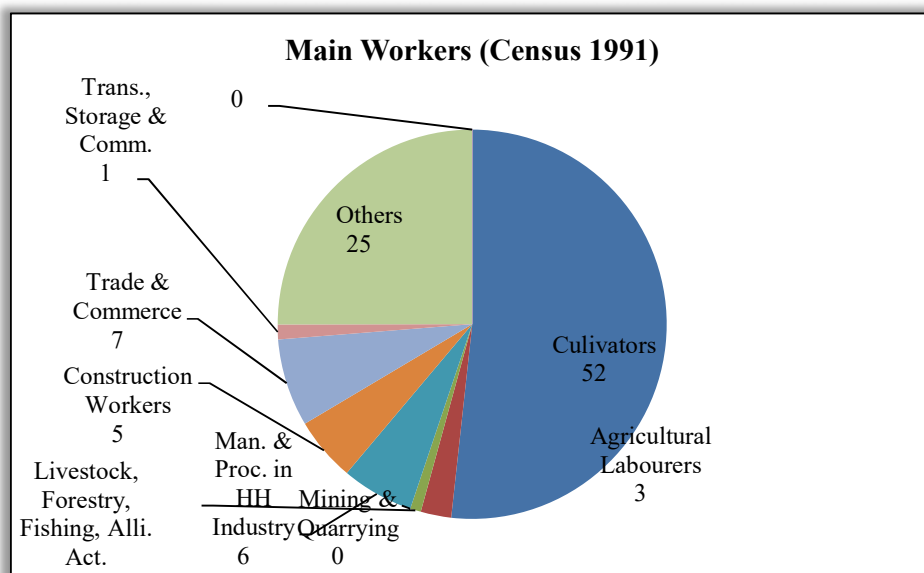
(Projected Population) (Source: Census of India)

2.4 IMPACT OF THE POPULATION GROWTH ON BASIC SERVICES

It is obvious with increase in Population the requirement of basic services in the village has increased rapidly. It is important to maintain the existing one, upgrade the services to the standards and provide the services in case of deficiency. The village has to withstand the impact in respect of basic services like water supply, sewerage, storm water drainage, roads & building infrastructures, employment opportunities, sanitation, educational, medical facilities, transportation, electrification and security. This will ensure the requirements by 2030 and support healthy and prosperous community living in the Village.

2.5 ECONOMIC BASE AND OCCUPATIONAL DISTRIBUTION

The major economic activities in the village are based on tertiary activities. This shows that the village has potential for development of economy based on skill based activities. The total working population in Neori is 1938.



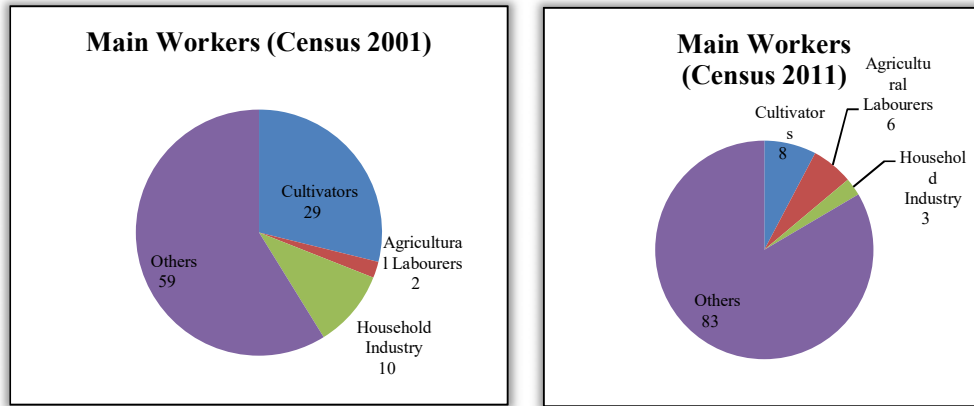


Fig. 2.5: Distribution of Main worker in Neori GP in three census decades

Source: Census of India

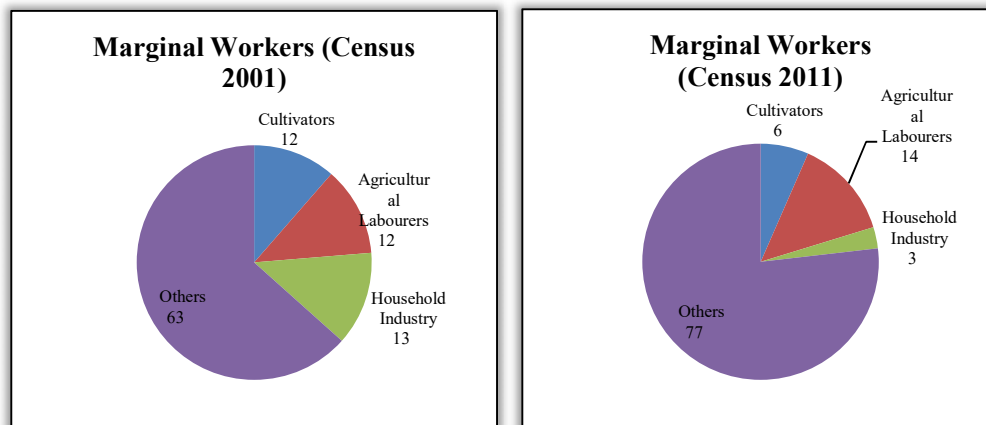


Fig. 2.6: Distribution of Marginal workers in two census decades in Neori GP

Source: Census of India

In addition to the same 18.86% of total population is the marginal workforce in village which is by children below 06 years. This needs serious interventions in terms of social development, so that this percentage of the population below 06 years is not engaged in such activities.

As almost 80% of the total population in Village is dependent on tertiary activities, so development of skills through skill development centers can be proposed in the village. Also in marginal workers almost 20% of the population is engaged in Primary activities. These activities can be developed and further upgraded, through various government schemes which will shift these workers from marginal workforce to main workforce. Almost 70% of the total population is non-working population which is again a concern for the GP and there is a need for more employment opportunities.

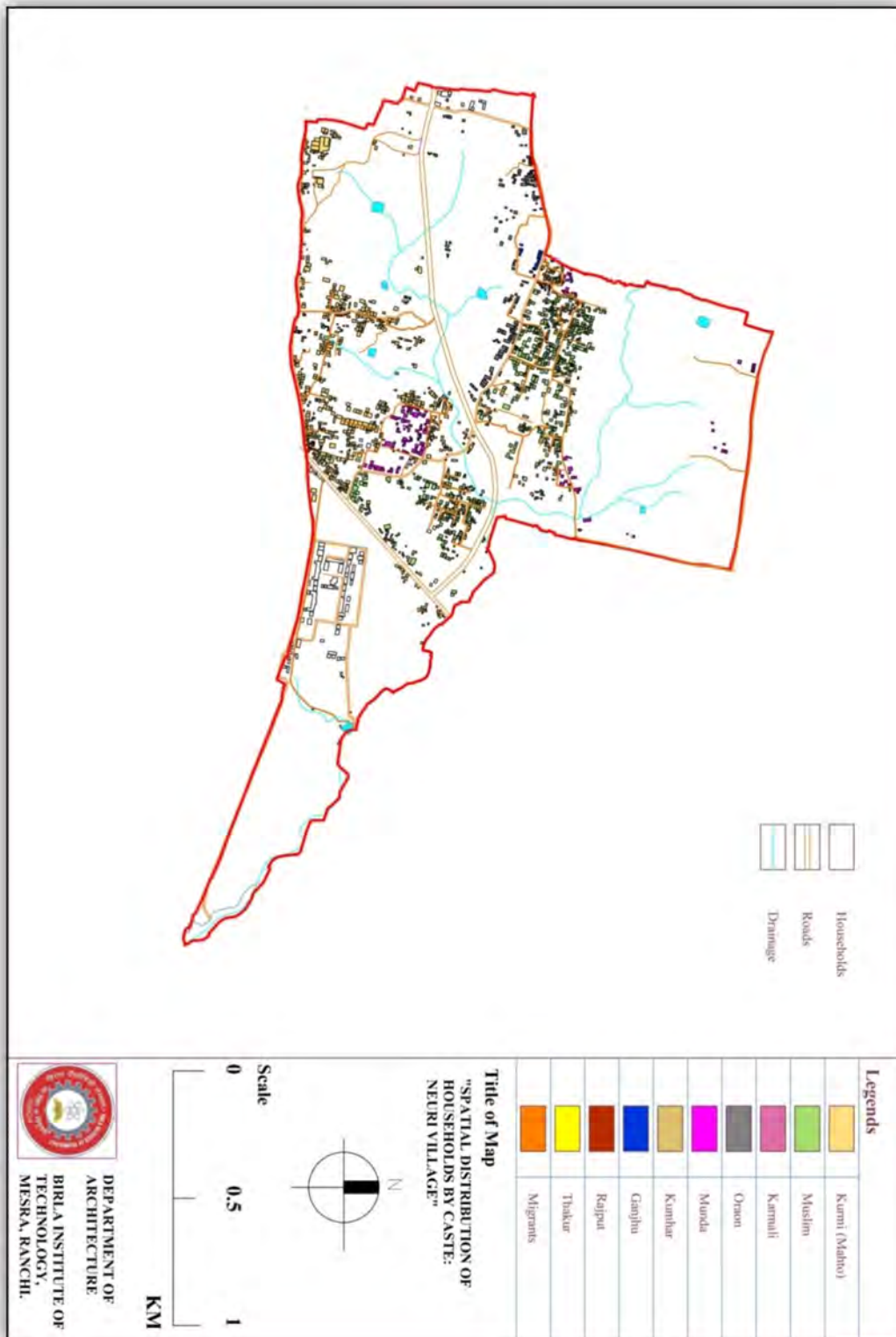
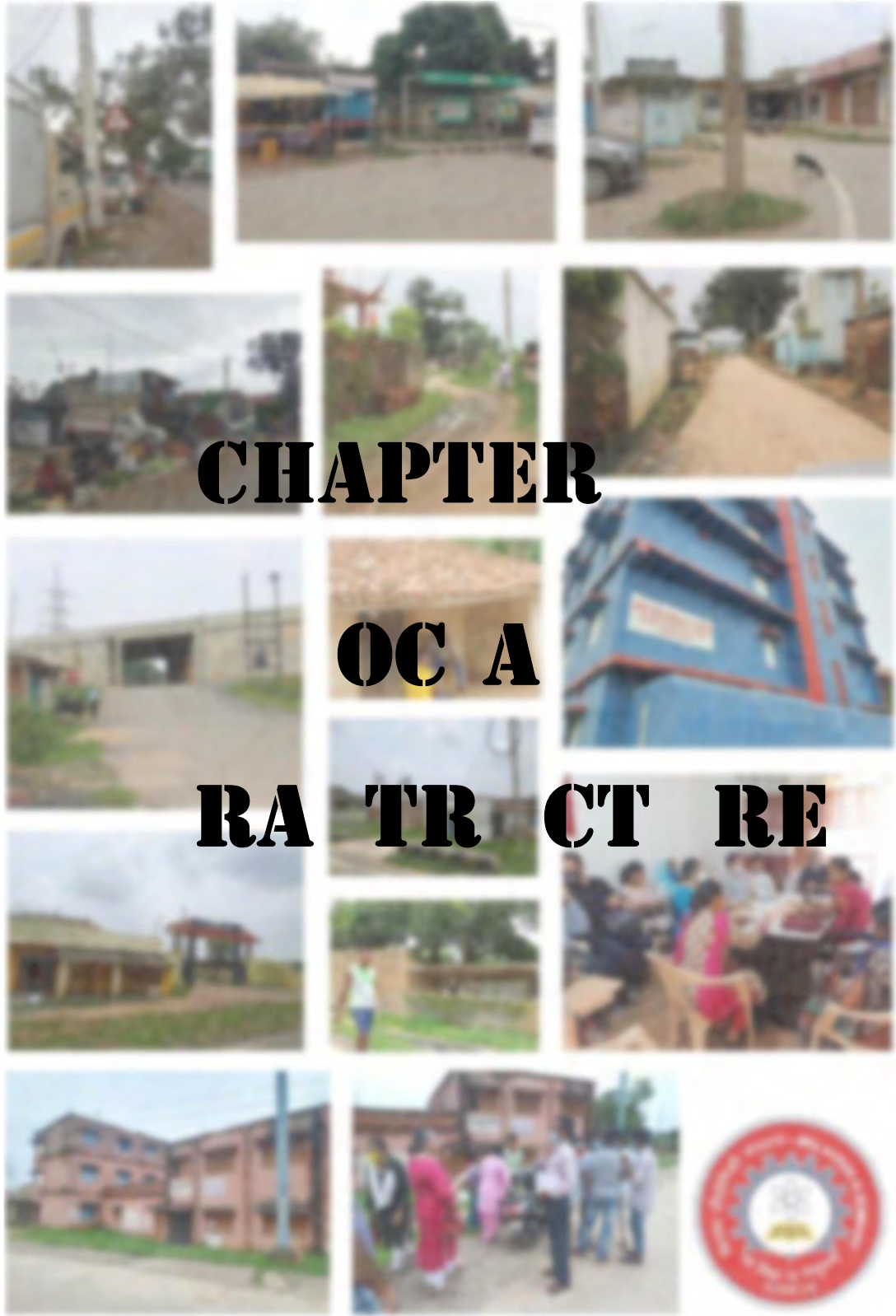


Fig.2.7: Map showing Spatial Distribution of Households by Castes in Neeri GP

Source: based on household survey prepared by the BIT Mesra Team



CHAPTER

OC A

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CHAPTER 3: SOCIAL INFRASTRUCTURE

3.1 INTRODUCTION

Economic, physical and social infrastructures are inter-related components for a holistic and sustainable community development. Good and adequate social infrastructure is the key to achieve progressive communities.

Social infrastructure deals with the following aspects:

Educational Facilities

Healthcare Facilities

Socio- Cultural Facilities

Other Public and Semi-Public Facilities: Police, Fire & Emergency Services, Communication (Postal Facility), Banking Facility

Recreational Facilities & Open Spaces

3.2 EDUCATIONAL FACILITIES

Education is the basic factor which makes a community aware and empowered. One of the Millennium Development goals postulated by UN is to achieve Universal Primary Education and so is the goal of SarvaShikshaAbhiyan (SSA) program of GoI. The current Neori village has 02 Government Primary (01 is Urdu as well as Hindi), 01 Private Primary School, 04 Private Secondary School, 04 Anganwadi Centre and 01 Senior Secondary School.

Sl.Nos.	Institutes	Total Numbers
01	Schools	
	Pre Primary School (Nursery School)	00
	Government Primary School (I to V)	02
	Private Primary School (I to V)	01
	Private Secondary School (I to X)	04
	Senior Secondary School (VI to XII)	01
02	Anganwadi Centre	04
03	Skill Development Centre	00
04	Social Welfare Hostel	00
05	Industrial Training Institute	00
06	Customer Service Centre (Digital Infrastructure)	00
06	Libraries	00

Source: Primary survey



Fig.3.1:Government Primary School in Kendua Toli- Neori (Source:Author)

As per the primary survey not every family in the village sends their children to the schools. As per educational infrastructure the village is having sufficient facilities. But it is also said that educational facilities not only depends on the number of population but also on the characteristics of the population. Considering the fact that female literacy rate is considerably low and there is a significant percentage of population below 06 which is engaged in economic activities rather than education, it is thereby important to generate awareness and increase the type of educational facilities especially for women and children.

There can be more/up-gradation of Anganwadi Centers in the village within easy walkable distance (300-800 m). The local community should be encouraged, especially women, in management of the local level facilities to promote efficient utilization of the resources. Anganwadi is the focal point for the delivery of services at the community level, to children below six years of age, pregnant and nursing mothers, and adolescent girls. Anganwadi center also serves as the meeting place for women s groups, mothers clubs and Mahila Mandals promoting awareness and joint action for child development and women s empowerment.

In order to achieve an overall development, it is important to create employment opportunities in the rural area. It is essential to impart vocational training and employable skills to the rural youth for promotion of sustainable rural livelihood. Neori presently has no vocational training/ industrial training institute or any skill development center under any government schemes like PMKVY.



Fig. 3.2: Private Secondary School, Neori (Source: Author)

3.3 HEALTHCARE FACILITIES

Healthcare facilities and their easy accessibility are important for the progressive communities. It also makes an important contribution to economic progress, as healthy population live longer and is more productive. It includes a system of healthcare and protection that is available, acceptable and of good quality.

The Healthcare Services is to have referral linkage to the next level of health-care facility of Primary Health Centre (PHC) at the rate of 1 PHC per 6 H-SC. In population norm terms, PHC to be provisioned as 1 for every 20,000 population in Hilly/Tribal/Difficult Access Areas and 1 for every 30,000 population in Plain Areas, while the bed norm is 4-6 beds in each PHC.

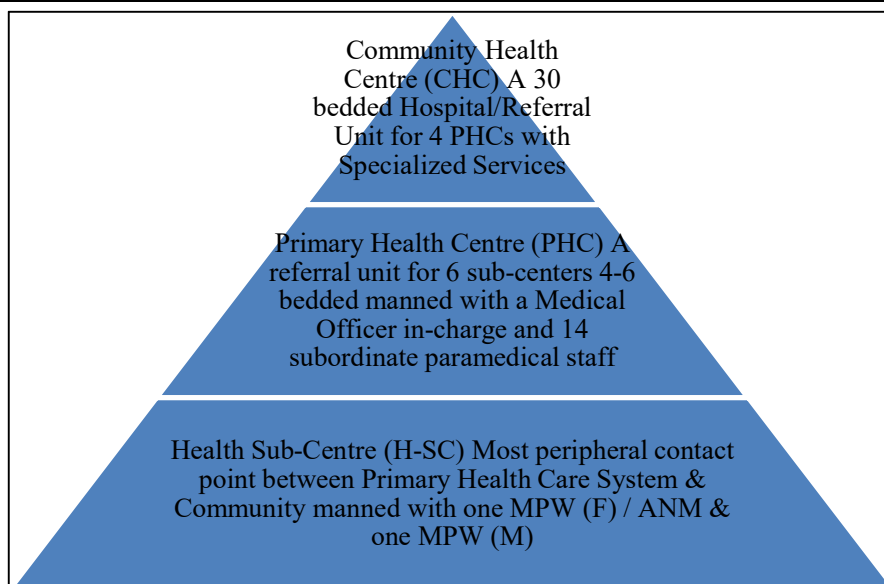


Fig.3.4: Hierarchy of Healthcare delivery system in India prescribed by MoHFW, GoI

There is one Health Sub Centre, one Community Health Centre (CHC), one Private Clinic and one Veterinary Clinic in the village which is in place as per the Guidelines for Rural Development. There is a number of private multispecialty hospitals located in Irba (Village) which is within the 03 km range of the Neori Village. As per Primary survey people mostly travel to RIIMS (almost 12 kms) which is in the Ranchi City as it is a Public Hospital.

Table 3.2: Number of Health Facilities in Neori Village by Hierarchy		
Sl. Nos.	Type of Health Facilities	Numbers
1.	Health Sub Centre (H-Sc)	01
2.	CHC/PHC	01
3.	Veterinary Clinic Hospital	01
4.	Private Hospital	01

Source: primary survey

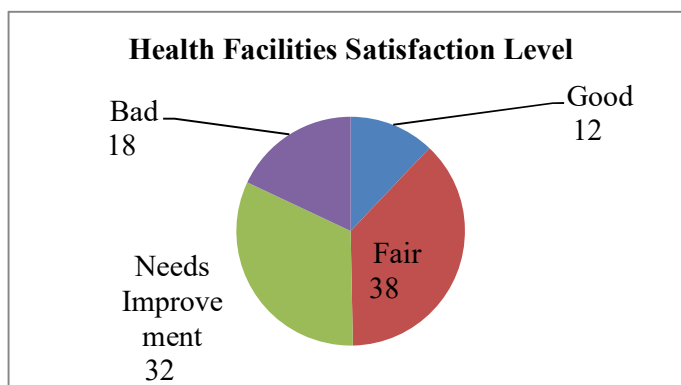


Fig. 3.5: Health facilities satisfaction level of residents of Neori GP

Source: Primary Survey of the village

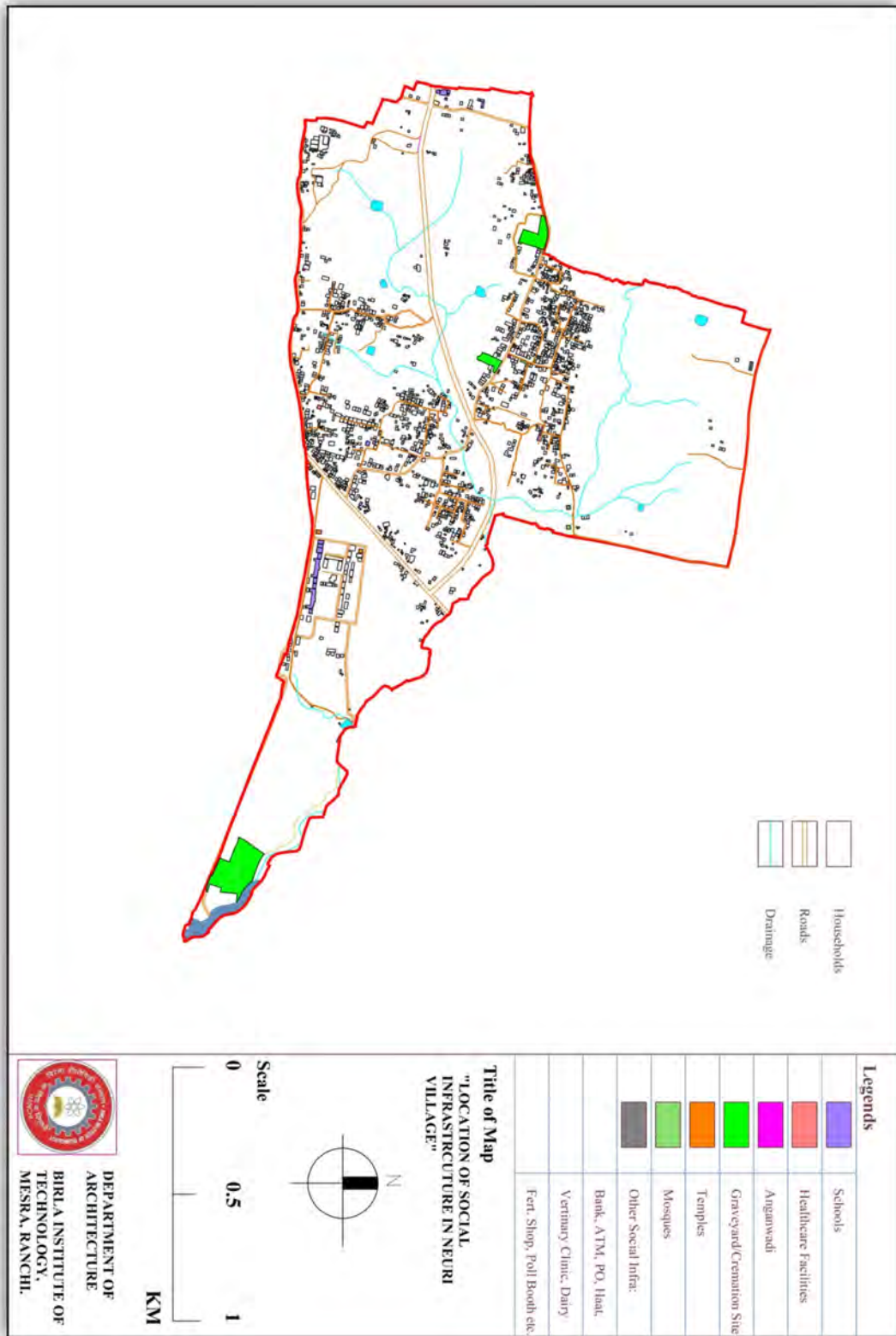


Fig.3.6: Map showing Location of Social Infrastructure in NeoriGP

Source: based on household survey prepared by the BIT Mesra Team

3.4 SOCIO-CULTURAL FACILITIES

The culture, traditions of tribes, stories, music, art and crafts always define the identity of a village. There is one Club Ghar (Chandni Tola) and one JSLPS (Jharkhand State Livelihood Promotion Society) present in the village. There has to be a socio-cultural center proposed in the village comprising of Community Hall, Library, Recreational Club, Music, Dance and Drama Centre. The existing Club Ghar present near Mahto Toli and JSLPS near Panchayat office can be upgraded and used for this purpose.

3.5 OTHER PUBLIC AND SEMI PUBLIC FACILITIES

A well distributed network of police stations and police out posts throughout a habitable region to provide security to the residents and create a peaceful and law abiding community is essential. At present there is no police station in Neori, it is under Mesra Police Post which is adjacent to the village.

Also, Fire Services are needed for protecting people from fire hazards, building collapses, and other unforeseen emergencies / disasters. Fire is categorized as a disaster. It can spread over large area in no time and cause great damage to life and property. The nearest fire station is the Army Fire Station (09 km) and Raj Bhawan Fire Station (16 km) away from the village.

The Postal Service, telephone and the internet form the communication network for any area. There is one Post Office present in the village near to the Vikas Chowk and there is also one Internet Caf present in the village but there is no government digital center. Nearly, all the villagers use mobile phones for telecommunication.

3.6 COMMERCIAL FACILITIES

The commercial facilities in Neori GP are largely confined along the flank of the NH 33. The shops aligned along GP include clothing, daily needs, furniture, groceries, motor parts, and there is also a car-showroom. There is a bi-weekly haat for vegetables, fruits and non-vegetarian items of daily use that takes place abutting to NH 33 on Monday and Thursday which creates a lot of commotion and unwanted spillover pollution on the NH. Otherwise there are a very few daily need shops dispersed over the GP to meeting grocery needs of the people.

3.7 RECREATIONAL FACILITIES AND OPEN SPACES

There are no designated parks or playgrounds present in the village. Although there are government open spaces in the village, it is not developed as a Park or a Playground. As per URDPFI Guidelines, 10-12 sq.m of open space per person is desirable. In the government open space a Park or a Playground is proposed to be provided.

3.8 MISCELLANEOUS FACILITIES

The following other facilities are required in the Villages:

- Banks/ ATMs
- Poll Booths
- Rural Haats (Weekly Market)
- Dairy
- LPG Distribution Centre
- Common Service Centre (Digital Infrastructure)
- Fertilizer Shop
- Temples /Mosques/ Churches
- Cremation Sites/Burial Grounds
- Auto/ Rickshaw Stands

As per Primary Survey all the villagers have their account in the bank. There are 02 banks present in the village. There are also 02 ATMs associated with the bank present in the Village. There are 06 Polling Booths (Neori School) present in the Village and one model Polling Booth (Kanke Block) present in Neori Panchayat Bhawan. The weekly market (rural haat) is held from Vikas Chowk to Panchayat Bhawan along road side in the Village and is done twice in a week (Monday & Thursday). There is one Dairy also present in the village in Kendua Toli. There is no LPG Distribution Centre present in the village under Pradhan Mantri Ujjwala Yojna. Currently LPG cylinders are supplied from Booty More Distribution Centre in the Ranchi City. There is one Fertilizer shop also present in the village. There are 07 temples, 04 mosques and 01 SarnaSthal present in the village. There is 02 Cremation Sites (01 for ST) and 01 Burial Grounds present in the village. There is no designated space for Auto/ Rickshaw parking.



Fig.3.6: Rural Haat (Weekly Market) along roadside near Vikas Chowk in dilapidated condition

(Source: Author)

At present there is no infrastructure for digital literacy in the Village. There are 03 internet services present in the Village.

Pragya Kendra (Mesra Paschim)- Vikas Chowk

Neori Pragya Kendra- Near Post Office

One Internet Caf in Kendua Toli

As per National Fibre Optics Network (E-DISHA), 2011 there has to be 01 Customer Service Centre, for every 5000 persons or 01 per Gram Panchayat which is at present lacking in the village. At least one person per household or at least 20 population in the village has to be digital literate; this deficiency needs to be addressed.



Fig. 3.7: A Temple in Neori Village

(Source: Author)

3.9 PROPOSALS AND RECOMMENDATIONS

Primary objective of GPSDP is to identify and formulate ways of addressing real needs of local people. Economic development of the village is one of the prime

concerns and therefore supporting sources of income needs to be encouraged in the Village. GPs should be encouraged to develop and use locally relevant indicators on issues of development, including aligning actions with localizing the SDGs and take up activities which would increase local production and productivity, increase employment and employability, improve market access and marketability of the local produce, promote value addition, create productive infrastructure like markets, ponds, fisheries, livestock development, horticulture development, land development, minor irrigation facilities, dug wells, irrigation tanks etc. The GP should converge different programs for livelihood promotion through MGNREA, NRLM, PMAY, PMGSY, NSAP, RKVY etc.

GPSDP should focus on literacy, education, skill development, health, nutrition, livelihood promotion etc. It should focus on improving quality of human development services through Anganwadis, schools, hospitals and improving access to them.

GPSDP should be aimed at improving the wellbeing of vulnerable and marginalized groups like SCs, STs, Other Backward Classes including minorities, persons with disabilities, elderly people, women, children, bonded laborers, child laborers, distress migrants, manual scavengers, victims of trafficking etc.

GPSDP should also focus on how Panchayats can play a major role in skill building and ensure that the most vulnerable sections, including women participate in the program. GPs have to plan for generating awareness about the skills related program, facilitating the mobilization efforts, creating databases for skill demand and placement, assist in conducting the Job mela and support the project implementing agencies in all stages of skill training.

The following proposal should be developed in the Neori Village in different phases:

The projected population of the Neori Village for 2026 is 11,000 and by 2031 to be almost 13,000. Residential and infrastructure developments catering to this population has to be planned in two phases. For this land parcels suitable for development and existing infrastructure up gradation and augmentation potential has to be identified and proposed in phases.

Under the Ministry of Rural Development and Ministry of Skill Development and Entrepreneurship self-employment skills for all eligible youths must be developed. For this there has to be a Skill Development Centre, Vocational Training Institute in the Village which provides a platform for the

development of skills of villagers especially youth and women. At the same time this center or institute must focus on creation of job for the trainee at the local level within or near to the village. This can be done in the existing Panchayat Bhawan building and vacant government buildings near Panchayat Bhawan and their up-gradation.

Under the Ministry of Human Resource Development existing government schools in the village must ensure 100% attendance and efficient learning outcomes. As in the village female literacy rate is still very low, it is because of many social and economic factors, a Government Higher Secondary School for girls (intake of 300, with a ratio of 01 teacher per 30 students) with adequate infrastructure is proposed. This school can be proposed in the existing government vacant plots in the village. All existing schools must upgrade their infrastructure, library and sports facility. A school for adult education under the scheme of Samagra Shiksha Abhiyan (SSA) providing non formal education can be proposed in the village. This can also be done in the existing Anganwadi Centers and can also work as Women and Child Development Centre.

The tribal population has a very rich culture and culture based regeneration activities can be encouraged in the Village. For this there has to be a Community Hall or Open Space at Gram Panchayat level. A land parcel or chowk within the residential colony has to be identified for community gathering and celebrations. There is an open space near the Graveyard which is used by villagers for community in Bantoli. The existing Club ghar/JSLPS is proposed to be upgraded for the same purpose.

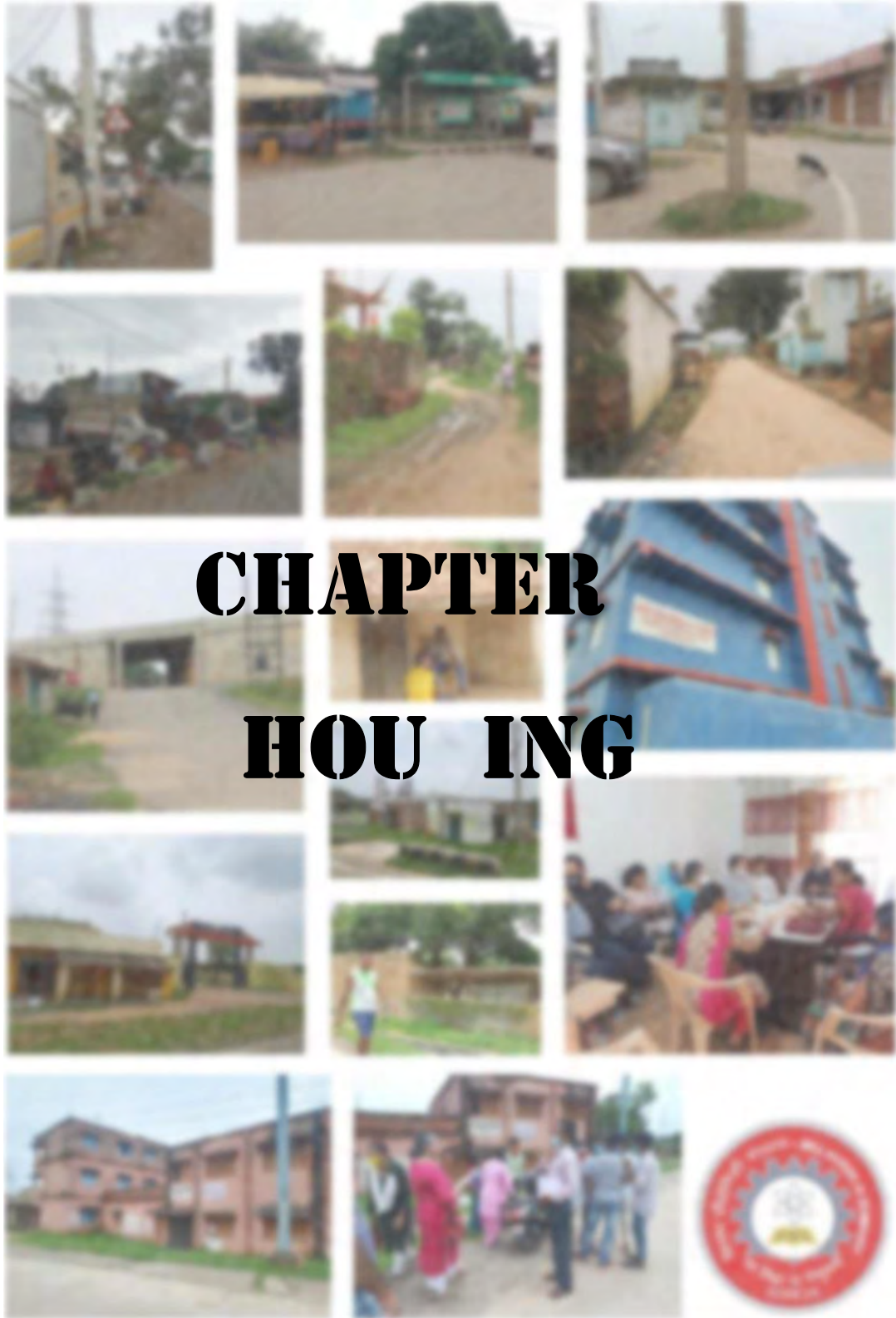
As far as Health infrastructure is concerned the village is already having a Health Sub Centre, Public Health Centre and a Private Nursing Home. The existing services must be made more efficient with emergency ambulance facility, 100% immunization and 100% treatment of community spread diseases.

The rural haat in the village has to be renovated, supported and marketed at the Panchayat level. With the development of village and increasing demand it is to be increased and made more efficient supporting the local people.

Under the Ministry of Social Justice & Empowerment and Department of Empowerment of Persons with disabilities various schemes relating to Scholarships for SCs, STs, OBCs, Minorities and differently abled people must be provided. Skill training and Social Security for differently abled persons have to be provided and can be done at existing Anganwadi centre in a different time zone or can be done in proposed skill development centre. Aids

and appliances to these people must be provided by the GP. Community facilities (toilets) catering to the needs of this section of society also have to be provided at suitable locations.

One LPG Distribution center can also be proposed in the village to facilitate better capitalization of Pradhan Mantri Ujjwala Yojna.



CHAPTER HOUSING

CHAPTER 4: HOUSING

4.1 INTRODUCTION

Housing in the country has been identified as a basic human need. The housing sector has been on the priority list of the Government of India right from the first five-year plan till date. Envisaging for the promotion of housing, the Government has initiated various fiscal incentives, through large number of schemes, to fulfill both the demand and supply sides. These schemes, under various names, focus mainly on housing for the poor and are aligned to improve the housing conditions of industrial workers/ economically weaker sections and of low-income groups. The continuous effort from the Government through various programmes have resulted in the positive growth in the total housing stock, which has increased from 13.30 million units in 1961 to 78.48 million units in 2011(MoHUPA, 2013).

Housing and housing amenities are important indicators to assess human well-being of a country. The statistics on living conditions, as represented by the type of housing available, average space available to each person in the house, the basic civic amenities available to the household etc. will give a picture of the overall socio-economic progress of the society. This statistical information relating to housing condition in quantitative terms is required for an assessment of the overall housing needs and helps in the formulation of housing policies and programmes along with its execution and evaluation. These housing policies and programmes constitute an integral part of the overall social and economic plans of the country or part thereof.

This chapter discusses the housing situation in Neori under three sections. The first section outlines the statistical information regarding housing characteristics based on 2011 census and the primary household survey (conducted through mobile app developed by ISRO) to portray the situation in perspective. The second section deals with the key observation and findings of existing housing condition. Finally, in the concluding section, we discuss about the proposals and recommendations which need to be taken up in two phases along with suggestions for policies for ameliorating the housing condition in Neori Gram Panchayat.

4.2 HOUSING CHARACTERISTICS

The housing characteristics of a settlement aptly describe the socio-economic condition and highlight the aspects for which interventions in the form of physical

planning proposals and policy guidelines can be developed. This chapter compares and highlights the general characteristics of Neori gram panchayat about their the ownership status, type of structure, building height, age of structure, condition of house, profile of the key housing characteristics and housing facilities based on 2011 census data and primary survey conducted during August 2020.

4.2.1 HOUSE OWNERSHIP STATUS

Home ownership has been argued to provide the most stable tenure arrangement to satisfy basic household needs and promote a sense of well-being for the residents. The home tenure status, according to census 2011 data, of Neori GP shows that 82.6 percent of households own their house whereas 9.9 percent of household are rented. The remaining 7.5 percent of households had other arrangement (Table 4.1).

Table 4.1 Percent ownership status		
	Census 2011	Primary Survey 2020
Owned	82.6	93.3
Rented	9.9	1.3
Any others	7.5	5.4
Number of Households	1230	1230
Total Population	6907	6907
Mission Antyodaya Baseline Survey 2018, Neori Gram Panchayat Score Card, Ministry of Rural Development, Govt. of India		

The result from primary survey indicate significant increase in percent household owning house from 82.6 percent to 93.3 percent while rented households declined from 9.9 percent to 1.3 percent. The percent of household having other arrangement also dropped from 7.5 percent to 5.4 percent. The spatial distribution of houses in Neori GP and change in ownership status from 2011 to 2020 is shown in Figure 4.1 and Figure 4.2 respectively below:

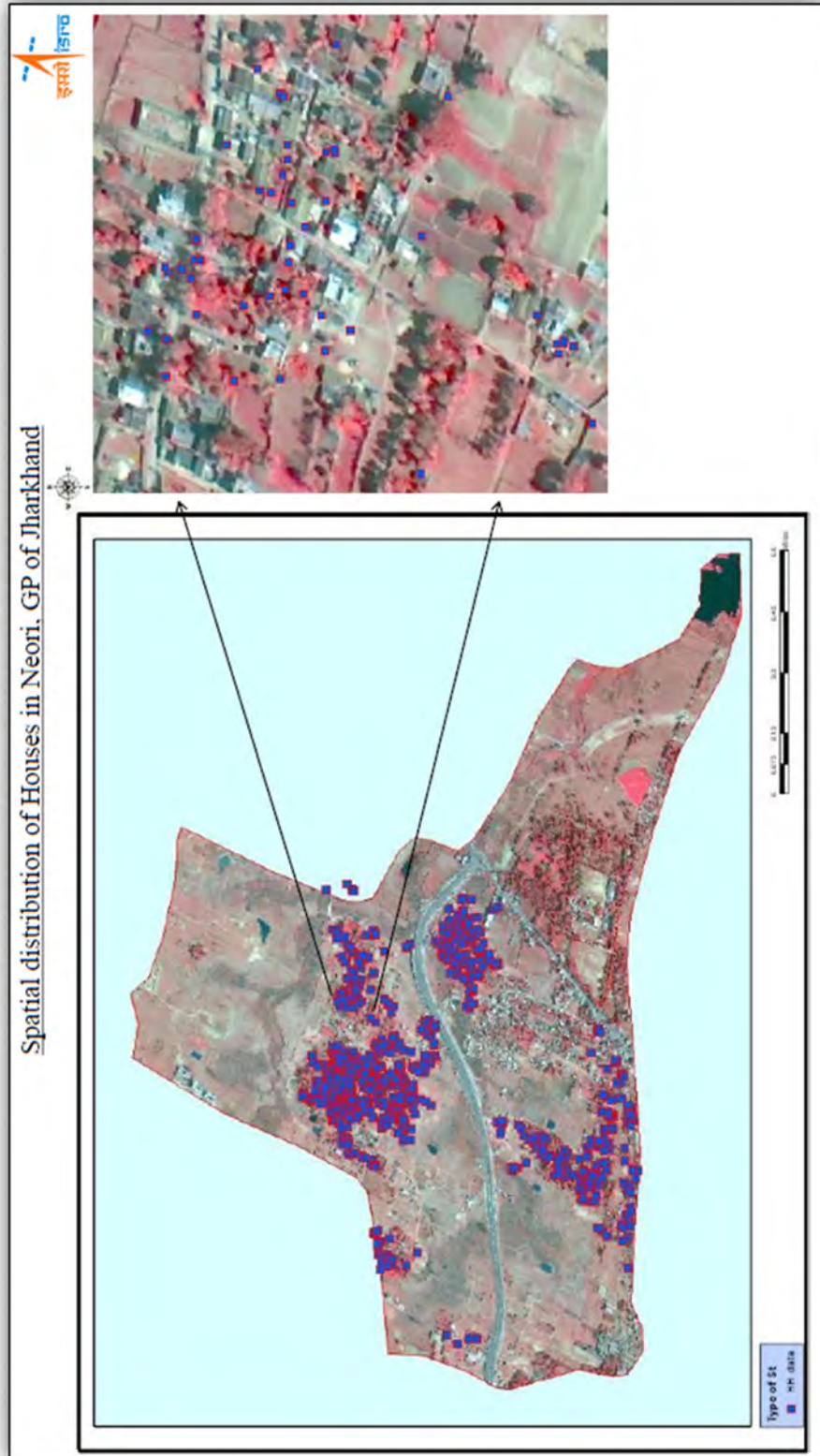


Fig. 4.1: Spatial distribution of Houses in Neori GP

Source: NRSC, ISRO

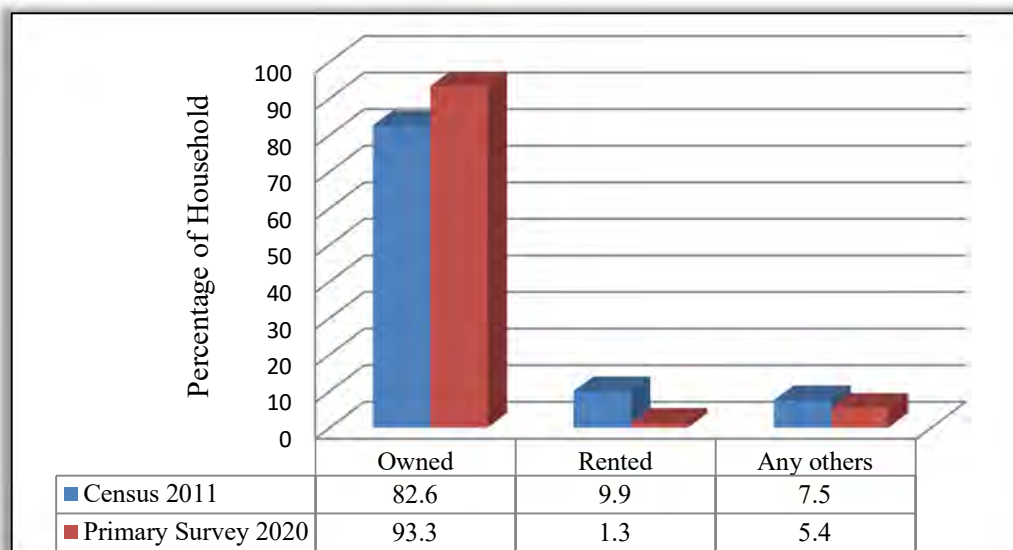


Fig. 4.2: Percent Household with ownership status

Source: Census 2011 and primary survey conducted during August 2020

4.2.2 HOUSES BY TYPE OF STRUCTURE

According to 2011 census, overall 3.6 percent of households live in *kachha* houses, 40.1 percent live in *semi pucca* houses, and the remaining 56.1 percent live in *pucca* houses (Table 4.2). The data from primary survey presents a complete different situation. The percent of households living in *kachha* houses increased to 44 percent from merge 3.6 percent whereas the percent of households living in *pucca* houses decreased to 14.8 percent from 56.1 percent. The percent of households living in *semi pucca* houses decreased marginally from 40.1 percent to 39.8 percent.

	Census 2011	Primary Survey 2020
Pucca	56.1	14.8
Semi-pucca	40.1	39.8
Kachcha	3.6	44
Other	0.2	1.4

The spatial distribution of houses in Neori GP based on house type and comparison of the percent of households living in houses by the type of structure is shown in Figure 4.3 and Figure 4.4 respectively.

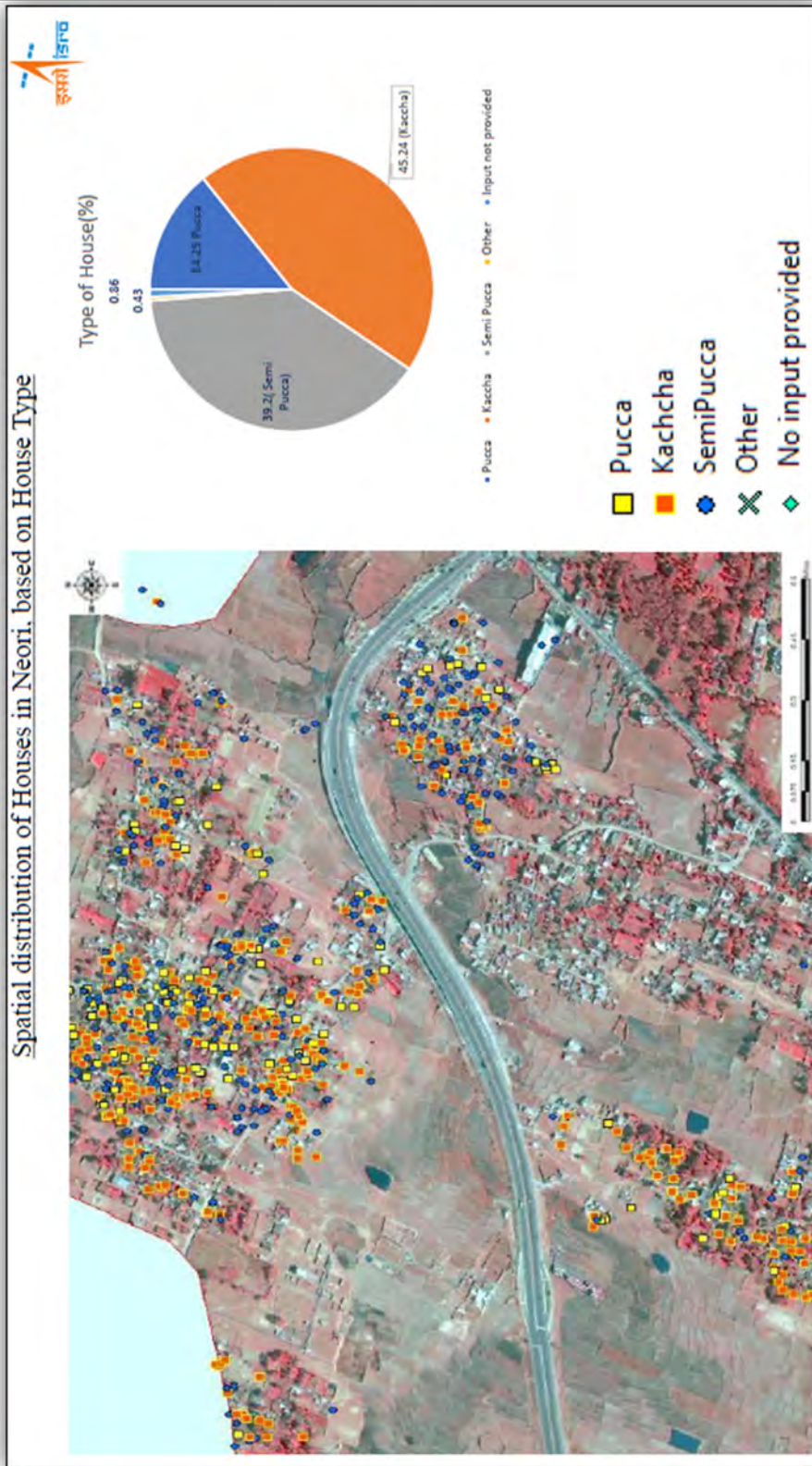


Fig. 4.3: Spatial distribution of Houses in Neori, based on House Type

Source: NRSC, ISRO

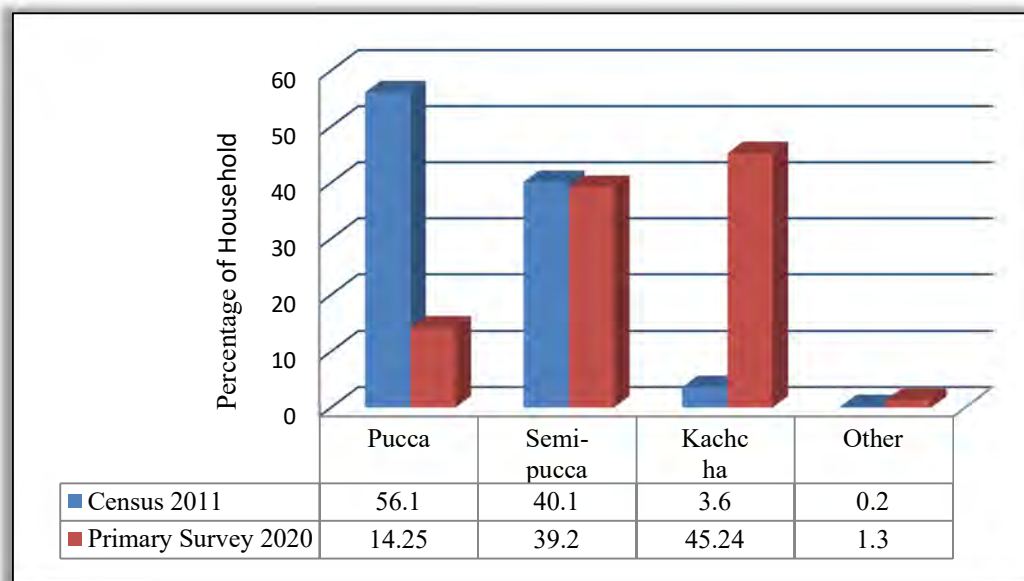


Fig. 4.4: Percent Household with type of structure

Source: Census 2011 and primary survey conducted during August 2020

4.2.3 HOUSES AND ITS CONDITION

Among the total census houses in Neori GP, 42.6 percent occupied for residence are classified as ‘good habitable condition’, whereas 48.4 percent occupied houses are classified as ‘livable habitable condition’. The houses in ‘dilapidated condition’ account for 4 percent (Table 4.3).

Table 4.3 Percent Household by its condition		
	Census 2011	Primary Survey 2020
Good	42.6	15.4
Livable	48.4	59.4
Dilapidated	4	25.2

The survey result shows that there is decrease in percent of houses in ‘good’ condition from 42.6 percent to 15.4 percent. The houses with ‘livable’ condition increased from 48.4 percent to 59.4 percent whereas there is a significant increase of houses in ‘dilapidated’ condition from 4 percent to 25.2 percent. The comparison is shown in Figure 4.5.

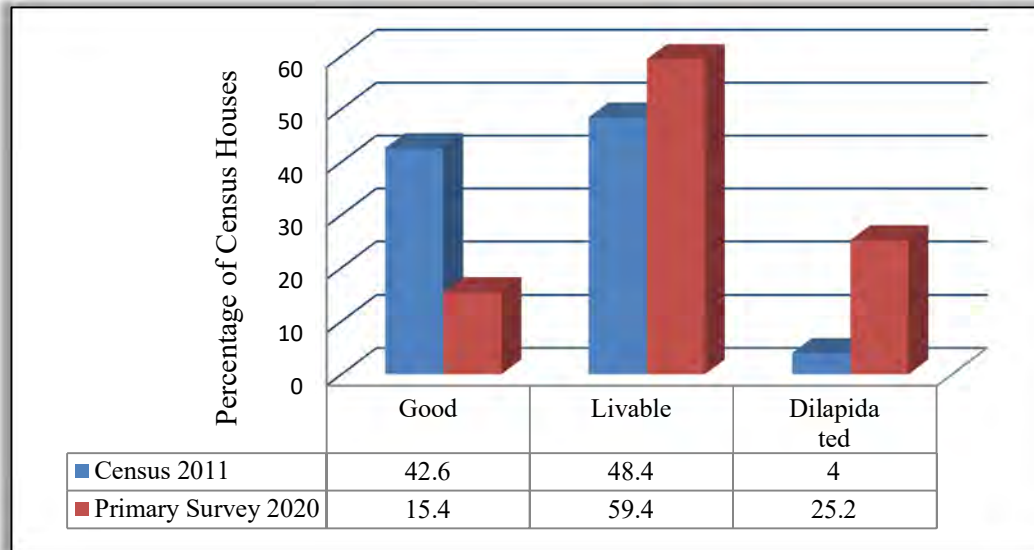


Fig. 4.5: Percent Census Houses by its condition

Source: Census 2011 and primary survey conducted during August 2020

4.2.4 HOUSES BY ITS HEIGHT

Primary survey of the Neori GP indicates that the height of buildings is uniform to a large extent, with houses having only ground floor accounts for 96.6 percent. The houses extending up to G+1 constitute 3.4 percent whereas those with G+2 in height are only 0.2 percent of houses (Figure 4.6). The spatial distribution of houses based on height is given in Figure 4.7.

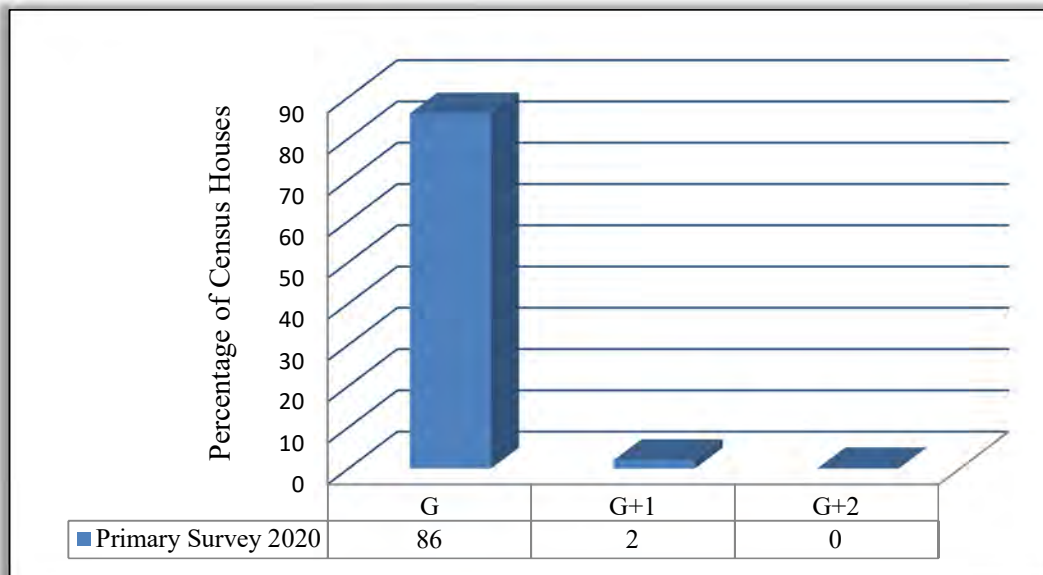


Fig. 4.6: Percent Census Houses by its height

Source: Primary survey conducted during August 2020

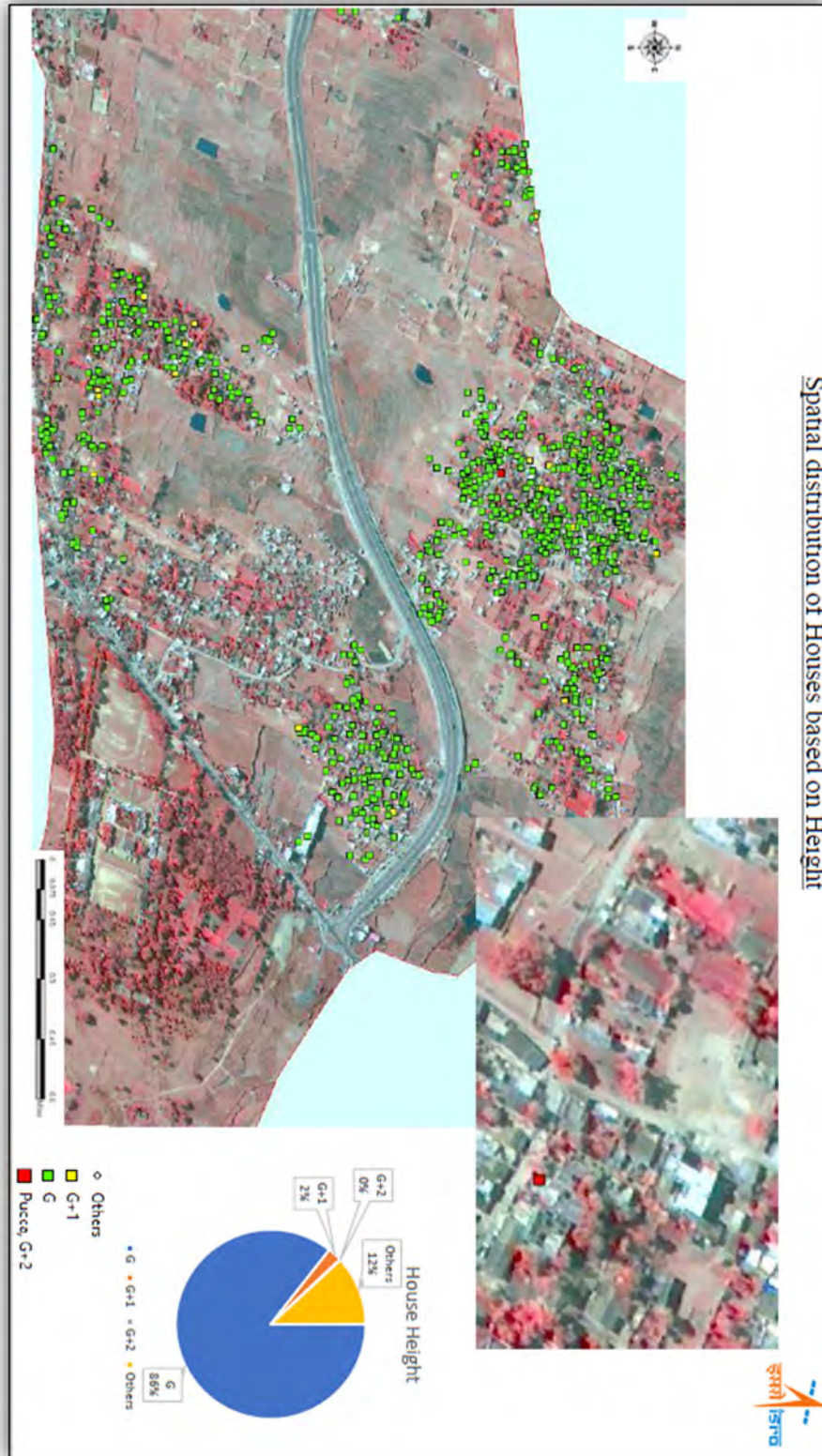


Fig. 4.7: Spatial distribution of Houses based on Height

Source: NRSC, ISRO

4.2.5 HOUSES BY AGE OF STRUCTURE

The household survey conducted in Neori GP attempted to determine the age of structure within its boundary. Houses constructed within ten years accounted for 35.1 percent and those constructed during past 10-20 years were 30.7 percent of total houses. Houses which are 20 to 50 years old constitute 22.2 percent whereas those constructed before 50 years are significantly less accounting for 11.9 percent (Figure 4.8). The spatial distribution of kaccha houses based on the duration of residence is shown in Figure 4.9.

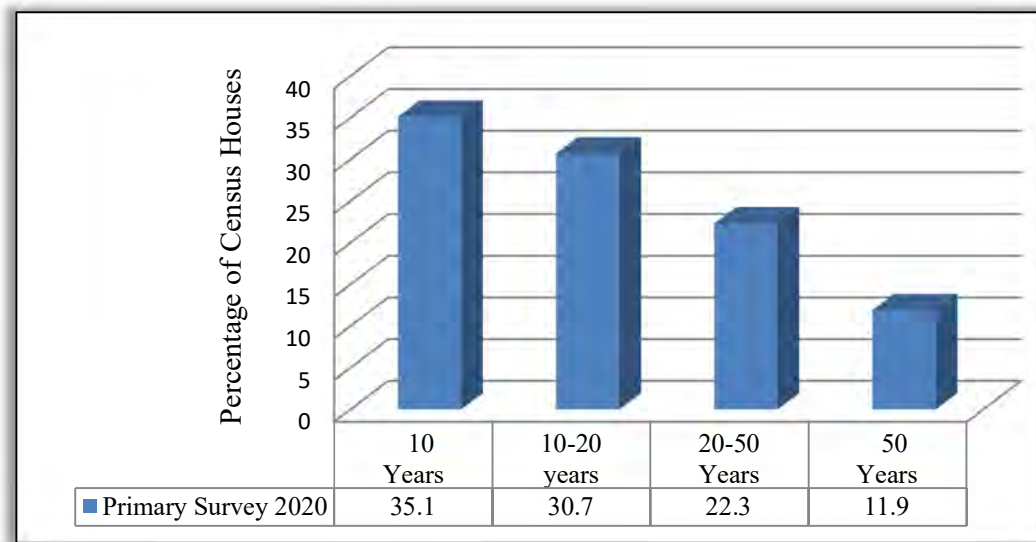


Fig. 4.8: Percent Census Houses by age of structure

Source: Primary survey conducted during August 2020

4.2.6 HOUSES BY MATERIAL OF ROOF

According to census 20011, the percent of houses in Neori GP with grass, thatch, bamboo, wood, mud was 5 percent, whereas those using plastic and polythene as roof material were 0.3 percent. Houses with roof made of handmade tiles and brunt bricks were 21.9 percent and 1.3 percent respectively. GI metal and asbestos sheets etc. constitute 44.4 percent of census house in Neori GP. 68.4 percent. Houses with roof made concrete were 26.2 percent (Table 4.4).

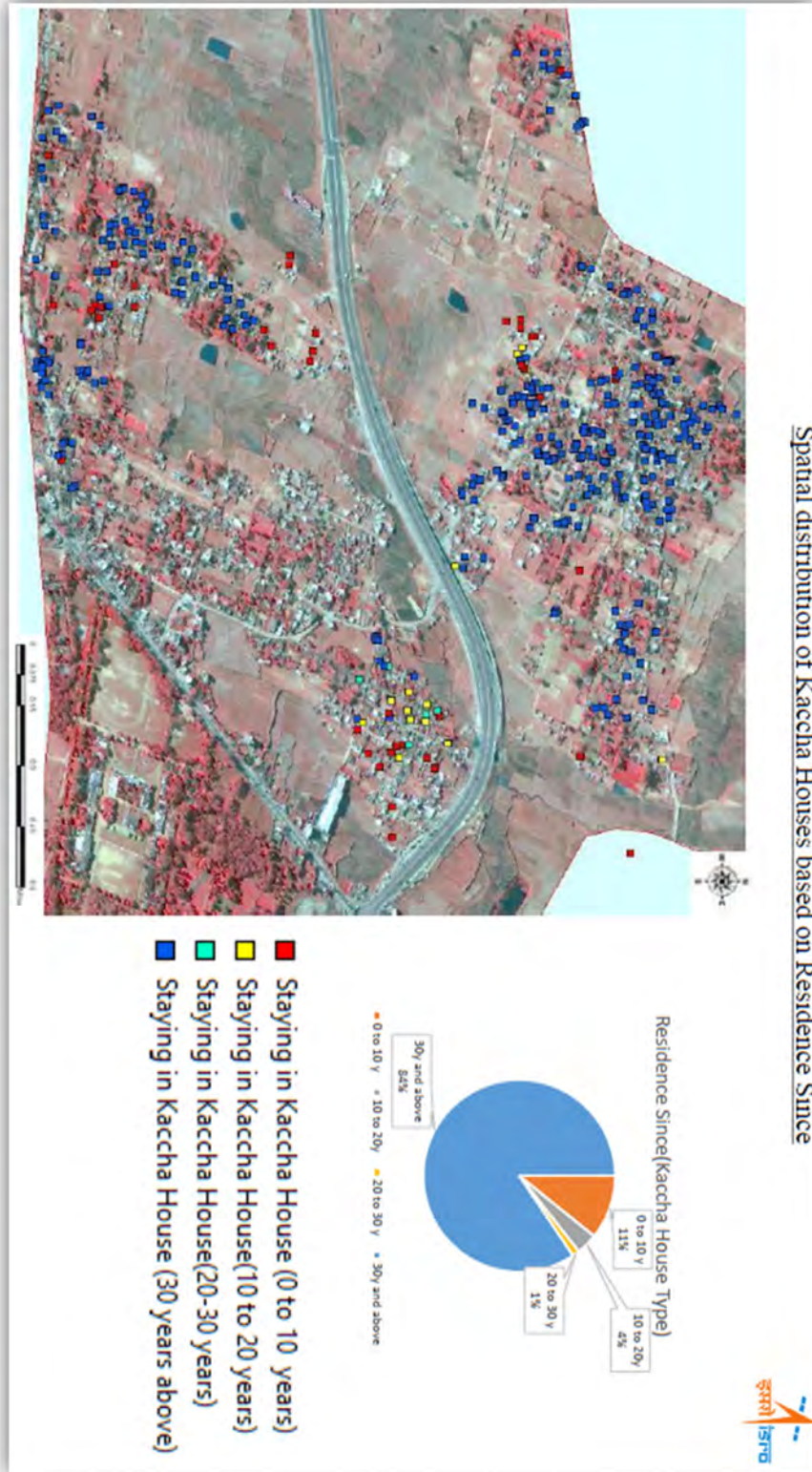


Fig. 4.9: Spatial distribution of Kaccha Houses in Neori, based on age of residence

Source: NRSC, ISRO

	Census 2011	Primary Survey 2020
Grass/ Thatch/ Bamboo/ Wood/Mud etc.	5	19.7
Plastic/ Polythene	0.3	0
Hand made Tiles	21.9	25.8
Machine made Tiles	0	0
Burnt Brick	0.8	0
Stone/ Slate	1.3	5.7
G.I./Metal/ Asbestos sheets	44.4	37.1
Concrete	26.2	11.7
Any other material	0	0

The primary survey reveals that the percent of houses with grass, thatch, bamboo, wood, mud increased to 19.7 percent from 5 percent. Houses with roof made of handmade tiles increased to 25.8 percent from 21.9 percent. Use of GI metal and asbestos sheets etc. as a roof material decreased to 37.1 percent from 44.4 percent. Houses with roof made concrete decreased from 26.2 percent to 11.7 percent (Figure 4.10).

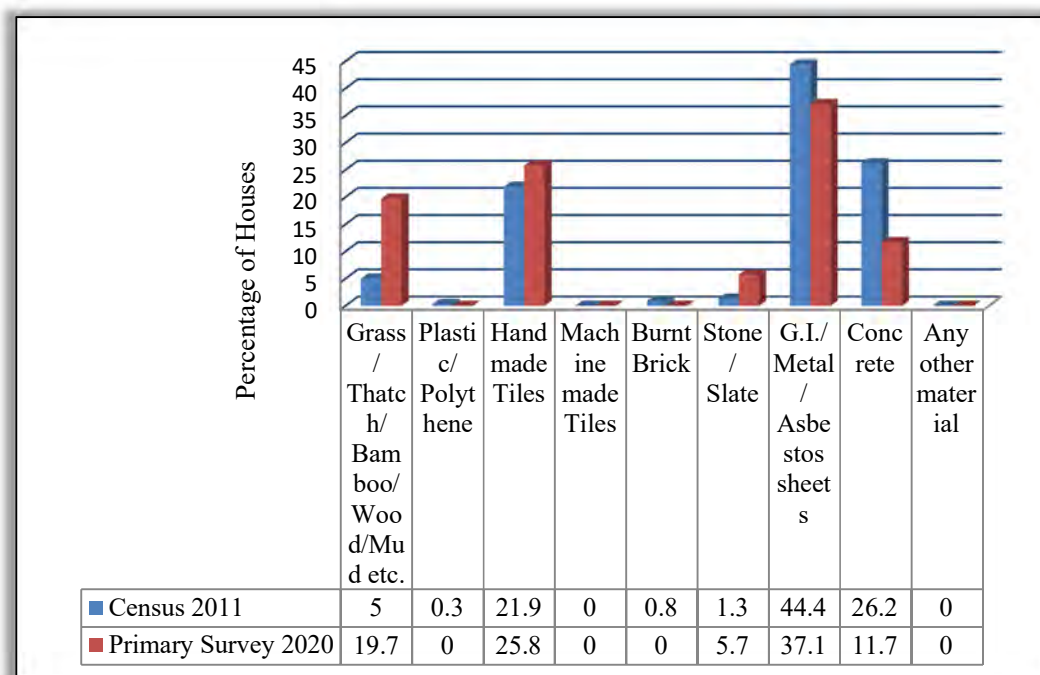


Fig. 4.10: Percent Household by material of roof

Source: Census 2011 and primary survey conducted during August 2020

4.2.7 HOUSES BY MATERIAL OF WALL

According to census 2011, the walls made of burnt bricks were prominent in Neori GP and constituted 53.2 percent of census houses followed by mud and unburnt bricks constituting 42 percent of houses. Walls made up of stone packed with mortar and of stone not packed with mortar were 2.6 percent and 0.8 percent respectively. The walls made of Grass, Thatch, Bamboo etc and those made of Plastic or Polythene were 0.1 percent each. Concrete used as a wall material constituted 1.1 percent of the census houses in Neori GP (Table 4.5).

Table 4.5 Percent of houses by the material of wall		
	Census 2011	Primary Survey 2020
Grass/ Thatch/ Bamboo etc.	0.1	0.3
Plastic/ Polythene	0.1	0
Mud/ un burnt bricks	42	58.9
Wood	0	0
Stone not packed with mortar	0.8	0
Stone packed with mortar	2.6	3.7
G.I./ Metal/ Asbestos sheets	0	0
Burnt brick	53.2	35.9
Concrete	1.1	1.5
Any other material	0.2	0

The primary survey of households indicates that the percent of houses with wall made of burnt bricks decreased from 53.2 percent to 35.9 percent whereas walls made of mud and unburnt bricks increased from 42 percent to 58.9 percent. Walls made up of stone packed with mortar increased from 2.6 percent to 3.7 percent. The walls made of Grass, Thatch, Bamboo etc. and those made of concrete also increased marginally from 0.1 to 0.3 percent and from 1.1 to 1.5 percent respectively (Figure 4.11).

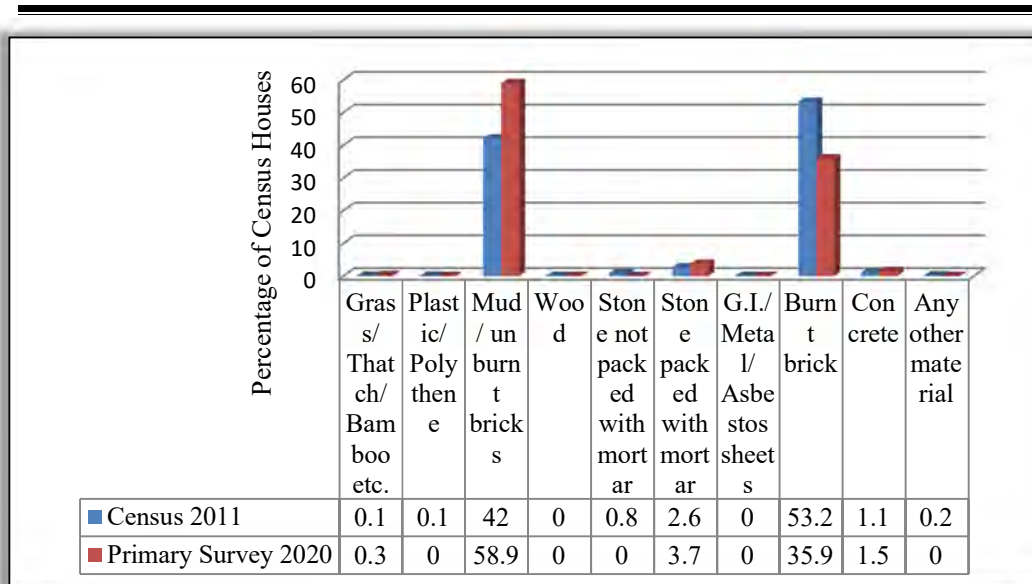


Fig. 4.11: Percent Household by material of wall

Source: Census 2011 and primary survey conducted during August 2020

4.2.8 HOUSEHOLD DISTRIBUTION BY DRINKING WATER SOURCE

There is limited number of households in Neori having access to an improved source of drinking water. An improved source of drinking water includes, in addition to water piped into the dwelling, yard or plot, water available from a public tap or standpipe, a tube well or borehole, a protected dug well, a protected spring, and rainwater (Table 4.6).

Table 4.6 Household distribution by drinking water			
Source	Census 2011	Source	Primary Survey 2020
Tapwater from treated source	8.2	Public Tap	4.4
Tapwater from untreated source	1.2	Private Tap	5.9
Covered well	2.2	Covered well	0
Un-covered well	51.2	Un-covered well	47
Hand-pump	33.9	Hand-pump	30.9
Tubewell/Borehole	1.5	Tubewell/Borehole	11.1
Spring	0	Spring	0
River/ Canal	0	River/ Canal	0
Tank/ Pond/ Lake	0	Tank/ Pond/ Lake	0
Other sources	1.8	Other sources	0.6

According to census 2011, only 8.2 percent of households in Neori have access to treated piped water and 1.2 percent of households get tap water from untreated source. Most people obtain their drinking water from uncovered well (51.2 percent) and hand-pump (33.9 percent); however, 2.2 percent of households get water from covered well and 1.5 percent of households depend upon Tubewell/Borehole for their water requirement.

The result from primary survey shows that 4.4 percent of households have access to public tap and 5.9 percent of households have private tap in their house. Majority of household (47 percent) fulfill their water need from well and 30.9 percent of households get water from hand-pumps. 11.1 percent of households draw water from bore-well and 0.6 percent of households get water from other sources (Figure 4.12).

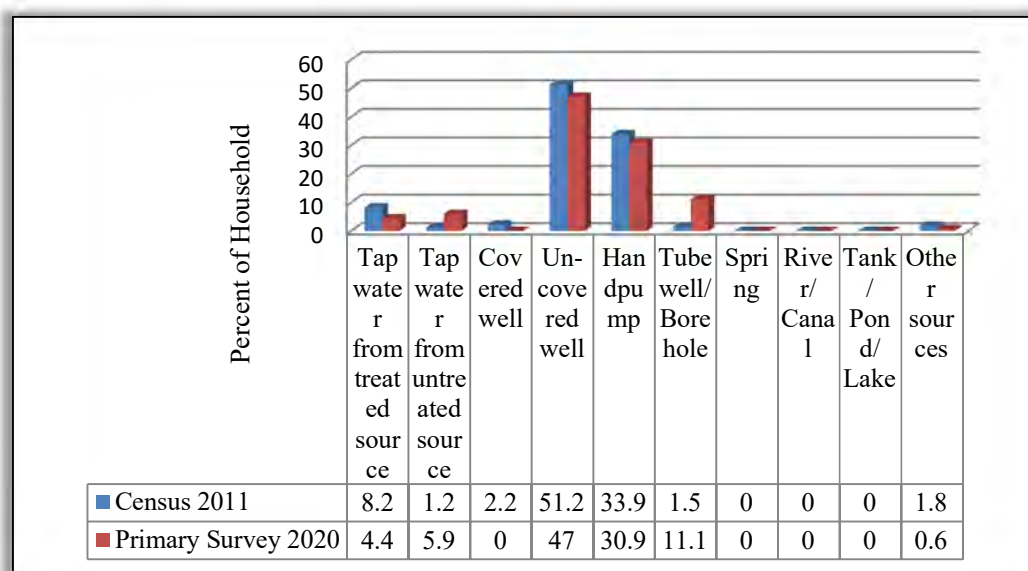


Fig. 4.12: Percent Household by distribution of drinking water

Source: Census 2011 and primary survey conducted during August 2020

4.2.9 HOUSEHOLD DISTRIBUTION BY TYPE OF FUEL USED FOR COOKING

Smoke from solid cooking fuels is a serious health hazard. Solid cooking fuels include coal/lignite, charcoal, wood, straw, shrubs, grass, agricultural crop waste and dung cakes. Among Neori GP households, those using coal, lignite and charcoal were 49.2 percent followed by cow dung cake using household at 20.1 percent. Crop residue as a fuel for cooking purpose was used by 7.7 percent and 6.8 percent of households used fire wood. Thus, 83.8 percent of household use solid cooking fuel. The households

using LPG/PNG were at 15.8 percent. The use of Kerosene oil and biogas are abysmally low with household at 0.1 percent each (Table 4.7).

Types of fuel	Census 2011	Primary Survey 2020
Fire-wood	6.8	9.6
Crop residue	7.7	0
Cowdung cake	20.1	22.6
Coal,Lignite,Charcoal	49.2	27.4
Kerosene	0.1	0.1
LPG/PNG	15.8	39.1
Electricity	0	0
Biogas	0.1	1.2
Any other	0.1	0

The result from primary survey shows that households, using coal, lignite and charcoal decreased from 49.2 percent to 27.4 percent whereas those using LPG increased from 15.8 percent to 39.1 percent. Fire wood as a fuel for cooking purpose increased from 6.8 percent to 9.6 percent and use of cow-dung cake increased from 20.1 percent to 22.6 percent. The use of Kerosene oil remained stagnant for 0.1 percent households. The use of biogas for households has increased from 0.1 to 1.2 percent (Figure 4.13).

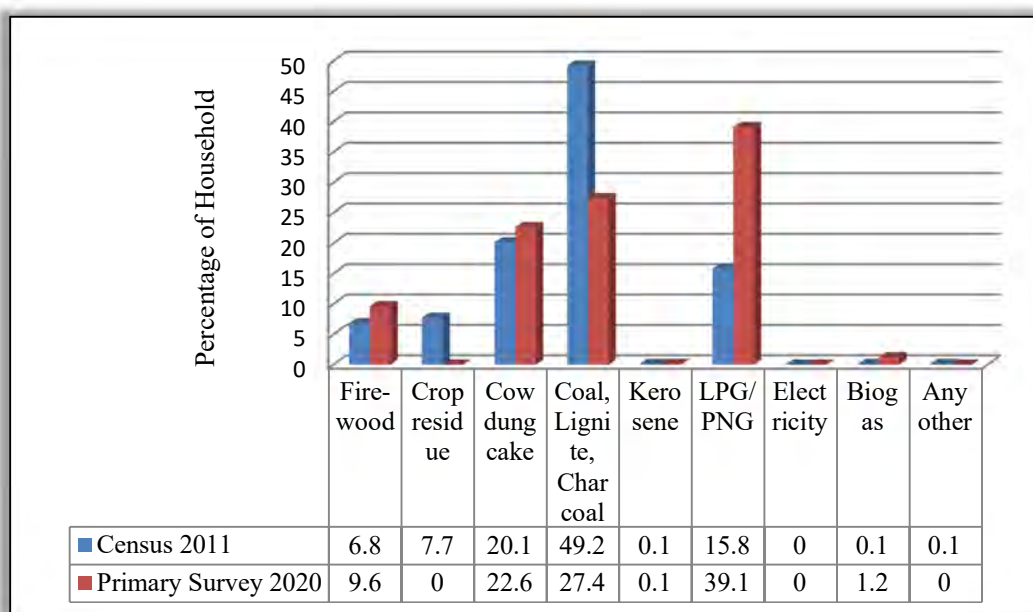


Fig. 4.13: Percent Household by type of fuel used for cooking

Source: Census 2011 and primary survey conducted during August 2020

4.2.10 HOUSEHOLD DISTRIBUTION BY AVAILABILITY OF TOILET FACILITIES

The primary household survey conducted in Neori GP reveals that 83.9 percent of households are having toilet facility and 16.1 percent of household have no access to formal toilet facility. The households who use community toilet are 6.9 percent and those going for open defecation constitute 9.2 percent (Figure 4.14). Out of the households owning the toilet facility 30.3 percent of household constructed the toilet through Government sponsored schemes whereas 69.7 percent constructed the toilet by their own resources. Financial assistance ranging from Rs 10,000 to Rs 20,000 was provided to construct toilet through various schemes.

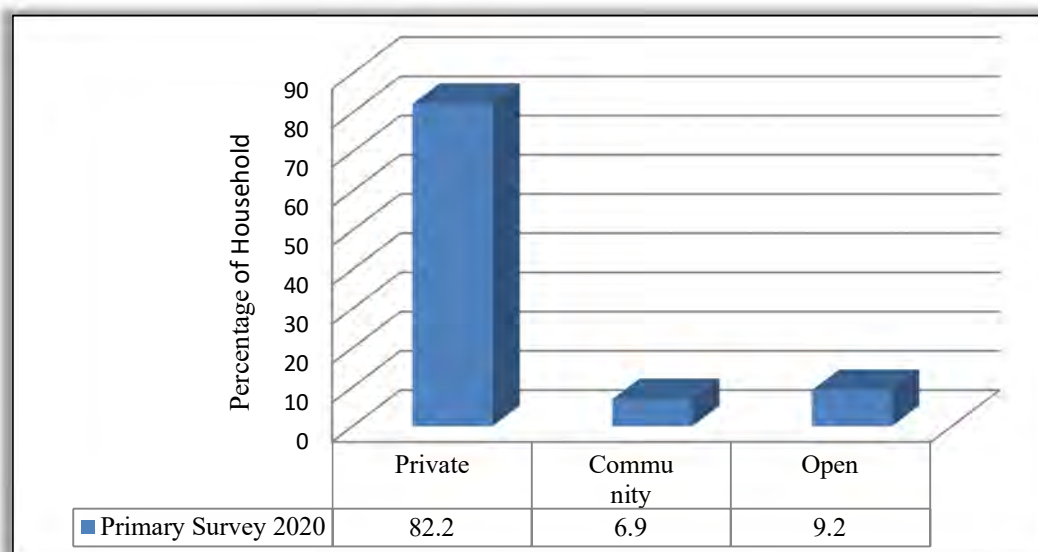


Fig. 4.14: Percent Household by availability of toilet facility

Source: Census 2011 and primary survey conducted during August 2020

The spatial distribution of Kaccha houses is shown based on caste in Figure 1.15, availability of BPL card in Figure 1.16, based on area of land in Figure 1.17, availability of water in Figure 1.18, condition of house in Figure 1.19, solid waste disposal in Figure 1.20 and availability of toilets are shown in Fig 1.21 respectively.

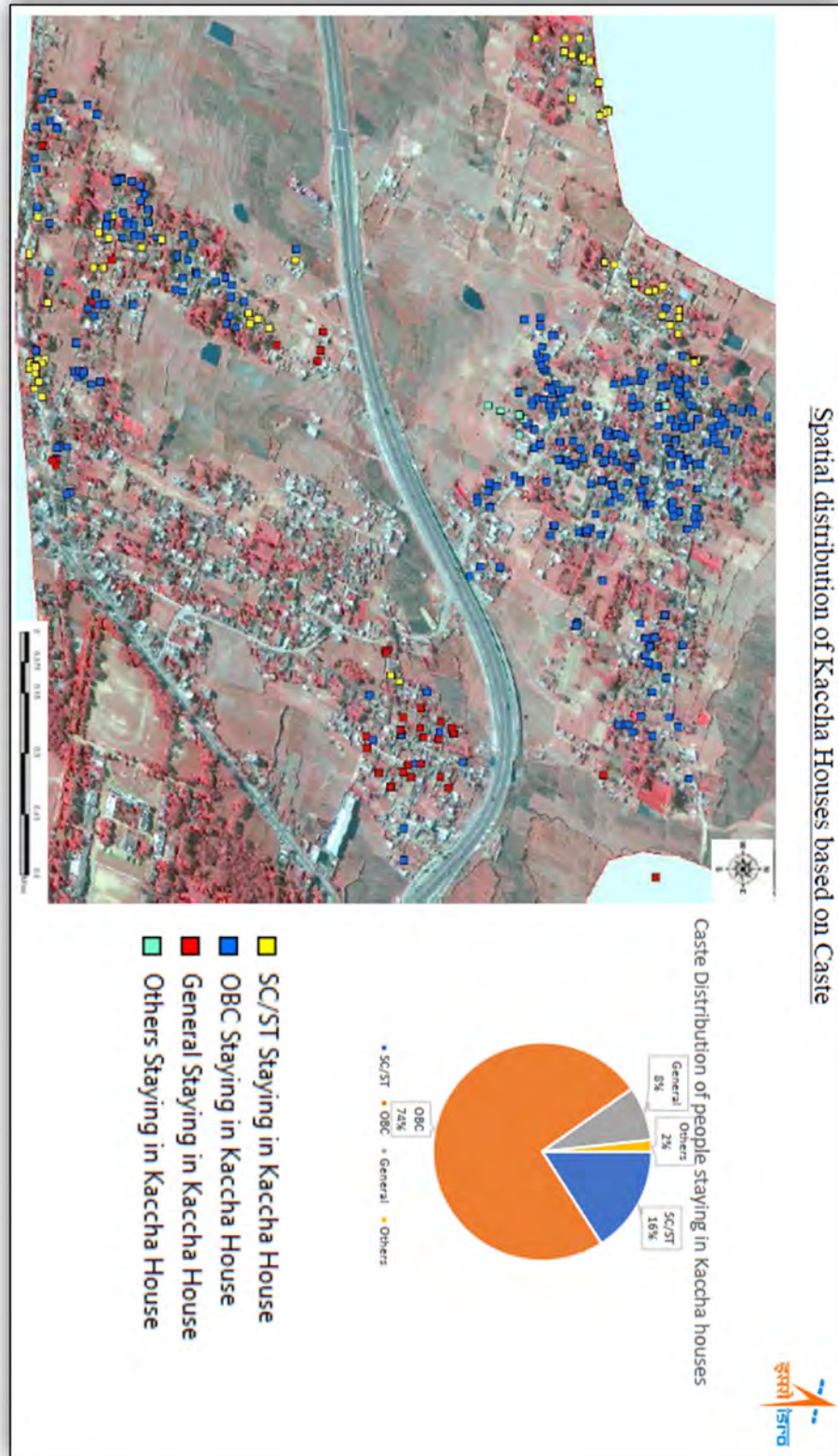


Fig. 4.15: Spatial distribution of Kaccha Houses in Neori, based on Caste
 Source: NRSC, ISRO

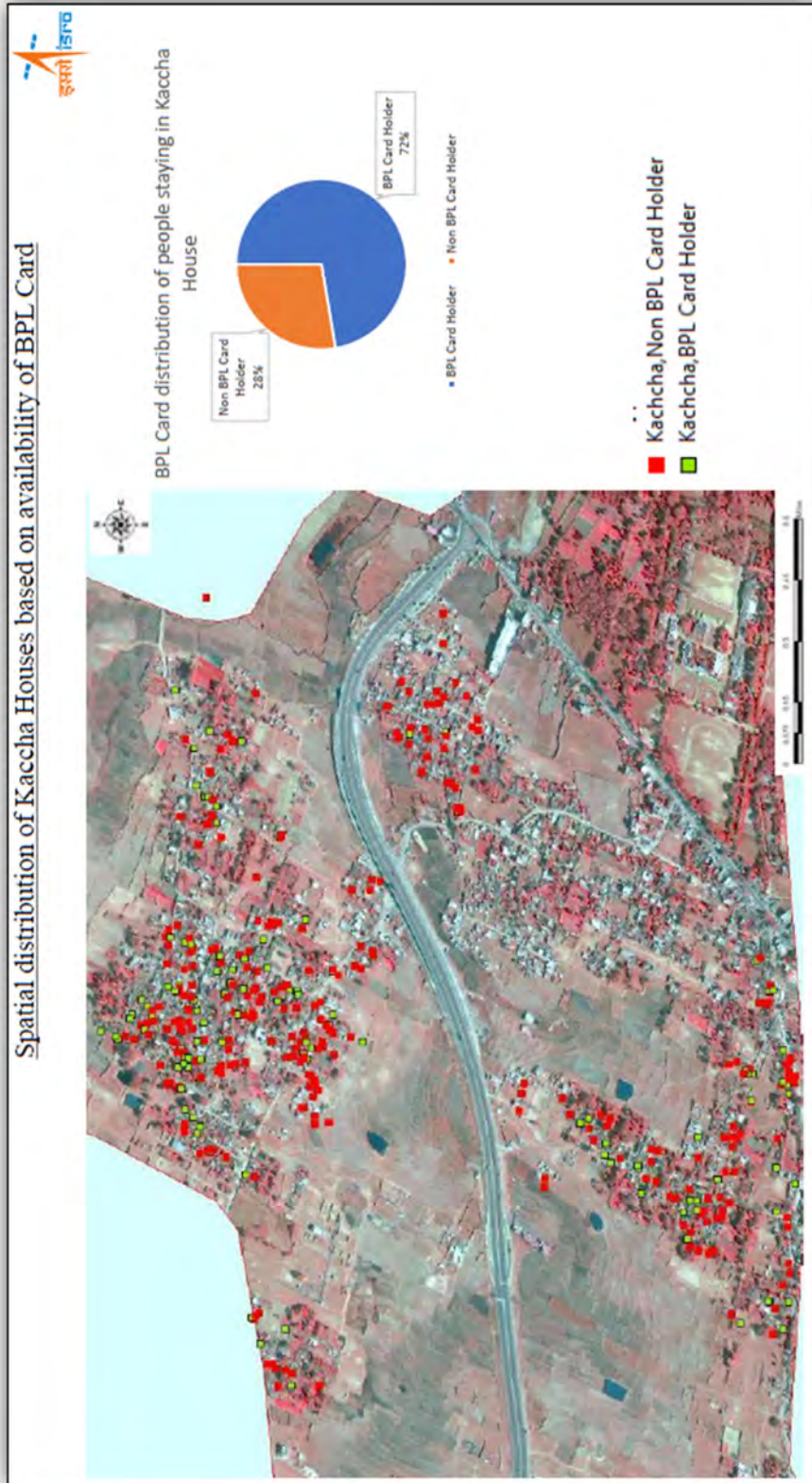


Fig. 4.16: Spatial distribution of Houses in Neori, based on availability of BPL card

Source: NRSC, ISRO

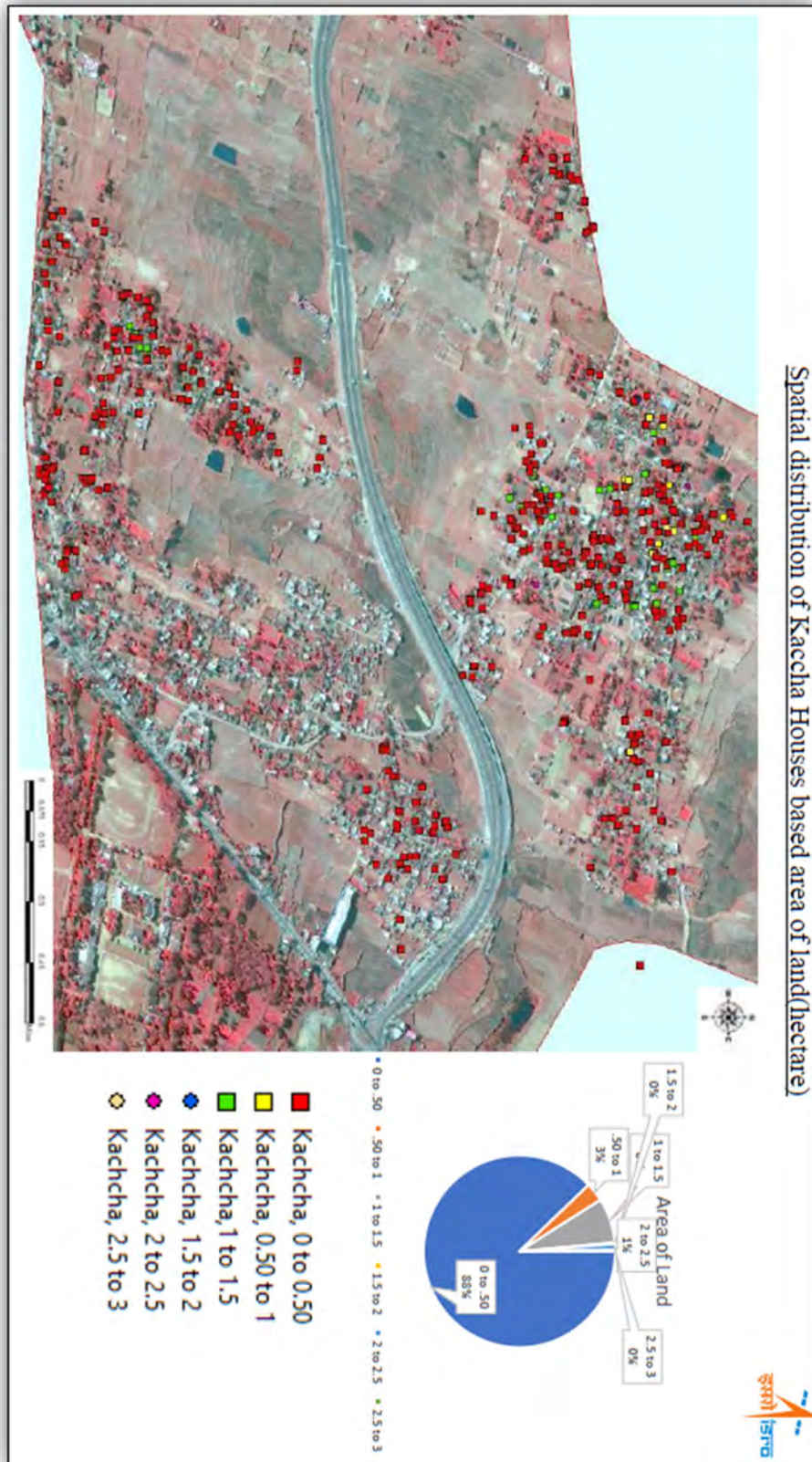


Fig. 4.17: Spatial distribution of Houses in Neeri, based on area of land (Hectare)
 Source: NRSC, ISRO

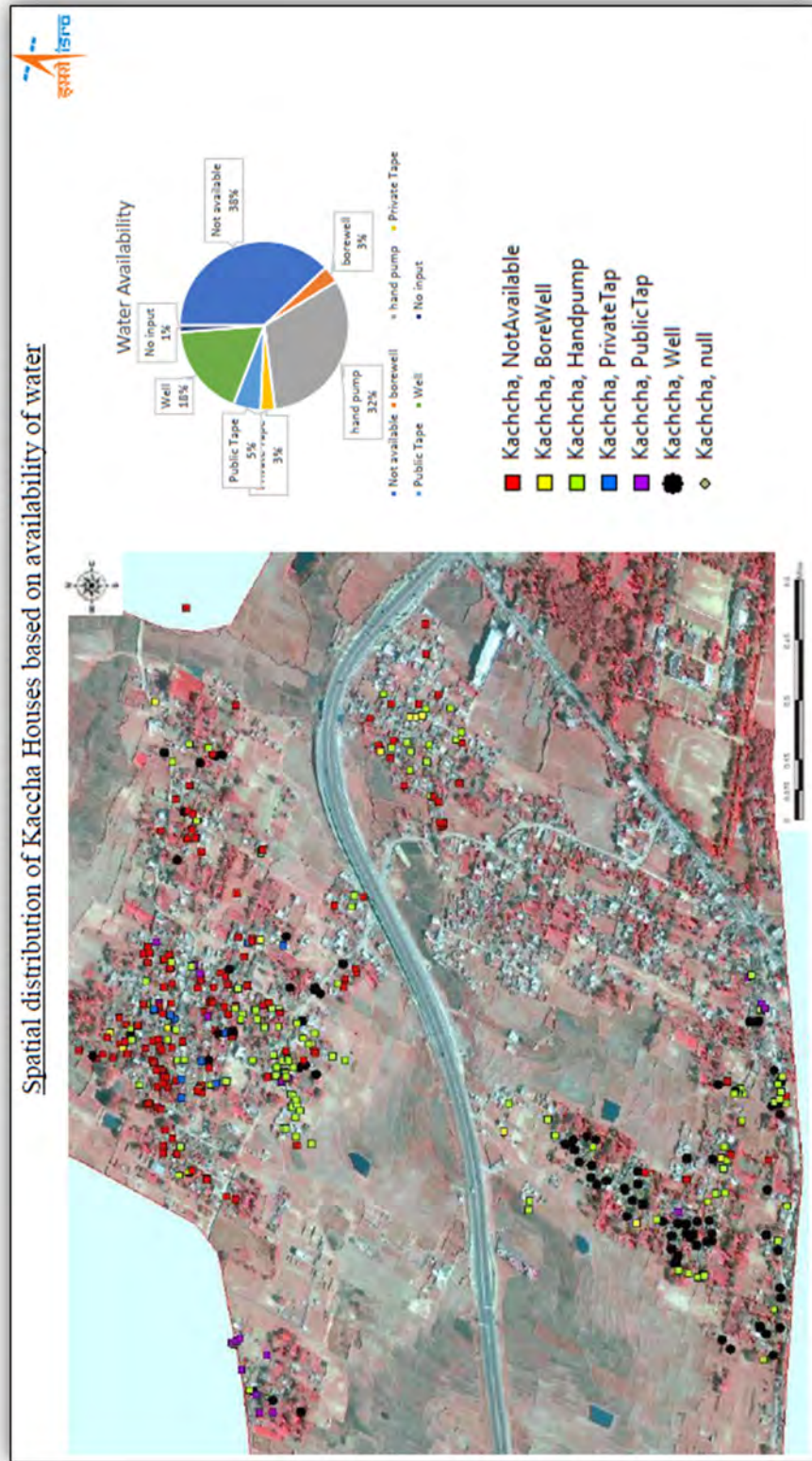


Fig. 4.18: Spatial distribution of Houses in Neeri, based on availability of water

Source: NRSC, ISRO

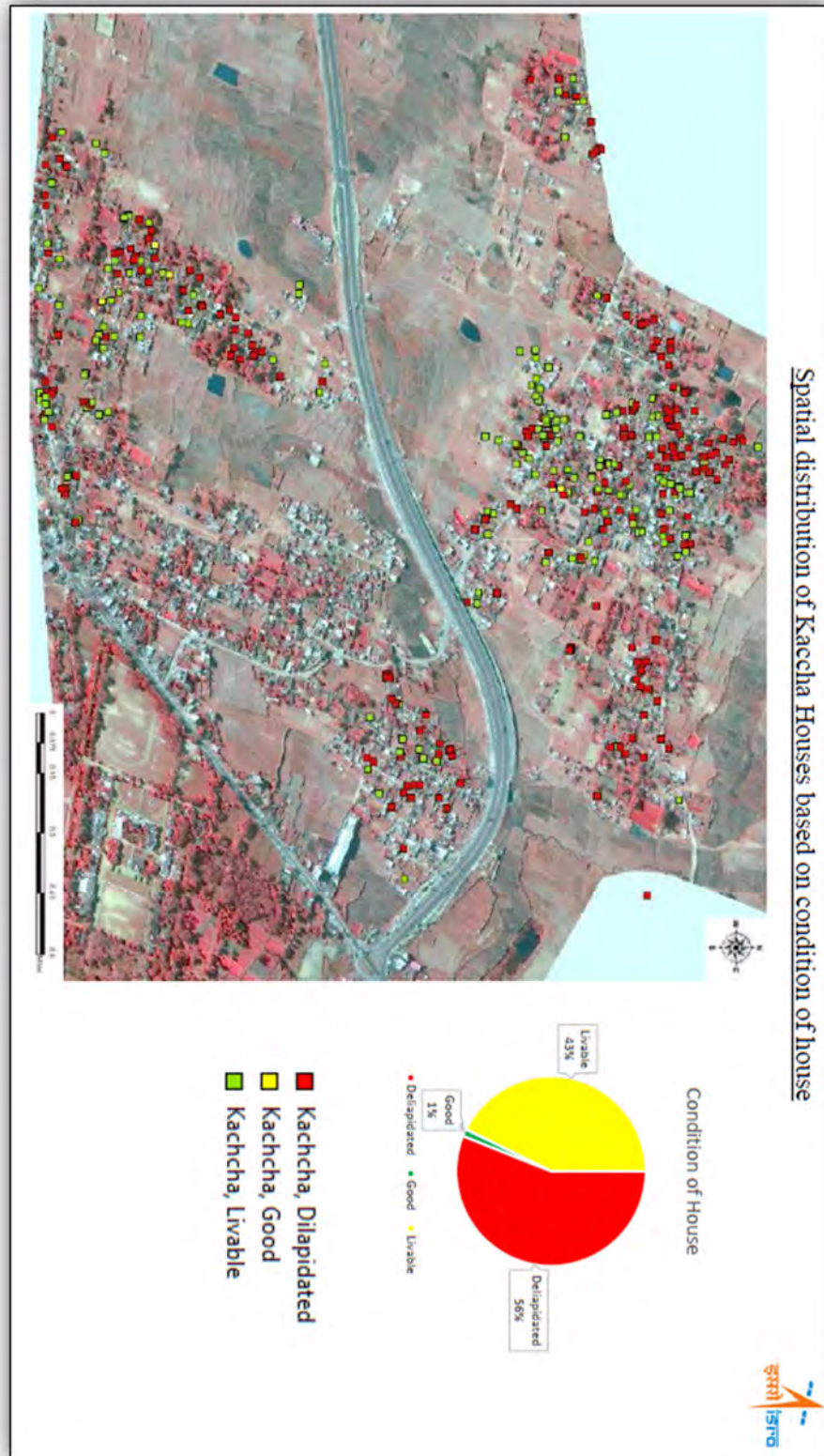


Fig. 4.19: Spatial distribution of Houses in Neeri, based on condition of House

Source: NRSC, ISRO

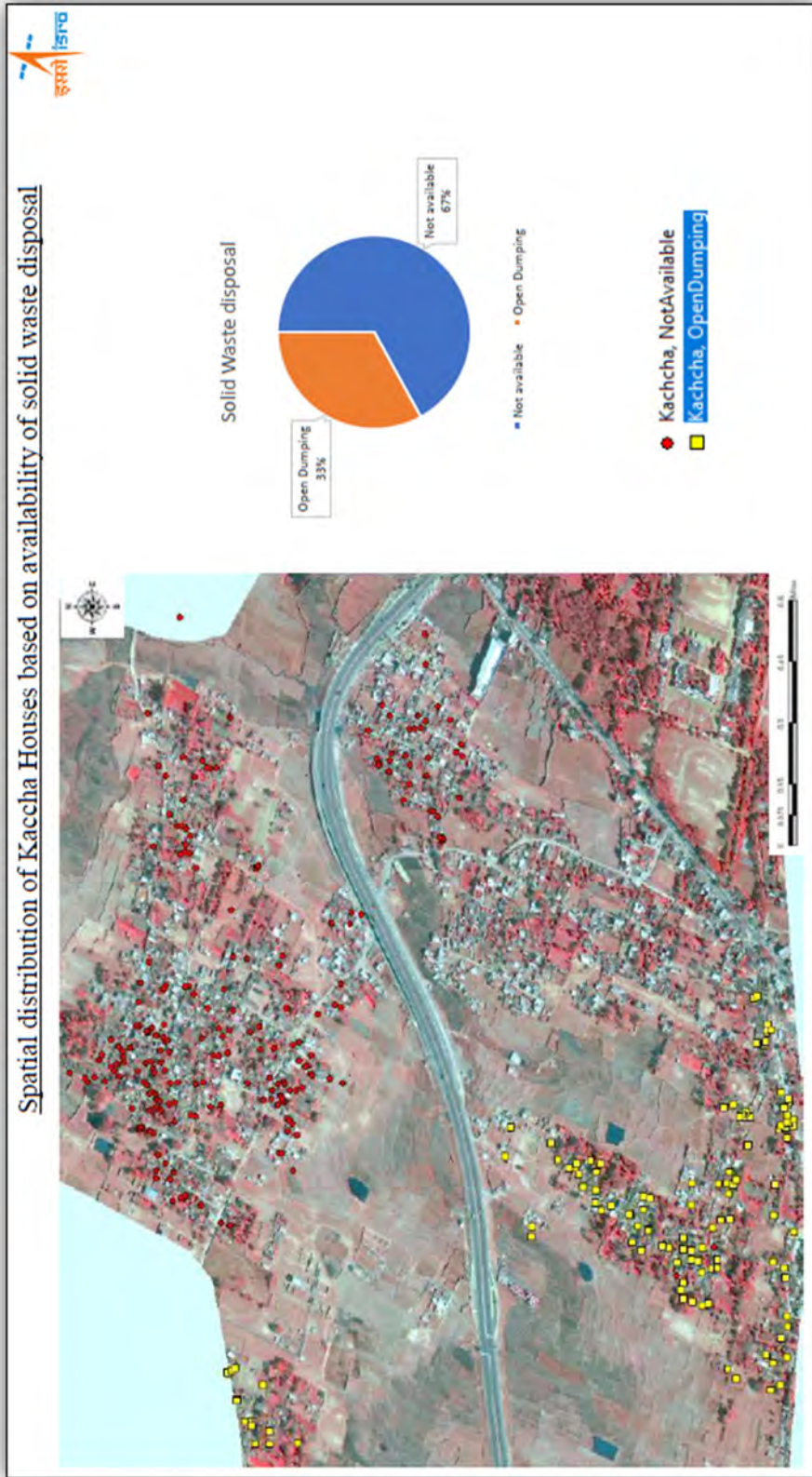


Fig. 4.20: Spatial distribution of Houses in Neeri, based on availability of solid waste disposal Source: NRSC, ISRO

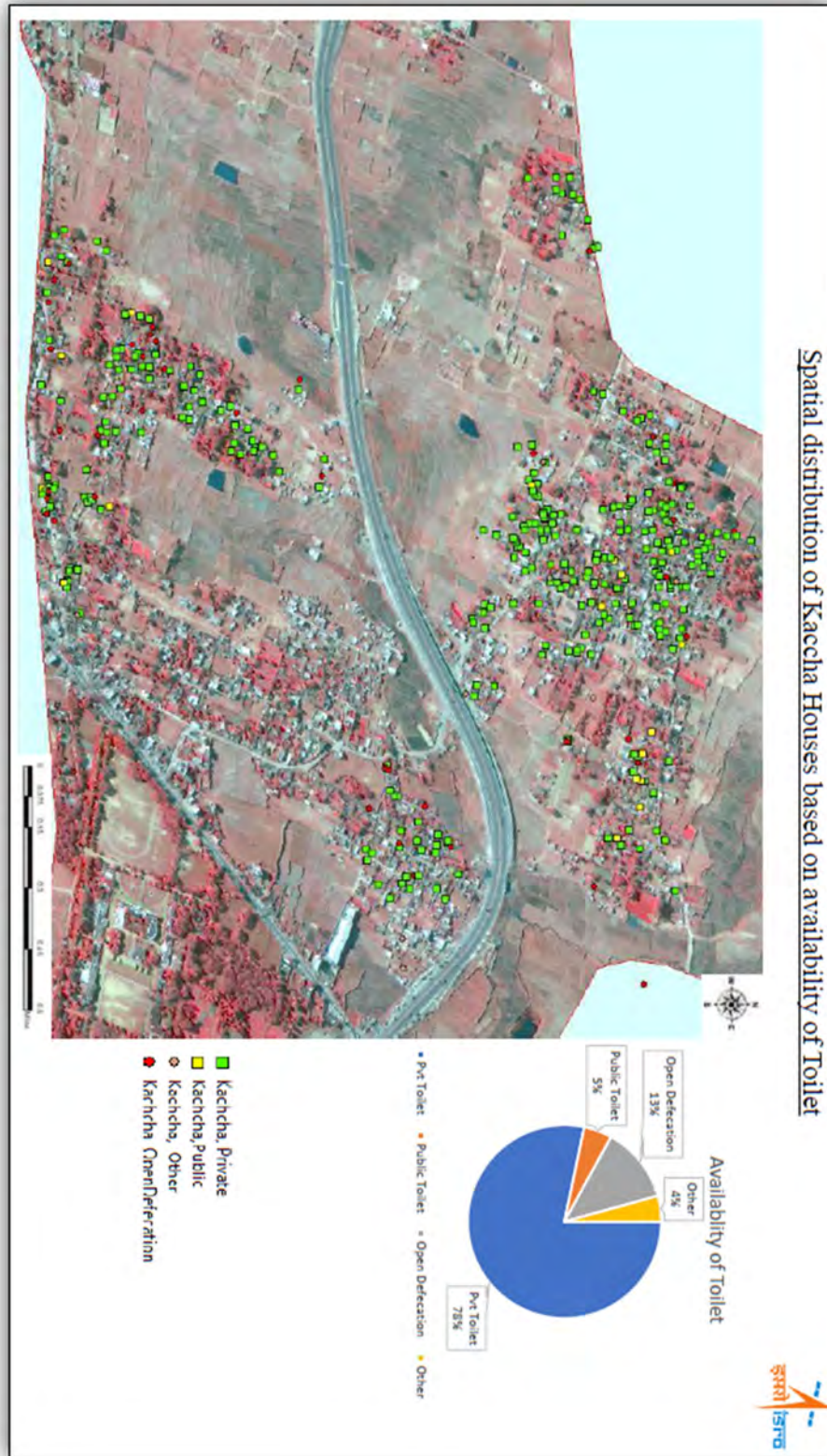


Fig. 4.21: Spatial distribution of Houses in Neori, based on availability of Toilet
 Source: NRSC, ISRO

4.3 KEY OBSERVATIONS OF EXISTING HOUSING CONDITION

The following are the key observation regarding the existing housing condition of Neori GP:

Though the homeownership percent has increased significantly from 82.6 percent to 93.3 percent, the conditions of houses have deteriorated considerably. The percent of dilapidated houses have increased from 4 percent to an alarming 25.2 percent (Figure 4.22).

The increase in home ownership can also be attributed to the increase in the construction of Kachcha houses which escalated from 3.6 percent to 44 percent (Figure 4.23).



Fig.4.22: Dilapidated house in Neori GP, Source: Author



Fig.4.23: Kachcha house in Neori GP Source: Author

Neori GP is characterized by houses of single floor which accounts for 96.6 percent of total houses (Figure 4.24).



Fig.4.24: Single floor houses in Neori GP



Fig.4.25: Houses in Neori GP constructed within the span of 10 years

Source: Author

Majority of houses in Neori GP (35.1 percent) are built within the span of 10 years. This is an indication of future growth potential of Neori GP (Figure 4.25). There is a visible concern regarding materials used as roof and floor in house. In 88.3 percent of houses, roofs are made of materials other than concrete, whereas a total of 64.1 percent of houses do not have burnt bricks as the material of wall (Figure 4.26).



Fig. 4.26: Houses in Neori GP with temporary roof material

Source: Author

The households having access to tap water in Neori GP is mere 10.3 percent. The flagship scheme of “Nal se Jal” through Jal Jeevan Mission, under the newly created Jal Shakti Ministry needs to expedite the process in order to achieve the objective of providing tap water to every rural households.

Only 4 out of 10 households (39.1 percent) use LPG as fuel type for cooking purpose. Under Pradhan Mantri Ujjawala Yojna, the beneficiary needs to be identified and extended with LPG facility.

About 1 in 10 households (9.1 percent) resort to open defecation. It is observed that 30.3 percent of households have received financial assistance ranging from Rs. 10,000 to Rs. 20,000 under various schemes to construct or upgrade toilets

in Neori GP. The households having no toilet facility need to be extended financial support to achieve the objective of Open Defecation Free (ODF) Gram Panchayat.

According to the report of MGNREGA, under the aegis of Pradhan Mantri Grameen Awas Yojna (PMGAY), during the financial year of 2019-20, construction of 79,524 houses in rural areas of Jharkhand has been sanctioned but work has not started. There are total of 22,587 projects which are ongoing and construction of 82 houses has been completed. The Panchayat office of Neori GP has reported the construction of only 41 houses under PMGAY since its inception.

4.4 PROPOSALS AND RECOMMENDATIONS

It has been proposed to undertake the implementation of planning proposals under two distinct phases. The first phase will be for the period of 2020 to 2026 and the second phase will run through 2026 to 2030.

FIRST PHASE (2020-2026)

It has been observed that the demands for housing in Neori GP may arise under following circumstances.

The houses in dilapidated condition should be taken up for repairing and reconstruction in situ through PMGAY. The process can be expedited by removing bottlenecks in the identification of beneficiary and attending to the vulnerable households on priority basis. The housing delivery mechanism under this head will be government assisted. Availability of microfinance for housing needs to be promoted.

The projected population for 2026 is 11,051, an increase of 4,144 persons. Considering the current household size of 5.62, 738 housing units will be required in the first phase. Assuming the requirement of 50 sq m plot size for each house and allowing 20 percent for access and other infrastructural facilities, total land requirement will be 44,280 sq m or 11 acres. The record of Panchayat office states the availability of 2acres of government owned land as shown in map in Figure 4.17. This land will cater to the requirement of 130 houses. It is further proposed that the state government may take initiative to develop land information system, where fallow lands and other wastelands are highlighted. The housing delivery mechanism will be partially government

assisted up to the extent of land available with the government through public private partnership/joint venture. The rest of the housing requirement will be developed as per the housing market dynamics and can be taken up by builders/developers or individual households.

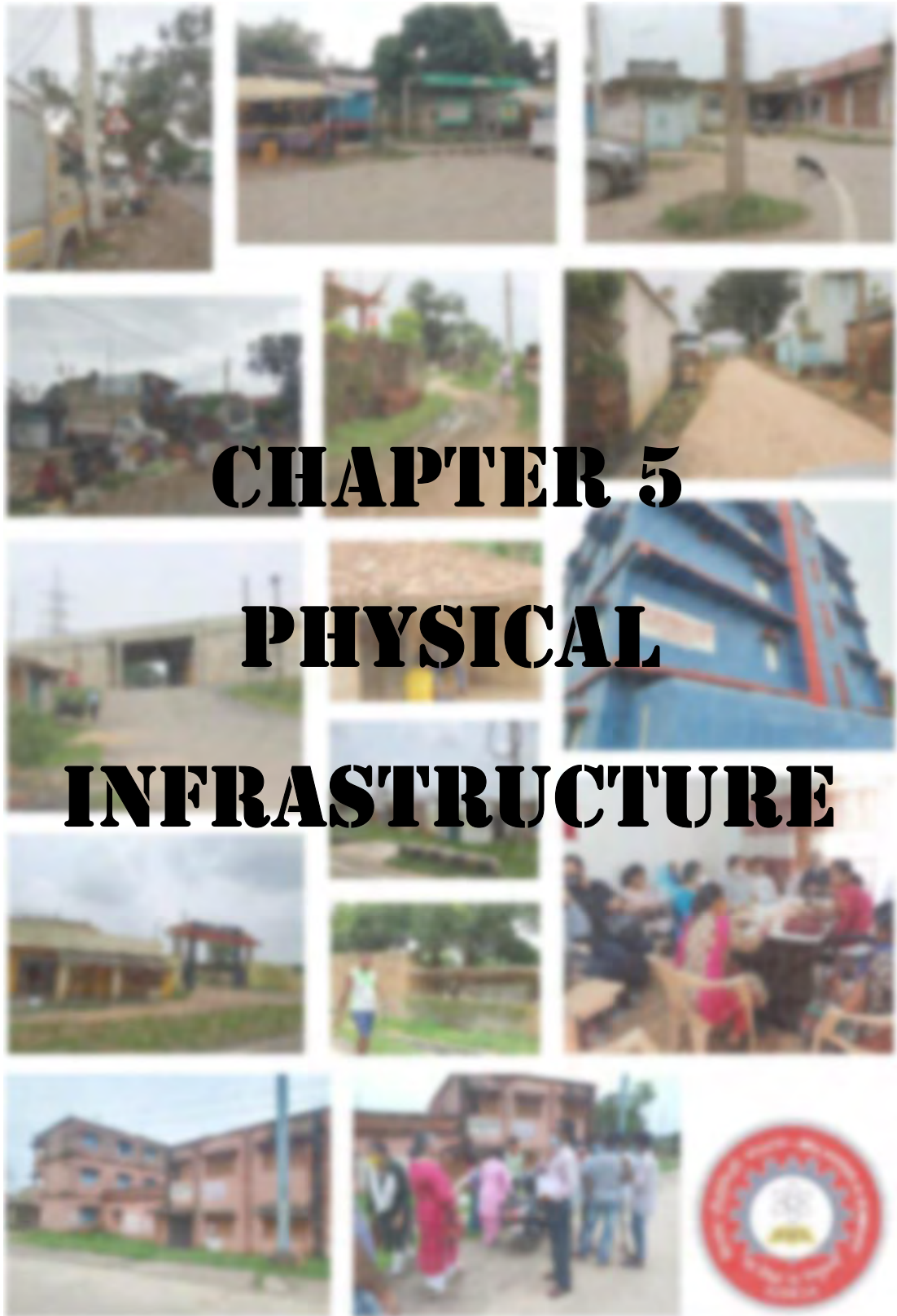
It has been proposed to extensively upgrade the social and physical infrastructure, which will boost the employment requirement in the Neori GP. Housing will be needed in Neori GP by persons seeking work in Neori GP or in nearby urban areas. As Neori GP is under the strong influence of capital city of Ranchi, it is expected that development driven by Ranchi will take place within the planning area of Neori GP. The presence of outer ring road and NH within the planning area of Neori GP will further accelerate the development process and would generate additional housing need. These housing requirements will be fulfilled entirely the housing market dynamics. The builders/developers or individual household will undertake land transaction process and construct the house as per market demand or their individual requirement.

SECOND PHASE (2026-2030)

The housing requirement in second phase will be mainly due to the population growth and extent of development in the Neori GP.

The projected population for 2030 is 12,930, an increase of 1889 persons which would require additional 336 housing units in second phase of development. Based on the previous assumption total land requirement will be 20160 sq m or about 5 acres. In this phase, it is proposed that group housing be delivered through public private partnership/joint venture so that government can take care of LIG and EWS section of the society.

The housing requirement generated by accelerated development process as mentioned during the first phase will be met through individual endeavor and private builders/developers.



CHAPTER 5

PHYSICAL

INFRASTRUCTURE

CHAPTER 5: PHYSICAL INFRASTRUCTURE

5 1 INTRODUCTION

For the efficient operation of a society and necessary for an economy to function with sustainability, physical infrastructures are highly required. Socio-economic growth of a town is facilitated with working on land resources and the provision of the physical infrastructures in the form of roads, water supply, waste water management, drainage networks, street lighting and solid waste management. Physical infrastructures are the most important assets of a town in terms of capital investment, provision of services and sustainable and resilient development. The impact of various physical infrastructures has been increasingly going beyond their core functions and which suggests that a wider array of stakeholders should be involved in making decisions on infrastructure development policies.

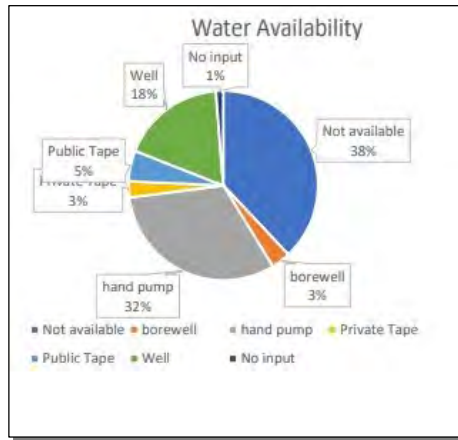
This chapter comprises of abovementioned various components of physical infrastructures and deals with them by studying the existing scenario, analyzing the demand and supply gap and accordingly propose for the future growth in an integrated manner so as to facilitate the socio-economic growth of the study area of Neori GP and is outlined below.

5 2 WATER SUPPLY

Planning for water supply system starts with the search of a source of water supply in the vicinity of the study area. Its capacity to serve for the planning period is of utmost importance. Storage for the further treatment of water is the next step in the process. Storage may be underground or at an elevated level. Elevated service reservoirs create the required pressure head for the distribution networks. Suitable system should then be designed to distribute the treated water through a network of distribution pipes to the individual households.

5 2 1 EXISTING STATUS

There is no provision of piped water distribution system in the entire Gram Panchayat area. Currently water supply in Neori GP consists of both ground water and surface water sources. People use water from hand pump, well and bore well. Data collected through survey suggests that 38 of household still don t have the availability of



water. Water is available to 32 of the households through the hand pumps. Water availability is 5 from the private tap and 3 from the public tap system. Public tap water availability is through 16 numbers of Jal Meenars. Water is available to 3 of households through private bore wells.

Fig 5 1: Availability of water in Neori GP

Source: Mobile App survey data collection and visualization of Neori GP

5 2 2 GROUND WATER

The Neori GP is primarily being sustained by ground water sources. The existing ground water resources are dug wells and hand pumps. There are around 156 nos. of wells with private ownership and 02 nos. with government ownership. As per the survey conducted Census 2011, about 56 of the population is depending on Dug Wells and rest is dependent on Jal Meenars and Hand Pumps.



Jal Meenar



Hand Pump



Private Well

Fig 5 2: Sources of underground water in Neori GP

Source: Author

Considering the need of the people GP has installed around 16 Jal Meenars (solar operated deep tube wells) for supporting the existing supply water system through point source. A declining trend of ground water has been noticed during recent years specifically during the summer.

Table 5 1: Location of t e al Meenars in Neori GP

No	Sector	Type of infrastructure	Location
01	Drinking water	Jalminar	Aslam Ansari ke ghar ke pass
02	Drinking water	Jalminar	Dhadhu Munda ke ghar ke pass
03	Drinking water	Jalminar	Habibulla Ansari ke ghar ke pass
04	Drinking water	Jalminar	Saket Ranjan ke ghar ke pass
05	Drinking water	Jalminar	Iltaff Ansari kr ghar ke pass
06	Drinking water	Jalminar	Akhtar Ansari ke ghar ke pass
07	Drinking water	Jalminar	Rajesh Oraon ke ghar ke pass
08	Drinking water	Jalminar	Kayla Gorayet ke ghar ke pass
09	Drinking water	Jalminar	khalil ansari ke ghar ke samane
10	Drinking water	Jalminar	Mustafa Ansari ke ghar ke pass
11	Drinking water	Jalminar	Panchayat Bhawan ke pass Karmali Tola
12	Drinking water	Jalminar	madhaya vidyalaya Neori Urdhu kanya mai
13	Drinking water	Jalminar	rajesh oraon ke ghar ke samane j
14	Drinking water	Jalminar	Shatbhoori ke pass
15	Drinking water	Jalminar	shukara mahto ke ghar ke samane
16	Drinking water	Jalminar	Sulochana Devi ke ghar ke pass

Source: GPDP report of Neori

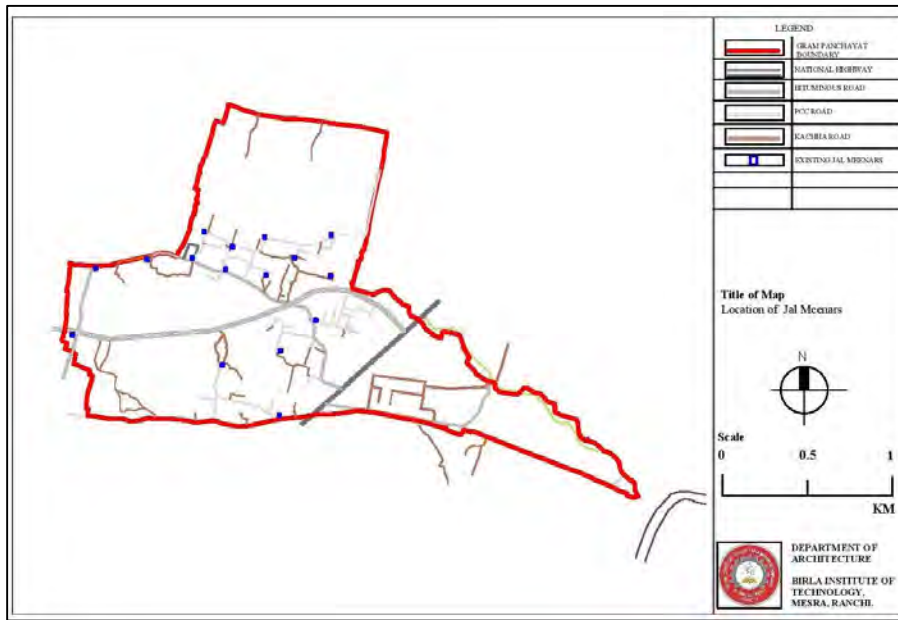


Fig 5 3: Map s owing t e location of al Meenars in Neori GP

Source: based on survey prepared by the BIT Mesra Team

Jal Meenars are the only source of water for the people who doesn't own a private dug well as most of the hand pumps are not operational. The distance travelled to and from for many households is beyond the walking distance and hence they prefer either their own well or they rely upon the nearby wells. The following map shows the location of the existing Jal Meenars in the Neori GP.

5 2 3 SURFACE WATER

A large section of the GP are still dependent on local surface water resources i.e. the ponds. There are 6 no. of Ponds in the GP inclusive of private and govt. ownership and used for washing, bathing and other domestic purposes in the villages.

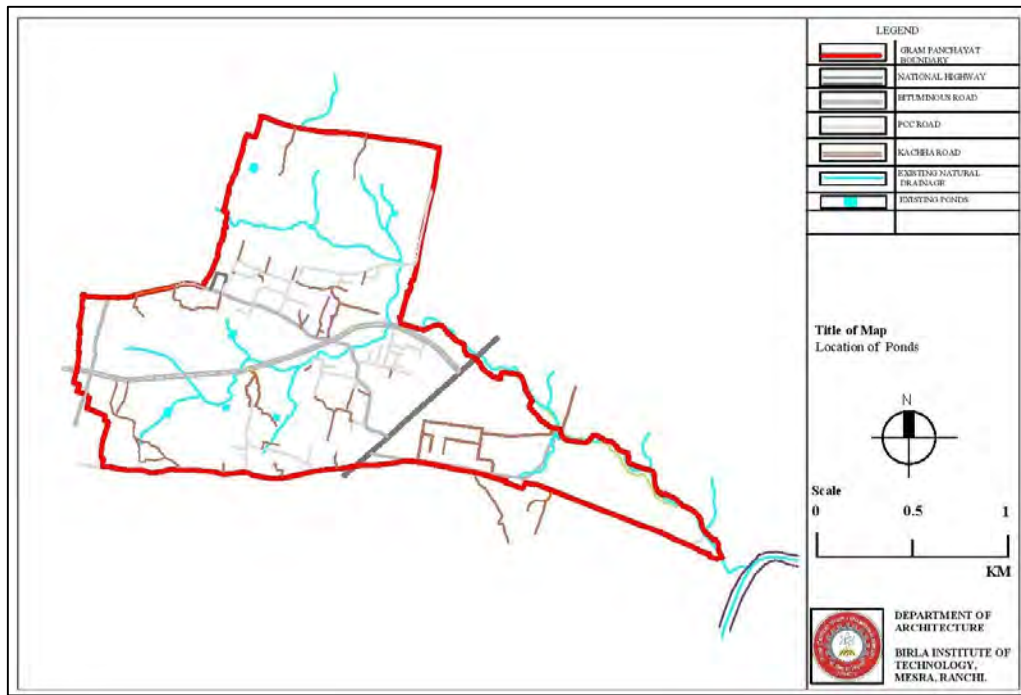


Fig 5 4: Map showing the location of Ponds in Neori GP.

Source: based on survey prepared by the BIT Mesra Team

5 2 4 SERVICE LEVEL BENCHMARKING

Following table shows the service level benchmarking for the water supply in the Neori GP.

Table 5 2: Service level benchmarking for Water Supply

SI No	Water Supply Indicators	Benchmark marks	Neori GP Status
1	Coverage of piped water supply	100	0
2	Per capita supply of conduited water	135 lpcd.	no piped supply
3	Coverage of water supply by Jal Meenars		44
4	Extent of metering of water connection	100	0
5	Extent of non-revenue water	20	0
6	Continuity of water supply	24 hours	no piped supply

*Source: SLB report by Mo D, Govt. of Jharkhand
As per the survey conducted.*

5 2 5 WATER QUALITY

As non conduited supply of water is too low to meet the extent and need of the populace of the GP, a significant number of people is surviving only on ground water through jal meenars, dug wells, hand pumps etc. During the field visits and interaction with the community, it was revealed that the general quality of surface water being consumed is hard in nature with a higher concentration of iron.

5 2 6 WATER DEMAND ASSESSMENT

Water demand assessment starts with the identification of the source of water supply in the vicinity of the Neori GP. Further the water demand is assessed based on the projected population. The storage should be designed for the ultimate design capacity keeping in view the non-revenue water.

5 2 6 1 Source of water supply

Getalsud Dam on the Subarnarekha River is the major, surface water source, located in the vicinity of the GP, at the distance around 3 km at Rukka. As per Master Plan of Ranchi 2037, the total design capacity of Getalsud Dam is 341.0 MLD and currently 171 MLD water is being supplied to a major part of Ranchi city from this Dam. Hence the present capacity of this Dam is able to cater to the needs of Neori GP. The supply mains of this Dam pass through the western boundary of the GP along the

National Highway 33. Another water supply mains pipeline laying is over along the Ring Road, branching from the same water supply trunk line, and is proposed to start supply shortly. Tapping of water from these two supply mains at a suitable point or points, may provide an economical solution by taking use of this existing infrastructure, for the source of water supply of Neori GP. Moreover, the water that is supplied through the Rukka-Ranchi Trunk line is treated water. There is a treatment plant of 114 MLD with an intake capacity 171 MLD intake well in the vicinity. Since the Ring Road supply mains is branching from this Rukka-Ranchi trunk line, hence in near future, when the supply will start, this will also be treated water. This existing water supply infrastructure is going to prove an economical facility for the Neori GP, as there is no need to treat the tapped water. Only storage of water and further the distribution of water have to be considered for Neori GP.

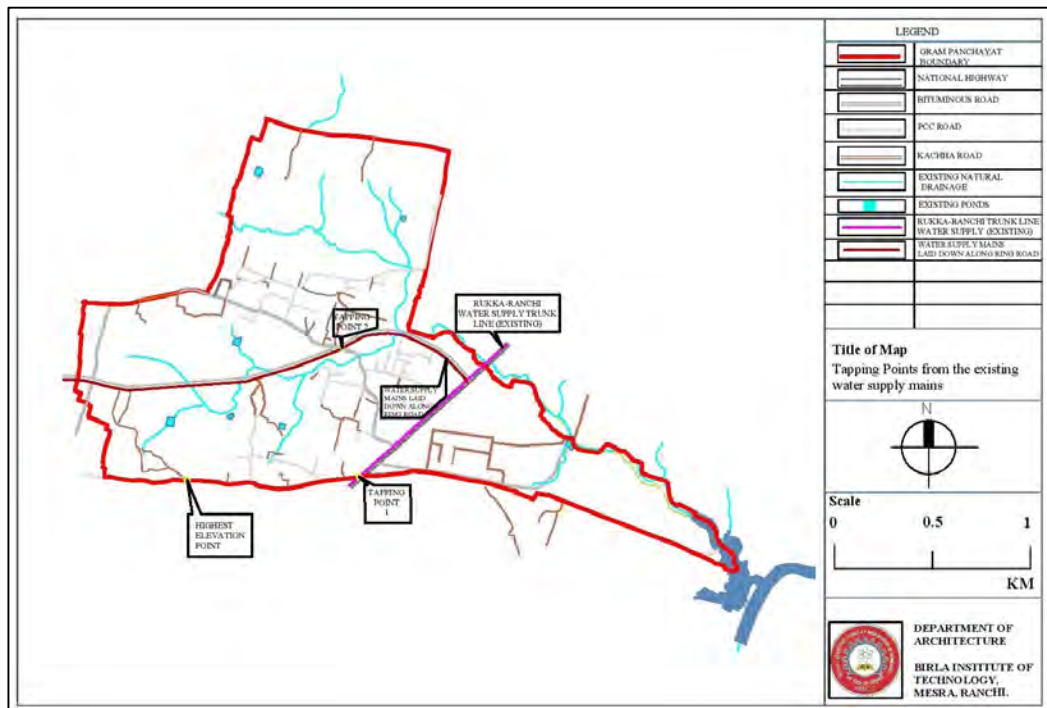


Fig 5 5: Map s owing t e tapping points for storage of water

Source: based on survey prepared by the BIT Mesra Team

Table 5 3: Water demand pro ections upto 2030				
Year	Population	Per capita water supply	Water demand in MLD	Water generation including 15 of NRW in MLD
2021	9,949	90	0.63	0.73
2026	11,051	135	1.22	1.40
2030	12,930	135	1.62	1.87

Source: Projections based on Calculations

5 2 6 2 Water demand pro ections

Based on the population projections and assuming a water demand of 135 liter per capita per day including 15 of Non-Revenue Water (NRW), gross demand for water supply till the year 2030 would be 1.87 MLD. From 2020 to 2030 water demand after every five year has been given in Table 5.3.

5 2 6 3 Storage Demand Assessment

Based on the water demand as estimated above the capacity requirement of water storage reservoirs/ Overhead tanks (OHT) are assessed in the table below.

Table 5 4: Storage Demand Assessment

Year	Total water demand MLD	Existing storage MLD	Storage Demand MLD
2021	0.73	NIL	0.73
2026	1.40	NIL	1.40
2030	1.87	NIL	1.87

Source: Based on Analysis and Calculations

Storage reservoirs store the treated water for supplying water during emergencies such as fire, breakdown and repairs etc. and also to help in absorbing the hourly fluctuations during the normal water demand.

OHT are the rectangular, circular or elliptical overhead tanks erected at a certain suitable elevation above the ground level and supported on towers. They are constructed where the pressure requirements necessitate considerable elevation above

the ground surface. They are constructed in areas where the combined gravity and pumping system for water distribution is adopted. Water is pumped into these elevated tanks from the surface reservoirs and then supplied to the households through distribution networks.

5 2 7 IDENTIFICATION OF A SUITABLE DISTRIBUTION NETWORK FOR PIPED WATER SUPPLY SYSTEM IN NEORI GP

Keeping in view of the water demand and topography of Neori GP, out of the available various types of water distribution network, Grid Pattern with Loop is found to be most suitable water distribution system. Since water in the supply system is free to flow in more than one direction, stagnation does not occur as readily as in the branching pattern. In case of repair or break down in a pipe, the area connected to that pipe will continue to receive water, as water will flow to that area from the other side. Water reaches all points with minimum head loss. At the time of fires, by manipulating the cut-off valves, plenty of water supplies may be diverted and concentrated for fire-fighting.

5 2 7 1 Grid Pattern with Loops

Since water in the supply system is free to flow in more than one direction, stagnation does not occur as readily as in the branching pattern. In case of repair or break down in a pipe, the area connected to that pipe will continue to receive water, as water will flow to that area from the other side. Water reaches all points with minimum head loss. At the time of fires, by manipulating the cut-off valves, plenty of water supply may be diverted and concentrated for fire-fighting. Loops may be provided in a grid pattern to improve water pressure in portions of the GP (business and commercial areas). Loops should be strategically located so that the GP develops the water pressure should be sustained.

5 2 8 WATER SUPPLY – PROPOSALS

All the pumping system, feeder main and distribution systems are proposed for the ultimate requirement. However, the pump sets will be installed for the intermediate capacity which will be replaced by suitable pump set at the end of Intermediate stage to take care of the ultimate requirement.

There are two tapping points as described earlier in the source of water supply section. One tapping point is near Vikas Chowk. The water tapped from this point will be stored near the Neori Pachayat Bhavan by providing an underground service reservoir (USR) and will be lifted through pumps to the over head tank (OHT). The second USR and OHT are proposed in the Kendua Toli along the southern boundary of the GP, which is also very near to the highest elevation point of the GP. The third USR and OHT are provided in Mahli Tola area, which is also one of the highest elevation points in the GP, in the northern area of the GP beyond the Ring Road. While deciding the location of USR and OHT, the water demand, the population density and the topographical profile has been kept in mind. All the three OHTs are such located that gravity flow will facilitate the distribution for almost the entire Neori GP.

For distribution of the water from the OHT, the entire Neori GP is provided with peripheral water supply mains and is the main loop of distribution system. It is almost bisected by the supply line provided along the Ring Road. Three supply feeder supply network connects these two main lines and covers the entire households of NeoriGP. Various loops are formed through the supply feeders and supply mains. This enables the distribution system to maintain the optimum water pressure through the entire network as the water reaches a certain section through various routes of grids and the loops.

The detail of proposed water supply and distribution arrangements within the Neori GP is outlined in Fig 5.6.

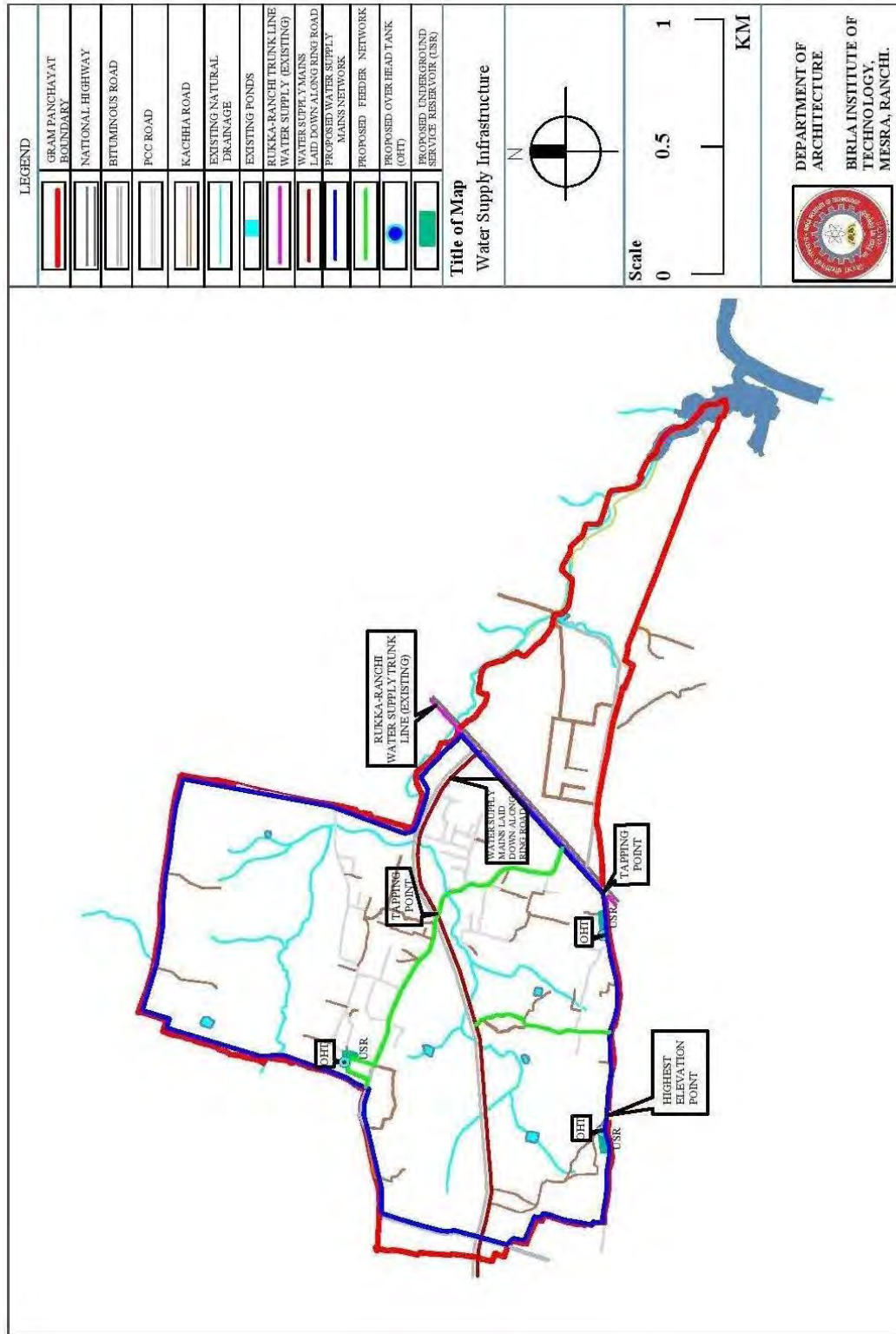


Fig 5 6: Map s owing proposals for water supply infrastructures in Neeri GP

Source: prepared by the BIT Mesra Team

5 2 9 PHASING

To achieve the targets and translate the vision into reality, certain goals have been marked as per water supply service level benchmarks. These goals are bifurcated within 10 years of time frame in three phases, i.e. short term goals till three year, medium term till five years and long term till ten years.

Table 5 5: P asing for proposed water supply system

Parameters	Unit	Benc marks	Baseline	S ort term 1 year 2021- 2022	Medium term 3 years 2022- 2025	Long term 6 years & beyond 2025- 2031
Coverage of water supply		100	5			
Per capita supply of water	LPCD	135	50			
Extent of metering of water connection		100	0			
Extent of non-revenue water		20	15			
Continuity of water supply	Hrs.	24	2			
Quality of water supplied		100	NA			
Efficiency in redressal of customer complaints		80	NA			
Cost recovery in water supply services		100	NA			
Efficiency in collection of water related charges		90	0			

Source: SLB report by Mo D, Govt. of Jharkhand

5.3 SEWAGE SYSTEM

5.3.1 EXISTING STATUS

Neori GP does not have proper sewerage facility. In absence of organized sanitation facilities/ sewerage system in the Neori GP, a major portion of waste water generated from the households, institutional and commercial area (both black and grey water) normally finds their way either directly to the roads whether kutchha or pucca without any drainage system or open fields that finally ends at lower fallow fields

Current drainage system comprises of open/ covered drains (*pucca* drain, *kuchcha* drain) constructed in an unplanned manner in different parts of Neori GP, mainly built on as and when required, and on fund availability basis. As per census of India 2011, approximately 7.8% of the GP is covered by drainage system, out of which 90.2% is closed drain. 92.2% of the GP area has no drainage system. The brief status of the drainage system in Neori GP is provided in Table 5.5.

Table 5.6: Present category wise drainage connections

Sl No	Category of Drain	of HHs connected
1	Closed drainage	7.2
2	Open drainage	0.6
3	No drainage	92.2
	Total	100

Source: Primary survey

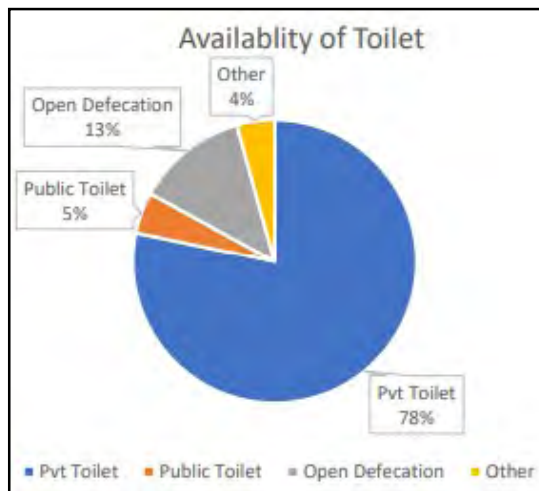


Fig 5.7: Availability of toilets in Neori GP

Source: Mobile App survey data collection and

Neori GP does not have proper sewerage facility. In absence of organized sanitation facilities/ sewerage system in the Neori GP, a major portion of waste water generated from the households, institutional and commercial area (both black and grey water) normally finds their way either directly to the roads whether kutchha or pucca without any drainage system or open fields that finally ends at lower fallow fields

As per the primary survey conducted, households having the private toilets are 78 . Public toilet availability is for only 5 households.13 of households still practice open defecation. Households having pit latrines without septic tank /soak pit facility discharge the effluent directly within their own individual plots, nearby open plots or in few cases on the roads.



Fig 5 8: Toilets built under Swachh Bharat Mission *Source: Author*

As per the primary survey conducted, households having the toilets built under Swachh Bharat Mission are around 30 . Besides that many households having privately built toilets with septic tanks is around 50 . Rest of the households either practice open defecation or has pit latrines without septic tank /soak pit facility discharging the effluent directly within their own individual plots or open plots.

Most of the septic tanks do not have soak pits, while few soak pits are found in dilapidated condition with broken top slabs and pipes. As a result, effluents from the septic tanks generally overflow and discharge within the plot or open lands.

Major drains flowing through the Neori GP carrying storm water and waste water with their disposal points are given in the table below.

Table 5 7: Major drains and their discharge points

Coverage	Sewage disposal system
The entire Neori GP	Due to poor drainage system most of the houses carrying waste water have no option left other than to have the outlets in vacant land or ponds. In all these wards water gets discharged either inside the own plot, or outside the plot into the roads, or low lands. Many of these low lands are agricultural fields.

5.3.2 WASTE WATER GENERATION

There is no accurate estimate of per capita water consumption available with DW&SD Government of Jharkhand. However, based on discussion with DW&SD officials, it was assessed that approximately 50 lpcd of water is being consumed by the residents both from government and private sources. Waste water generation for the Neori GP is calculated considering 80% of the water consumed (i.e. 40 lpcd), comprising of 30% black water (12 lpcd) and 70% grey water (28 lpcd). Data from secondary sources indicate that waste water generation from pour flush toilet is approximately 10-25 lpcd per day, which was further confirmed by the residents during field visit that 10-15 lpcd of water is used for flushing toilet facilities. An estimate of the total waste water being generated for the town is presented in Table 5.7.

Table 5.8: Domestic waste water generation in Neori GP

Year	Total Population	Total Water Supplied lpcd ¹ m ³	Total Waste Water generated 40 lpcd ² m ³	Total Black Water transferred to the Septic Tanks 12 lpcd ² m ³	Total grey water generated 28 lpcd ² m ³
2021	9449	473	378	113	265
2026	11051	995 ³	796	239	557
2030	12930	1746 ⁴	1397	419	978

Source: Calculation as per population projection

Note:

As per population projection

Waste water assumption - 80% of water supplied (= 50 lpcd)

black water 30% of total waste water and grey water 70% of total waste water supply

water supply rate is assumed to be 90 lpcd in the year 2026 assuming water supply system will be functional by then

Water supply rate is assumed to be 135 lpcd in the year 2031 for achieving the 100% SLB.

5.3.3 SEPTAGE MANAGEMENT

Neori GP has no suction machine for maintenance of the septic tanks as there is no system of septage management in the entire GP.

5.3.4 SERVICE LEVEL BENCHMARKS

Service level benchmarks for sewerage status for Neori GP is provided in Table 5-9. Although the town does not have the integrated sewerage system, the service level benchmarks have been provided to indicate the level of service expected in the long term.

Table 5.9: Sewerage and sanitation service level benchmarks in Neori GP

Sl No	Sewerage and Sanitation	Bench marks	Neori GP Status
1	Coverage of toilets	100	80
2	Coverage of sewage network services	100	0
3	Collection efficiency of the sewage network	100	0
4	Adequacy of sewage treatment capacity	100	0
5	Quality of sewage treatment	100	0
6	Extent of reuse and recycling of sewage	20	0
7	Complaint Redressal	80	0
8	Extent cost recovery in sewage management	100	0
9	Efficiency in collection of sewage related charges	90	0

Note: Includes toilets constructed under SMM as well as the privately constructed by the house owners

Source: SLB report by Mo D, Govt. of Jharkhand

5.3.5 ONGOING SCHEMES AND PROPOSED INITIATIVES

Currently, there is no scheme or work for development of sewerage system at Neori GP. However, Neori GP is now going to implement schemes according to SBM guidelines. Since the entire GP does not have proper sewerage facility, it has to take exclusive plan and initiative accordingly to tackle the existing sanitation problems that the GP is facing.

5.3.6 KEY ISSUES

- **Absence of sewerage system:** Though there are septic tanks constructed with individual households and public toilets, there is absence of sewerage network

in Neori GP resulting into discharge of waste water in open drains leading to unhygienic conditions in the town.

- **Degradation of natural water bodies:** Flowing untreated waste water into natural drains and finally to the open fields, which are both agricultural and fallow, lead to degradation of quality of water bodies and soil thus causing damage to the overall eco system. There is threat to human health and environment due to degradation of water quality.
- **Choked drains:** Most of the drains are choked with dumped solid waste / plastic waste and causing localized water logging (mixed with waste water) and flooding like situation during the monsoon in many of the residential areas.
- **No reuse and recycling of waste water:** At present there is no reuse and recycling of waste water in Neori GP.

5 3 7 IDENTIFICATION OF A SUITABLE SEWERAGE SYSTEM FOR NEORI GP

Neori GP has a very low level of non conduited water supply (approximately 50 lpcd) and high dependence on ground water. Waste water generation is low, approximately of 40 lpcd. Hence, conventional off site underground sewerage system for waste water management cannot be proposed for the Neori GP as of now; and decentralized wastewater treatment system (DEWATS) seems to be the best options for Neori GP in current situation. The shift from onsite to offsite will be decided based on the factors such as and when water supply 135 lpcd will be made available for the entire Neori GP. In addition, other factors like availability of uninterrupted electricity, peoples acceptability of sewerage system particularly connecting to sewer as well as high capital and operation cost and necessary institutional needs etc. will decide on the time frame for shifting from on site to an integrated sewerage system.

Currently, the electric power supply is unstable in Neori GP, which is crucial for operation and maintenance of sewerage system. Integrated sewerage system usually involves laying of sewers at considerable depth, construction of manholes, installation of intermediate / main pumping stations and sewage treatment plant. These require stable electric power and in case of shortage of electricity, standby arrangements in the form of DG sets have to be provided, which further increases the operation and maintenance cost. Also, narrow roads and unplanned development might affect the efficiency of laying the sewer network.

In Neori GP, the BPL population and slum population may not afford high cost of

maintenance of conventional sewerage system. In addition, the majority of population having already constructed septic tank may take longer time for connection of toilets to the sewerage system. Therefore, utmost care should be taken in the decision making process to avoid any wasteful investment in the sector.

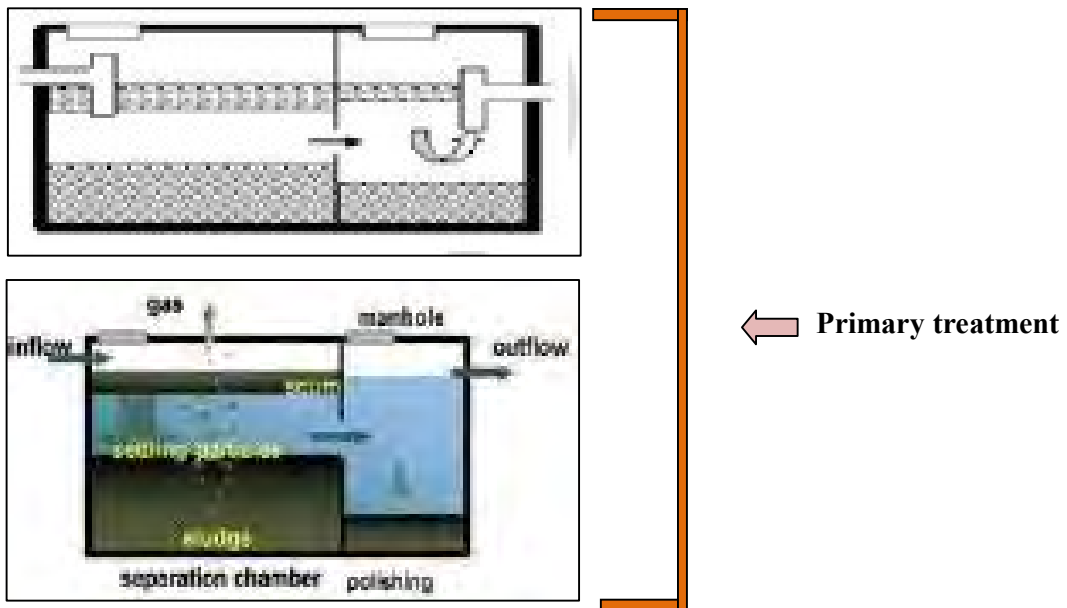
It is, therefore, necessary to consider cost effective sewerage system in the Neori GP, which is affordable and sustainable. Following Table 6.8 provides the suitability of the various types of sewerage system between conventional and low cost sewerage system:

Table 5 10: Options for waste water conveyance system

Types of system	Description
1. Conventional sewerage system	Conventional sewerage system is centralized waste water treatment system consist of closed system of pipes, manholes and pumping station. The underground sewer network conveys black and grey water from individual households to centralized treatment facility. The underground sewer line is categorized into primary, secondary and tertiary networks. The main line or primary line runs through the center of the system and all the other lines empty into it.
2.Low cost sewerage system	
2.1 Shallow Sewers	Shallow sewers are conventional sewers constructed to relaxed standards. Shallow depth made possible by low traffic loads and short connection lengths allows the use of inspection chambers rather than manholes. Since these are not designed for entry of persons, they can be much smaller and cheaper than manholes, thus considerably reducing the cost of sewerage
2.2 Decentralized wastewater treatment system (DEWATS) with Small-bore sewerage	All waste water is diverted to an on-plot septic tank. Households constructing new individual sanitation facilities should be encouraged to construct septic tanks. Some households could use pit latrines. Only black water may be connected to sewers. Septage is removed for further treatment and final disposal. Small diameter sewer pipe (100- 200 mm) is laid at a flatter gradient to carry the effluent from inceptor tanks which are similar to septic tanks.
2.3 Combined system	The combination includes both on-site sanitation arrangements and off-site sanitation systems.

Development of sewerage network would take a longer time frame and would depend on external factors such as availability of funds for implementation of cost intensive sewerage and wastewater treatment systems, the objective of this project component is to address the immediate need of treating the wastewater (black water) that are discharged into the surface drains and to minimize pollution on the surface water bodies, in the interim period. Decentralized waste water treatment system (DEWATS) system is cost effective, both in terms of capital investment and maintenance needs. The system should also be capable of taking variable loads considering the proposed development of wastewater infrastructure within the Neori GP that over the time will reduce the wastewater load into the drains. These DEWATS would be established in various locations of Neori GP and one module would treat waste water from approximately 400 HHs. Septic tanks would be set up in the low lying area but above the flood level so that gravity flow can be maintained. Not only in the existing housing area but for the housing to be developed in future too could have this system of waste water treatment. Locally treated water can be further utilized for other purposes such as gardening, road cleaning and washing.

5 3 8 FUNCTIONING OF DEWATS SYSTEM



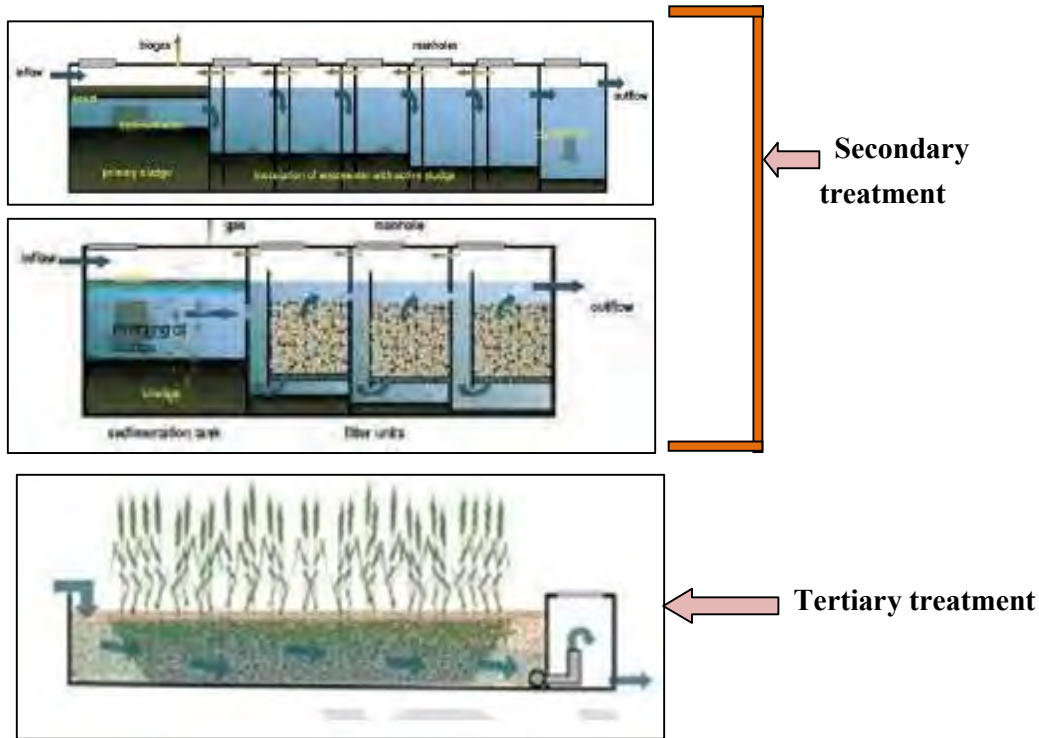


Fig 5 9: Functioning of DEWATS system

Source: Guidelines on Solid and Liquid Waste Management (SLM) in Rural Areas, Ministry of Drinking Water and Sanitation 201

5 3 9 WASTE WATER CONVEYANCE BY SMALL BORE SEWER SYSTEM

For grey water, surface drain is the cheapest option for collecting such waste water. For black water, mixed with grey water, small bore sewer is the appropriate and sustainable options for collecting waste water in rural areas. Small bore sewer systems are designed to receive only the liquid portion of household wastewater for off-site treatment and disposal. Grit, grease and floating materials are separated from the waste flow in interceptor tanks similar to septic tanks. Such interceptor tanks are installed for a group of household. Depending upon the size of interceptor tanks and inflow of waste water, settled solids should be removed periodically from the interceptor tanks.

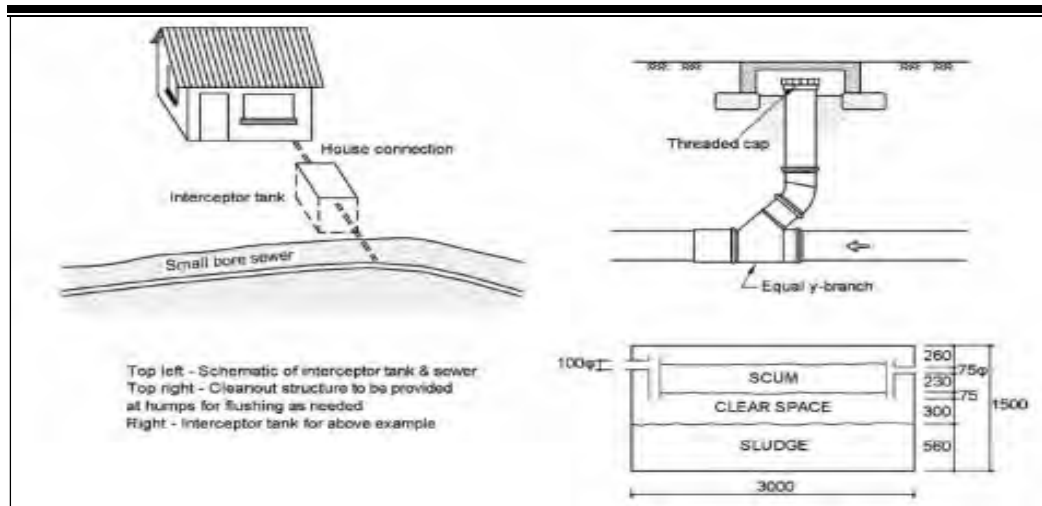


Fig 5 10: A schematic diagram of Small bore sewer system

Source: *Manual on Sewerage and Sewage Treatment Systems – 2013, Ministry of Drinking water and Sanitation, chapter*

5 3 10 COMPONENTS OF A SMALL BORE SEWER SYSTEMS

- House connection: The house connection is made at the inlet to the interceptor tank.
- Interceptor tank: It is designed to detain the liquid flow for 12 to 24 hours and to remove both floating and settleable solids from the liquid stream. Volume is also provided for storage of the solids, which are periodically removed through an access port. The design of interceptor tank is similar to conventional septic tanks
- Sewer: Sewers are small bore pipe (minimum diameter of 100 mm) which is trenched into the ground at a depth sufficient to collect the settled wastewater from most connections by gravity. Unlike conventional sewers, small bore sewers are not necessarily laid on a uniform gradient with straight alignment between manholes or cleanouts.
- Cleanout Manhole: Cleanouts and manholes provide access to the sewers for inspection and maintenance. Also, they can be easily concealed to prevent tampering. They function as flushing points during sewer cleaning operations.

5 3 10 1 The Small Bore System has the following advantages

- Reduced water requirements. It is suitable where per capita waste water generation is very low. It is more suited in rural areas where per capita water supply is low, making conventional sewer system technically unfeasible.

- Reduced excavation costs. With the troublesome solids removed, the sewers can be designed with minimum depth, required to maintain self-cleansing velocity when the slope is kept minimum, excavation costs are minimized.
- Reduced materials costs. Peak flows, for which the small bore sewers must be designed to handle, are lower than those experienced with conventional sewers because the interceptor tanks provide some surge storage. Expensive manholes are not required in case of small bore system.
- Reduced treatment requirements. Interceptor tanks arrest floating materials, oil and grease and most of the settleable solids from wastewater. Therefore, it reduces cost of the treatment, as it requires lesser hydraulic retention time for treatment of such waste water.

Thus, small bore sewer systems provide an economical way to upgrade existing sanitation facilities to a level of service comparable to conventional sewers. Because of the lower costs of construction and maintenance and the ability to function with little water, small bore sewers can be used where supply of water is low and consequently low volume of waste water is generated per household.

5 3 11 WASTE WATER GENERATION PRO ECTION

Based on the population projections and projecting water demand of 135 lpcd day (2026 onwards), net demand for water supply till the year 2031 would be 17.46 MLD. Current water demand is based on existing per capita supply of 50 lpcd. It has been assumed that by year 2026, water supply infrastructure work will be completed and per capita supply will increase to 135 lpcd.

As per CPHEEO manual on Sewerage and Sewage Treatment, waste water generation is 80 of water supply, hence total waste water generation till the year 2031 would be about 13.97 MLD, considering 15 ground water infiltration as the water table is very low in the GP. Table 5.10 provides the projected waste water generation details from 2020 to 2031.

Table 5 11: Waste water generation pro ection in Neori GP

Year	Population	Net water demand at consumer end MLD	Waste water generation including 15 ground water infiltration
2021	9449	4.73 ¹	4.35 MLD
2026	11051	9.95 ²	9.15 MLD
2030	12930	17.46 ³	13.97 MLD

Source: Projections based on CP EEO Manual and Population Projections

- Note:** 1 Assumption being 50 lpcd, as there is no piped water supply for 2021
 2 Assumption being 90 lpcd, considering that piped water supply will be augmented by 2026 and onwards
 3 Assumption being 135 lpcd, considering that piped water supply will be augmented by 2031 and onwards

Table 5 12: Projected septage generation in Neori GP

Particular	Unit	2021	2026	2031
Population	No.	9449	11,051	12,930
No of households	No.	1817	2125	2487
Households having septic tank	No.	493	1162	1990
Number of septic tank to be cleared every year – 50 of the total	No.	247	581	995
Septage generation 2.5 m ³ per septic tank	m ³	618	1453	2488
No of cleaning vehicles required	No.	2	4	8
Existing number of vehicle		0	0	0
Actual number of vehicle required	No.	2	4	8

Source: Calculation based on population projection

Following assumptions were made for above calculation

- Average volume of septage produced by emptying one septic tank – 2.5 m³.
- Septic tank is cleaned once in two years. On an average 50 of the septic tank gets cleaned in a year.
- Each vacuum de-sludging vehicle will clear 4 septic tanks in a day
- After 2026, with the development of Decentralized sewerage system the septage generation will get reduced.

5 3 12 PROPOSALS AND RECOMMENDATION FOR SEWERAGE SYSTEM IN NEORI GP

Based on the topographical and hydrogeological details which include soil type, ground water table and general topography of Neori GP, Population density and available open spaces, the small bore DEWATS is proposed with the following salient points:

- The sewerage network is designed for the Ultimate requirement.
- The small bore sewer system will be provided with small bore of 100mm u-PVC pipes for the conveyance of the black water.

- The collected black water will be transferred to cluster inception tanks for further treatment. The effluent from the inception tanks would be forwarded further for the tertiary treatment by biological process (planted bed filters).
- The treated sludge would be reused as manure and the treated water will be reused for agricultural purposes.

5 3 13 RECYCLING OF TREATED WASTE WATER FOR NON-PORTABLE APPLICATIONS

Recycling of wastewater is essentially, reusing treated waste water for beneficial purposes such as agricultural and landscape irrigation, toilet flushing and replenishing a ground water basin. Recycling and reusing are both aimed at conservation and reduction of wastage. Action plan for recycling and reuse of waste water should be developed along with the development of sewerage system and sewage treatment plant. Reuse is especially critical for Neori GP since water supply is relatively low and high cost of getting piped water supply for the Neori GP.

Waste water can be recycled to agricultural farms, commercial and institutional establishments. This will entail a direct saving to the consumer of water and a direct saving for the Neori GP which continuously struggles to find or locate new sources of water to meet the growing demands of the population.

5 3 14 PROPER OPERATION AND MAINTENANCE OF SANITATION INFRASTRUCTURE

Sewerage System need to be maintained as per the guidelines provided in CPHEEO Manual on Sewerage and Sewage treatment. Both preventive and the emergency maintenance should be done regularly for the proposed sewerage system. The waste water management system proposal is outlined in Fig. 5.9

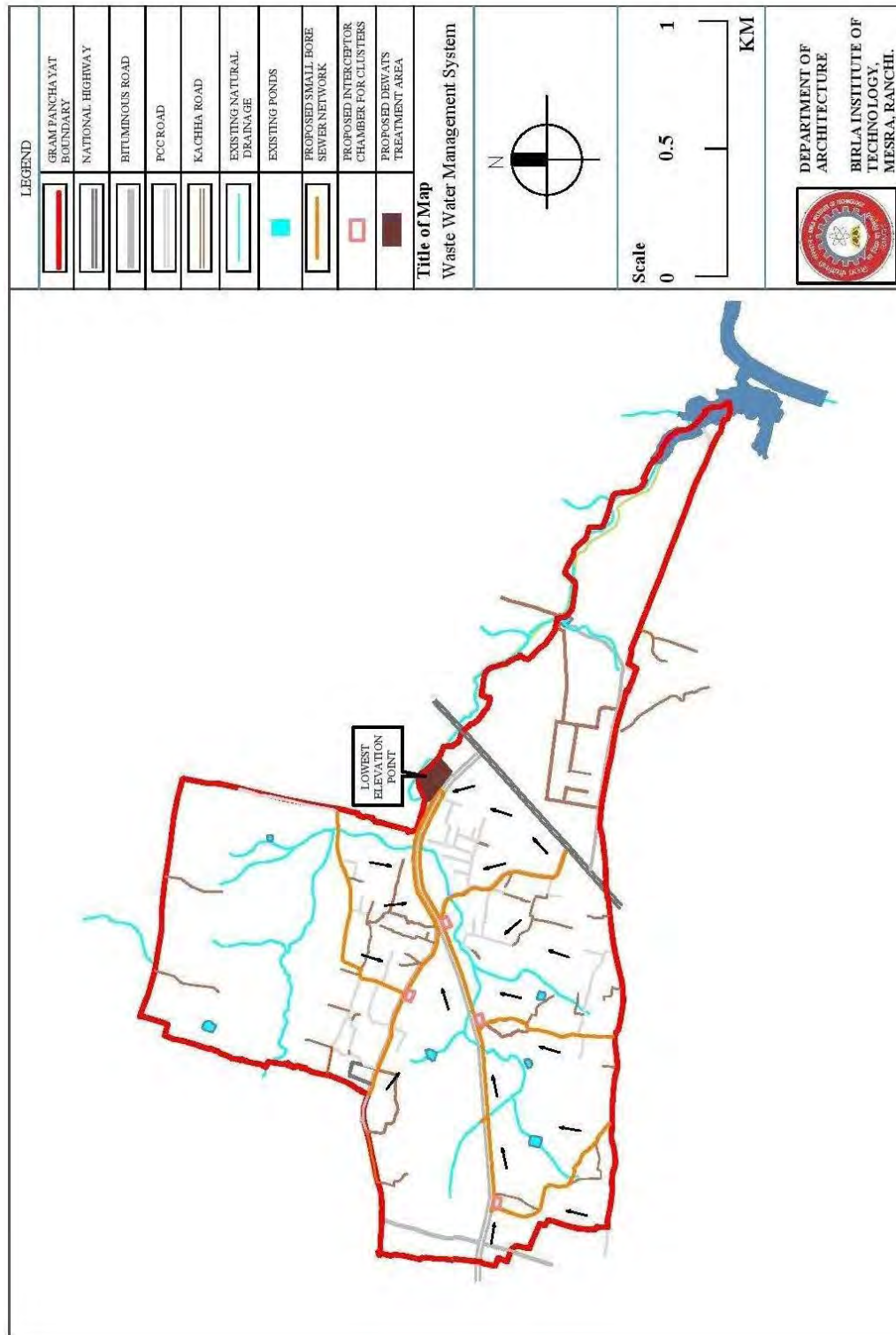


Fig 5 11: Map s owing t e proposals for t e waste water management system for Neori GP (Source: prepared by the BIT Mesra Team)

5.3.15 PHASING FOR WASTE WATER MANAGEMENT SYSTEM

The main goal is to develop suitable waste water collection and treatment system for Neori GP. In the long term, all the waste water generated in the Neori GP shall be collected and conveyed through sewer network to treatment plants, treated to acceptable quality levels and disposed, recycled or reused

It has been proposed a three-phase approach to implement the plan in this report, namely immediate / short-term, medium-term and long-term benefits to upgrade the waste water management system for the town. Each term would be spread over a certain period of years to complete the targeted tasks. Under this, it has been adopted that financial approval of the scheme would probably be completed by the year 2021 and tenders for implementation of works would be floated.. This has been referred to as immediate phase having a projected time period of 1 year when the project works are expected to be completed. The next phase of development over another 2 years from 2022 till 2024 is mentioned as short-term, and the remaining works to be taken up over the remaining 7 years is referred as medium-term (2 years) and long-term (more than 5 years). This phased approach aims to navigate through the challenges posed by the limitations in investments and funding, existing administrative framework, institutional capacities and community engagement in a proficient manner. The sewerage goals with respect to the service level benchmarks have been provided in

Table 5.13: Phasing for the waste water management system in Neori GP

Parameters	Unit	Benc marks	Baseline	PHASING		
				Short term 1 years	Medium term 2 years	Long term 7 years
Coverage of toilets		100	80			
Coverage of sewage network services		100	0			
Collection efficiency of the sewage network		100	0			
Adequacy of sewage treatment capacity		100	0			

Quality of sewage treatment		100	0			
Extent of reuse and recycling of sewage		20	0			
Complaint redresses		80	0			
Extent cost recovery in sewage management		100	0			
Efficiency in collection of sewage related charges		90	0			

Source: SLB report by Mo D, Govt. of Jharkhand

Note: Includes toilets constructed under SMM as well as the privately constructed by the house owners

5 4 STORM WATER DRAINAGE SYSTEM

5 4 1 EXISTING SCENARIO

In Neori GP, currently there is no storm water drainage system except for the southern and western boundaries. The drainage system on the western boundary of Neori GP is developed by NHAI along the NH no.33. The drains on the southern boundary are constructed under the scheme of Mukhya Mantri Gramin Sadak Yojna. Except for these two stretches there is absolute absence of drainage system in the entire GP.



Absence of drainage in almost entire Neori GP



Covered Pucca Drains



No drainage along the PCC Roads the southern and western boundary

Fig 5 12: Existing condition of drainage in Neori GP

Source: Author

Table 5 14: Drains and outfall points in Neori

Coverage	Drainage system
Along southern and western boundary of Neori GP	Only this section is provided with covered pucca drains
Rest part of Neori GP	Drainage system is almost absent. Only few parts have open kutchha drains. Outlets in vacant land, agricultural land or ponds.

5 4 2 DRAINS AND THE SLOPE PROFILE IN NEORI GP

The topography and the slope profile of the Neori GP is suitable for development of an efficient drainage network, The northern and the southern edges are with the highest elevation and a valley is formed along the Ring Road. The entire GP can be provided with drainage network draining out the storm water following its topographical slopes. The slope profile suggests secondary and tertiary drains can be developed along the roads to cover the entire GP and finally these should be connected to the major storm water drainage along the Ring Road, The junction of Ring Road with the NH No. 33 is the lowest elevation point in the entire GP. Map 5. Shows the existing drains with the slope profile of the Neori GP

Water logging is major issues in the GP, during the monsoon season low lying areas get inundated. Many of the vacant plots and pits also gets filled with water and become breeding grounds of the mosquitoes and flies. There is no water draining

pump available with Neori GP to tackle the problem of water logging. As revealed from the discussions with the stakeholders including officials of the Neori GP, there are as many as 8 (eight) locations having problem of water logging in Neori GP and most of these are located beyond Ring Road on the northern zone of the GP. The area south to the Ring Road is a better situation due to the natural gradient of the site.

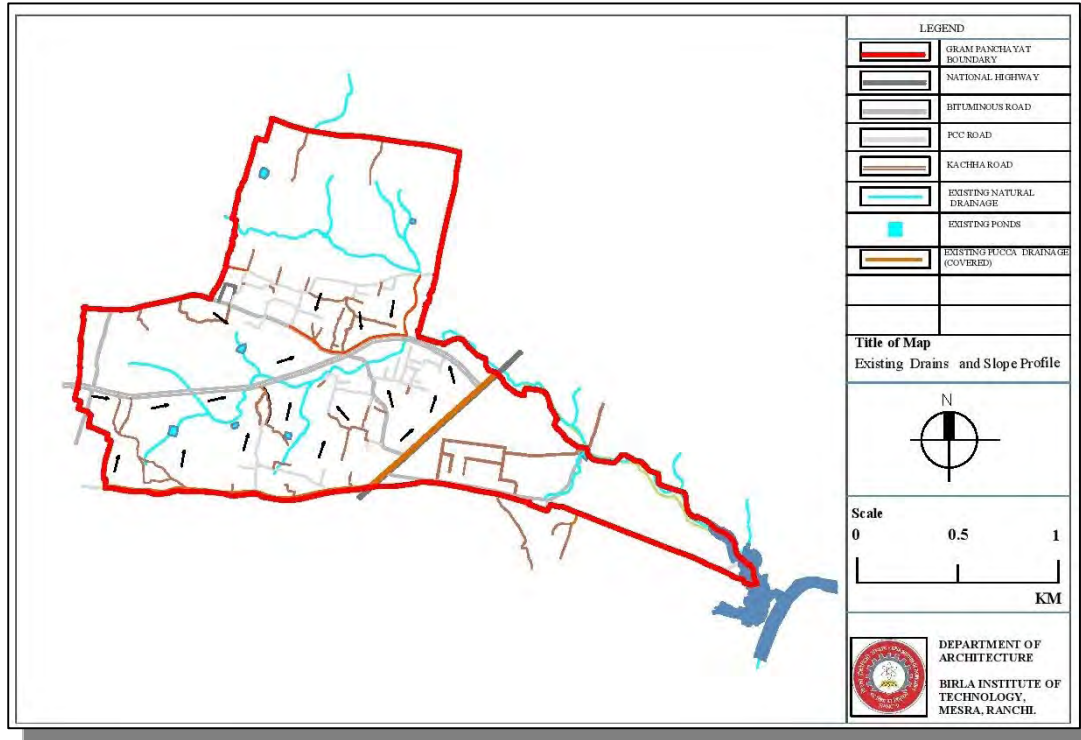


Fig 5 13: Map s owing t e existing drains and t e slope profile of Neori GP

Source: based on household survey prepared by the BIT Mesra Team

5 4 3 SER ICE LE EL BENCHMARKS

Service level benchmark and its status with respect to the GP is shown in **Table 8-2**

Table 5 15: SLB of drainage system in Neori GP

Sl No	Drainage System	Benc mark	Neori GP Status
1	Provisions of storm water drainage network	100	NA
2	Incidents of water logging/flooding	0	8

Source: Neori GP and discussions with GP Officials

5 4 4 KEY ISSUES

- **Mixing of storm water and waste water:** There is mixing of waste water and

storm water in the drain. Due to absence of proper sewerage system and public ignorance household waste water is finding way directly into the drains. Mixing of waste water and storm water drain is the major problem faced by the GP.

- **Degradation of natural water bodies:** Flow of waste water into nearby ponds leading to degradation of water quality.
- **Absence of proper storm water drainage network:** In the absence of storm water system the waste water finds its way on the roads resulting in serious water pollution in all the water bodies in the GP.
- **Choked drains:** Most of the drains are choked with solid waste / plastic waste and causing localized water logging situation in many of the residential areas.
- **Silting in drains:** Regular and proper cleaning of drains is not being done. Major drains are cleaned occasionally, only or if any complaint is lodged. Heavy silting of drains resulting into overflow of water and water logging in rainy season.

5 4 5 PROPOSALS

As per the natural drainage pattern and topography of Neori GP, the 8(eight) numbers of water logged areas of the GP have been proposed to be provided with a secondary storm water drainage system leading to the major drains to be constructed along the ring road.

The existing drainage system shall also be improved in the west and south side of the GP. As the junction of Ring Road with the NH No. 33 is the lowest elevation point in the entire GP the nallah flowing beside this is the outfall point for all the natural drains flowing in this GP. All the drainage system leading to nearby ponds shall be diverted in alignment with the major drains constructed along the ring road. The tentative alignments of the proposed major storm water drains and construction of other secondary and tertiary drains are indicated in the Fig. 5.12

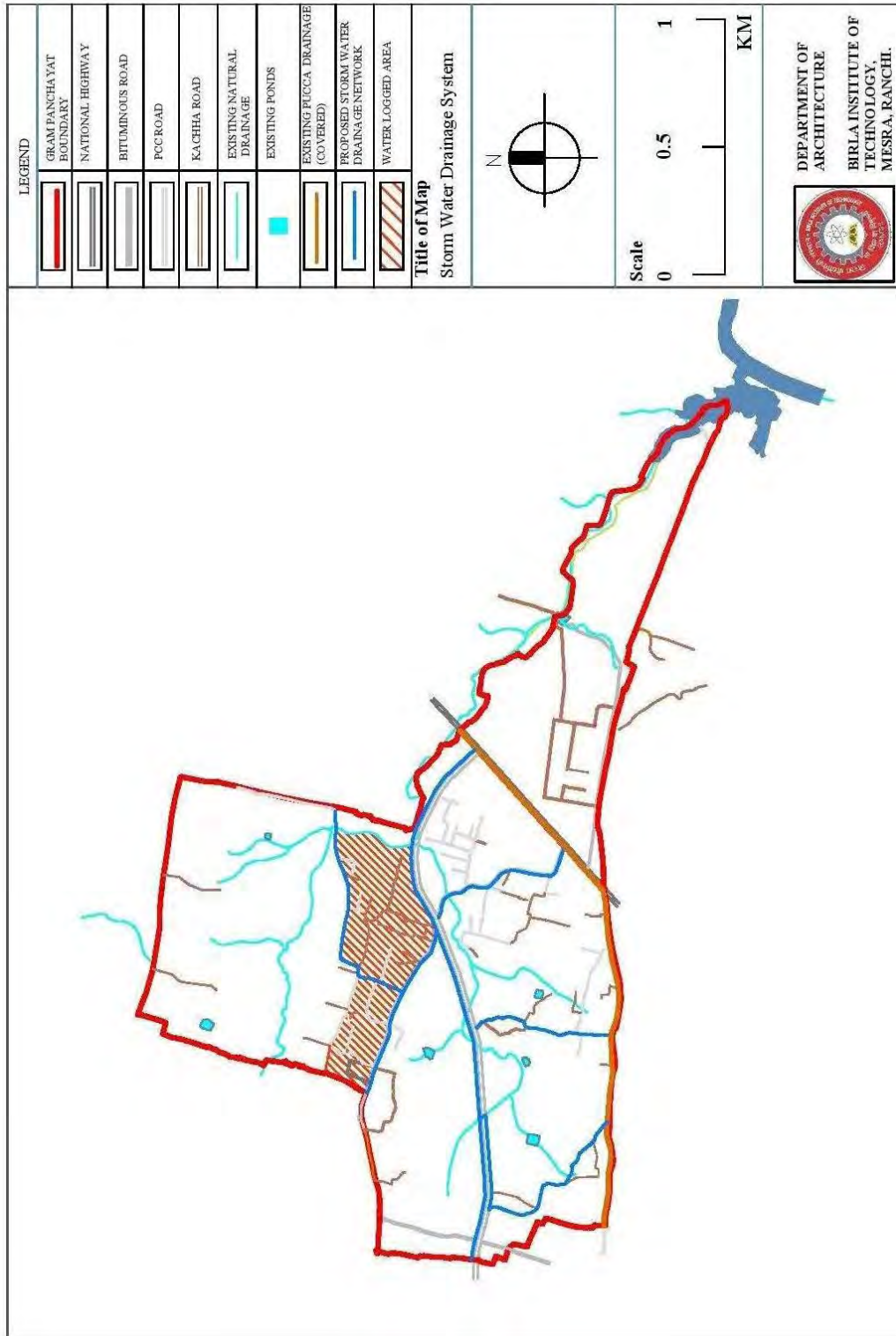


Fig 5 14: Drainage map for Neori GP s owing existing and proposed drains

Source: based on household survey prepared by the BIT Mesra Team

5 4 6 OTHER RECOMMENDATIONS

1) **Strengthening of the Existing Storm Water Network for Neori GP:**

Topography of the Neori GP makes drainage situation relatively better in the GP. The general slope of the GP is towards the ring road which almost bisects the GP. However, some of the natural drains are heavily silted and thus, are inadequate to accommodate and transport the storm water. Thus strengthening of storm water drainage channel is recommended. The strengthening is primarily comprise of following activities

- De-silting of existing drains to increase the carrying capacity. To make the drain cleaning system sustainable, there is a need to undertake periodical desilting operation, which can keep the drains clean and prevent all six numbers of existing ponds water from getting polluted.
- All the natural drains flowing through Neori GP need to flow freely for proper storm water discharge. All such drains will also be kept encroachment free with required de-silting / dredging from time to time.
- Appropriate plantation / beautification on the banks of the natural drains are required.

2) **Construction of New Storm Water Drainage system:** After review of the status and efficacy of the primary and secondary drainage in Neori GP., it is suggested to construct new storm water drains for almost the entire Neori GP.

3) **Integration of existing ponds and water bodies in the town in the storm water drainage network:** Some of the drains in the GP carries storm water and waste water to the ponds and pollute the water. These drains should be rerouted and either connected to other natural drains or should be connected to prevent flow of storm water into ponds.

4 **Source Control and Ground water recharge initiatives to be developed along with storm water drains:**

Urbanization and development of hard pavement and dedicated storm water drainage system leads to high surface runoff to bigger drains and finally to nearby Nallas / Rivers. Rain water harvesting for utilizing the primary source of water and preventing the run off from going to the storm water drains should be encouraged. Recharging of the ground water using appropriate technology should be done for Neori GP. Central Public Works Department. Government of India has developed a technical manual for rain water harvesting and conservation. Neori GP can refer to the manual for design

details of rain water harvesting structure (refer [http://cpwd.gov.in/Publication/rain wh.PDF](http://cpwd.gov.in/Publication/rain_wh.PDF)).

Some of state governments has been proactive in development of legislations for rain water harvesting. Jharkhand state water policy also gives due consideration to rain water harvesting in planning water resources. However, the state of Jharkhand can look into the aspect of developing legislation for appropriate rain water harvesting in the state of Jharkhand, which shall be helpful to cater the problem of draught.

5 4 7 PHASING FOR THE DEVELOPMENT OF STORM WATER DRAINAGE SYSTEM

The development of storm water system should start with the short term goal with the conduct of the topographical survey to mark the levels which will help in identifying the alignment of the drains. The medium phase of three years should be for the development of secondary, tertiary and major drainage construction, followed by the long term last phase of the development of the primary drainage network along with individual house connections. The following table outlines the phasing for the development of the entire new storm water drainage system for the Neori GP.

Table 5 16: Phasing for storm water drainage system in Neori GP

Sl No	Short Description	Phasing for the proposed storm water drainage system in Neori GP		
		Short term	Medium term	Long term
		2021-2023	2023-2026	2026-2031
1	Conduct Topographical Survey for the Neori GP area to recognize the current condition of the sites etc.			
2	Development of new pucca main storm water drainage networking along ring road and connection of various other sub-mains to the main			
3	Development of individual house drainage Network along with the connection to it			

5.5 SOLID WASTE MANAGEMENT - INTRODUCTION

The domestic solid waste generation in the rural household of India is increased, and now it plays a significant role in the field of health management. The solid waste generated in the rural area is organic and biodegradable in nature. These solid wastes are not handled properly, and eventually, they create problems for the entire region.

5.5.1 EXISTING STATUS

Table 5.17: Existing Solid Waste Management System in Neori Gram Panchayat

Waste Generation	Collection and Transportation	Disposal
<p>Total estimated Solid Waste Generated: ✓ 2-3 tonnes per day (based on an estimate of 330g per person per day)</p> <p>Types of Solid Waste:</p> <p>✓ Biodegradable: Animal waste, vegetable waste</p> <p>✓ Non-Biodegradable: Plastic bags, papers, glass</p> <p>Solid Waste Sources:</p> <p>✓ HH, Weekly markets, Schools/Anganwadis, shops etc.</p>	<p>Presently there is no system to collect and/or transport the daily generated solid waste.</p> <p>Once in 2 to 3 months, waste is collected from the roads/drains and transported to an open area outside the village</p> <p>This process is contracted out by the GP</p>	<p>Current Disposal methods</p> <p>Vegetables & Food Waste: Given to livestock, reused in field</p> <p>Plastics: Thrown outside in the open area, fields, drains or burnt</p>

Source: Primary survey

Currently there is no reliable waste system in Neori GP. Generated solid waste is managed by households only. Generally, they disposed of all waste material according to their suitability. There is no segregation method; most of them disposed it on barren land. Cow dung and vegetable waste directly dump on the paddy field and try to convert it in compost without using any proper method.

5 5 2 FORECASTING OF SOLID WASTE GENERATION FOR NEORI AREA

The current waste generation of Neori is about 3 MTPD. Due to rapid growth and an increase in the population, waste generation will also be increased. The current waste generation rate of the GP is 0.338 kg/capita/day.

Table 5 18: Protected Waste Generation in Neori GP

Year	Population	Total Waste
2021	9449	3.19 MTPD
2026	11051	3.73MTPD
2030	12930	4.37 MTPD

Source: Computed by author

5 5 3 TYPES AND QUANTITY OF WASTE

The types of waste generation vary as per:

- The geographical region of any particular area.
- The socio-economic condition of any area
- The seasonal variation which affects the types of food
- The packaging of food items.

In general, it is observed that in those areas where the supplies of packed edibles are less, they generate less volume of waste

5 5 4 CATEGORIES OF SOLID WASTE

Table 5 19: Categories of Solid waste generated in Neori GP

Organic waste	Waste from the preparation of food, market places, etc.
Combustibles:	Paper, wood, dried leaves, packaging for relief items, etc. (high organic and low moisture content)
Non-combustibles:	Metal, tin cans, bottles, stones, etc.
Ashes/dust:	Residue from fires used for cooking
Bulky waste:	Tree branches, tires, etc.
Dead animals:	Carcasses of domestic animals and livestock
Hazardous waste:	Oil, battery acid, medical waste
Construction waste:	Roofing, rubble, broken concrete, etc.

5 5 5 INITIAL STEPS OF SOLID WASTE MANAGEMENT SYSTEM SWM

The following process should be used to establish an effective SWM system in any affected area.

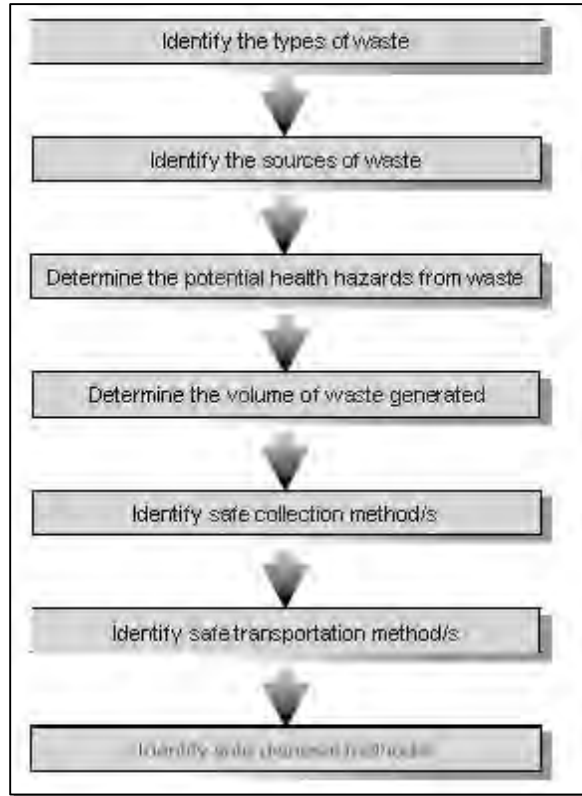


Fig 5 15: Solid waste Management flows et

5 5 6 INTER ENTION LE ELS

The table indicates general intervention strategies for the storage and disposal of solid waste in different scenarios. The same may be replicated for Neori GP.

Table 5 20: Intervention strategies for storage and disposal

Immediate Action	<ul style="list-style-type: none"> • Cleaning of scattered waste • Burning and burial of waste on-site • temporary community pits • Repairing and upgrading of existing facilities 	
Short term measure	<ul style="list-style-type: none"> • community pits • family pits • community bins 	
Long term actions		<ul style="list-style-type: none"> • community bins • family pits

		<ul style="list-style-type: none"> • community bins • repairing or upgrading of existing facilities • Recycling
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Table 5 21 - Actors in Rural Solid Waste Management System

Level	Organi ation
GP	Gram Sevak/Sachiv
	Panchayat Development Office
	Community-based organizations
	SHGs
	Private sector/entrepreneurs
	Households

Source: Ministry of Drinking Water and Sanitation and Asian Development Bank (201) Guidelines on Solid and Liquid Waste Management (SL M) in Rural Areas. Government of India.

Different organisations mentioned in the Table 5.21 may be involved in Neori GP for the Solid Waste Management purpose.

5 5 7 PROPOSED SOLID WASTE MANAGEMENT SYSTEM

The Solid Waste Management Model based on the sustainable hierarchy of waste management, in these entire system the major focus on Reduction to Recycling concepts. The entire process can be achieved by way of decentralization process of solid waste management. The entire SWM operation may be worked on Public Private Partnership (PPP) mode involving professional agencies through Built-Operate –Transfer (BOT) platform. The private agencies may be asked to use innovative technologies and recycle agro-waste to produce manure for boosting agriculture. Such an operation may be designed to sub serve a cluster comprising of few Gram panchayats.

The entire process will comprise of:

Segregation: Separate bins needs to be installed for bio-degradable, non - biodegradable and domestic hazardous wastes and handover segregated wastes to authorized waste pickers.

Storage: Every household, shop and establishment generates solid waste on day to day basis. Generally no bins for separate storage of waste according to nature are kept

at source. Very few people keep personal bins for storage of waste according to its nature.

Collection and transportation: Door to door and Community bin collection using the concept of Ghantagari once a day. Domestic waste is collected through house to house collection and all other type of waste i.e. institutional, commercial etc. have been collected through community bins. At primary level, wastes dumped by public in containers provided by GP will be collected through small vehicles by sanitary workers and transferred to secondary storage depots from where without segregation it will be sent through big vehicles to dumping grounds for final disposal.

End treatment:

Incineration: Incinerators is proposed to be installed through PPP mode to treat biomedical and other infectious forms of wastes.

Landfill: This treatment is proposed for non-biomedical and no-agro based waste.

Preparation of Manures: The agro based waste may be recycled to produce manure which may be sold at a nominal rate to the cultivators to boost cultivation.

The manure production may be conceived to be a part of the PPP model and the process of production and sell of manure is proposed to be conducted by the organization awarded with PPP for Ten years term period upto 2030. After 2030, as per principles of BOT project, the entire operational system will be handed over to Neori GP, which will further continue with the operation. The entire collection to disposal system will not be chargeable. However, it will be advised to the organization to employ maximum number of Neori GP residents for the entire operation through proper training so as to increase the involvement of the locals.

5 5 7 1 P ytical Sustainability of Waste management system

- A set of rules and regulations must be established with respect to the disposal of waste inside the village and every resident must be aware of them properly.
- The awareness program and information regarding waste must be supplied to them and every resident must be educated.
- A sound monitoring system must be established which will continuously monitor the entire process and also look after complaints of the residents of GP.

- Documents and reports of the entire process must be released from time to time so that people can be aware of the process.

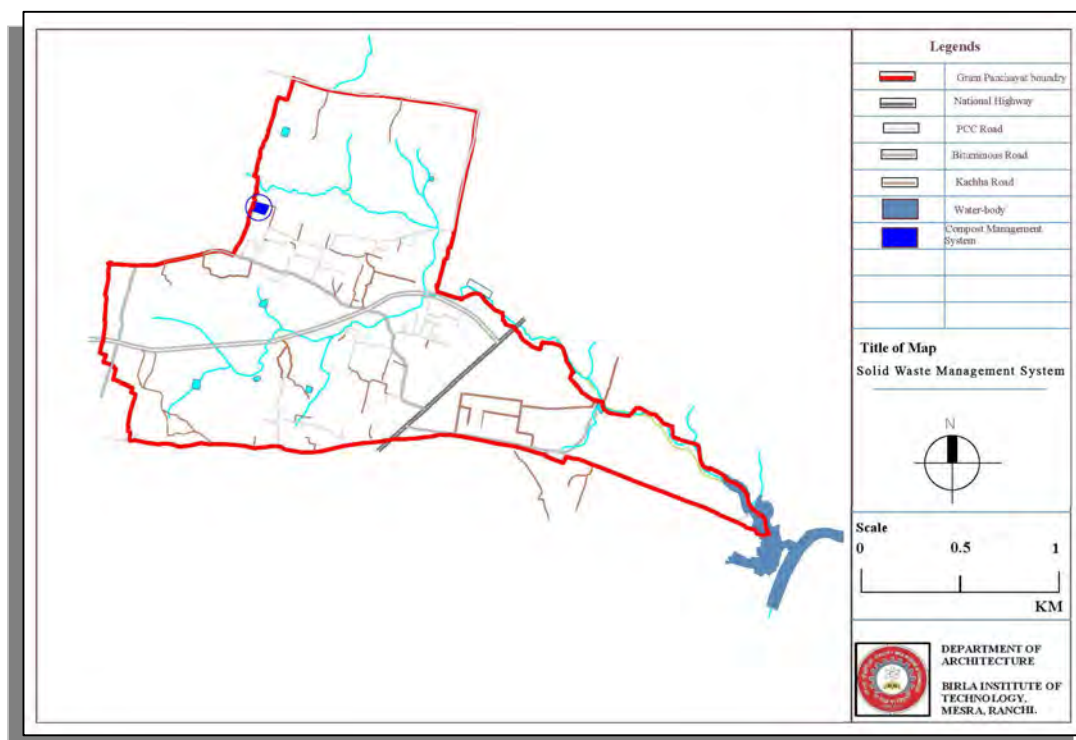


Fig 5 16: Proposed site for solid waste activity

Source: prepared by the BIT Mesra Team

5 5 8 COSTING AND FINANCES

The details of costing for the entire SWM operation are given in the table 5.22 below.

Table 5 22 – Details of cost for SWM operation

Sl no	Particular	Quantity	Unit price	Total Cost in Rs
Solid Waste Management				
1.	Construction of waste collection center	2000 sq feet	Based on PWD Specification	
No. of dustbins installed				
2.	Dustbins capacity 100 kg (including School, Anganwadi and Panchayat building)	12	5000	60,000

3.	Dustbins for households and commercial green color (10 liters)	1400	150	2,10,000
4	Dustbins for households and commercial red color (15 liters)	1400	175	2,45,000
Collection system, segregation, and disposal of household garbage				
5	Waste Collection Vehicles (Battery operated vehicles)	4	200000 (approx.)	8,00,000
6	Other SWM Activities, Landscaping and Beautification	Lump Sum		30,000
7	Construction of incinerator	1		7,50,000
8	Manure processing plant	1		4,00,000
9	Manure selling outlet	1		1,00,000

5 6 0 ELECTRICITY DISTRIBUTION AND PRO ISSION

Supply of electricity to every household, commercial and institutional establishment is of utmost necessity in today s context. 85.3 of the households are electrified which suggest a gap of still nearly 15 of households which doesnot have electrical connections. Commercial establishments all have electrical connections. The entire Neori GP is partially facilitated with a street light. There is a total of 471 no electric pole. However, electrical connections through LED lights are present only in 236 poles.

5 6 1 PRO ISSION OF SMART STREET LIGHT SSL

A smart street light system includes power generation, storage, and management device using solar panel. Since it is important to harness renewable source of energy for our daily use, Smart Street Lighting system is proposed in the entire Neori GP. The proposed structure of a Smart Street Lighting system is shown in Fig. 5.14.

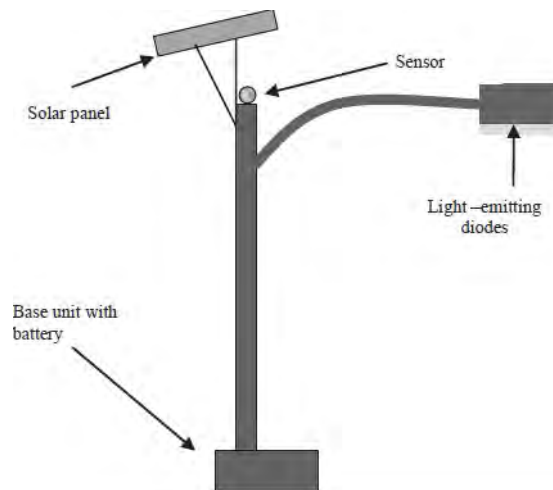


Fig 5 17: Component of a smart street lighting system

5 6 2 HOME SOLAR SYSTEM

The house-hold survey data suggests a dismal state of affairs of the GP in terms of electricity. Average electric supply in the Neori GP is between 8-10 hours which means a large part of the day is spent in utter darkness. Even functioning of schools and establishments gets jeopardized because of shortage of electricity.

To overcome the crisis, it is proposed to establish Home Solar system at every household which maybe further linked with Grid-connected system . The main advantage of Grid connected system includes connecting every household with the main grid so that the excess electric power generated over and above the household usage may be fed in the Grid to be used in other essential services. In this, a household is required to be installed with a roof top PV system over a roof area of approximately 100 sq ft., connected with necessary accessory items which can generate 1400 units annually. This entire process of installation and operation can work on government subsidy and may be executed through US-India Clean Energy Finance (USICEF).

5 6 3 PROPOSAL FOR STREET LIGHTING

Considering, the present condition, there is an urgent need to electrify all houses, institutions and commercial establishments. For better electrification of roads and to create a better safer environment, Smart electric lights are proposed to be installed in all roads, streets and narrow lanes within Neori GP. SSL should be installed alternatively because normal LED light is already installed on an alternative electric pole. Details of SSL installation is shown in the Table 5.23.

Table 5 23: Details of cost of SSL installation t roug out Neori GP

No. of SSL required	236
Unit cost of SSL	32,578
Total Cost	76,88,408

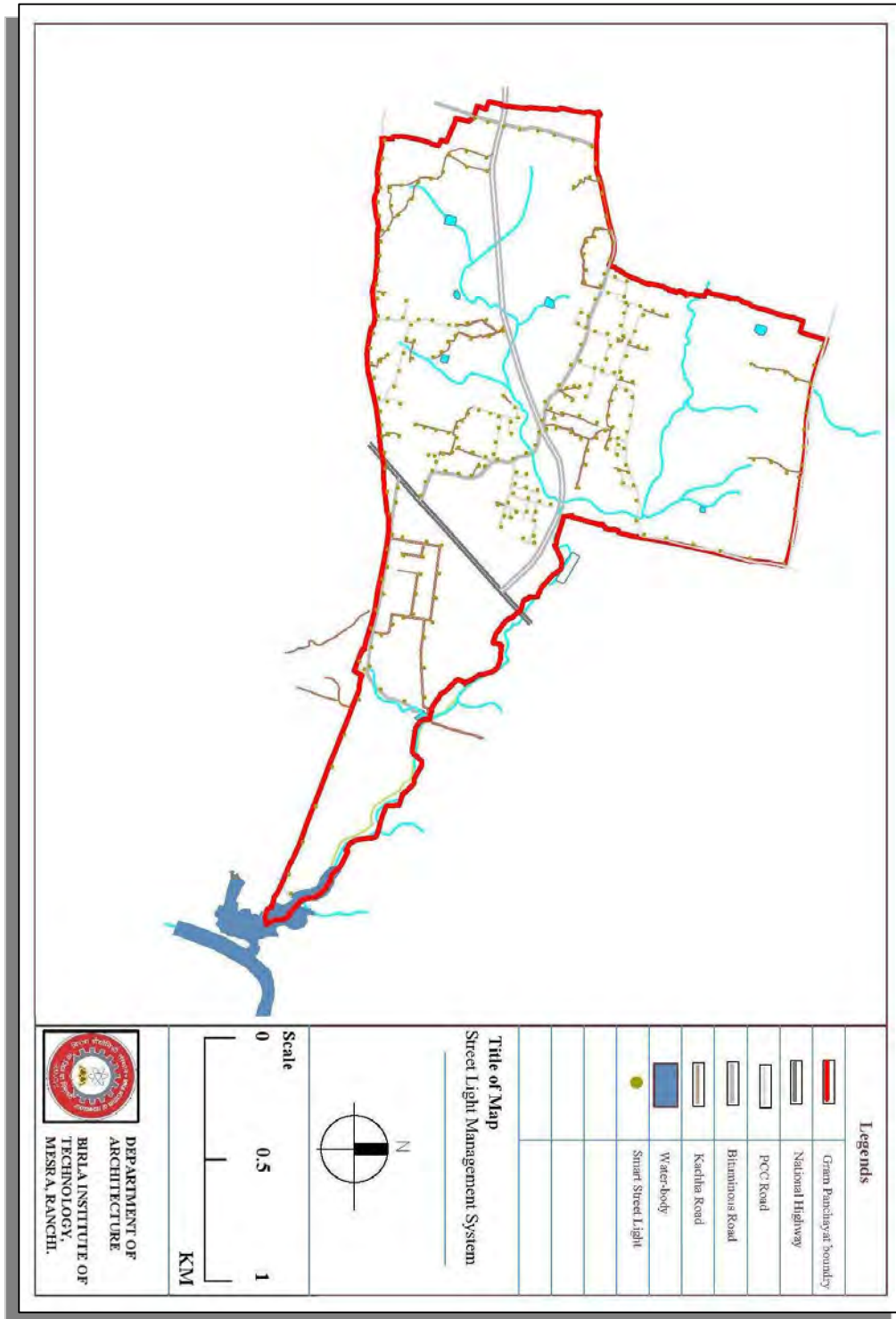
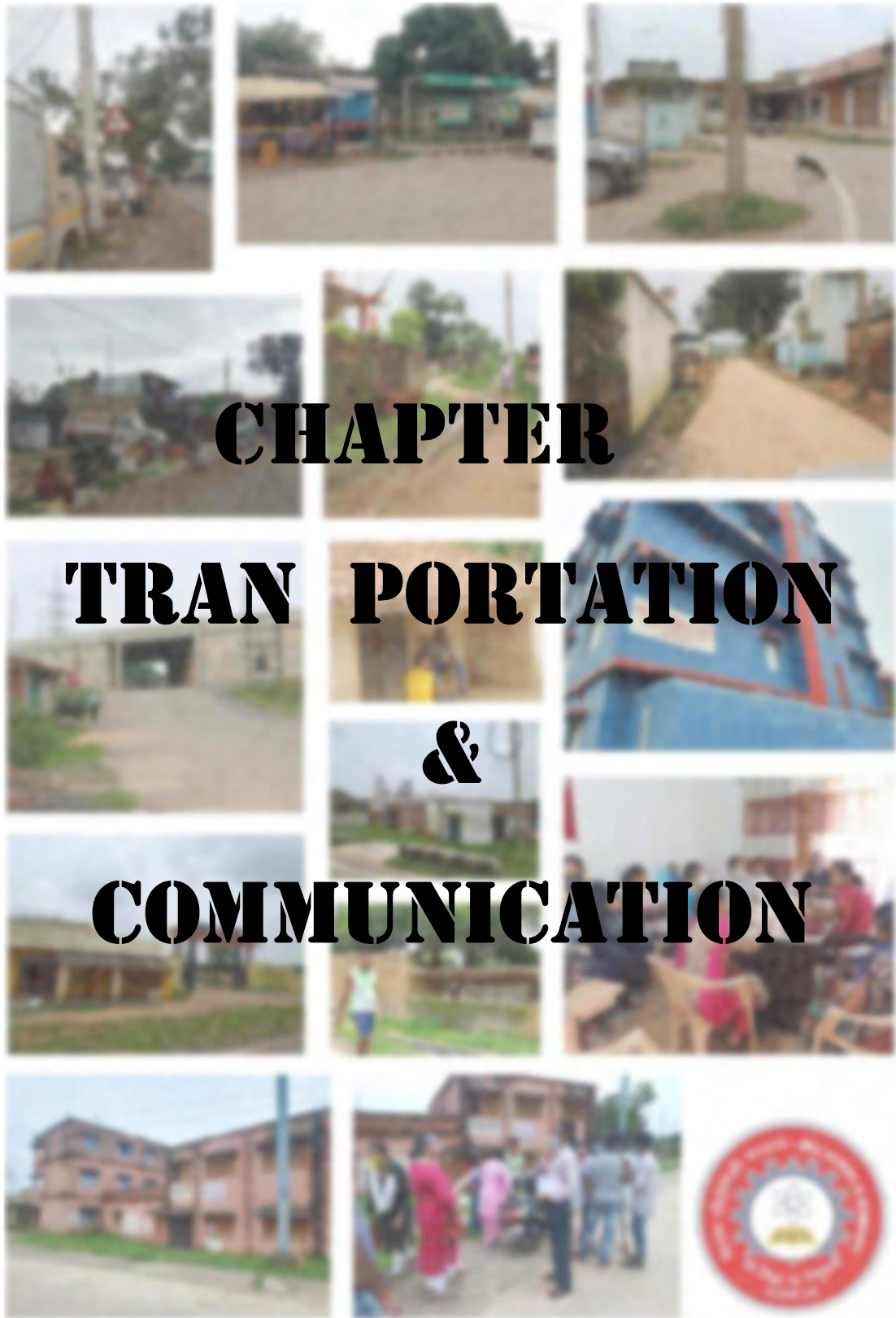


Fig 5 18: Spatial locations of street lights in Neori GP

Source: based on household survey prepared by the BIT Mesra Team



CHAPTER TRANSPORTATION & COMMUNICATION

CHAPTER 6: TRANSPORTATION & COMMUNICATION

6.1. ROAD NETWORK

For rural development, the provision of rural road network is a key component to enable the rural people to have access to schools, health centers and markets. Rural roads serve as an entry point for poverty alleviation since lack of access is accepted universally as a fundamental factor in continuation of poverty. Rural roads act as a facilitator to promote and sustain agricultural growth, improve basic health, provide access to schools and economic opportunities and thus holds the key to accelerated poverty reduction, achievements of Millennium Development Goals (MDG), socio-economic transformation, national integration and breaking the isolation of village communities and holistic and inclusive rural development.

Neori village is well connected with road and rail network with major cities in the state of Jharkhand; it is 18 kms from Ranchi, the capital of Jharkhand. Neori village is located in Kanke Block of Ranchi district in Jharkhand, India. It is situated 10km away from sub-district headquarter Kanke and 15km away from district headquarter Ranchi. The National Highway NH 33 passes through the Gram Panchayat. The NH connects the village to Ranchi towards the east whereas to Ramgarh, Dhanbad, Bokaro to the west. Besides this, there are state highways and major district roads linking to other cities Jamshedpur, Daltonganj, Lohardaga in the region. A 6-lane wide ring road takes off from NH-33 and meets the various regions of the state. Like many other villages adjacent to the National Highway in India Neori is also witnessing an unprecedented changes, since past few decades, leading to a profound impact on the overall traffic and transportation system. This chapter describes the importance of location of the village and its connectivity in the region, current system of transportation and issues and future requirements.



Fig. 6.1: Existing Road Map of Neori GP

Source: based on survey prepared by the BIT Mesra Team



Fig. 6.2: National Highway 33

Source: Author



Fig. 6.3: The Ring road

Source: Author

6.1.1. INTER- VILLAGE ROAD AND INTRA VILLAGE ROAD CONNECTIVITY

Connectivity plays an important role in deciding the current traffic pattern as well as future demands of the city. Due to the current development along the NH 33 there is lot of traffic in the stretch whereas the internal roads lack in hierarchy in the system. The roads in the internal area are very narrow.

The roads in and around the village serve as feeder road to the main network. They link villages with the nearest market centers, or any other village. Traffic volume on the ring road is low, comprising mainly of four wheeler and goods carriage , the NH 33 is the major road going across the village which has the maximum traffic comprising of public vehicles i.e. buses, auto rickshaw and trucks.

Slow moving vehicles like cycles and animal drawn vehicles and pedestrians who are generally cultivators of abutting land. There are other lower level roads also, such as paths and tracks. These are farm roads and intra-village roads. The farm roads traverse the agricultural fields and are mainly un-surfaced linking agricultural farms with the main village. Intra-village roads connect the clusters of small size settlements in a village, known with different names in different.

6.2 EXISTING ROAD NETWORK

6.2.1. EXISTING ROAD NETWORK: ROAD TYPE, ROAD COVER

The length of road network of Neori village is estimated to be about 17.6 kms. As per the definition and classification of road system adopted in Road Development Plan of India (1981-2000), rural roads are the tertiary road system which comprises of Other District Roads (ODR) and Village Roads (MOST, 1984).

Table 6.1.: Road characteristics and the Right of way

Type of Road	ROW (in meters)	Carriageway
B.T. Road	25	15
B.T. Road	8	7
C.C Road	9.5	8
P.C.C. Road	3.5	3
Kutchha	2	1

Source: Primary survey

As observed in Neori village there is no systematic hierarchy of roads which is clearly seen in the pictures below.



Fig. 6.4: NH 33



Fig. 6.5: From Neori chowk to underpass



Fig. 6.6: To Chutto chowk



Fig. 6.7: Kenduatoli



Fig. 6.8: Internal road (Bituminous)



Fig. 6.9: Internal roads (PCC)



Fig. 6.10: Internal roads (kachha)



Fig. 6.11: Internal roads



Fig. 6.12: PCC roads which needs maintenance **Fig. 6.13: Paved road in the GP**

Source: Author

6.2.2. CHARACTERISTICS OF ROAD NETWORK

The road inventory survey conducted along a primary road network of length 17.6 km. Indicated that about 47.8 percent of road is bituminous road, 48 percent of road is concrete and rest is kuccha road.

Table 6.2: Details of road inventory survey

Road name	Length (in meters)	Surface type	Carriageway (in meters)
NH 33	1140	Bituminous	15
Vikas chowk to Chuttu chowk	1540	Concrete	8
Chuttu chowk to ring road	568	Concrete	6
Ring road junction to Pramukh awas	491	Bituminous	7
Pramukh awas to Rameshwar Thakur's residence	522	Bituminous	6
Rameshwar Thakur's residence to Anganbaadi	540	Bituminous	5
Anganbaadi to underpass	281	Bituminous	6
Neori more to the Ring road underpass	738	Bituminous	7
other bituminous roads	4100		5 to 8

other internal roads			6424	Concrete	3.5 to 5.5
Other internal roads	1165	Kachha	1 to 2		

Source: Primary survey

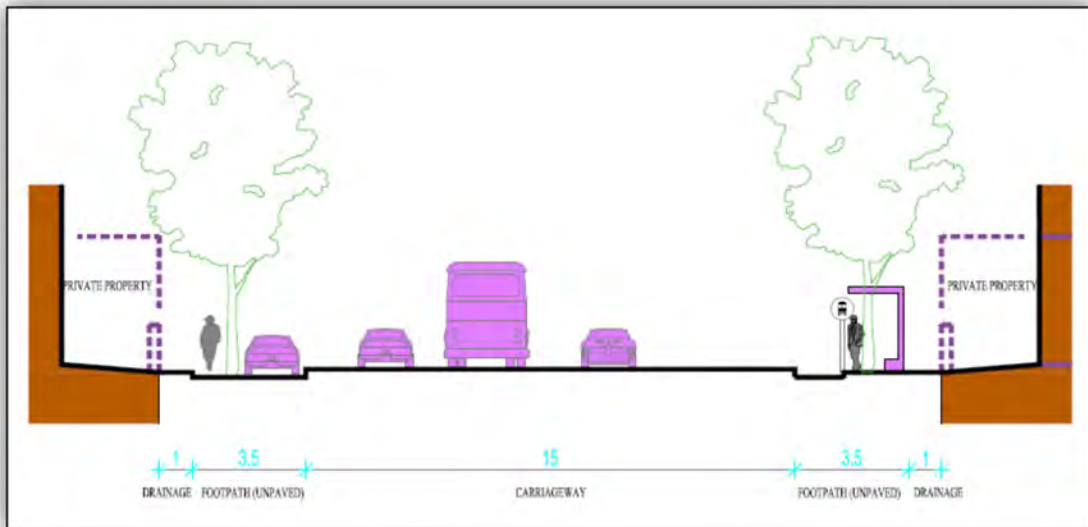


Fig. 6.14: Existing road section for NH-33

Source: prepared by author



Fig. 6.15: National Highway 33



Fig. 6.16: Vikaschowk to Chuttochowk

Source: Author

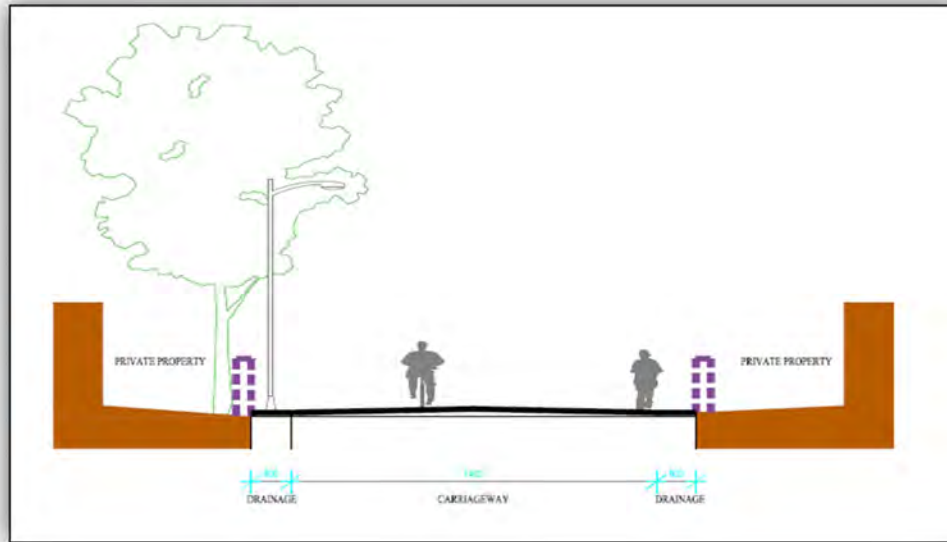


Fig. 6.17: Road section for ROW 9 m at ChuttoChowkRoad

Source: prepared by author

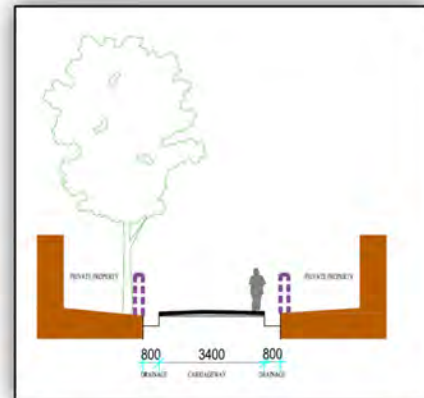


Fig. 6.18: Internal paved roads section

Fig. 6.19: 5m ROW Road

Source: Author

6.3 STREET FURNITURE

Street furniture is also covers a vast array of equipment placed in, on, or over the road for safety and convenience on the street and including various purposes like traffic control and lighting, information and communication, relaxation and waiting, waste control and drinking, cooling and beautification, immortalisation etc. These include

traffic barriers, traffic lights, street lamps, advert boards, signage, post boxes, phone boxes, bus/taxi/cycle shelters, benches, brief toilets, waste bins, drinking water stands, fountains, watering troughs, planters etc.

Below is the existing street furniture which is very few. With respect to the fact that the National Highway passes through the gram panchayat there is a need of traffic lights, street lamps, advert boards, signage, etc.



Fig. 6.20: The signage is inappropriately placed



Fig. 6.21: The street lights are placed at regular interval



Fig. 6.22: No parking space and Signage



Fig. 6.23: Bus stop



Fig. 6.24: The street vendors along NH 33



Fig. 6.25: Neori Chowk



Fig. 6.26: Sign boards



Fig. 6.27: No pedestrian crossing

Source: Author

6.4 TRAFFIC SURVEY AND DATA COLLECTION

The traffic count data of the national highways collected by the Road is given in the table below. The survey was done at Neori More, The graphical representation of modal share presented in below figure:

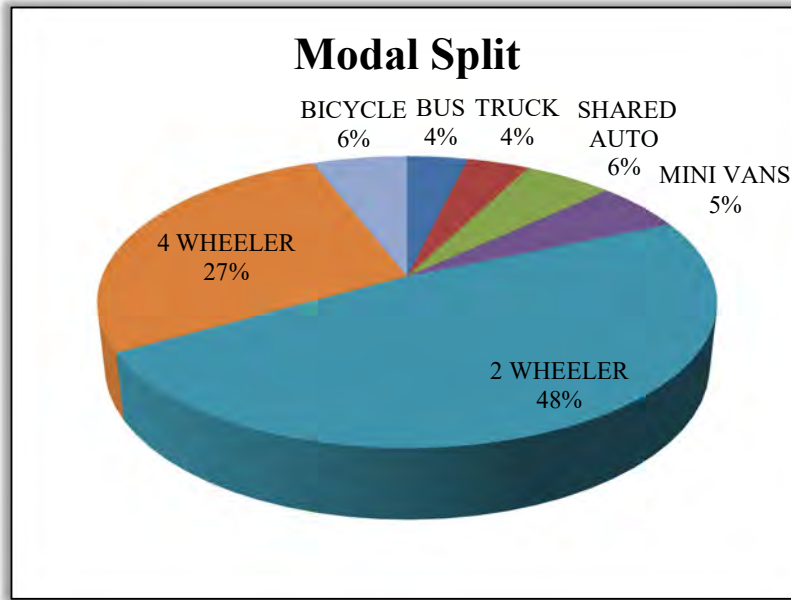


Fig. 6.28: Modal share in Neori Gram Panchayat area

Source: based on survey prepared by the BIT Mesra Team

A composition of traffic shows that major mode of transportation in this route is by 2 wheeler which forms the maximum proportion of traffic on almost all the locations. There are lot of shared autos which is used by the people to commute to the nearby workplace and is a major mode of connectivity to other villages and nearing cities. The percentage of 4-wheeler is also comparatively high up to 27%.

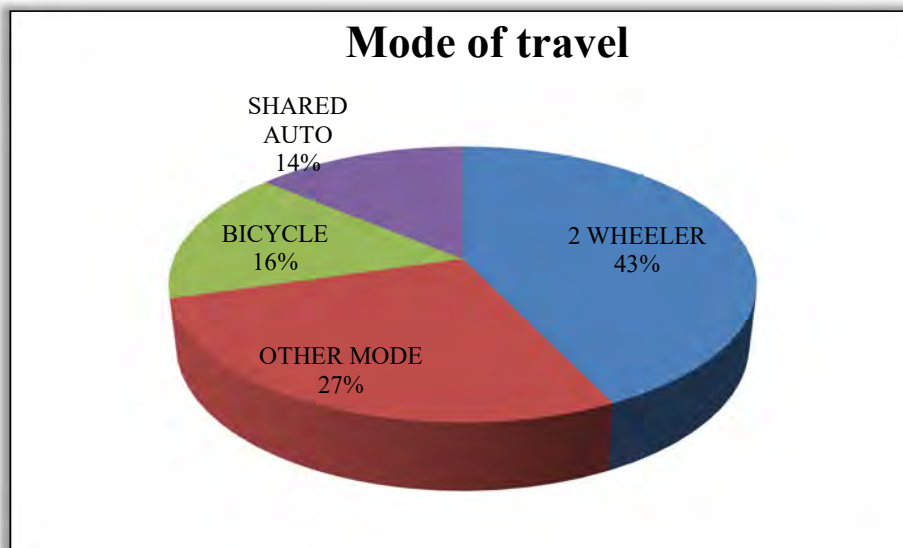


Fig. 6.29: Modal share for the Neori Gram Panchayat area

Source: based on survey prepared by the BIT Mesra Team

The chart above shows that the share of mode of transportation used by the people of Neori gram panchayat to commute to their work. So its observed that 2 wheeler is used maximum to commute to their work and bicycle and shared auto share the same percentage approximately. Therefore we see a need of sustainable approach to the network for public transportation for the Neori village. The bicycle being the cheapest mode of transportation is seen to be used by 16% of the population followed by shared auto being 14%.

6.5 PARKING SURVEY

Parking is an important component of transport system. Parking surveys were carried out as a part of comprehensive traffic study at both off-street and on-street locations to assess the parking characteristics viz., parking demand, usage pattern of dedicated parking facilities, parking accumulation on road stretches, parking duration, composition of parked vehicles etc. Uncontrolled roadside parking is an omnipresent problem in all the area where parking space is not allotted. Parking survey was conducted for a period of total 2hrs along the National highway's identified locations/stretchches.

Hourly Variation: The parking demand exists uniformly throughout the day along the NH 33 it is because of the major commercial area, banks, post office and market are. The demand for parking begins at around 9 am and lasted till 8 pm.



Fig. 6.30: Unorganized parking along NH-33



Fig.6.31: Unorganized parking done in front of the bank.



Fig. 6.32: vehicles parked along the street



Fig. 6.33: Vehicles parked along NH33

Source: Author

It is observed that the vehicles are parked along the National highway on the unpaved space beside the carriageway. These vehicles are parked mostly in front of the shops, banks and post office and as there is no designated space it is done in an unorganized manner along the NH 33. Below is the map showing the unorganized parking done at various areas of the Gram panchayat along the NH and on weekly market days it is observed on the road towards Chuttu chowk.

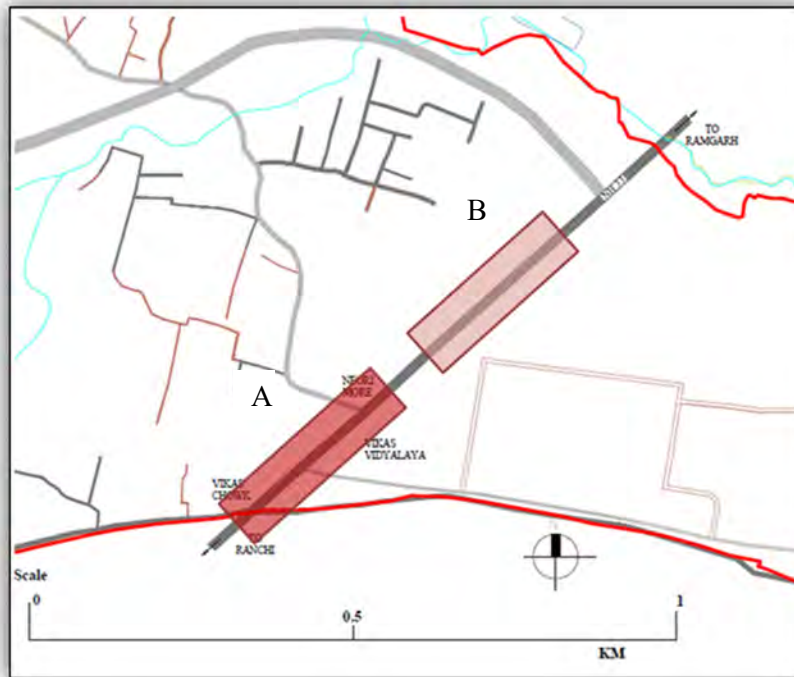


Fig. 6.34: On-street parking locations in Neori GP

Source: based on survey prepared by the BIT Mesra Team

It is observed that at zone A- Vikas Chowk to Neori Chowk a lot of on street parking is done which is due to the commercial activities and other offices. In this zone mostly the 2 wheeler and 4 wheeler vehicles are parked. At zone B which is along the boundary of Vikas Vidyalay till the Vikas Nursing home, there are heavy trucks parked along the road. The peak parking accumulation of 2-wheeler and 4-wheeler takes place during the morning/afternoon hours from 11AM to 2PM on regular days whereas on market days it observed from 12 PM to 5 PM. There is huge demand for truck parking along the National highway as trucks and other goods vehicles are parked in discriminately along the NH33 roads in the Neori Gram panchayat area.

6.6 PEDESTRIAN COUNTS SURVEY

The survey was conducted at three locations across the National Highway 33 for duration of 1 hour from 11 AM to 12 PM. The summary of pedestrian counts at all the locations is presented in the table given.

Table6.3 Number of pedestrians crossing at various points

Points	Location	Number of pedestrians crossing
A	VIKAS CHOWK	278
B	NEORI CHOWK	184
C	VIKAS NURSING HOME	140

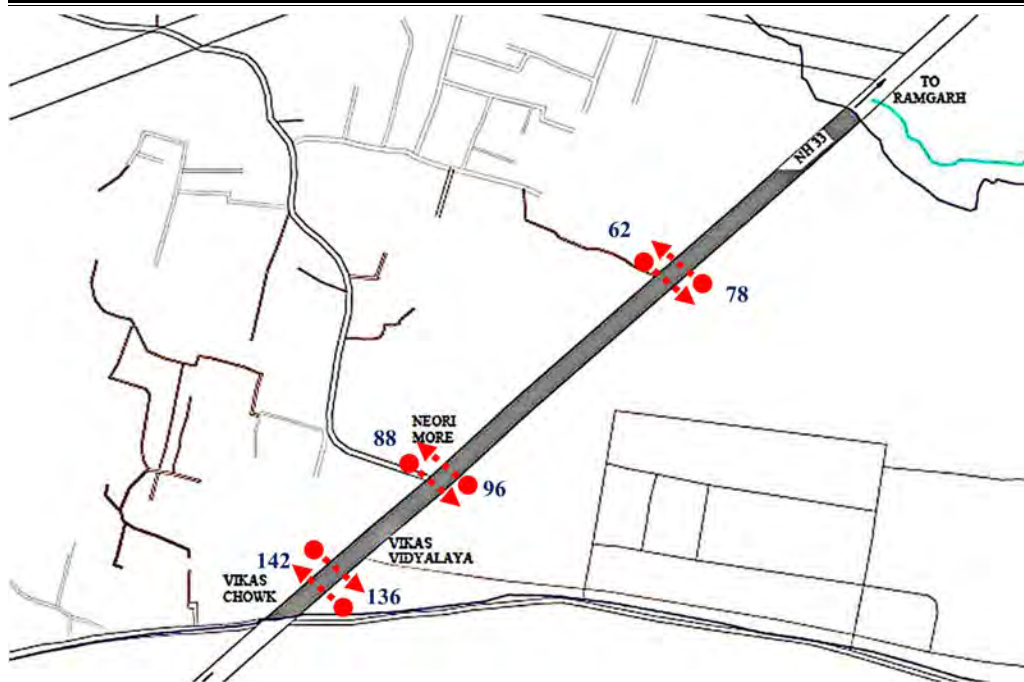


Fig. 6.35: Pedestrian movement per hour count

Source: based on survey prepared by the BIT Mesra Team

Heavy pedestrian crossings are observed at Vikas Chowk, especially on the market days. As there are banks and post office and other offices on the other side of the major settlement of Neori gram panchayat a lot of pedestrian crossing observed near Vikas Chowk and also Neori Chowk.

National Highway 33 has heavy traffic flow and has a total ROW of 25 meters whereas the width of the carriageway is 15m along the sides the drains are constructed of width 1 meter and rest of the space which is for the pedestrians is unpaved. The unpaved area being at the same level as carriageway and no barricading is seen in the area thus inviting on street parking along the road. There are no footpaths in any of the streets so the pedestrians are forced to walk on the carriageway which is not safe.

6.7 PUBLIC TRANSPORT SYSTEM

Public transportation system in Neori comprises of auto rickshaw which runs in regularly in the NH and it connects Ranchi to Ormanjhi. There are limited city services plying on this road. Cycle rickshaws are negligible in the village. However, there is a dependence on auto rickshaws and minidor carry a lot of passenger population. This is due to less

travel distances, easy availability of auto rickshaws and low fares. These vehicles only ply at the Nh-33 and the Ring road which connects the village to the Kanke chowk. Most of the auto rickshaw runs in the NH 33 carrying about 30% of the village population commuting to other areas. Though, other Intermediate Public Transport (IPT) modes (para transit) is known to be an important mode of transport for last point connectivity, it is absolutely absent in the internal roads of the village. There is a need of Intermediate Public Transport (IPT) system which will play a dominant role in meeting the need of public transport within the Gram panchayat.

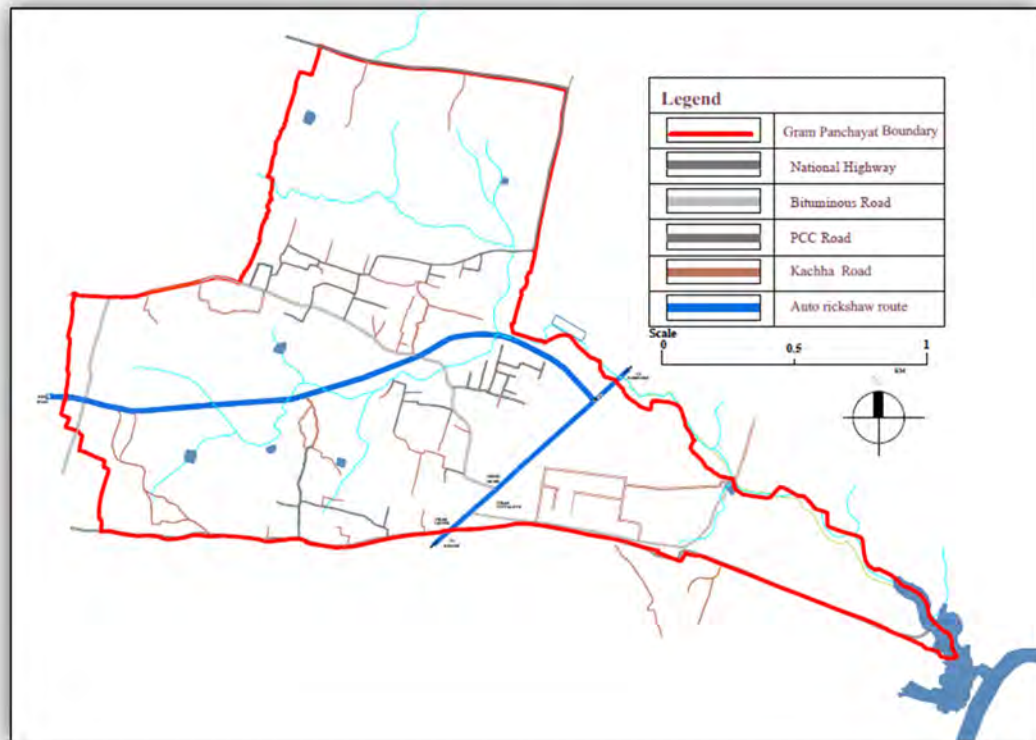


Fig. 6.36: Map showing auto route

Source: based on survey prepared by the BIT Mesra Team

6.8 PROPOSAL AND RECOMMENDATIONS

Rural roads play an important role in the overall development of rural areas as access to social and economic infrastructure and services are the sine qua non of rural development. In an indirect way, rural roads influence the process of growth through changes in socio-economic attitudes of people by facilitating the dissemination of knowledge and reduction of inequalities leading to better quality of life. The proposals given below focus on:

- a) Prioritise mobility for all socio economic groups and genders.
- b) Give adequate attention to sustainable modes of transport (i.e., public transport, pedestrians and non-motorised).
- c) Provide a recognised and effective platform for integrating land use and transport planning.
- e) Focus on the safety.

6.8.1 COMPLETE STREET DESIGN

It is observed that National Highway 33 is a busy road and the right of way is not the same varying from 22 m to 25 m so it needs to have a uniform width and the street needs to design which would cater to all the requirements. The road must have :

- Fast moving vehicles
- Non-motorized vehicles
- Bicycles
- Pedestrians
- Parking space
- Safe crossings
- Median/ separator
- Street Furniture

Hence a uniform width with complete street design can be the best solution for consistent and safe movement.

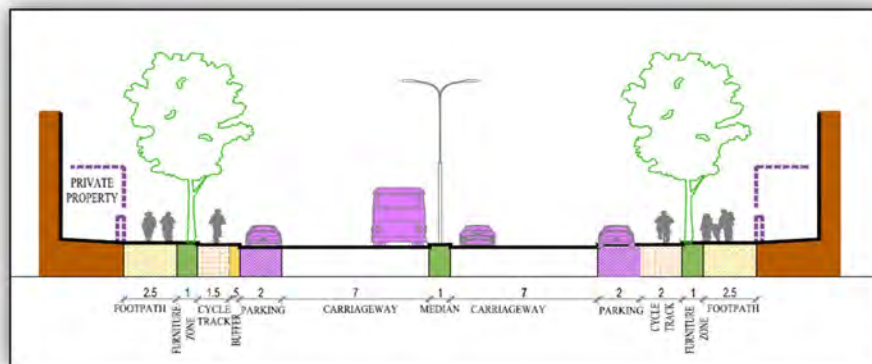


Fig. 6.37: Street design proposal for 30 m wide road with footpath, cycle track, parking space and traffic carriageway

Source – prepared by author

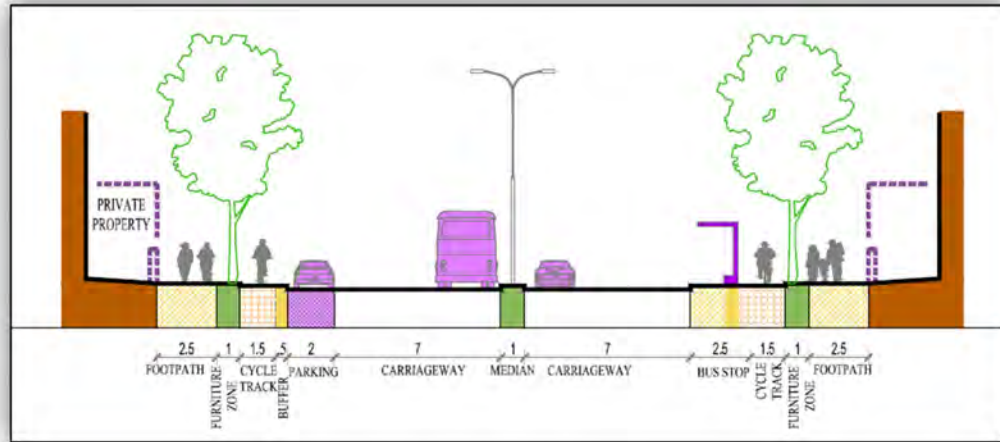


Fig. 6.38: Street design proposal for 30 m wide road with footpath, cycle track, parking, bus stop and traffic carriageway

Source – prepared by author

All the streets must follow the IRC: Standard measurements and dimension for a rural road in India which is as follows: IRC 073: 2002

A major part of the roads are unpaved which reach to various houses so those paths need to be paved or a concrete road must be constructed as per the power of the government the land can be acquired and roads can be proposed. For the first phase: the bituminous roads need to be maintained and PCC roads should also be improved with proper drainage along the streets which would make the streets comfortable to walk.

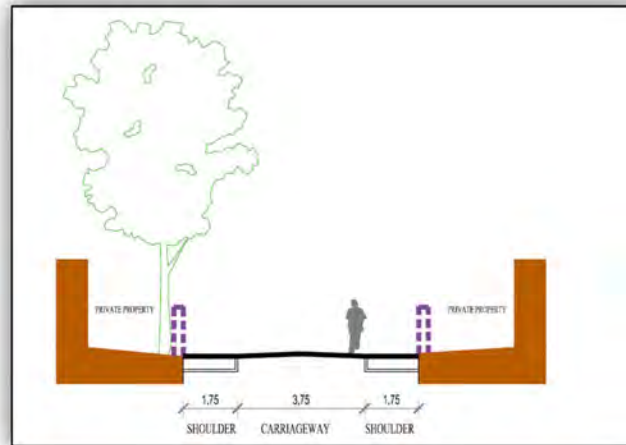


Fig. 6.39: Road geometry as proposed by IRC

Source – prepared by author

6.8.2 DEVELOPMENT AND MAINTENANCE OF THE NATIONAL HIGHWAY

The development and maintenance of the National Highway is an important part for this Gram Panchayat. Ministry of Road Transport & Highways, Government of India, is responsible for the development and maintenance of NHs in India. For the development of NHs in the country, the National Highways Development Project (NHDP), the largest highways project ever undertaken in the country, was implemented by the National Highways Authority of India (NHAI) of the Ministry of Road Transport & Highways (Box).

6.8.3 ROAD HIERARCHY

Road hierarchy in any regions guides the people to a settlement area. A well defined hierarchy should be followed for the development and maintenance of the internal roads in the village. Hierarchy can be defined on the basic purposes as follow:-

Roads to carry through traffic, serving a longer distance purpose;

Streets to provide access to properties and local area. (Eppell Olsen & Partners,2001)

Table 6.4: Proposed hierarchy of roads

Classification	Cover/top surface	Traffic volume (in vehicles per day)	Carriageway (in meters)
Collector Road	Bituminous	150	8-10
Commercial / Heavy Residential Road	Bituminous	75	5-7
Seasonal Roads	PCC	25	5-6
Local Road	PCC	25	3.5-5
Low Volume Farm Access	PCC	10	2.5-5

Source: Rural road classification definition, P D

6.8.4 MEDIAN / SEPARATOR

The median divides the traffic moving in separate directions in a street. It is a physical barrier which stops the vehicles to travelling into opposite traffic lane and it is an essential component of safe streets. Median also acts as refuge for the pedestrians to

cross the road. In the entire stretch of National Highway going through the Neori village the median is required for separation of the traffic.



Fig. 6.40: Median divides the traffic moving in different direction

Source:

<http://toolkit.irap.org/default.asp?page=treatment&id=13>



Fig. 6.41: Median also acts a refuge for the pedestrians

Source:

<http://urbanmobilityindia.in/Upload/Conference/684f851a-00c6-48e4-a2e3-a6ade1930456.pdf>

6.8.5 PEDESTRIAN PATH

While user awareness is an essential element of a holistic approach to road safety, it is only one component of an effective strategy to address road safety. There is a lack of dedicated footpath which enforces the pedestrians to walk on the carriageway. Especially along the NH 33 there is need of dedicated footpaths along with cycle tracks which will improve the safety of NMT users. In Neori village walking is the most fundamental mode of mobility. A good walking environment is not only the need of the urban setting but is essential for every settlement; all of the streets need dedicated footpaths. Footpaths need to be unobstructed, continuous, shaded, and well lit. New Indian Roads Congress guidelines (IRC 103 2012) clarify that all footpaths should have three main zones:

1. Frontage zone,
2. Pedestrian zone, and
3. Furniture zone.

Per IRC guidelines, the pedestrian zone must provide a continuous clear space for walking with a minimum width of 2 m. The pedestrian zone must be free of any obstruction. This width may vary as per the adjacent land use and can be as wide as 4.5 m in market areas. Street utilities such as manholes, trees, benches and other

potential obstructions should be placed outside the path of travel and in the furniture zone, which should be at least 1 m wide. The frontage zone can vary between from 0.5 to 1 m.

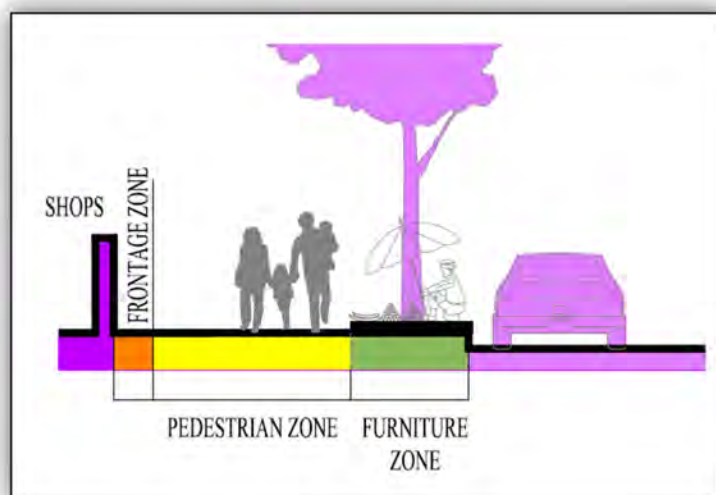


Fig. 6.42: Proposed 3 Zones of footpath

Source – prepared by author

6.8.6 PEDESTRIAN CROSSING

Good pedestrian crossing measures should be undertaken to allow pedestrians to cross busy streets safely and conveniently.

Proposals for Pedestrian safety:

1. Raised Zebra Crossing/ Table Top

Formal raised pedestrian crossing, where pedestrians remain at the same level as the footpath and vehicles pass over ramps will enable safe crossing for pedestrians. Raised crosswalks should be located at all intersections and at major activity area. As along the NH there is the weekly market space i.e. at Vikas Chowk and Neori more which connects the two sides of the village, therefore it requires pedestrian crossing.



Fig 6.43: signage for zebra crossing

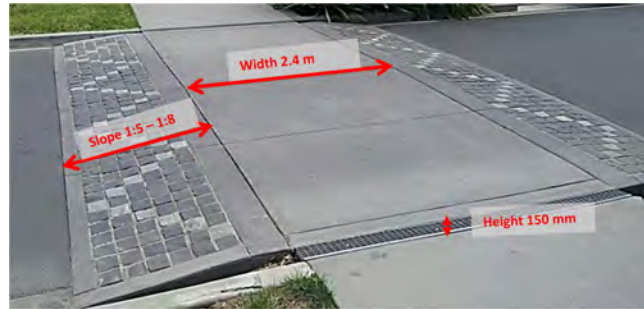


Fig 6.44: Raised / Table top Zebra crossing

Source: <https://commons.wikimedia.org/wiki>

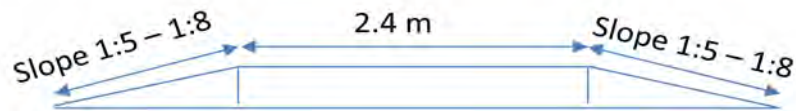


Fig.6.45: Geometry of Table top crossing

Source – prepared by author

2. Normal Zebra Crossing

The normal zebra crossing should be made near the Vikas Nursing Home, which sees a good amount of pedestrian crossing.



Fig. 6.46: Zebra crossing marking



Fig. 6.47: Zebra crossing at NH

Source:

[https://commons.wikimedia.org/wiki/File:3810Pila National Highway 62.jpg](https://commons.wikimedia.org/wiki/File:3810Pila_National_Highway_62.jpg)

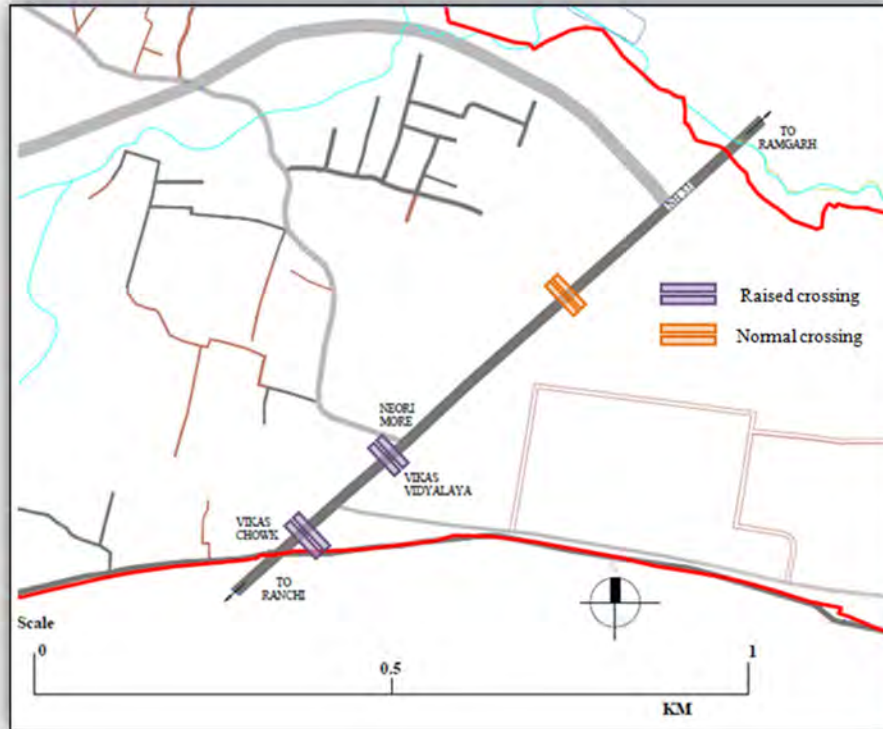


Fig. 6.48: Proposed location for pedestrian crossings

Source: based on survey prepared by the BIT Mesra Team

3. Signalised pedestrian crossing

Pedestrian crossing signals are often used at intersections and are also used at points of busy roads for the safe crossing of the pedestrians. Signalized pedestrian crossing gives priority to vehicles and pedestrians are allowed to cross when at signals halt vehicle traffic on the through road. Signals must be timed to give pedestrians long enough to complete their crossing before the signals change to allow vehicle traffic to start passing through the crossing again.



Fig 6.49: Pedestrian crossing signal

Source: <https://zebrafishimages.blogspot.com/2011/01/zebra-crossing-traffic-signal.html>

6.8.7 COMFORT AND SAFETY

Streets should serve as safe, shaded public open space corridors with the existing landscape, lighting, and greenery. Whereas the footpaths should serve as spaces for social and economic activity must not be ignored. Thus they must be designed with dedicated space for seating and regulated street vending besides simply walking. Tree shade makes walking comfortable and pleasing. Sufficient space should be allocated for tree pits next to the footpath.

6.8.8 STREET VENDORS

Street vending: Street vending plays a crucial role in the economy of Ranchi. Therefore, it is important to provide dedicated vending zones, particularly in areas close to the transit stations. As in Neori village the street vendors are seen along the NH 33, they must be incorporated in the street design. A space must be allotted to them which will not hamper the movement of the vehicles and pedestrians thus utilizing the entire right of way evenly. The street vendors are proposed to be relocated to the Vikash Chowk Chuttu road by removing the dilapidated structures along the road.



Fig. 6.50: Street vendors along the National Highway 33

Source: Author

6.8.9 STREET FURNITURE

Concept of street furniture, its application goes a long way in shaping the urban environment particularly with regards to planning and architecture in providing the

needed safety, security and beauty .Also the proper planning, design and management of street and landscape furniture enhances the functionality, aesthetics and add value to the built environment. Therefore proper traffic lights and signage along with other street elements are to be implemented in the plan.



Fig. 6.51:Traffic and street signs proposed

Source: <https://mgglobalads.com/traffic-signs-street-signs-philippines/>

The street signs provide advanced information regarding the direction, give warnings, orders or guidance to the riders. Here there is need for the traffic sign for pedestrian crossing at required intervals. The sign for school and other important spaces along the highway are proposed.

A defined and detailed design guidelines for various street elements, including footpaths, cycle tracks, pedestrian crossings, bus stops, medians, refuge islands, vending, on-street parking, and underground utilities is a major requirement.

6.8.10 PARA TRANSIT

As a large percentage of the population commutes to nearby places for work and education and they use the public vehicles it is necessary to provide a Para transit mode for last point connectivity within the village. The existing para transit in the village is available only on one street which starts from the Vikas chowk connecting the ring road. The most feasible mode can be proposed as auto- rickshaw and cycle sharing. Hence we see that when 30% of the village population travels to work by

various modes which run in the NH 33 and Ring road there is absence of last point connectivity. Though, other Intermediate Public Transport (IPT) modes (para transit) is known to be an important mode of transport for last point connectivity, it is absolutely absent in the internal roads of the village. There is a need of Intermediate Public Transport (IPT) system which will play a dominant role in meeting the need of public transport within the Gram panchayat. The proposal map shows the routes identified for the Intermediate Public Transport (IPT)

6.8.11 BUS TERMINUS

With reference to the Ranchi Master Plan 2037 there are 4 buses terminus proposed at various locations and one among them has been marked partially at Neori and Oyana. These provide services to businesses (and households) within that village also helps to move goods and people between two points. As this bus terminus can serve by inter-urban transport services, allowing connections to larger towns and other destinations for those who need to travel further. The land that is adjacent or serviced by good transport services generally has greater value due to the utility it offers. Consumers can have access to a wider range of services. On the other side the residents can have better accessibility to employment, services, and social networks, all of which transcribes in higher land value. An efficient transport system with modern infrastructures favors many economic changes, most of them positive. Transport also contributes to economic development through job creation and its derived economic activities.

6.8.12 LAND USE TRANSPORTATION INTEGRATION DEVELOPMENT

The land use transportation integration development is required for the area along the national highway as it will be based on the nature of interaction between spatial and transport development. The allocation of land uses impact demand for travel as people need to access different activities; transport infrastructure adds to the attractiveness of a location by improving accessibility and leads to change in land values. With improved accessibility, the locations become attractive for investments and it results in further development of these locations. There should be high density development

around the transit station and the mixed land should be encouraged on the transit corridor for which the land should be identified by the government.

The road network will focus around transit nodes and easy accessibility to all the adjacent places. A safe and competent transit network will lead to the safety and strategic development of the gram panchayat.

With reference to the strategic goals for the Neori Gram panchayat, the focus is to improve local economic development through various sectors. For any part of the gram panchayat to be growing it is the most important need to be connected to the main streets through road network. Considering each part of the development aspect the transportation network has to be strengthened.

Industries and transportation:

The proposal of the small industrial area as innovation and training center are proposed which should be directly linked with the National highway 33 or the ring road. This will generate employment to the people of Neori as well as people from the nearby villages. these industries need to be adjacent to the main road for easy access of the raw materials and to dispatch the finished goods to nearby market.

Since there is a proposal for the multi commodity cold storage and also for fruits and vegetables in the Neori Gram Panchayat, it should be located such that it is easily accessible and close to market hubs and/or produce collection point.

Because of its intensive use of infrastructures, the transport sector is an important component of the economy and a common tool used for development. The building construction has always been a growing industry in developing areas and with the proposal of various residential, commercial and industrial areas as per the Ranchi Mater plan 2037 there will be several built structures in the city. Promoting and allotting the space for the various sectors elated to building construction like welding services, carpentry, plumbing, electrical fixtures etc along the main roads would connect the potential customers to the suppliers. This would enable the people of Neori to supply to

the market near and further afield. This would open a wider area of employment in the labour market.

Agriculture and transportation:

The agricultural commodities go through several operations before they reach the market, transportation being one of them. It is identified that transport costs have a critical role in recognizing the link between accessibility and agricultural development hence a proper transport system is important to competent agricultural marketing as it would lead to distribution of agriculture produce from the farms to the market and also to various urban communities.

Thus Transport creates market for agricultural produce, improves interaction among geographical and economic regions and opens up new areas to economic focus.

Neori gram panchayat being the agriculture based village and National Highway 33 as well as the ring road crossing through the gram panchayat will play a crucial role in the connectivity of the agricultural produce to the market and a strategic location of the storage, processing plant and its connectivity to the market has to be along these two major roads and various facilities in it.

There are two aspects of transport facility, first being the link between farms and market second transport equipment carry agriculture produce. So the internal roads in the gram panchayat which connect to the farms have to be constructed as mentioned in IRC: Standard measurements and dimension for a rural road in India which is as follows: IRC 073: 2002 so the heavy equipment required for agricultural activities could be carried out.

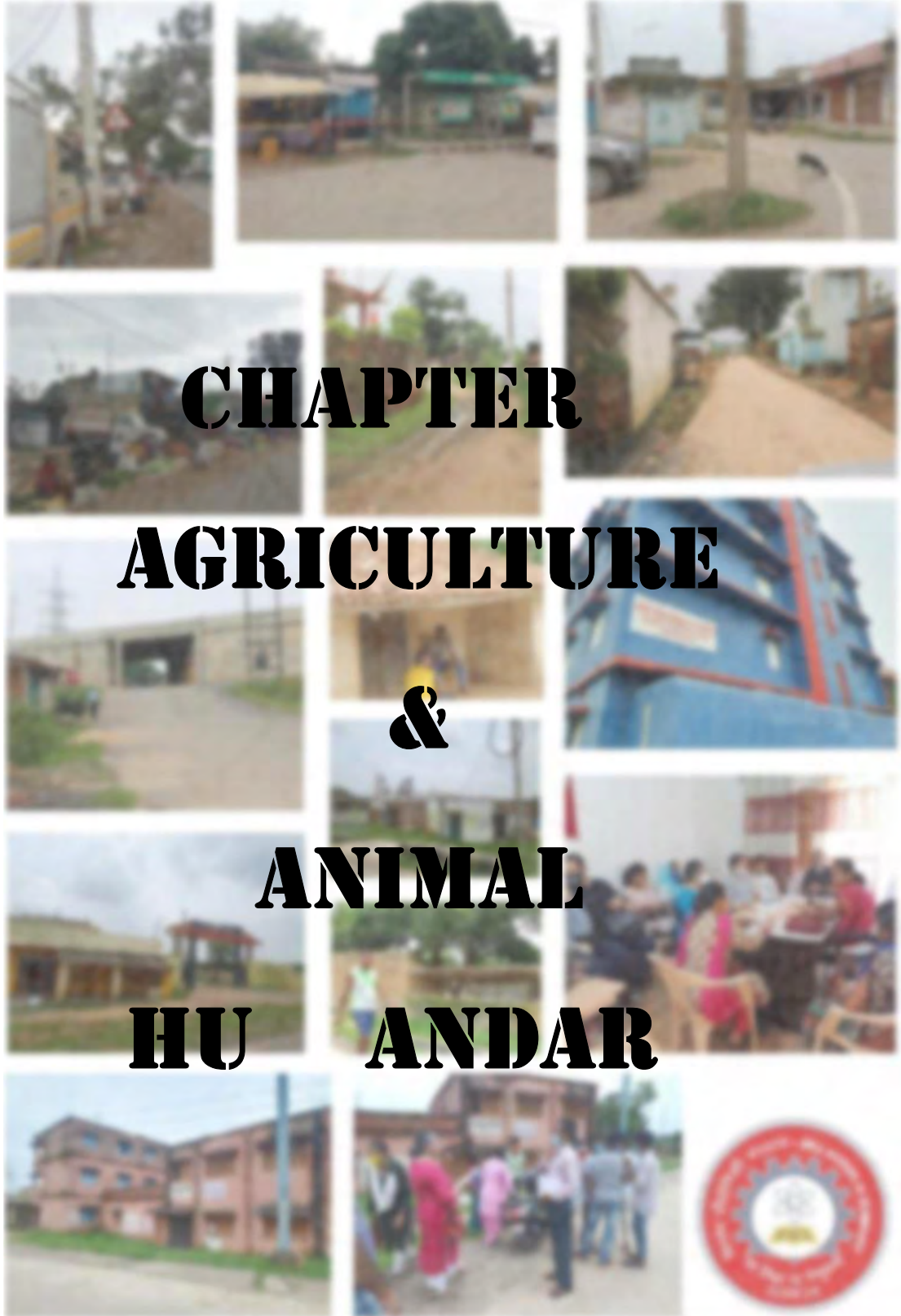
6.8.13 TRANSIT ORIENTED DEVELOPMENT (TOD)

With reference to the Ranchi Master Plan 2037 the Government of Jharkhand TOD 2016-2026 Policy, the Government of Jharkhand aims to, sustainably, guide urban development in the State over the coming years and provide a clear framework for its cities to better manage their existing urban areas as well as guide future transportation and land use investments.



Fig. 6.52: Proposed Road Network map of Neori GP

Source: based on survey prepared by the BIT Mesra Team



CHAPTER 7: AGRICULTURE & ANIMAL HUSBANDRY

7.1 AGRICULTURE AND ANIMAL HUSBANDRY

Neori GP is bifurcated latitudinally by Ring Road and longitudinally by NH33. In the Far East, it extends till Getalsud dam. Numerous commercial and institutional developments have taken place along the NH33. A similar growth pattern can be seen along the ring road as well. About one-third of the GP comes under VikasVidyalaya School. The presence of National Highway and ring road has tremendously affected the land value in the GP.

7.2 LAND

7.2.1 LAND CLASSIFICATION

Land is the basis for agriculture and other rural land uses, encompassing soils, climate, vegetation, topography and other natural resources. Land in Jharkhand has been classified as per the usage in the agricultural sector as - Forest Area, Area under Non-Agricultural Uses, Barren & Uncultivable Land Area, Permanent Pastures and Other Grazing Land Area, Land under Miscellaneous Tree Crops etc. Area, Culturable Waste Land Area, Fallows Land other than Current Fallows Area, and Fallows Area. In Neori Panchayat, of the total area of 388.98 hectares, the net sown area is 97.98 hectares. The total un-irrigated land is 194 hectares against the total irrigated area of 97 hectares (*Source: Mission Antyodaya Baseline Survey, 201*).

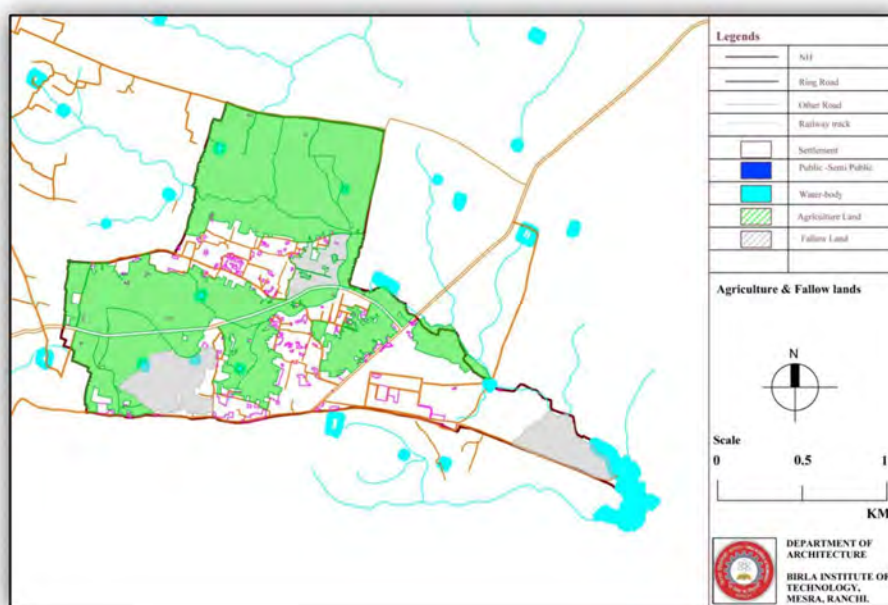


Fig. 7.1: Agriculture and Fallow Lands.

Source: based on household survey prepared by the BIT Mesra Team

7.2.2 LAND VALUE

The existence of NH 33 and the construction of the Ring Road has caused a tremendous increase in the land value of the GP. The Table 7.1 clearly depicts the difference in the circle rates and market rates.

Table 7.1: Land Value

S. No.	Land Value	Rate in Rupees (Lakhs/Decimal)	
		1	Circle Rates
		Residential	1.13
		Commercial	2.245
2	Market Rates (Near NH 33)	4.5	
3	Market Rates (Near Ring Road)	4.5 5.0	
4	Market Rates (Away from Road)	2.0-3.0	

Source: Circle rate from the Circle Office, Ranchi, and the current market rates from interview

7.2.3 LAND HOLDING SIZE AND PATTERN

Land holding size varies between 0.2 acre and 10 acre. More than 50% households have land less than 1.2 acres, increasing the agricultural production cost and underlining the need for enhancing the potential for rural non-farm employment. As per SECC data, in the context of land owned the total unirrigated land in the GP is 65.50 hectares, whereas total irrigated land is 184.84 hectares and other irrigated land is 1.00 hectare.

7.3 AGRICULTURE

Jharkhand, the 28th State of the Indian Union is best known for its rich mineral resources. However, 78% of the total population of 2.69 crore live in rural areas, largely dependent only on agriculture and allied activities. The total cultivable land in the State compares well at 52% of the total geographical area with 55% in the country. But, unfortunately while 76% of the total cultivable area is under net sown area in the country, only 43% is cultivated in Jharkhand. The state suffers from several critical gaps in the agricultural and allied sectors.

7.3.1 AGRO-CLIMATIC SUBZONES

Jharkhand forms a part of agro-climatic Zone VII of the country known as Eastern Plateau and Hill Region. The state has been further divided into three agro-climatic regions i.e. Central and North-eastern Plateau (Region-I), Western Plateau (Region-II) and South-eastern Plateau (Region-III) as shown in the Table 7.2 and Fig 7.2.

Table 7.2: Agro-climatic Regions of Jharkhand

Region No.	Agro-climatic Region	District	Cropped area (00 ha)	Percent irrigated area	Characteristic features
Region-I	Central North-eastern Plateau	Chatra, Koderma, Hazaribag, Ramgarh , Bokaro, Dhanbad, Dumka, Pakur, Godda, Jamtara, Sahebganj and Ranchi	851.05	11.40	Erratic and uneven distribution of rainfall, Coarse textured soils, Crust formation on the soil surface. Low water retention capacity of the soils. Lack of safe runoff disposal and drying of the tanks.
Region-II	Western Plateau	Garhwa, Palamau, Latehar, Lohardaga, Simdega, Gumla and Khunti	670.03	12.60	Erratic and uneven distribution of rainfall, Low water retention capacity of the soils. Lack of safe runoff disposal and drying of the tanks.
Region--III	South-eastern Plateau	East Singhbhum, West Singhbhum, Sarikela-Kharsawan	289.05	7.80	Uneven distribution of rainfall. Low water holding capacity, eroded soils. Shallow soil depth. Poor soil fertility.

Source: Economic Survey, 2007-08, Government of Jharkhand Newly created districts



Fig. 7.2: Agro-climatic region-wise districts of Jharkhand

Source: Environmental Assessment and Environmental Management Framework for Jharkhand Opportunities for Assessing Rural Growth (JO AR)

Table 7.3: Rainfall pattern in Ranchi District

Rainfall	Normal RF (mm)	Normal Onset (specify week and month)	Normal Cessation(specify week and month)
SW monsoon (June-Sep)	1090	2 nd week of June	1 st week of October
NE monsoon (Oct-Dec)	103	2 nd week of October	3 rd week of December
Winter (Jan-Feb)	38	-	-
Summer (Mart-May)	99	-	-
Annual	1323	-	-

Source: Agriculture Contingency Plan for District: Ranchi

Neori GP falls under agro-climatic Zone VII (Eastern Plateau and hill region) and subzone Region-I (Central North eastern Plateau) as depicted in Table 7.3. The average annual rainfall received is 1323 mm.

Ranchi consists of tabular landmass. The entire area is full of tanrs and Dons on account of rolling topography. Tanrs are the comparatively highlands and Dons are lower lands.

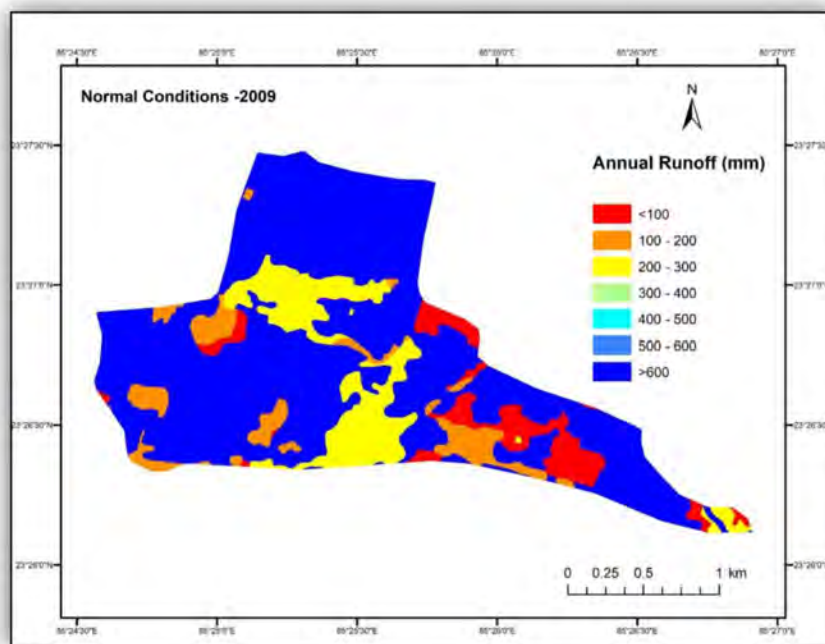


Fig 7.3: Annual runoff for Neori GP
Source: NRSC

7.3.2 LAND USE AND CROPPED AREA

The distribution of land under different uses is as listed in Table 7.4 below. Almost 49.2% of the total area comes under fallow land and another 11% is barren and uncultivable land.

Table 7.4: Land Use distribution

Land Use	Area (Ha)
Non Agriculture Use	52.5
Barren and Uncultivable land	44.8
Permanent Pastures and Grazing Fields	0
Land Under miscellaneous trees and crops	28.6
Culturable waste land	18.5

Current Fallows	25.92
Fallow Land and Other Fallows	120.6
Net Sown Area	97.98
Total Land	388.98

Source: Department of Agriculture, Government of Jharkhand,

7.3.3 CROPPING INTENSITY

Cropping intensity is expressed as the ratio of gross cropped area to Net cropped area .The cropping intensity across the Gram Panchayat is shown in Figure 7.3, and Table 7.5 lists the percentage distribution of single crop, double crop and multiple crop. Most of the land is Mixed cropped.

Table: 7.5: Cropping intensity

Cropping pattern	Percentage of Agricultural land
Single crop	9
Double crops	42
Multiple crops	49

Source: Department of Agriculture, Government of Jharkhand,

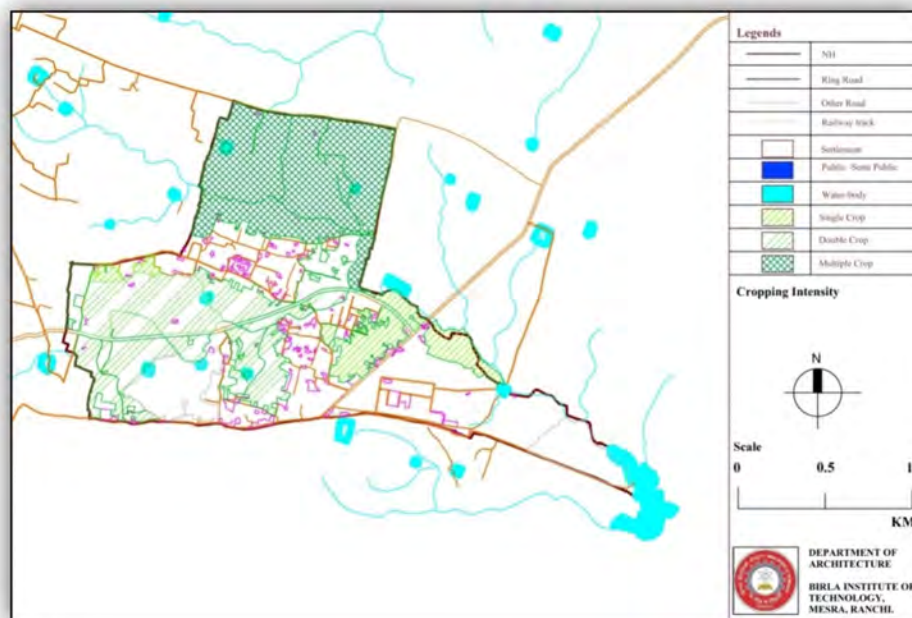


Fig. 7.4: Cropping Intensity

Source: Department of Agriculture, Government of Jharkhand and based on survey prepared by the BIT Mesra Team

7.3.4 CROPPING PATTERN

The lower lying area provides suitable condition for paddy cultivation. The higher elevations provide condition for orchards and cultivation of pulse and vegetables. During the monsoon season paddy is cultivated and during rabi season wheat is cultivated in the same fields. Most of the time mixed cropping is practiced, where pulses, mustard or groundnut are cultivated along with paddy and wheat.

Based on primary survey, the proportion of land under cultivation of different crops in different seasons is shown in Table 7.6. It can be seen that wheat in Rabi season, while Rice and Maize in Kharif season dominates agricultural produce. Most of the Maize is produced in the backyard farms of farmers. Fig 7.4 shows agriculture lands used for paddy cultivation, while Fig 7.5 depicts agricultural lands used for gram and groundnut cultivation and Fig 7.6 displays agricultural lands used for wheat and mustard cultivation.

Table 7.6: Cropping Pattern

Crop	Area	
	Area cultivated in Kharif Season (Ha)	Area cultivated in Rabi Season (Ha)
Paddy	132	
Maize		
Gram	2.6	
Groundnut	132	
Wheat		18
Mustard		37

Source: Department of Agriculture, Government of Jharkhand,

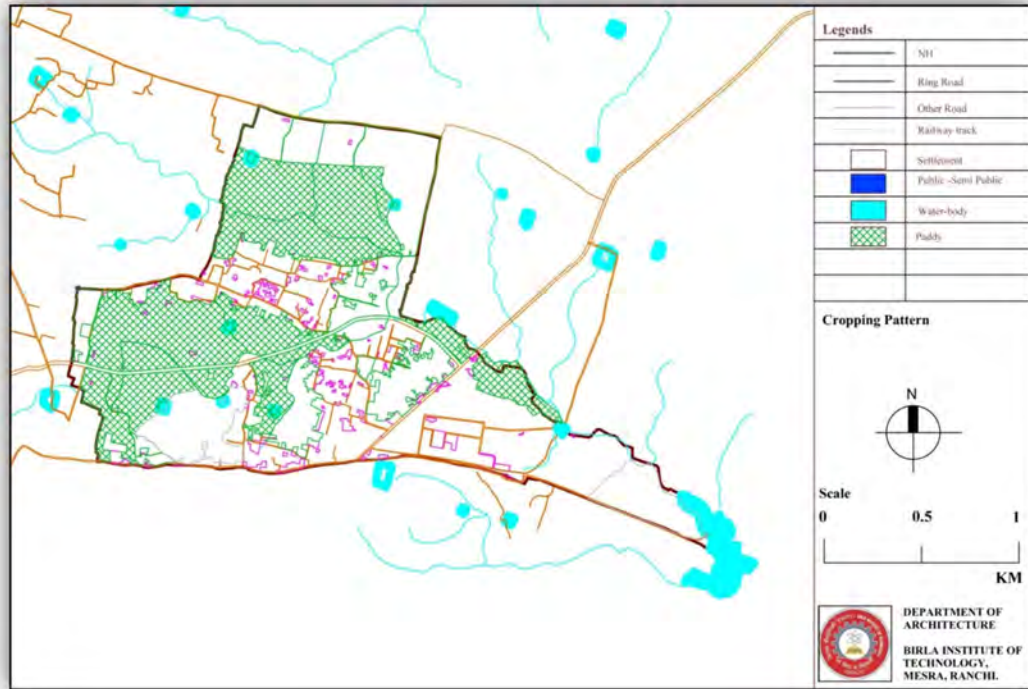


Fig. 7.5: Agriculture lands used for Paddy Cultivation

Source: based on survey prepared by the BIT Mesra Team

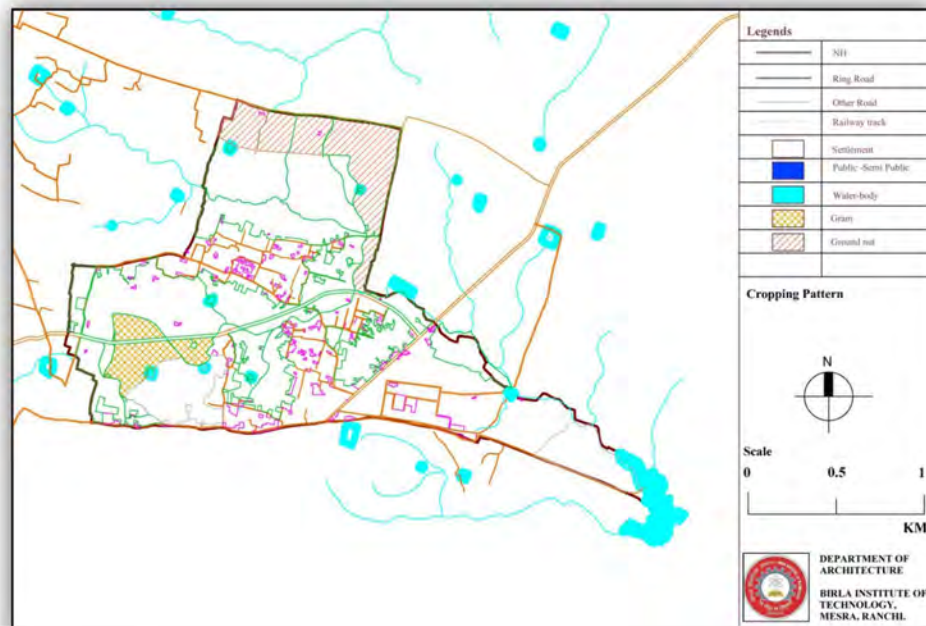


Fig.7.6: Agriculture lands used for Gram and Groundnut Cultivation

Source: based on survey prepared by the BIT Mesra Team

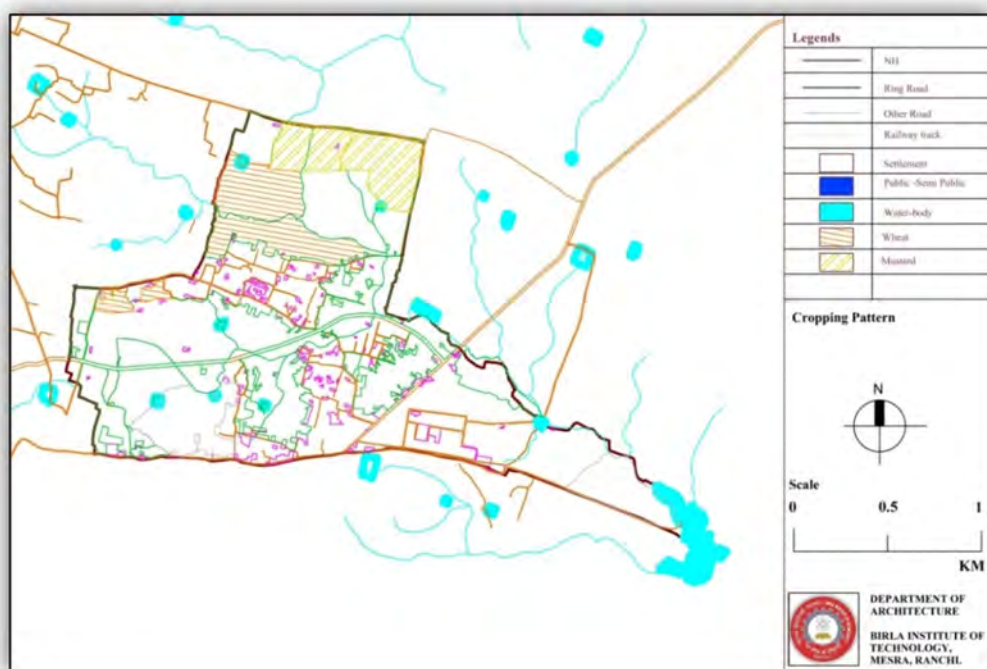


Fig. 7.7: Agriculture lands used for Wheat and Mustard cultivation

Source: based on survey prepared by the BIT Mesra Team

7.3.5 YIELD RATE OF PRINCIPAL CROPS

In Neori Gram Panchayat, Paddy /Rice has the maximum crop yield of 2400 Kg/Ha followed by Maize and Wheat with crop yield of 2300 and 2000 Kg/Ha respectively. The major crops produced and its yield rates are listed in the Table 7.7 below.

Table 7.7: Yield Rate of Principal Crops

Crop	Yield Rate(Kg/Ha)
Paddy	2400
Maize	2300
Wheat	2000
Ground Nut	830
Gram	1000
Mustard	950

Source: Agriculture Department, Ranchi

7.3.6 PRODUCTION OF FRUITS, VEGETABLES AND FLOWERS

The major fruits, vegetables and flowers produced in the GP are listed below in Table 7.8. Watermelon is cultivated in 6-8 Ha. Most of the vegetables are produced in backyard farms (locally known as *Baadi*). Other vegetables cultivated in the GP are Tomato, Ginger, Garlic, Chilli, Brinjal, Cabbage and Cauliflower.

Table 7.8: Land under Vegetable and Fruit Cultivation

Fruit	Area
Watermelon	8 Ha
Vegetable	Area
Potato	8 Ha
Onion	20 acres

Source: Neori GP records

Most of the vegetables produced are sold in the weekly market in Vikas. There is lack of cold storage space in the GP or nearby, resulting in rotting of vegetables which are not sold in the weekly Market.

7.4 IRRIGATION

7.4.1 PERCENTAGE OF IRRIGATED AND UN-IRRIGATED LAND

As per the data collected by primary and secondary sources (Mission Antodaya Survey), 25 % of the total land in Neori Gram Panchayat is irrigated. The total cultivated land area is 97 hectares, as shown in the Table 7.9.

Table 7.9: Land under Irrigation

Irrigated Land/ Un-irrigated land	Area (Ha)
Total Irrigated Land	97
Total Un-irrigated land	194
Total Cultivated land	97.98
Total area	388.98

Source: Neori GP records

The percentage of Irrigated to Cultivated Land is 99%. The crops in rabi season are completely dependent on monsoon rains, whereas during Kharif seasons agricultural fields are irrigated using ground water, majorly from wells and occasionally by tube wells (in the farms using drip irrigation system).

7.4.2 SOURCE OF IRRIGATION

Groundwater extracted from open wells and hand pumps are the major source of irrigation. The numbers and land dependency percentage are as shown in Table 7.10.

Table 7.10: Irrigation Sources

Source of Irrigation	Numbers	Dependency of agricultural land in percentage
Well	86	99%
Ponds	7	Nil
Hand Pump	31	Nil
Tube well	15	6-8 Ha (where drip irrigation system is used)

Source: Neori GP records

7.4.3 MINOR IRRIGATION SCHEME AND IRRIGATION

Potential Created & Potential Utilized in GP

The government schemes on irrigation, benefitting the farmers in GP are listed below

50 percent subsidy on irrigation equipment's is being availed by many farmers.

90 percent subsidy for drip irrigation system has been availed by 15 farmers.

90 percent subsidy for deep boring for land parcels of 5 acre or more has been availed by few farmers.

7.4.4 LOCATION OF PONDS

There are 7 ponds in the GP of which 2 ponds are public ponds as shown in Fig 7.7. All the cultural and social activities are held in these 2 ponds. There are no bunds or steps in these 2 ponds resulting in occasional mishaps. These public ponds hold religious and cultural importance for the residents. There is a need to improve the precincts of these ponds and construct earth bunds and steps around.

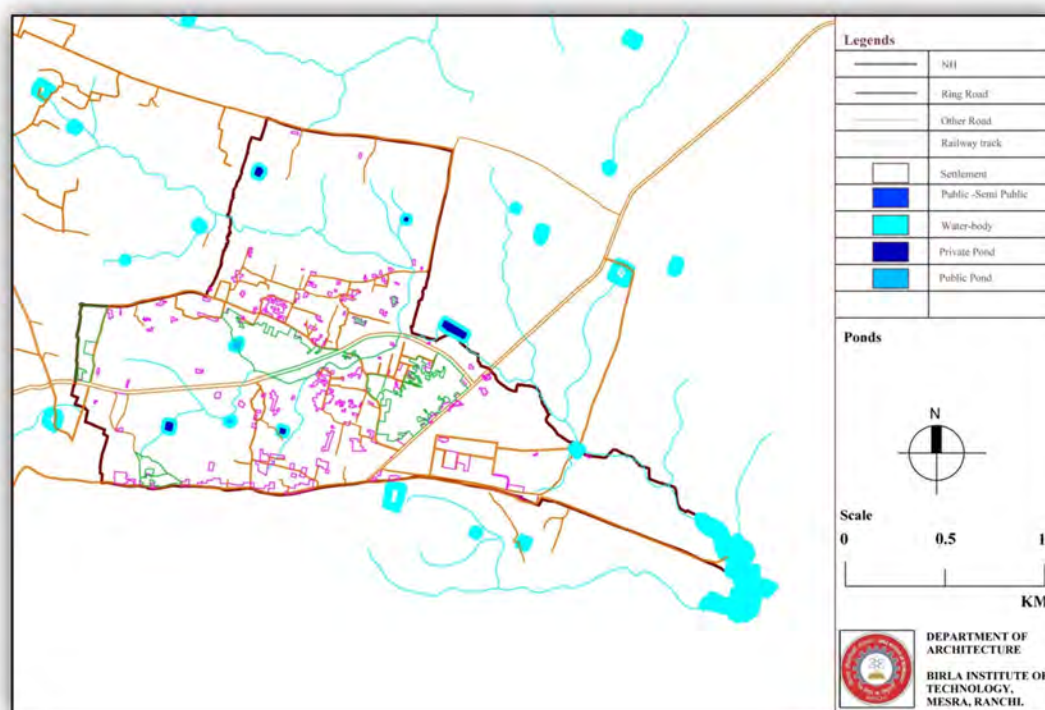


Fig. 7.8: Location of Ponds

Source: based on survey prepared by the BIT Mesra Team

7.5 LIVESTOCK

As per the primary survey, 58% households have at least one kind of livestock and only 3.0% people use their livestock chicken and goat only, for commercial purpose. The primary study also indicates that other animals owned by the families in the GP are dog, duck. None of the household owns horse and donkey. The type of livestock available is shown in Table 7.11.

Table 7.11: Number of Livestock

Livestock	Number
Cow/ Buffalo	112
Chicken	274
Goat	177
Ox	15
Other animals	02
Total	580

Source: Primary survey

In the context of commercial use of livestock, 268 households have chicken, while only 12 families use goats for business. A total of 13 families use cow milk for selling. Most of the milk produced is sold in the village itself, only little amount of 80-90 liters extra produce is sold in the milk collection centres.

The Table 7.12 elaborates the number of HHs using livestock for commercial purposes. Merely 13 HHs sell cow milk, and It is observed that maximum number of 268 HHs keep chicken for mercenary usage. The Table 7.13 details the number of chicken livestock used for commercial purpose against the number of households. Around 240 households keep chicken in single digit numbers. There are 5 families who own 10 chicken, while 2 households keeping more than 50 chicken.

Table 7.12: Number of Livestock for Commercial Purposes

Livestock	Number of Households
Cow milk used for selling	13
Chicken	268
Goat	12

Source: Primary survey

Table 7.13: Number of Chicken Livestock for Commercial Purposes

Number of Chicken Livestock	Number of Households
1	50
2	40
3	24
4	33
5	62
6	9
7	8
8	13
9	1
10	5
12	10
13	2
16	2
18	1
20	1
21	1

23	1
25	2
30	1
56	2
Total	268

Source: Primary survey

7.6 PROGRESS AND STATUTORY AND MODIFIED RATION SHOPS IN THE VILLAGE

The Neori GP has ample number of ration shops - a total of 7 statutory ration shops are present located in the residential pockets. The location of statutory ration shops is marked in the Fig 7.8 below.

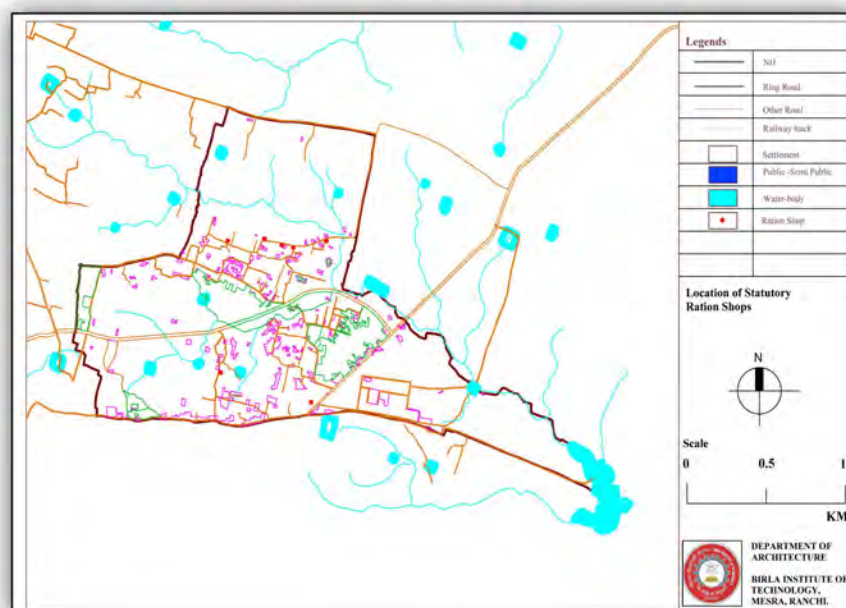


Fig 7.9: Location of Statutory Ration Shops

Source: based on survey prepared by the BIT Mesra Team

7.7 LAND RECLAMATION & LAND CONSERVATION DATA IN GP

The various projects under different schemes and programmes and its impact area, under various headings towards land reclamation and conservation is listed below in Table 7.14.

Table 7.14: Schemes and Programmes in Neori GP

Drought Proofing	No physical infrastructure, but farmers can avail an insurance scheme under which, during droughts, insured farmers will receive Rs 21,945/acre (2016-2020)
Flood Control and Protection	Not required
Land Development	Nil
Rural Connectivity	8430 ft
Water Conservation & Water Harvesting	Nil
Works on Individual land, IAY houses etc.	32

Source: Neori GP office records

7.8 MAJOR CONTINGENCIES GP IS PRONE TO

Ranchi district is prone to droughts as evident from the Table 7.15. Most of the Kharif produce are dependent on Monsoon rain, whereas Rabi produce are dependent on groundwater mostly extracted through open wells. Even though the district receives ample amount of rainwater, there is lack of any provision for rainwater harvesting.

Table 7.15: Major Contingencies

Major Contingencies GP is prone to	Regular	Occasional	None
Drought			
Flood			
Cyclone			
Hail storm			
Heat wave			
Cold wave			
Frost			
Sea water intrusion			
Pests and disease outbreak			

Source: Agriculture Contingency Plan for District: Ranchi

7.9 SUITABLE SITES FOR CHECK-DAM, PERCOLATION TANK

The GP has a gradual slope from South-west and North-west to South-east, where it meets the streams of Getalsud dam. A few drains carrying the runoff from surrounding areas are flowing across the GP, which can be utilized in rainwater harvesting in Neori and surrounding areas. Fig 7.9 shows the watershed map for the GP.

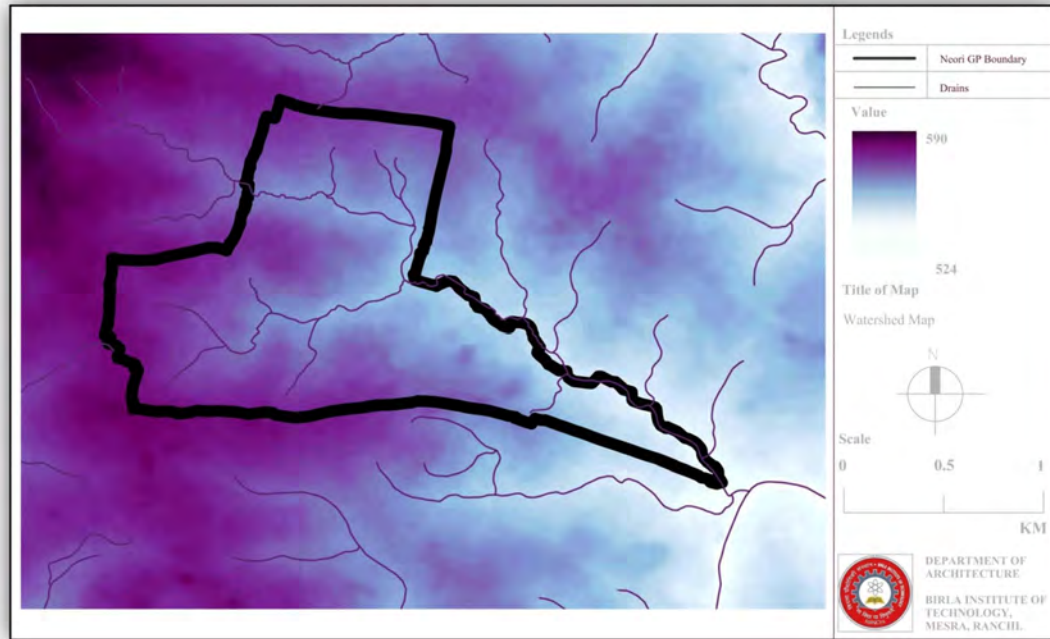


Fig. 7.10: Watershed Map for Neori GP

Source: based on survey prepared by the BIT Mesra Team

7.10 RECOMMENDATIONS

As the cropping pattern is dominated by paddy, the crop diversification will consider less water intensive crops (or efficient irrigation methods), keeping in view the soil characteristics and nutrient status. Crop rotation with pulse crops should be promoted to the extent possible.

Majority of the production happens in kharif as 82% of rainfall is from monsoon. Despite of good amount of rainfall, the surface water is not available for irrigation in crucial periods due to inadequate storage facilities. The rainfall in the state also has witnessed significant changes in last decade. Late arrival and early cessation of monsoon is a common phenomenon in the state. Monsoon breaks occur in mid-June. Dry spells of 2-3 weeks and even more usually occur in July-August. Failure of *athia* rain (late September-early October) is observed once in four years, which adversely affects grain growth of standing crops besides

affecting the establishments of second crop in winter season. As a general practice in the state, paddy being the most preferred crop, its sowing season during kharif keeps on extending even to late August /early September depending on the rainfall factors there by affecting the yield of the crop. The district of Ranchi has been declared as drought hit in the year 2016.

As discussed above, the GP is majorly dependent on rainfall for agriculture. As the district receives ample rainfall, provisions should be made to conserve rainwater during monsoon and utilize it during dry seasons. The rainwater can be harvested by

Ground water recharge

Retention ponds

Considering the present area under cultivation, 726000 – 1210000 Cubic metre of water is required during Rabi season.

A series of 6 connected retention ponds should be constructed along the natural gradient to store rainwater as shown in Fig 7.10.

The size of retention ponds to be constructed is 150m x 160m x 3.5m.

As per estimate, the construction cost of retention pond for storing the required water is 4.5 lakh.

During Monsoon, in case of overflow of retention tanks, surplus water can be released in Getalsud dam, through the network of connected streams.

Farmers need to be encouraged to conserve rainwater in their own fields.

Construction of open wells to be promoted as it will help in ground water recharge.

A Cold storage for vegetables and milk need to be proposed, which can be used by the farmers from Neori and surrounding villages as well.

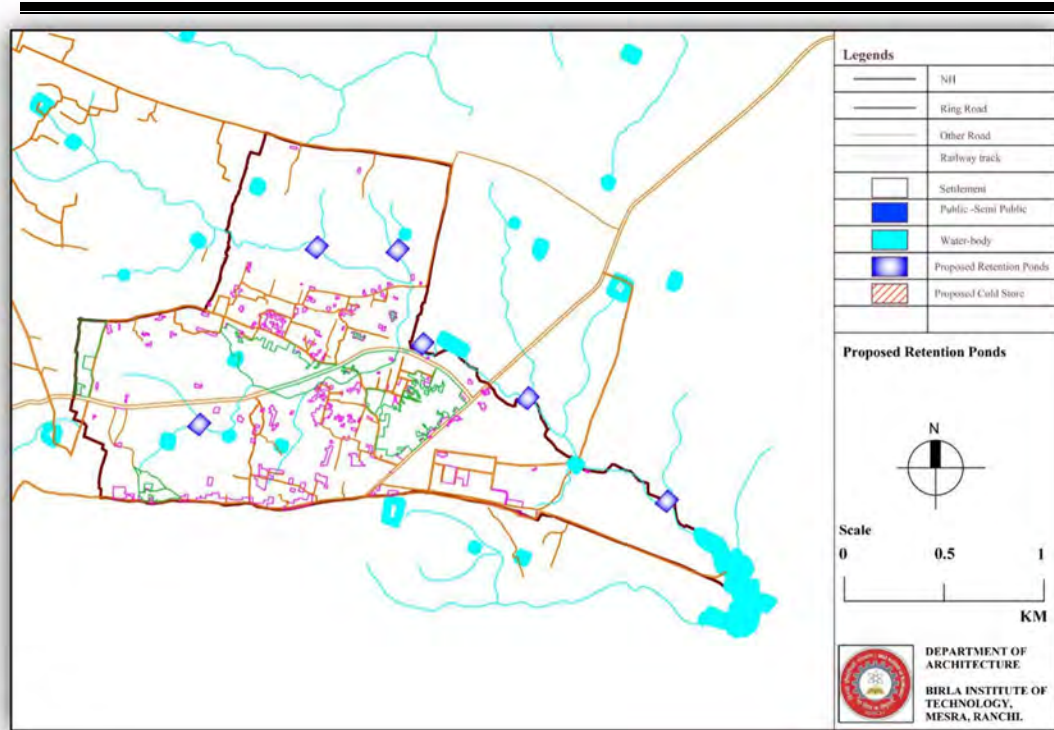


Fig. 7.11: Proposed location of Retention Ponds and Cold Storage

Source: based on survey prepared by the BIT Mesra Team

For a 10 MT cold storage unit, the room dimensions required would be 5.5m x 3.5m x 3.5m. The refrigeration capacity shall be 30000 Btu/hr.

The produce from agriculture and industries would be categorized into groups of fruits and vegetables; meat and fish products; milk and milk products; and other products of the kind. The cost of a 10 MT cold storage varies depending upon the location, the availability and demand of materials in the market. The investment shown here is for a 10 MT cold storage which as per norms is estimated to cost nearly Rs.15,00,000/- except the cost of land. (Source: <https://www.agrifarming.in/cold-storage-project-report-cost-and-subsidy> : :te t=The%20cold%20storage%20room%20basic,to%20be%3A%20 3%CB% A C.)

The assistance provided by the government could be such that 60% of the expenses should be borne by the beneficiary and 40% of the expenses would be given as subsidy to the beneficiary.

Construction of Green Houses should be promoted in the GP along with provision of subsidies.

Agro-industries should be promoted for employment creation, socio-economic development and income generation. Agro Processing Industries has been proposed as described here under:

Primary Food Processing Units:

Paddy is the main food crop of Neori grown in largest area (132 ha). For food processing activity, a few rice mills are proposed. Products from rice like rice flakes, puffed rice, popped rice, canned rice and other products can be encouraged.

Maize is also grown seasonally, so provisions can be provided for maize products like cornflakes, corn starch, corn flour, cornmeal, Corn gluten, etc.

Groundnut processing is another profitable agriculture business which can be encouraged in the GP, as large production is there. Groundnut to be used as snack, healthy groundnut oil processing and manufacturing unit can be established as small scale business.

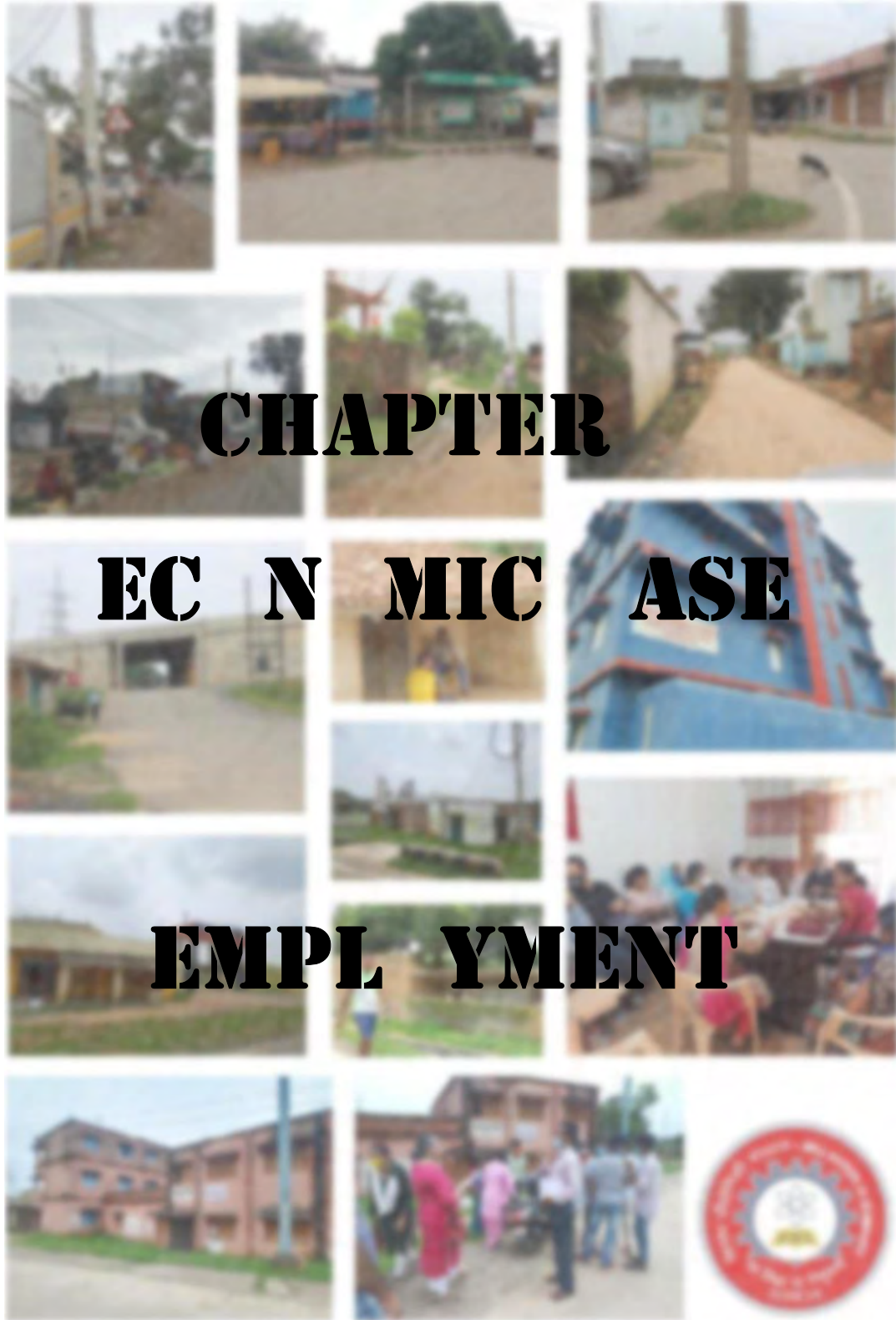
Tomato is widely available, so Tomato Processing Units are encouraged to produce tomato products like tomato sauce, puree, juice, ketchup etc.

Spices Processing Enterprise:

Turmeric, Ginger, Garlic and Chilies plantation can be promoted to produce spices.

Livestock Based Processing Activity: Poultry and cattle Farming

The Milk based processing activity (viz., khoa, paneer and butter) is missing in the GP. The entire milk is sold in the nearby Mesra GP or Ranchi town. The provision of Milk Chilling Centers would positively contribute in greater concentration of milk based processing activities under unorganized manufacturing sector in the GP. Poultry farming does exist and can be encouraged with adequate provisions.



CHAPTER 8: ECONOMIC BASE & EMPLOYMENT

8 1 INTRODUCTION**8 1 1 ECONOMIC ASPECT OF PANCHAYATI RAJ**

For Panchayati Raj system, devolution of funds has often been questioned as transfers made through the State Finance Commissions were meager in most States. Hence the local bodies in the Panchayati Raj system have faced problems to undergo development process due to lack of funds. Moreover ground survey suggests common reason for low utilization was with respect to delay of funds trickling down from the Centre to State and finally to Panchayats. Further, the administrative difficulties to obtain sanctions and approvals add to the delay. Limited capacity and shortage of staff at various tiers in the PRI delays the sanctioning and approval. The inordinate delay in many funding schemes increases project cost which ultimately remains incomplete. The Fourteenth Finance Commission (FFC) took note of it and substantially increased the grants to the local bodies for the period year 2015-16 to 2019-20. The grants provided are intended to be used to support and strengthen the delivery of important basic public services. The 15th Finance Commission has further increased the grants in its interim report for year 2020-21 for rural and urban bodies.

To respond to these long standing crises, Centre for Policy Research, Delhi in its report on Devolution of Union Finance Commission Grant to Panchayats, published in 2019, proposed a Transparency Portal to address monitoring release of grant, budgeting, planning, maintaining time series information, providing updates and monitoring outcomes. This proposal may ease all bottlenecks of development at GP.

Table 8 1: Trends in Fourteenth Finance Commission FFC Grants to Rural Local Bodies for the State of Jharkhand and all figures in crore

	2016-17	2017-18	2018-19	2019-20	Total grant
Total grant	1022.53	1178.63	1360.62	1382.12	6046.74
Basic grant	903.36	1044.45	1208.24	1632.59	5442.07
Performance grant	118.57	134.18	152.38	199.53	604.67

Source: Basic Statistics of Panchayati Raj Institutions, 2019, MoPR, Government of India

8 2 FINANCIAL POSITION OF NEORI GRAM PANCHAYAT GP

Table 8 2:Trends in t e Structure and Growt of Neori GP Income and Expenditure

	2016-17	2017-18	2018-19	2019-20	Total
Total receipt	1658619	1017608	6870161	2870388	12416779
Total expenditure					9383406

Source: Neori GP panchayat office records

8 3 STATUS OF CENTRAL AND STATE FUNDED SCHEMES IN NEORI

In 2015-16, Yojana Banao Abhiyan for the first time gave opportunity to the Gram Panchayats for preparing the holistic development plan for the panchayats. The recommendation of the 14th Finance Commission for Gram Panchayats also became a driving force for the preparation of the plans. Last year, Jharkhand was the first state to prepare Gram Panchayat Development Plan (GPDP) based on convergence. To make GPDP a success in the state, a massive media campaign was launched at the state level followed by mid media activities in the districts, block and panchayat level.

Under Pradhan Mantri Gramin Awas Yojna (PMAY), the Neori Gram Panchayat witnessed an increase in both- the scale of the program in terms of the physical target and increase in the allocated amount of money for building each unit of housing. For the year 2016- 19, the number of houses completed under the scheme is 4,53,770. The total number of houses built in Neori GP under the scheme is 41 for which Rs. 42,40,000/- has been disbursed.

Pradhan Mantri Gram Sadak Yojana (PMGSY) aims to provide connectivity by way of all-weather roads (with necessary culverts and cross-drainage structures, which are operable throughout the year), to the eligible unconnected habitations in the rural areas. In the first phase habitation with a population of 1000 and more and a population of 500 and more were to be connected. In the second phase, realizing the presence of the sparse population in the hilly and forest areas, special provisions were made to connect habitations with 250 plus population. Under this scheme over the last five years the GP has experienced a total construction of 1750 feet of metalled road and 4000 feet of paver brick road. Under Mukhya Matri Gram Sadak Yojaya (MMGSY) 600 feet of metalled road has been constructed.

National Rural Livelihoods Project (NRLP) is a component of NRLM which is carried out in some selected intensive blocks. Till now, a total of 31415 villages have been targeted at the state level under NRLP, in which a total of 2, 24,793 SHGs are actively working. In Neori GP, 32 SGH with 319 members are working. Number of households mobilized into SHGs is 138. Total number of SHGs having access to bank loans is 07. Percentage of households mobilized into SHGs is 11.22 % (<http://missionantyodaya.nic.in>).

Mahila Kisan Sashaktikaran Pariyojna is a sub component under NRLM, which identifies women worker as an integral part of the agricultural sector. Under the ambit of this program, 8 project proposals covering 27,630 households of 22 blocks in the 10 districts of Jharkhand have been sanctioned since its inception. Under the same in Neori GP has not been benefitted as no projects have been conceived in Kanke block of which Neori Gram Panchayat is a part.

The MGNREGS seeks to enhance the livelihood security of the households in the rural areas by guaranteeing at least 100 days of wage employment in a year to every household whose adult members volunteer to do unskilled manual work. This scheme works have been undertaken in almost all the gram panchayats across the state. In the current financial year, 56,960 workers have been provided with employment, generating about 31.08 lakh mandays. In this period a total of 52.99 lakh active jobcard holders and 91.48 lakhs worked under the program. For Neori GP, MNREGS have employed 1522 individual with 702 job cards.

Apart from generating employment, this program also aims at creating valuable rural assets which can provide recursive livelihood opportunities for the rural populace. Since its inception, a total of 4801 assets have been already completed, while, the construction of 1734 assets are in the on-going process in Kanke block of which Neori Gram Panchayat is a part.

Under Pradhan Mantri Kisan Samman Nidhi, the Government of India has initiated a program to facilitate all farmers with a yearly income support of Rs. 6,000/- . The support was mainly aimed in procuring various inputs to ensure proper crop health and appropriate yields. The number of beneficiaries targeted across India is approximately 120 million. In Neori GP, the scheme has reached to only 125 farmers.

Mukhyamantri Samagra Gram Yojana (MMSGY) was initiated in the year 2016-17 in Jharkhand to bridge the differences of development in the urban and rural areas of the state by creating urban like infrastructure, so that the urban services, amenities and

opportunities can be easily reached at the door step of the rural households. The program targets to strengthen almost all the sectors like rural governance, sustainable energy, rural industry and market, production system, skill development, education and healthcare through technology led innovations like ICT, smart grid, digitized marketing and web connect. Some of the good practices that have been tried in this financial year are shifting of post office accounts to bank accounts and DBT, expediting Aadhaar seeding process, SHG women mate, GeoMGNREGA, NREGA Sahayata Kendra and digitization of the department.

The State Government of Jharkhand is planning to launch a new scheme called "ARYA" to attract rural youth in agriculture. The objective of the ARYA scheme will be to promote the green revolution in the state. Under the ARYA scheme, the state government will attract rural youth in agriculture by making them skilled and make the state self-dependent in agriculture.

The Government of Jharkhand has initiated many welfare schemes for the people of the Gram Panchayat including Student Scholarship Scheme, Tribal School Scheme, Birsa Awas Yojana, and various other schemes for Scheduled Caste, Schedule Tribes and Citizen Protection Schemes.

The Fifteenth Finance plan has allocated Rs. 7, 48,658 in 2020-21 as the first phase allotment for the Neori GP.

Table 8 3: Development works planned in Neori GP over t e last five years

Sr no	Sector	Work Name	Work status	Planned budget Rs	Expenditure Rs
1	Drinking water	Jalminar nirman at 16 identified points	Completed	12,00,000	Nil
2	PCC road	1000 ft wide road at 01 identified location	Completed	10,00,000	Nil
3	PCC road	250 ft wide road at 27 identified locations	Completed	66,50,000	Nil
4	PCC road	200 ft wide road at 04 identified locations	Completed	10,50,000	Nil
5	PCC road	70 ft wide road at	Completed	1,00,000	Nil

		01 identified location			
6	Nalinirman	200 ft nail nirman at 05 identified locations	Not yet started	9,00,000	Nil
7	Nalinirman	250 ft nail nirman with boundary wall at 01 identified location	Not yet started	3,00,000	Nil
8	Shoktagadda	10 X10 X8 Shoktagadda at 04 identified locations	Not yet started	2,70,000	Nil
9	Handwash	Hand wash unit in all schools, Anganwadi	Not yet started	19,500	Nil
Total allotment				1 26 89 500 -	Nil

Source: Review of Previous years GPDP – Neori GP and current updates from survey.

The table above shows around 59 development projects planned by the Gram Panchayat of Neori in support of the State Government. This further establishes the urge of the local self-government to bring about changes in the infrastructure and improving the Quality of Life of the people here. But due to various reasons, some of the projects are still in the conceptual stage and are yet to take wings.

8 4 EMPLOYMENT SCENARIO OF NEORI GP

The employment scenario of the Gram Panchayat is lopsided with nearly 96 per cent of household involved in non-agricultural activity. This is due to the influence of capital city in the proximity. In Neori GP out of total population, 1938 were engaged in work activities. 32.77 of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 67.23 were involved in Marginal activity providing livelihood for less than 6 months. Total workers in the village are 1938 out of which 1545 are male and 393 are female. Total main workers are 635 out of which female main workers are 549 and male main workers are 86. Total marginal workers of village are 1303 (Census 2011). The maximum main earning member of the household is involved with casual manual services of various kinds and serves as one of the main labour bases of the city. Hence nearly 16 per cent of the household has a recorded income of more than Rs. 5,000 as per government

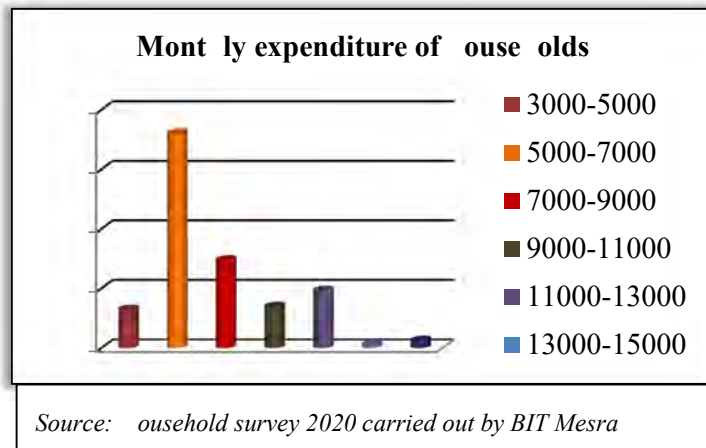
records. Percentage of households supported by village based Agricultural Extension Workers is only 16.26 . Number of households supported by village based Livestock Extension Workers is 250 (<http://missionantyodaya.nic.in>).

Table 8 4:Neori Working Population ---Census 2011

	Total	Male	Female
Total Workers	1938	1545	393
Main Workers	635	549	86
Main Workers Cultivators	49	44	5
Agriculture Labourer	39	22	17
Household Industries	17	13	4
Other Workers	530	470	60
Marginal Workers	1303	996	307
Non Working Persons	4969	2155	2814

Source : PCA 2011

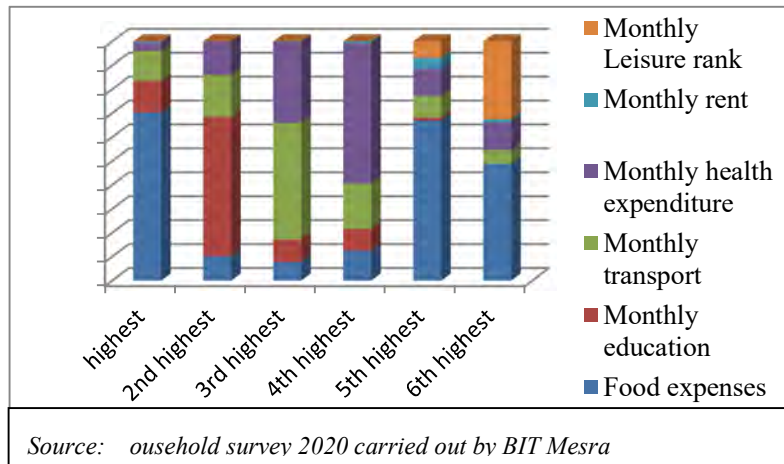
Fig 8 1: Showing monthly expenditure of households in Rs



The survey of households carried out clearly shows the picture of utter poverty where largest chunk of over 50 population has a monthly household expenditure ranging between Rs. 5000 to below Rs. 7000.

Considering an average household size to be around 5, average expenditure per person in these households is somewhere around Rs. 1000/- which is much below the national average of Rs. 1,446 (NSO 2017-18).

Fig 8 2:Distribution of mont ly expenditure amongst ouse olds as per actual spending under different eads



Source: ousehold survey 2020 carried out by BIT Mesra

The figure 10.2 shows 70 of the households have Food expenses as main means of expenditure, 55 of household has monthly education as second highest means of expenditure. 50

households have transport expenditure as third highest means of expenditure and 65 households has substantial expenditure in health related issues. Considering more than 50 of the population has only Rupees One thousand as monthly expenditure and 70 has food as the main source of expenditure, it establishes the fact that more than half of the population is not able to meet two ends meet. The poverty index hence is presumed to be high in this GP.

Only 5 no. of families in the entire GP has taken any form of loan which re-establishes the purchase power of the residents.

Table 8 5:Distribution of House old based on mont ly income of t e ig est earning member

GP	Less than Rs 5000 per month	Between Rs. 5,000 and 10,000	Rs. 10,000 or more
Neori	962	116	66

Source: SECC data of Neori GP 11 of MoRD

Table 8 6: Distribution of House old based on main source of income

GP	Cultivat ion	Manua l casual labour	Part-time / full time domestic service	Rag picking	Non-agricultural own account enterprises	Beggin g / charity / Alms	Others (Busine ss etc.)
Neori	21	1103	5	0	1	1	13

Source: SECC data of Neori GP 11 of MoRD

Table 8 7: Distribution of population based of variable source of employment

GP	Government sector	Private sector	Factory worker	Small Scale Industries	MGNREGS Male	MGNREGS Female
Neori	20	500	200	9	831	691

Source: Neori GP office records

Table 8 8: Distribution of House old by ig land olding

GP	Household owning 2.5 acre or more of irrigated land with atleast one irrigation equipment	Household owning 5 acres or more of land irrigated for two or more crop seasons	Household owning 7.5 acre or more of irrigated land with atleast one irrigation equipment	Household having kisan card with a credit limit of Rs.50,000 and above
Neori	1	4	1	1

Source: SECC data of Neori GP 11 ofMoRD

Table 8 9: No of ouse olds and persons registered under National Rural Employment Guarantee Act

illage	Number of registered		SCs		STs		Ot ers		Male	Femal e
	House old	Per sons	House old	Per sons	House old	Per sons	House old	Per sons		
Neori	710	1522	34	70	237	501	439	901	831	961

Source: NIC-DRD informatics Centre

8 4 1 ACADEMIC UALIFICATION OF THE INHABITANTS OF NEORI GP

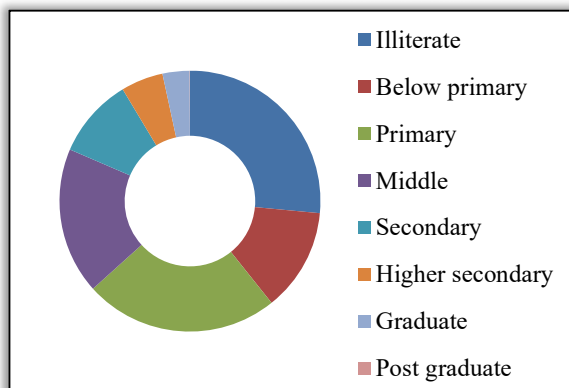


Fig 8 3: Percentage of academic attainment

Source: SECC data of Neori GP [114696]ofMoRD

As per 2011 Census, a large section of population is non-working. The academic attainment of the Neori GP residents presents a sordid state

of affair. The Sarva Shikha Abhiyan of Government of India has also not reached to nearly 26.5% people in the GP. The segment of people with no education, below primary, primary, middle, secondary and higher secondary educational attainment is nearly 96%. This segment contributes to manual and casual labour for the city and its suburbs having monthly income of zero to Rs. 10,000/-.

About 55% of this population is within the age group of 16 to 55 years. Survey and discussion with stakeholders suggests that majority of this population has an intention to learn new skills and engage in good-income practices. Since a significant percentage of this population is talented and are willing to learn if resources are available, specialised training to these may pave the path for better economy infiltration to the GP. For this, Skill Development Centres and Agricultural Processing Centres are proposed to be open in the GP level to make these stakeholders Atmanirbhar.

8 4 2 INTERDEPENDENCY OF HINTERLANDS AND NEORI GP FOR ECONOMIC ACTIVITIES

The block of Kanke housing Neori GP has 103 villages with a rural population of 1,11,800. The Neori GP is surrounded by the villages of Mesra, Gobarhappa, Hundur, Chari, Haldama, Hujir, Oyna, Chandewe, Dubliya,, Banhara, Murum and Ral along its vicinity. These villages supply labour and consumables to Neori GP as a result of which the economy of the GP trickles down into these villages. The bi-weekly haat that is organized in the GP has lots of contributions from these villages around. A small section of labours, working in commercial establishment in Neori GP, travel from these villages.

With the formulation and implementation of Gram panchayat Spatial Development Plan for Neori GP, there are possibilities of economic and physical migration to the GP from its hinterlands. With subsequent creation of work opportunities, survey of many families will travel to settle in the GP for better livelihood opportunities from hinterlands which are spaced beyond 50 km from the GP. Survey of commuting labours in Ranchi suggests that a large section travelling on bicycles comfortably ride upto 50 kms for search of livelihood and they are more of landless labours willing to relocate.

8 5 CONCLUSIONS OF ECONOMIC AND EMPLOYMENT SCENARIO IN NEORI GP

The state of affairs in Neori GP in terms of Economy and employment is grim and needs immediate attention for a holistic development. The key findings include:

The economic condition of the Neori GP is extremely fragile and maximum percentages of the population are well below economic level. Inhabitants need to be exposed to multiple source of income.

The educational attainment level is extremely low which leads to maximum inhabitants being employed as labours and casual workers. This needs attention and hence needs to create a base for skilled personnel in the GP.

During unforeseen circumstances like lockdown, the labours in tertiary sectors are left without any source of income.

Very few opportunities exist within the GP for families to earn better living and quality of life which needs to be addressed and create a congenial environment to earn and sustain.

Capitalisation from Government grants and schemes is low and hence needs concerted effort from PRIs to allow development through available schemes.

Ratio of successful utilisation and completion of government projects is low as is seen from number of projects being planned and sanctioned but not implemented.

Physical and social infrastructure exhibits a miserable state of affair and needs immediate attention to improve the Quality of Life.

Panchayat s own source of revenue is nil and has to depend completely on government s grants for its sustenance and development. Hence the Panchayat should be empowered with own revenue apart from government grants to promote development of the GP in desired direction.



CHAPTER 9: STRATEGIES & RECOMMENDATIONS

9.1 THE GRAM PANCHAYAT VISION AND STRATEGIC GOALS

The 73rd and 74th Constitutional Amendment Acts, 1992, gave Constitutional status to the third tier of government at the sub-State level, thereby creating the legal conditions for local self-rule or Panchayati Raj. These Amendments sought to bring about greater decentralization, increasing the involvement of the community in planning and implementing schemes and, thereby, increasing accountability. The 73rd Constitution (Amendment) Act 1993 was enacted to promote economic and social development in the rural sectors in India laying emphasis on Panchayati Raj Institutions (PRIs) as institutions of local governance. The decision tree for the process starts at Gram Sabha (GS) which discusses the development work plans of the GP which ultimately manifests through Gram Panchayat Spatial Development Plan (GPSDP). Formulation of GPDP improves efficiency of public services as projects get executed through the elected representatives.

Gram Panchayat Spatial Development Strategy helps to give direction, to identify and create opportunities, to create consensus, to mobilise resources, and finally, to achieve results. Keeping in mind of preparing Neori Gram Panchayat (GP) competitive and at par with the national level Gram Panchayats, a vision needs to be created and achieved by 2030. In order to gear up the development process of Neori, strategies needs to be made both at block level and sectoral level.

9.1.1 TOWARDS 2030

The next 10 years will see significant growth of the panchayat in terms of population and infrastructure. The benefits of this growth must be fairly distributed and must adhere to directions obtained from analysis. Through this, goals for strengthening the development process of the GP may be met and Neori GP by 2030 may be:

Spatially distributed and equipped physically and infrastructurally to accommodate future growth.

Planned for the future thereby promoting integration through sustainable access to panchayat resources of all kinds.

Integrated industrial, commercial and social sectors which provide access to a range of panchayat resources.

Model GP for others to take the path

Economically competitive on both district and state arena.

9.1.2 STRATEGIC GOALS

The panchayat vision mandates five main goals for the Spatial Development Strategy which may be listed below as:

To promote planned growth of all the villages under Neori GP in an integrated approach: This includes promoting growth in the GP so as to accommodate future migration from the hinterlands.

To create more efficient and productive rural areas through the growth and development of agriculture: The aims to consolidate and promote future agriculture based opportunities.

To rapidly reduce existing disparities in infrastructure and facilities: This aim is to improve infrastructure services at GP level with an aim towards 2030.

To improve the overall quality of the rural environment through best practices: This aims at judicious and sustainable use of rural resources so as to improve local economic development.

To address the issue of employment through creation of opportunities: This aims to create avenues for employment and making the inhabitants of the GP ‘Atmanirbhar’.

9.2 DEVELOPING NEORI AS AN INTEGRATED GP

To formulate ‘Gram Panchayat Spatial Development Strategy’ for Neori GP, first step would be to strengthen the different sectors through minimising the critical backlogs found through analysis. The broad strategies in this regard may be:

To foster development at the regional level by strengthening the GP;

To strengthen the panchayat level infrastructure in terms of basic services and sustainability;

To integrate policies of central government with these strategies so as to achieve national objectives;

To create more economic opportunities for the current residents and the future in line with the Ranchi Master plan so that the GP grows up as an important growth node.

9.3 STRENGTHENING INDUSTRIAL SECTOR

The general strategies to reinforce the above sector may be enumerated below as:

To establish small industrial area as innovation and incubation center with basic industrial infrastructure like connectivity, uninterrupted power, water, therein;

To encourage private sector participation in infrastructure upgrading;

To provide special incentives to encourage establishment of small scale industries and household industries specially related to agro-processing ;

To create an eco-system for supporting rural-nano and growth-nano enterprises;

To provide special package necessary for startups of household industries;

9.4 STRENGTHENING OF PHYSICAL INFRASTRUCTURE

As has been clarified in the analysis water supply, power supply, sanitation facilities, solid waste management and education needs augmentation of resources in Neori GP. Strategies for strengthening of these sectors which also induce development include:

To convert all kutchha houses into pucca houses with permanent roof;

To convert all roads in the GP to all-weather roads up to access points of individual houses and establishments;

To provide LED street lighting throughout all metaled roads of Neori GP at a spacing of 25 m;

To augment all possible resources to supply tapped water to households, establishments of proper purification plant for the same and regulating the same by use of water-meter.

To augment all possible resources to supply uninterrupted power to households and establishments. Electrification of all houses and establishments needs to be taken up immediately.

To augment all possible resources for improving sanitation facilities of every household in the GP along with commercial and public establishments through appointment of Green Ambassadors focusing on overall environmental development and improved personal hygiene thereby arresting cases of diarrhea, malaria and dengue. This can be achieved through construction of IHHL under Government of India's Swachh Bharat Mission (SBM-Gramin);

To create awareness amongst the community about sanitation and its importance for a healthy life, especially the areas that needed the toilets most, so as to promote healthy sanitation practices. For the same, the school children may be educated to reach out to their family. An intensive campaign is proposed to be launched in schools for this purpose.

- To ensure recycling of bathroom water (through its reuse in kitchen gardens), separation of biodegradable and non-biodegradable waste at source and transportation of only the remaining waste to the waste disposal system;
- To make proper waste disposal mandatory for public premises, restaurants, dhabas, small stalls, chicken & meat centers, etc.;
- To discourage use of plastic and promote ‘plastic free Gram Panchayats’ by phasing out plastics;
- To encourage shop owners to use paper bags rather than plastic bags, for packing consumables;
- To make it mandatory for landlords to construct separate bathing and toilet facilities for their tenants;
- To declare the Neori GP as Open Defecation Free (ODF) after successful completion of sanitation program;
- To make provision for management of waste by construction of Solid Waste Processing Centre (SWPC) along with maintenance of organic vermin-compost unit. This will help in providing employment to a portion of unskilled labors;
- To provide designated parking zone in large congregation areas like market, religious assemble places, playgrounds / social gathering space;
- To upkeep Panchayat infrastructure with proper annual maintenance and cleaning;
- To make provision for drainage cleaning in the GP area once in six months.
- To plan for leadership for evening and morning nazardari (Vigilance/Patrolling);
- To rehouse the existing road-side vegetable market into a proper permanent market at selected location;
- To propose an LPG distribution center integrating it with Common Service Center;
- To plan for creating future competitive environment and enhanced ICT applications by providing free Wi-Fi facilities to the residents of the Panchayat.

9.5 STRENGTHENING OF SOCIAL INFRASTRUCTURE

The GP of Neori is extremely deficient in terms of academic attainment and related infrastructure. Moreover, the healthcare facilities, religious institutions have very weak infrastructure. Hence, strategies for strengthening of these sectors which also induce development include:

To plan for adequate level of basic health facilities for 24 hours in Primary health center and to provide ambulance services for the residents;

To plan for upkeep and maintenance of all religious places and create ample spaces for congregation;

To rebuild the bazaar area beside Panchayat Bhawan at NH 33 intersection so as to permanently house the vendors in the structure having the cold storage beside;

To identify and provide infrastructural strengthening of an open space to convert it to a public playground with proper furniture in the GP area. A stage will be created at the end to the open space to provide for social functions;

To create library and computer training center within the proposed common service center so as to benefit the future generation;

To improve literacy of all the inhabitants of the Neori GP through Sarva Shiksha Aviyan. For the same, intermediate camps of short duration has to be organized in school buildings / Anganwadi beyond working hours to make 100 % of population literate.

To plan for alternate routes of resource generation for school including donations from local donors, builders and CSR initiatives for provision of school furniture, school uniform and school kids achievement.

To strengthen educational institutions and promote education at Panchayat level so as to improve the educational attainment level of all stakeholders along with creation skill development and training center so as to develop a pool of skilled workforce;

To utilize state government schemes like Student Scholarship Scheme, Tribal School Scheme for establishing schools and supporting meritorious students;

To plan for compulsory implementation of midday meal schemes;

To plan for provision of every household with Pradhan Matri Ujjwala Yojana so as to ensure that 100 % of the households, Anganwadis have LPG gas connection.

To plan for provision of Anganwadi with a model kitchen, storeroom, utensils, toilets, water filters, electric connection and wall paintings and to organize regular visits of field supervisors so as to maintain the standards.

To plan for celebration of birthdays of children whose birthdays fall within a particular month, so as to attract the children community.

To plan for Child-friendly Gram Panchayat through

Vaccination and immunization program,

Making mandatory school enrolment,

Attendance of teachers and students in school,

Reducing dropout rates in school
Distributing free sanitary pads to improve girl child hygiene,
Maintaining good nutrition level of children.

9.6 STRENGTHENING OF AGRICULTURAL AND ANIMAL HUSBANDARY SECTOR

The future revitalization of Neori GP largely depends on benefaction of resources in agricultural sector. The analysis reveals that there is large agricultural production of paddy, maize, wheat, ground nut gram and mustard in the GP. To capitalize on this production and channelize these resources, the following strategies are proposed:

- To adopt micro planning and project development in agriculture to convert single agricultural land into double;
- To convert un-irrigable land area of 45 ha to irrigable land to boost agricultural production;
- To provide more source of irrigation so as to increase cropping intensity from 126% to 200 %;
- To add to value addition, fodder development, market linkage infrastructure at Panchayat level through linking of SGH entrepreneurs;
- To give 100 % farmers coverage under Pradhan Mantri Fasal Bima Yojna;
- To mobilize formation of a Federation of Farmers at Panchayat level so as to increase household income from enterprise activity;
- To develop Agricultural Service and Processing Center, Ware house for cold and dry storage, Sorting and Grading centers;
- To provide government grants and technical support for projects supporting poultry development, goatary development and other livestock extension services in individual plots;
- To provide milk collection centers, milking routes and chilling center for supporting residents with cattle breeding. The “Chilling Center” is proposed to be integrated with the Cold Storage.

9.7 FUTURE LANDUSE CONTROL AND DEVELOPMENT STRATEGY

The GP of Neori because of its close proximity to capital city, NH 33 and Ring Road is already experiencing unorganized growth of residential and commercial establishments without proper provision of infrastructure. G+3 complexes are propping up as isolated developments showing signs of future trajectories of growth.

Hence there needs to be a strict plan for abiding by landuse control, sanctioning process and byelaws so as to control future developments.

Construction in Neori GP Area

(i) Any plot of above 100 sq. m and a subdivision plan above 1000 sq. m area, needs approval from sanctioning authority before construction on site. The plan should strictly abide by development control and building regulations as laid down by Jharkhand Building byelaws 2016 and should have signature of a registered Architect having Council of Architecture (COA) active membership and a structural engineer. The Mukhiya of the Neori GP may be delegated powers to release the plans duly signed by him / her, but only after the approval of the Kanke BDO in respect of any building plan on The Architect and Junior Engineer from Rural Engineering Department of the State Government shall on technical matters assist Neori GP. This segment will be reviewed in 2030 relooking into the development scenario and fresh mechanism of sanctions maybe relaid if necessary.

9.8 FUTURE ECONOMIC REVITALISATION OF PANCHAYAT

Analysis of the current situation, leads us to the path of strengthening development in the GP. The development initiatives are required to start at the grass-root level and should be meant to serve and benefit the entire GP population. Neori panchayat should provide all kinds of inputs and services for establishment of social enterprise and create opportunities for employment of rural youth, farmers and women. Since the strength of the GP lies largely in work force participation through supply of semi-skilled and unskilled labour as well as agricultural activities in some pockets, there is a need to orient these two sectors for better performance and orientation towards skilled development. As a step towards “Atmanirbhar” Panchayats, Neori GP needs to plan for:

- Capacity building of PRI representatives and recruitment at village level;
- Establish incubators to potential enterprises for employment generation;
- Revenue generation at Panchayat through earning, training and rentals;
- Provision of civic services to the people and employing people there-in;
- Providing job opportunities to the resident through Green Ambassador program and Solid waste management program;

Providing jobs in incubation center, small scale startups, Agricultural service and processing center, Ware house for cold and dry storage, Sorting and grading centers.

Providing and installing ‘Solar still’ units at every Below Poverty Level (BPL) household for production of distilled water for commercial uses. The provision can be made through Government subsidy through which a BPL family can produce upto 1.5 liter distilled water which may be sold commercially Rs. 20 per liter.

To convert adjoining lands on NH 33 to Highway service providing uses and employ inhabitants in service related jobs.

There is a need for continuous source of funds for development of Neori GP. This is made possible by leveraging financial autonomy to fulfill their new functional obligations along with the funding obtained for implementing various government projects. In order to become financially more independent, Neori GP should raise local resources along with seeking grants from government. Possible earning areas for Panchayat are:

Earnings from Agricultural service and processing center at Panchayat
Training and skilling of identified youth,
Rent from common infrastructure for village like micro cold storages and food processing units.

The Own Source Revenue (OSR) of the Panchayat should be permitted and proposed to make the areas affluent and amenable for business. The OSR may be shared with the state revenue and a considerable percentage transferred to state exchequer. OSR will include House tax, Professional tax, Business Tax, Sales tax, Income from rights of agricultural products sold, Bank interest, Sale of items, Building regulatory fees and Birth and death control fees. For the same an elaborate system is proposed consisting of staff employed for collection, accounts maintaining, disbursement, leveraging in proper hierarchy as prescribed by the government;

Connecting with NGOs for development funds and disaster relief is also proposed as it will help in generating funds for other aspects beyond schedule like school kid development, awareness campaign, GP advertisement, ease of living etc.

By leveraging agriculture and allied sector infrastructure creation at Gram Panchayats, monetary support will be obtained to run an institution which will create

further job opportunities. With able guidance from resource person at Block or District level, these offices can help in disseminating knowledge and skill to the deserving within the Gram Panchayat. This is proposed to be done through Deendayal Upadhaya Grameen Kaushalya Yojana which aims at gainful employment and career progression of candidates after skilling. The Central Government aims to mobilize 50 lakh candidates by 2024 and the same is proposed to benefit youths of Neori GP.

Table 9.1: List of new structures required to be constructed in the Neori GP

Sr. no	Amenities at GP level	No. required	Land area requirement	Minimum width of abutting road	Estimated cost (Rs.)	Implementing agency
1	Skill development centre	01	500 sqm	9 m	1 crore	State Government
2	Agricultural service and processing centre	01	500 sqm	9m	1 crore	State Government
3	Ware house for cold and dry storage. Milk storage	01	1000sqm	9m	0.25 crore	State Government
4	Decentralized waste water treatment system (passive technology)	01	1000 sqm	9m	0.50 crore	Central Government
5	Solid waste dumping and processing plant	01	1000 sqm	9m	0.50 crore	PPP Mode
6	Water distribution	01	1000 sqm	6m	1.50 crore	Central Government

	network and Overhead tank					
7	Common service centre	01	1000 sqm	6m	1.50 crore	State Government
8	Conversion of all kuchha and dilapidated houses to pucca	238	On individual land	NA	2.50 crore	Central Government
9	Reconstruction of dilapidated bazaar	01	Existing land	NA	0.50 crore	State Government
10	Installation of Street lighting system	236	NA	NA	0.77 crore	Central Government
11	Installation Solar Still in BPL houses	962	NA	NA	0.962 crore	Central Government
12	Installation of solar PV at Household level	1200	NA	NA	12 crore	PPP mode

Source: Framing Guidelines for Model Land uses, Development Controls, and Service Level Benchmarks with Appropriate Enforcement Mechanisms for Rurban Clusters, Ministry of Rural Development, Government of India 201

9.9 THE PROPOSED LANDUSE PLAN

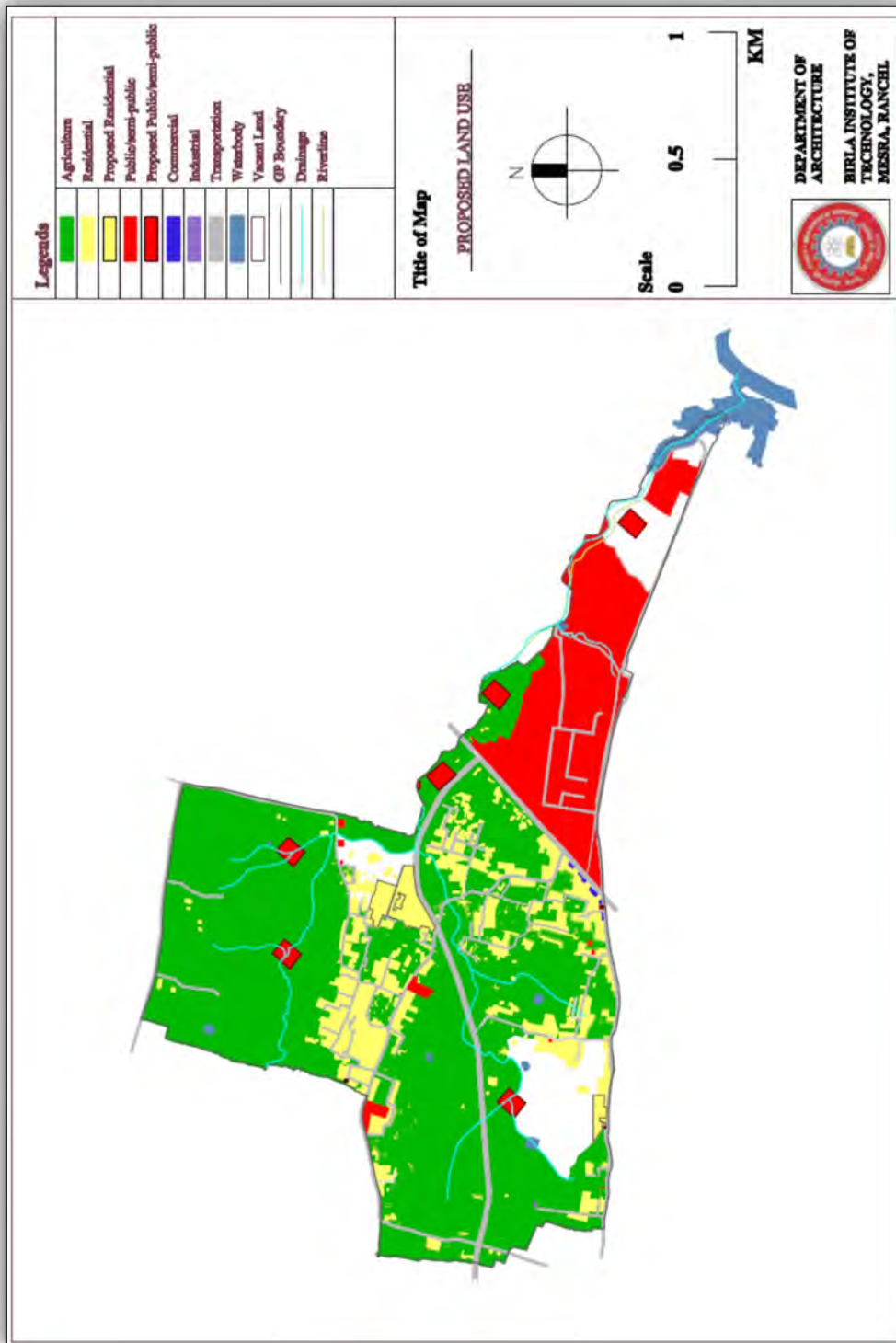


Fig. 9.1: Proposed Landuse plan of Neori GP

Source: Prepared by Team of BIT Mesra

Table 9.2: Break-up of proposed landuse of Neori GP		
Use	Proposed Area: Sq. m	Percentage
Residential	515241	13.25
Commercial	1556.7	0.04
Public/semi-public	584175	15.02
Waterbody	10020.6	0.26
Industries	603.9	0.02
Transportation	122481.6	3.15
Agriculture	2301693	59.20
Vacant/Fallow land	352453	9.06

Source: Prepared by Team BIT Mesra

9.10 CAPACITY BUILDING INITIATIVES OF GOVERNMENT

Formulation of a comprehensive and holistic GPSDP calls for interaction amongst stakeholders by understanding the processes, identification of the problem and earmarking the priority areas, projectisation, implementation etc. Capacity Building & Training (CB&T) of the stakeholders is an utmost necessary step for smooth functioning of the process. UNDP defines “Capacity Building as the process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time”. Government of India has launched restructured Centrally Sponsored Scheme (CSS) of Rashtriya Gram Swaraj Abhiyan (RGSA) for implementation from 01.04.2018 to 31.03.2022 with the primary aim of strengthening Panchayati Raj Institutions (PRIs) for achieving Sustainable Development Goals (SDGs) with main thrust on convergence with Mission Antyodaya and emphasis on strengthening PRIs (*Basic Statistics of Panchayati Raj Institutions, 201* , MoPR, Government of India). The Government of Jharkhand has released Rs. 98.24 crore during 2014 - 19 for Rashtriya Gram Swaraj Abhiyan with an aim for capacity building. The Government of Jharkhand through this process has outreached 2,61,084 Elected Representatives, Panchayat Functionaries and other Stake holders for Capacity Building.

9.10.1 Capacity Building at Neori GP

The Capacity Building Program of Neori GP should aim to:

- Form and consolidate an efficient team of the major stakeholders at various levels to launch and implement the GPSDP precisely;
- Orient towards basic training for the Elected Representatives of Panchayats;

Raise community awareness for proposed initiatives and motivate them towards participatory planning;

Mobilize community effectively and call for greater public ownership of flagship programs of the Government;

Create a vision for the GP, so as to utilize the allocated funds under various schemes and create opportunities for additional resource mobilization;

Channelize Sustainable Development Goals within the Neori GP through identification of priority areas of interventions for achieving socio-economic goals;

Equip the GP with strong leadership marked by efficient partnership with line departments for quick implementation of the developmental schemes and program;

Strive for better service delivery through use of e-governance and technology driven solutions at Panchayat level so as to attain administrative efficiency, improved service delivery, and greater accountability while implementing GPSDP;

Enable GPs to come out as strong institutions of local government with all round development of their people and to empower them to provide skilled human resources for the state.

To develop an efficient Capacity Building mechanism at the Gram Panchayat level, the State Institute of Rural Development & Panchayati Raj (SIRD&PR) or designated Jharkhand State Nodal Institution should provide Training and Capacity Building of Panchayat Raj and Rural Development Functionaries at State level for the selected GPSDP. To improvise the process, the state of Jharkhand should coordinate action-oriented training and field based practices of the members including the elected representatives, functionaries of GPs, community leaders and employees of the line departments operating at the GP level for organized planning, implementation and monitoring of GPSDP. A District Level Monitoring Cell should be constituted in Ranchi district with officers / Panchayat leaders selected from District administration / Neori Panchayat level and Block/Intermediate Panchayat level. This will help to develop an appropriate strategy and action plan for implementing various schemes of the center and state government through convergence in the GP. Taking directions from the National Capacity Building Framework (NCBF) initiated by the Ministry of Panchayati Raj, Government of India, and the following strategies are prescribed for Neori GP:

- To prepare a self-realization report to understand capacity assets and needs and define a vision and mandate;
- To engage stakeholders on every initiative of capacity development;
- To create opportunities for Panchayat elected representatives to upgrade their knowledge and skills for better performance;
- To orient key officials associated with the devolved functions to (a) better function as technical advisors and trainers and (b) respect, be more receptive and learn from the ground-level experience of elected Panchayat representatives;
- To develop mechanism to respond to the situation based on availability of budget, and managerial capability;
- To adopt for Information and Communication Technology (ICT) through incorporation of DISHA dashboard, MGNREGS-NREGASoft, SBM Rural, Gram Sanvad Mobile App, PRIASoft-PFMS and integrating them to daily governance integration;
- To leverage Smart Governance Services through Common Service Center;
- To improve the Gram Sabah functioning;
- To evaluate capacity development;
- To sensitize the media, political parties, representatives in the legislatures, civil society organizations and citizen.

As a step towards enabling public information of the activities of the panchayat, it is advised that the Panchayat may have its own website or link up with government website to disseminate year round information. Publication of an Annual Administrative Report every year in the local language is recommended which should contain details of meetings held, members who attended them, honorarium paid, total funds received (plan and non-plan) and corresponding expenditure, job vacancies announced and filled, the number of elected members and officials who have attended the training programs, number and kinds of grievances addressed, departmental progress, developmental works progress, etc. The Panchayat is also required to publish the action plan for the forthcoming year in the website.

9.11 BEYOND 2030

With the strengthening of Neori GP, the surrounding regions of GP by 2030 are also going to be benefitted in the due course of time. The next strategies would revolve around consolidating the position in the national forefront and becoming the model for GP development in the country. The strategies may be:

To keep pace with national development including reforms in varied sectors;
To create spatially distributed rural township to curb migration;
To create an aura of sustainable development based on longevity of resources present and their reserves.

9.12 PHASING

The entire planning proposals cannot take place at a time. The desirable development is that which takes place in phases as per the varying demand of the area. So the phasing plan may incorporate:

Phase I (2020-2025)

For existing areas:

Conversion of all kutchha and dilapidated houses into pucca houses;
Completion of all-weather roads along main spines,
Completion of sanitation layout and construction along main spine including construction of Decentralized waste water treatment system;
Completion of street lighting along main spines;
Completion of piped water supply connection along the main spine including installation of water treatment plant;
Construction of processing plant for manure production at identified location and commencement of decentralized solid waste management system;
Construction of toilets for 100 % households, schools, anganwadi.
Completion of construction of Skill development center, Agricultural service processing center, Ware house for cold and dry storage (extension), Common Service Center and starting their respective operations.
Identification and provision of playground / social gathering space for the GP with required furniture and facilities;
Setting up of LPG distribution center;
Construction of market place to rehouse existing market;
Construction of parking space associated to large gathering space.
Initiation of the process of collection and expenditure through Own Source Revenue and setting up of adequate system for proper functioning of the same.

Phase II (2026-2030)

For existing areas and newly developed areas:

Completion of all-weather roads extending it from the main spine to individual entry points.

Extension of sanitation layout and construction of it from the main spine to individual use points.

Completion of street lighting extending it from the main spine to individual entry points.

Completion of piped water supply connection extending it from the main spine to individual entry points.

Extension of solid waste management system to new households.

Provision of Wi-Fi facility for the entire GP.

9.13 SUMMARY AND CONCLUSION

The recommendations set forward through this research will prepare Neori GP for future growth on a scale higher than present one. The future of the Neori GP begins now. The investment and development activities to be made in the region over the next ten years will crucially determine their structure and functioning as well as their capacity to accommodate and manage the inevitable future growth.

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ANNEXURE

Annexure 1 GDP report for Neori GP

7/16/2020

REVIEW OF PREVIOUS YEAR GDP

JHARKHAND >RANCHI>KANKE>NEORI(114696)

S.No.	Sector	Works Completed	Works OnGoing	Works Not Started	Works Abandoned	Planned Budget	Expenditure
S.No.	Sector	Work Name	Work Description	Work Status	Planned Budget (Rs)	Expenditure	
1	Drinking water	Aslam Ansari ke ghar ke pass Jalminar Nirman	Aslam Ansari ke ghar ke pass Jalminar Nirman	On Going	1,50,000	0	
2	Drinking water	Dhadhu Munda ke ghar ke pass Jalminar nirman	Dhadhu Munda ke ghar ke pass Jalminar nirman	On Going	1,50,000	0	
3	Drinking water	Habibulla ansari ke ghar ke pass jalminar nireman	Habibulla ansari ke ghar ke pass jalminar nireman	Not Started	1,50,000	0	
4	Drinking water	jalminar	Saket Ranjan ke ghar ke pass jalminar nirman	Not Started	1,50,000	0	
5	Drinking water	jalminar	Iltaff Ansari kr ghar ke pass jalminar nirman	On Going	1,50,000	0	
6	Drinking water	jalminar	Akhtar ansari ke ghar ke pass jalmiar nirman	Not Started	1,50,000	0	
7	Drinking water	jalminar	Rajesh oraon ke ghar ke pass jalminar nirman	On Going	1,50,000	0	
8	Drinking water	Kayla Gorayet ke ghar ke pass Jalminar nirman	Kayla Gorayet ke ghar ke pass Jalminar nirman	On Going	1,50,000	0	
9	Drinking water	khalil ansari ke ghar ke samane jalminar	khalil ansari ke ghar ke samane jalminar	Not Started	1,50,000	0	
10	Drinking water	Mustafa Ansari ke ghar ke pass Jalmiar Nirman	Mustafa Ansari ke ghar ke pass Jalmiar Nirman	On Going	1,50,000	0	
11	Drinking water	Panchayat Bhawan ke pass Karmali Tola mai Jalminar nirman	Panchayat Bhawan ke pass Karmali Tola mai Jalminar nirman	Not Started	1,50,000	0	
12	Drinking water	Rajyakrit uttkaramitt madhaya vidyalaya Neori Urdhu kanya mai Jalminar nirman	Rajyakrit uttkaramitt madhaya vidyalaya Neori Urdhu kanya mai Jalminar nirman	On Going	1,50,000	0	
13	Drinking water	rajesh oraon ke ghar ke samane jalminar	rajesh oraon ke ghar ke samane jalminar	Not Started	1,50,000	0	
14	Drinking water	Shatbhori ke pass Jalminar Nirman	Shatbhori ke pass Jalminar Nirman	On Going	1,50,000	0	
15	Drinking water	shukara mahto ke ghar ke samane jalminar	shukara mahto ke ghar ke samane jalminar	Not Started	1,50,000	0	
16	Drinking water	Sulochana Devi ke ghar ke pass Jalminar Nirman	Sulochana Devi ke ghar ke pass Jalminar Nirman	Not Started	1,50,000	0	
17	Roads	Amin Ansari ke ghar se Haji Ajibuddin Ansari ke ghar thak PCC Road nirman 250ft	Amin Ansari ke ghar se Haji Ajibuddin Ansari ke ghar thak PCC Road nirman 250ft	Not Started	2,50,000	0	
18	Roads	Babby Prawin ke ghar se Nezam Ansari ke ghar thak PCC Road nirman 250 ft	Babby Prawin ke ghar se Nezam Ansari ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0	
19	Roads	Chunnilal Thakur ke ghar se Denish Munda ke ghar thak PCC Road nirman 250 ft	Chunnilal Thakur ke ghar se Denish Munda ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0	

7/16/2020

S.No.	Sector	Work Name	Work Description	Work Status	Planned Budget (Rs)	Expendit
20	Roads	Haji Ajmuddin ke ghar se Late Navi Hussian ke ghar thak PCC Road nirman 250 ft	Haji Ajmuddin ke ghar se Late Navi Hussian ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
21	Roads	Khalil Ansari ke ghar se Kayum Ansari ke ghar thak PCC Road nirman 250 ft	Khalil Ansari ke ghar se Kayum Ansari ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
22	Roads	Manjur Ansari ke ghar se Jayull Ansari ke ghar thak PCC Road nirman 250 ft	Manjur Ansari ke ghar se Jayull Ansari ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
23	Roads	Masjid se lekar Harunn Ansari ke ghar thak PCC Road nirman 250ft	Masjid se lekar Harunn Ansari ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
24	Roads	PCC Road	Sirat nagar ke Kasinath Karmali ke ghar se Shatig khan ke ghar thak PCC Road 1000ft	Not Started	10,00,000	0
25	Roads	PCC ROAD	Sikander Ansari ke ghar se Choti Kaburstan thak PCC road 250 FT	Not Started	2,50,000	0
26	Roads	PCC ROAD	Lalu gorayet ke ghar se Krisna thakur ke ghar thak PCC road 250FT	Not Started	2,50,000	0
27	Roads	PCC ROAD	GIRDHARI MAHTO KE GHAR SE BIRENDRA MAHTO KE GHAR TAK 200 PCC ROAD	Not Started	3,00,000	0
28	Roads	PCC ROAD	Shekhar singh ke ghar se Vijay Viswakarma ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
29	Roads	PCC ROAD	kenduwa toli mai sonu mahot ke ghar se kartik mahto ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
30	Roads	PCC ROAD	Tyubb Ansari ke ghar se Naya Aganbari thak PCC road 250 FT	Not Started	2,50,000	0
31	Roads	PCC ROAD	Jamil Ansari ke ghar se Kayamudin Ansari ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
32	Roads	PCC ROAD	gram neori me sandeep pahan ke ghar se bhola pashwan ke ghar tak 200 pcc road	Not Started	3,00,000	0
33	Roads	PCC ROAD	GRAM NEORI ME KURBAN ANSARI KE GHAR SE SAFIULLAH ANSARI KE GHAR TAK 200 PCC ROAD	Not Started	3,00,000	0
34	Roads	PCC ROAD	hashib ansari ke ghar se lukman ansari ke ghar tak 260 pcc road	Not Started	3,00,000	0
35	Roads	PCC ROAD	Jitu oraon ke ghar se Nanku karmali ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
36	Roads	PCC ROAD	Saligram mahto ke ghar se Kartik Mahto ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
37	Roads	PCC ROAD	Manohar sahu ke ghar se Rajesh Verma ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
38	Roads	PCC ROAD	Alauddin ansari ke ghar se Shanker singh ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
39	Roads	PCC ROAD	Hakim Ansari ke ghar se Naimm Ansari ke ghar thak PCC road 250 FT	Not Started	2,50,000	0

7/16/2020

S.No.	Sector	Work Name	Work Description	Work Status	Planned Budget (Rs)	Expenditur
40	Roads	PCC ROAD	Jasmudin Ansari ke ghar se Rajak ansari ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
41	Roads	PCC ROAD	Talib Ansari ke ghar se yasin ansari ke ghar thak PCC road 250 FT	Not Started	2,50,000	0
42	Roads	PC ROAD	Nafrudin Ansari Ke ghar se Yasin Ansari ke ghar tak 70 Pcc Road	Not Started	1,00,000	0
43	Roads	Rabani Ansari ke ghar se Nejam Ansari ke ghar thak PCC Road nirman 250 ft	Rabani Ansari ke ghar se Nejam Ansari ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
44	Roads	Rajesh Verma ke ghar se Krishna Oraon ke ghar thak PCC Road nirman 250 ft	Rajesh Verma ke ghar se Krishna Oraon ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
45	Roads	Samsaad Ansari ke ghar se Bablu Khan ke ghar thak PCC Road nirman 250 ft	Samsaad Ansari ke ghar se Bablu Khan ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
46	Roads	Shabir Ansari ke ghar se Jhagir Ansari ke dhukkan thak PCC Road nirman 250 ft	Shabir Ansari ke ghar se Jhagir Ansari ke dhukkan thak PCC Road nirman 250 ft	Not Started	2,50,000	0
47	Roads	Shawkatt Ansari ke ghar Roshan Ansari ke ghar thak PCC Road nirman 250 ft	Shawkatt Ansari ke ghar Roshan Ansari ke ghar thak PCC Road nirman 250 ft	Not Started	2,50,000	0
48	Roads	Shoyab Ansari ke ghar se Madharsa thak PCC Road nirman 250 ft	Shoyab Ansari ke ghar se Madharsa thak PCC Road nirman 250 ft	Not Started	2,50,000	0
49		Gurundha Gaddha se Sajudd Ansari ke ghar thak Pakki Nali Nirman 200 ft	Gurundha Gaddha se Sajudd Ansari ke ghar thak Pakki Nali Nirman 200 ft	Not Started	1,50,000	0
50		Handwash	Nrori ke sabhi vidyalay aur anganbari mai Hand Wash unit	Not Started	19,500	0
51		nali nirman	Moti Singh ke ghar se Shiv Mandir ke ghar thak 200 FT Nali nirman	Not Started	2,00,000	0
52		nali nirman	Ramnath mahto ke ghar se Public school thak nali nirman 200FT	Not Started	2,00,000	0
53		nali nirman	Suleyman Ansari ke ghar se Talib Ansari ke ghar thak Nali nirman 200FT	Not Started	2,00,000	0
54		Nali Nirman Bondri wall	Neori ke Panchayat Sachivalay may Nali nirman aur Bondri wall 250 FT	Not Started	3,00,000	0
55		Shajud Ansari ke ghar se Habbibulla Ansari ke ghar thak Pakki Nali Nirman 200 ft	Shajud Ansari ke ghar se Habbibulla Ansari ke ghar thak Pakki Nali Nirman 200 ft	Not Started	1,50,000	0
56		Shokta Gadda	Devlal thakur ke ghar ke pass Shokta gadda 10*10 *8 ft	Not Started	85,000	0
57		Shokta Gadda	Birbal gorith ke ghar ke pass shokta gadda 10*10*8 ft	Not Started	85,000	0
58		Shokta Gadda	kasinath karmali ke ghar ke pass shokta gadda	Not Started	50,000	0
59		Shokta Gadda	saligram mahto ke ghar ke pass	Not Started	50,000	0

Annexure II Neori GP. Mission Antodaya Report



सत्यमेव जयते

Ministry of Panchayati Raj

Gram Panchayat Development Plan

STATE: JHARKHAND > DISTRICT: RANCHI > DEVELOPMENT BLOCK: KANKE
GRAM PANCHAYAT: NEORI [114696]

पंचायती राज

Villages:Neuri [373506]		Strength	Moderate Gap	Critical Gap
Domain	Parameter Description	Village Status	GP Status	Suggestions
Health and Sanitation	Is the village Open Defecation Free	No	No	Build and use toilet. Gram Sabha should penalise those who make GP unclean.
	Community Waste Disposal System	No	No	MGNREGA can be used to create waste disposal system.
	Availability of Community bio gas or recycle of waste for production use	No	No	
	Availability of drainage facilities	None	None	Village drain planning. MGNREGA can be used.
	Availability of PHC/CHC Sub Centre	CHC	CHC	
	Availability of Veterinary Clinic Hospital	Yes	Yes	
Agriculture, allied and livelihood	Availability of Govt. Seed Centre	No	No	
	% households engaged exclusively in Non-Farm activities	30	30.00	Contact the Block Mission Manager, National Rural Liveihood Mission of your state.
	Availability of markets	Weekly Haat	Weekly Haat	Farmer groups can be created to build access to markets.
Housing	% of household with kuccha wall and kuccha roof	70.73	70.73	Check the waiting list for PMAY-G.
Land Improvement	% of Area irrigated	99.00	99.00	Call Kisan call centre 1800-180-1551.
	Availability of soil testing centres	Yes	Yes	Anyone from the village can open soil testing centre.
	Availability of Fertiliser Shop	Yes	Yes	
Animal Husbandry	% of households supported by village based Livestock Extension Workers	20.33	20.33	Call agnculture helpline 1094 for details
Drinking Water	Availability of Piped tap water	None	None	
Roads	Whether the village is connected to All weather road	Yes	Yes	
	Whether village has an internal cc/ brick road	No	No	MGNREGA can be used to create internal cc/brick road.
	Availability of Public Transport	Auto	Auto	
Rural Electrification	Availability of electricity for domestic use	8-12 Hrs	8-12 Hrs	Renewable electricity equipments can be used at subsidized rates.
Non-conventional energy	% of Household using clean energy (LPG/Bio gas)	40.65	40.65	
Poverty alleviation programme	% of households mobilized into SHGs	11.22	11.22	Contact the Block Mission Manager, National Rural Liveihood Mission of your state.
	% of SHGs accessed bank loans	7	7	Contact the Block Mission Manager, National Rural Liveihood Mission of your state.
	% of households mobilized into Producer Groups (PGs)	0.00	0.00	Contact the Block Mission Manager, National Rural Liveihood Mission of your state.





सत्यमेव जयते

Ministry of Panchayati Raj

Gram Panchayat Development Plan

STATE: JHARKHAND > DISTRICT: RANCHI > DEVELOPMENT BLOCK: KANKE
GRAM PANCHAYAT: NEORI [114696]



पंचायती राज

Poverty alleviation programme	% of households supported by village based Agricultural Extension Workers	16.26	16.26	Red	Call agriculture helpline 1094 for details
	% of SHGs Promoted	11	11	Green	
Vocational education	Availability of Vocational Educational Centre	No	No	Red	
Women & Child Development	Availability of Aanganwadi Centre	Yes	Yes	Green	Contact the District Magistrate.
	% of children aged 0-3 years registered under Aanganwadi	100.00	100.00	Green	Register and send children to Aanganwadi.
	% of children aged 0-3 years immunised	100.00	100.00	Green	
	% of children categorized as Non-Stunted as per ICDS record	0.00	0.00	Red	Take your child to Village Health and Nutrition Day.
Social Welfare	Availability of Post Office	Yes	Yes	Green	
	Telephone Services	Mobile	Mobile	Green	
	Availability of Internet Cafe/Common Service Centre	Yes	Yes	Green	Anyone from the village can open the internet cafe/common service centre.
	Availability of Banks	Yes	Yes	Green	
	Availability of ATM	Yes	Yes	Green	
Education	Availability of School	Primary School	Primary School	Yellow	
Public Distribution System	Availability of Public Distribution System (PDS)	Yes	Yes	Green	

STATE: JHARKHAND(20)		DISTRICT: RANCHI(339)							
Sub District: Kanke(2684)		DEVELOPMENT BLOCK : KANKE(3223)							
GRAM PANCHAYAT : NEORI(114696)		GRAM PANCHAYAT SCORE : 47							
LGD CODE : 114696									
Villages	Basic Parameters	Key Infrastructure Parameters	Economic Development and Livelihood	Health, Nutrition and Sanitation	Women Empowerment	Financial Inclusion	Total Score		
Max Score	4	64	4	18	7	3	100		
Neuri (373506)	4	34	3	6	0	0	47		
Average Score of GP	4	34	3	6	0	0	47		
BASIC PARAMETERS									
Villages	Total Population	Male Population	Female Population	Total Households	Total No. Of SHGs Promoted	Total Area(in ha)	Net sown Area (in ha)	Total Un-irrigated Land (in ha)	Total Irrigated Area (in ha)
Neuri (373506)	6907	3700	3207	1230	11	388.98	97.98	194	97
Total	6907	3700	3207	1230	11	388.98	97.98	194	97



Baseline Survey 2017

1. Location Parameters

State:	JHARKHAND (20)	District :	RANCHI (339)
Sub District :	Kanke (2684)	Development Block :	KANKE (3223)
Gram Panchayat :	NEORI (114696)	Village :	Neuri (373506)
PIN :	835217	Serial No/Total Village :	1/1

2. Basic Parameters

S.NO	Question	Census 2011 Status	Survey 2017 Status	Max Score	Score Obtained
1	Total Population	6907	6907		
2	Male	3700	3700		
3	Female	3207	3207		
4	Total Household	1230	1230		
5	Total number of SHGs promoted	NA	11		
6	Total Area (in hectares)	388.98	388.98		
7	Net sown Area(In hectares)	52.81	97.98		
8	Total Un irrigated land area (in hectare)	44.95	194		
9	Area irrigated (in hectare)	7.85	97	4	4

3. Key Infrastructure Parameters

10	% households engaged exclusively in Farm activities	NA	70		
11	% households engaged exclusively in Non-farm activities	NA	30	5	0
12	Availability of banks	Yes	Yes	5	5
13	Availability of bank/Business correspondent with internet connectivity	NA	-		
14	Availability of ATM	No	Yes	1	1
15	Whether the village is connected to All weather road	Yes	Yes	5	5
16	Whether village has an internal cc/ brick road	No	No	4	0
17	Availability of Public Transport	Auto	Auto	3	1
18	Availability of Internet Café/Common Service Center	No	Yes	2	2
19	Availability of electricity for domestic use(In Hrs)	4-8 Hrs	8-12 Hrs	4	3
20	Availability of Public Distribution System (PDS)	Yes	Yes	1	1
21	Availability of markets	None	Weekly Haat	3	3
22	Availability of Piped tap water	None	None (Nearest facility More than 10 kms)	4	0
23	Availability of Telephone Services	Both	Mobile	2	2
24	Total no of household using clean energy (LPG/Bio gas)	NA	500	4	2
25	No of household with kuccha wall and kuccha roof	122	870	5	2
26	Availability of Post office/Sub-Post office	Yes	Yes	1	1
27	Availability of School	Senior Secondary School	Primary School	4	1
28	Availability of Vocational Educational Centre/ITI/RSETI/DDU-GKY	No	No (Nearest facility More than 10 kms)	2	0
29	Availability of Sub centre /PHC/CHC	Sub Centre	CHC	3	3
30	Availability of Veterinary Clinic Hospital	No	Yes	2	2

Annexure III SECC data of Neori GP



Ministry of Rural Development Socio Economic and Caste Census

STATE: JHARKHAND > DISTRICT: Ranchi > DEVELOPMENT BLOCK: KANKE
GRAM PANCHAYAT: NEORI [114696]



SECC ABSTRACT

Village	Sex Ratio	Total Household	Excluded Household	Included household	Deprived Household	Zero Deprived Household	Household Owning Land
Neuri	940	1144	521	1	584	38	165
Total	940	1144	521	1	584	38	165

EXCLUDED HOUSEHOLDS

Village	Households with any member earning more than Rs. 10,000 p.m	Households with three or more rooms with pucca walls and pucca roof	Households owning 2.5 acres or more irrigated land with at least one irrigation equipment	Household owning 5 acres or more land irrigated for two or more crop seasons	Households owning 7.5 acres or more land with at least one irrigation equipment	Households having Kisan credit card with the credit limit of Rs.50,000 and above
Neuri	66	376	1	4	1	0
Total	66	376	1	4	1	0

INCLUDED HOUSEHOLDS

Village	HH without shelter	Destitute/ living on alms	Manual scavengers	Primitive tribal groups	Legally released bonded labourers
Neuri	0	1	0	0	0
Total	0	1	0	0	0

DEPRIVED HOUSEHOLDS

Village	Only one room with kucha walls and kucha roof	No adult member between age 16 to 59	Female headed households with no adult male member between age 16 to 59	Disabled member and no able bodied adult member	SC/ST households	No literate adult above 25 years	Landless households deriving major part of their income from manual casual labour
Neuri	23	14	33	1	130	167	545
Total	23	14	33	1	130	167	545





Ministry of Rural Development

Socio Economic and Caste Census

STATE: JHARKHAND > DISTRICT: Ranchi > DEVELOPMENT BLOCK: KANKE
GRAM PANCHAYAT: NEORI [114696]



HOUSE OWNERSHIP, LAND OWNERSHIP, MONTHLY INCOME

Village	House Ownership			Land Owned			Households with Highest Earning member Income as		
	Owned	Rented	Any Other	Total unirrigated land (in hectares)	Total irrigated land (in hectares)	Total other irrigated land (in hectares)	Less than Rs. 5,000	Between Rs. 5,000 and Rs 10,000	Rs. 10,000 or more
Neuri	1038	59	47	65.50	184.84	1.00	962	116	66
Total	1038	59	47	65.50	184.84	1.00	962	116	66

MAIN SOURCE OF HOUSEHOLD INCOME

Village	Cultivation	Manual Casual Labour	Part-time or Full-Time Domestic Service	Foraging Rag Picking	Non-agricultural Own Account Enterprise	Begging/Charity/Alms collection	Others
Neuri	21	1103	5	0	1	1	13
Total	21	1103	5	0	1	1	13

POPULATION

Village	Total Population	SC Population	ST Population	Male	Female	Transgender
Neuri	6304	101	1163	3249	3055	0
Total	6304	101	1163	3249	3055	0

DISTRIBUTION OF POPULATION BY AGE

Village	0-5 Yrs	6-15 Yrs	16-25 Yrs	26-35 Yrs	36-45 Yrs	46-55 Yrs	56-65 Yrs	66-75 Yrs	Above 76 Yrs
Neuri	620	1700	1307	976	706	492	314	131	58
Total	620	1700	1307	976	706	492	314	131	58

POPULATION BY MARITAL STATUS

Village	Never Married	Currently Married	Widowed	Separated	Divorced
Neuri	3371	2651	194	22	20
Total	3371	2651	194	22	20





Ministry of Rural Development

Socio Economic and Caste Census

STATE: JHARKHAND > DISTRICT: Ranchi > DEVELOPMENT BLOCK: KANKE
GRAM PANCHAYAT: NEORI [114696]



POPULATION BY HIGHEST EDUCATION LEVEL COMPLETED

Village	Illiterate	Below Primary	Primary	Middle	Secondary	Higher Secondary	Graduate or Above	Other
Neuri	1668	805	1518	1144	625	331	211	2
Total	1668	805	1518	1144	625	331	211	2

POPULATION BY DISABILITY

Village	In Seeing	In Hearing	In Speech	In Movement	Mental Retardation	Mental Illness	Other Disability	Multiples Disability	No Disability
Neuri	3	4	5	20	1	3	3	7	6258
Total	3	4	5	20	1	3	3	7	6258



Annexure IV 15th Finance Commission allotment to Neori GP

क्र०	जिला का नाम	पंचायत समिति का नाम	पंचायत का नाम	जनसंख्या	क्षेत्रफल (वर्ग कि०मी०)	जनसंख्या के आधार पर (90%)	क्षेत्रफल के आधार पर (10%)	कुल आवंटित राशि (₹+₹)
1	2	3	4	5	6	7	8	9
110			दुदुल उत्तरी	6180	4.52	656.948	18.793	675,741
111			दुदुल दक्षिणी	5361	1.40	569.887	5.821	575,708
112			कुदरतीग	4563	9.06	485.058	37.670	522,728
113			बातातारीग	5378	18.54	571.694	77.086	648,780
114			घेट	5704	16.43	606.349	68.313	674,662
115		09 रातु	साकुर	6163	17.89	655.141	74.383	729,524
116			बापापीडी	4642	5.30	493.455	22.036	515,491
117			पुरिया	5201	8.03	552.878	33.387	586,265
118			हुन्हुनी	6242	7.26	663.539	30.186	693,725
119			रातु उत्तरी	5486	2.13	583.175	8.856	592,031
120			रातु पूर्वी	5472	2.17	581.686	9.022	590,708
121			रातु दक्षिणी	5732	2.19	609.325	9.106	618,431
122			रातु पश्चिमी	5689	2.15	604.754	8.939	613,693
123			साहना	6158	13.70	654.610	56.962	711,572
124			पातो	6011	10.25	638.983	42.618	681,601
125			बाजपुर	4756	9.89	505.574	41.121	546,695
126			तिगरा	4713	9.08	501.003	37.753	538,756
127			बिजुलिया	6087	8.35	647.062	34.718	681,780
128			गुनु	4213	6.81	447.852	28.315	476,167
129			स्मिरिया	6523	11.00	693.410	45.736	739,146
130			कुटकरटोली	9503	8.64	1,010.191	35.923	1,046,114
131			सुपडील	4780	3.82	508.125	15.883	524,008
132			घटकरपुर	4800	2.18	510.251	9.064	519,315
133			पण्डरा	3921	1.64	416.811	6.819	423,630
134			कामंडे	9444	8.70	1,003.919	36.173	1,040,092
135		10 कांके	उरगुद	6574	22.49	698.832	93.509	792,341
136			उपरकांगली	5567	35.08	591.785	145.856	737,641
137			काटमजुरी	5903	8.08	627.503	33.595	661,098
138			मालाकांग	7809	17.47	830.115	72.637	902,752
139			मनातु	6060	14.42	644.192	59.956	704,148
140			जयपुर	6954	7.99	739.226	33.221	772,447
141			सुखारहुद दक्षिणी	5301	5.20	563.509	21.621	585,130
142			सुखारहुद उत्तरी	6561	6.04	697.450	25.113	722,563
143			गागी	6683	10.67	710.418	44.364	754,782
144			ईसापीडी	6424	5.84	682.886	24.282	707,168
145			मिशीरिया	6550	4.07	696.280	16.922	713,202
146			राइका	6183	35.83	657.267	148.974	806,241
147			बातु	7885	14.67	838.194	60.995	899,189
148			कांकाटोरो	6335	12.79	673.425	53.178	726,603
149			हुनीर	10004	10.17	1,063.449	42.285	1,105,734
150			कांके पश्चिमी	5144	5.78	546.819	24.032	570,851
151			कांके दक्षिणी	5433	10.21	577.541	42.451	619,992
152			कांके उत्तरी	6983	12.21	742.309	50.767	793,076
153			अरसण्डे	9582	9.67	1,018.589	40.206	1,058,795
154			बाडेया	5891	10.27	626.227	42.701	668,928
155			होसर	4917	7.46	522.689	31.017	553,706
156			सलकापाहु	5648	8.17	600.396	33.969	634,365
157			उरगुनु	5607	9.07	596.037	37.711	633,748
158			घान्दव	6239	8.81	663.220	36.630	699,850
159			हुन्हुद	5710	8.59	606.986	35.716	642,702
160			कांके	6907	3.47	734.230	14.438	748,668
161			बुदु	4452	8.97	473.258	37.296	510,554
162			कांके	6237	6.49	663.008	26.984	689,992

