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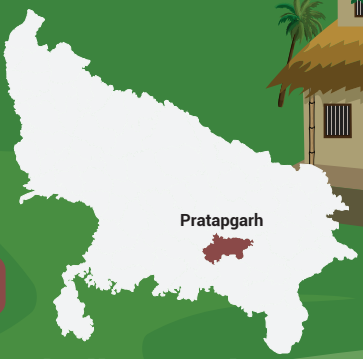
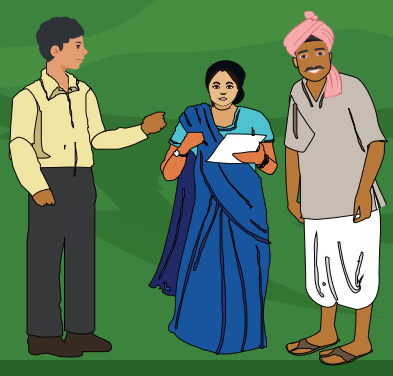
CLIMATE SMART GRAM PANCHAYAT ACTION PLAN

YADAVPATTI GRAM PANCHAYAT



Department of Environment, Forest and Climate Change

Government of Uttar Pradesh



GORAKHPUR ENVIRONMENTAL ACTION GROUP

VASUDHA FOUNDATION
Green ways for a good earth!

CLIMATE SMART GRAM PANCHAYAT
ACTION PLAN

Yadavpatti Gram Panchayat

Department of Environment, Forest and Climate Change

Government of Uttar Pradesh

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–::संदेश::–

ग्राम पंचायतों को जलवायु सजग ग्राम पंचायत बनाने हेतु समर्पित क्लाइमेट स्मार्ट ग्राम पंचायत–**यादवपट्टी विकास खण्ड कुण्डा जनपद प्रतापगढ़** की कार्ययोजना हेतु संदेश लिखते हुए मुझे बहुत सम्मानका अनुभव हो रहा है। जैसा कि हम जलवायु के परिर्वतन से उत्पन्न चुनौतियों को देख रहे हैं, हमारे लिए जमीनी स्तर पर तत्काल और व्यापक कार्यवाही किये जाने की आवश्यकता है। हमारी ग्राम पंचायतें समुदाय के निकटतम शासन की एक आवश्यक इकाई होने के कारण जलवायु संबंधी चुनौतियों को कम करने और सतत् विकास को बढ़ावा देने में महत्वपूर्ण भूमिका निभा सकती है। हमारे समुदाय, हमारी पारिस्थितिकी तंत्र और हमारी अर्थ व्यवस्था आपस में जुड़े हैं और हमारे लिए ऐसी रणनीतियों को अपनाना आवश्यक है जो जलवायु से जुड़े जोखिमों को कम करती हो।

ग्राम पंचायतो हेतु तैयार यह कार्ययोजना जलवायु पर कार्य करने के लिए प्रतिबद्ध है तथा जो पंचायतों को क्लाइमेट स्मार्ट पंचायत बनाने के लिए एक मार्ग दर्शक के रूप में कार्य करेगी।

मैं इस क्लाइमेट स्मार्ट कार्ययोजना निर्माण के लिए **पर्यावरण, वन एवं जलवायु परिवर्तन विभाग, उत्तर प्रदेश तकनीकी सहयोगी वसुधा फाउंडेशन नई दिल्ली, स्थानीय सहयोगी संस्था गोरखपुर एनवायरमेंट एक्शन ग्रुप (जी.ई.ए.जी.) गोरखपुर एवं तरुन चेतना समिति प्रतापगढ़** को धन्यवाद करता हूँ और आशा करता हूँ कि निर्मित कार्ययोजना ग्राम पंचायत को क्लाइमेट स्मार्ट ग्राम पंचायत बनाने में सहयोगी होगी।

।। शुभकामनाओं सहित ।।

भवदीय

21-09-2024

(संजीव रंजन)

डा0 दिव्या मिश्रा
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–::संदेश::–

मैं क्लाइमेट स्मार्ट ग्राम पंचायत–यादवपट्टी विकास खण्ड कुण्डा जनपद प्रतापगढ़ की कार्ययोजना विकसित करने में पर्यावरण, वन एवं जलवायु परिवर्तन विभाग, उत्तर प्रदेश के तकनीकी सहयोगी वसुधा फाउंडेशन नई दिल्ली स्थानीय सहयोगी संस्था गोरखपुर एनवायरमेंट एक्शन ग्रुप (जी.ई.ए.जी.) गोरखपुर एवं तरुन चेतना समिति प्रतापगढ़ उत्तर प्रदेश के प्रयासों के लिए धन्यवाद देती हूँ।

जिस प्रकार हम और हमारी ग्राम पंचायतें जलवायु परिवर्तन से उत्पन्न चुनौतियों का सामना कर रही हैं, उसमें यह कार्ययोजना सहयोगी होगी। स्मार्ट और टिकाऊ प्रथाओं को बढ़ावा देकर हमारा लक्ष्य एक ऐसा मॉडल तैयार करना है जो न केवल हमारे पर्यावरण की रक्षा करे बल्कि समुदाय के समग्र कल्याण को भी बढ़ायें।

यह कार्ययोजना ग्राम पंचायतो में संवाद, सहयोग और क्रियान्वयन को प्रेरित करेगी। इसके साथ ही हम सब मिलकर जलवायु नीतियों को प्रभावी रूप से लागू कर सकते हैं तथा स्थायी लक्ष्यों को अपना सकते हैं और एक ऐसे भविष्य का निर्माण कर सकते हैं जो न केवल पर्यावरणीय रूप से मजबूत हो बल्कि समाजिक रूप से भी न्याय संगत हो।

योजना के सफल कार्यान्वयन और समुदाय एवं पर्यावरण पर इसके सकारात्मक प्रभाव की आशा करती हूँ।

।। शुभकामनाओं सहित ।।

भवदीया

डा0 दिव्या मिश्रा

मुख्यमंत्री पुरस्कार प्राप्त आर्दश ग्राम पंचायत यादव पट्टी

सौरभ सिंह
(ग्राम प्रधान)

निवासी
यादवपट्टी कुण्डा प्रतापगढ
मो0– 9455907717

पत्रांक...दो०...

दिनॉक 18/09/2024

ग्राम प्रधान
ग्राम पंचायत –यादव पट्टी
वि0ख0–कुण्डा जिला– प्रतापगढ

अभार

सर्वप्रथम आप सभी को प्रधान ग्राम पंचायत यादवपट्टी वि0ख0 कुण्डा जिला– प्रतापगढ की ओर से सादर नमस्कार और अभिनन्दन । मुझे आशा ही नही पूर्ण विश्वास है कि आप सभी स्वस्थ होंगे । मैं अपनी ग्राम पंचायत को क्लाईमेट स्मार्ट ग्राम पंचायत बनाने की ओर बढाये गये कदम प्रयास को आपसे साझा करते हुए रोमांचित हूँ ।

जलवायु परिवर्तन से उत्पन्न चुनौतियां हर दिन अधिक स्पष्ट होती जा रही है । और हमारे समुदाय और भावी पीढियो की भलाई के लिए उनपर कार्य करना हमारी सामूहिक जिम्मेदारी है इस विषय की गम्भीरता को समझते हुए सभी ग्रामवासियों की सर्वसहमति से हमने अपनी ग्राम पंचायत को क्लाईमेट स्मार्ट ग्राम पंचायत बनाने की प्रकिया को प्रारम्भ किया है । सर्वप्रथम आवाश्यक था ग्राम पंचायत में जलवायु परिवर्तन सम्बन्धित समस्याओं और मद्दो की पहचान करना जिसके लिए सामुदायिक सहभागिता के साथ –साथ ग्राम सभा की बैठक एवं समूह केन्द्रित चर्चा के आयोजन के अतिरिक्त व्यक्तिगत चर्चा की गयी और ऑकड़ो को एकत्रित किया गया । आंकडे एकत्रित करने की प्रकिया को पंचायत में कियान्वित करने के लिए मैं स्थानीय सहयोगी संस्था ग्राम्या संस्थान वाराणसी व गोरखपुर इन्वायरमेन्ट एक्शन ग्रुप (जी0ई0ए0जी) गोरखपुर का आंकडे एकत्रित करने में हमारे ग्राम वासियों के समर्थन व सकिय भागीदारी के लिए हृदय से धन्यवाद हम सभी साथ मिलकर हमारी ग्राम पंचायत में एक पर्यावरण अनुकूल वाताकत्रवरण बनायेगें । जो न केवल हमारे प्राकृतित संसाधनो की रक्षा करेगा । अपितु प्रत्येक ग्रामीण के जीवन की समस्त गुणवत्ता को भी बढायेगा ।

इसके साथ ही पर्यावरण वन एवं जलवायु परिवर्तन उ0प्र0 और तकनीकि सहयोगी पार्टनर वसुधा फाउण्डेशन, नई दिल्ली का भी अभारी हूँ । जिन्हाने एकत्र किये गये आंकडे को कार्य योजना का स्वरूप दिया तथा मार्गदर्शन एवं तकनीकि सहयोग प्रदान किया ।

मैं सभी ग्राम वासियों से अपनी ग्राम पंचायत को क्लाईमेंट स्मार्ट ग्राम पंचायत बनाने के लिए हाथ मिलाकर आगे बढने का आग्रह करता हूँ । आइये हम सभी एक सकारात्मक बदलाव की ओर आगे बढे और दूसरों के लिए उदाहारण स्थापित करें ।

धन्यवाद

(ग्राम प्रधान)
ग्राम पंचायत यादवपट्टी
वि0ख0–कुण्डा जिला–प्रतापगढ

Contents

List of Figures

1 Executive Summary

The Yadavpatti Gram Panchayat in the District of Pratapgarh lies in the Eastern Plain agro-climatic zone of Uttar Pradesh. The Climate Smart Gram Panchayat Action Plan of Yadavpatti has been prepared with an aim to strengthen climate action at the Gram Panchayat (GP) level and make it climate smart/ resilient by 2035. The action plan provides a GP-specific roadmap to aid in building resilience, enhancing adaptive capacity, reducing vulnerabilities, and associated risks as well as mitigating greenhouse gas emissions, while reaping other co-benefits like, additional revenue generation, overall socio-economic development, improved health, and natural resources management.

The Action Plan has been prepared by adopting the draft Standard Operating Procedure (SOP) for Development of Climate Smart Gram Panchayat Action Plans prepared by the Department of Environment, Forests and Climate Change, Government of Uttar Pradesh. The Climate Smart Gram Panchayat Action Plan (CSGPAP) for Yadavpatti is formulated in a manner that it can be easily and effectively integrated with the existing Gram Panchayat Development Plan (GPDP) of Yadavpatti GP.

The action plan[1] captures the key demographic and socio-economic aspects, key issues pertaining to the Eastern Plains agro-climatic zone, climate variability,carbon footprint analysis of the GP and current status of natural resources. The action plan also includes inputs from the community members of Yadavpatti GP gathered through field surveys, focus group discussions and relevant government departments and agencies. This helped in building a baseline and identifying the key issues of Yadavpatti.

The GP has 4 revenue villages and 8 hamlets. There are 516 households with a total population[2] of 2,868 as reported during the field survey. The main economic activity is agriculture. A baseline assessment shows that Yadavpatti GP has a carbon footprint of ~2,249 tCO_2e[3].

Approach

Development of primary survey tool

Survey & primary data collection: Survey was carried out with support from Gram Pradhan and community members. Participatory Rural Appraisal (PRA) activities included Focus Group Discussions (FGDs) with residents and community members, transect walks, development of social resources map etc.

Data analyses & plan development:

- ***Development of GP profile:*** A detailed GP profile was developed based on the responses received on the Survey Questionnaire. This profile includes demographics, climate variability, key economic activities, natural resources, and amenities of Yadavpatti.
- ***Identification of key issues:*** An exhaustive list of key climatic, developmental & environmental issues was identified through responses received in Survey Questionnaire & HRVCA.
- ***Carbon footprint estimation:*** Carbon footprint was estimated for key activities* in Yadavpatti.
- ***Proposed recommendations:*** Recommendations were developed for Yadavpatti based on the environmental and climatic issues identified. These recommendations also take into account the prevailing agro-climatic characteristics of eastern plains zone. Additionally, sector-wise adaptation needs & mitigation potential of Yadavpatti have been determined

A participatory approach was followed throughout the development of the action plan. This will result in enhancing the capacity of the community for climate leadership while fostering a sense of ownership and accountability at the local level.

* Activities include- Electricity consumption, residential cooking, emissions arising from diesel pump usage, transport, crop residue burning, livestock emissions, fertiliser emissions, rice cultivation & domestic wastewater.

1 The Gram Panchayat Action Plan includes aspects of climate change adaptation, mitigation and Hazard Risk Vulnerability and Capacity Assessment (HRVCA)

2 Census 2011 data notes: Total Population 837

3 Includes scope 2 emissions due to electricity consumption within the GP (data obtained from UPPCL and grid emission factor from CEA)

A few priority areas identified for immediate action in Yadavpatti GP are:

- Strengthening road and drainage infrastructure to reduce waterlogging and increase resilience.
- Adopting sustainable agriculture practices, including micro irrigation practices and growing climate resilient crops (drought tolerant varieties of wheat and paddy, drought resilient crops like millets, etc.)
- Ensuring sustainable water management though restoration and conservation of water bodies, as well as promoting rainwater harvesting and other water recharge methods
- Harnessing Renewable Energy (RE) and energy efficiency solutions such as solar rooftop installations, solar-powered pumps, and energy efficient fixtures in households and public utilities amongst others.

Taking into account the vulnerable sectors, issues emerging from focus group discussions and field surveys, and ongoing activities in the GP, the recommendations have been proposed. The recommendations cover the thematic areas of water, agriculture, clean energy, enhancing green spaces, sustainable waste management, sustainable mobility, and enhanced livelihoods and green entrepreneurship.

The activities under these recommendations have been divided into 3 phases- Phase I (2024-2027), Phase II (2027-2030) & Phase III (2030-2035). The phase-wise targets can be further distributed into annual targets at the discretion of the Gram Panchayats. Moreover, the financing avenues for the suggested activities have been indicated along with phase-wise targets, potential costs, and supporting Central and State schemes.

The Climate Smart Gram Panchayat Action Plan (CSGPAP) for Yadavpatti is formulated in a manner that it can be easily and effectively integrated with the existing Gram Panchayat Development Plan (GPDP) of Yadavpatti GP.

CSGPAP will supplement and complement the Yadavpatti GPDP by:

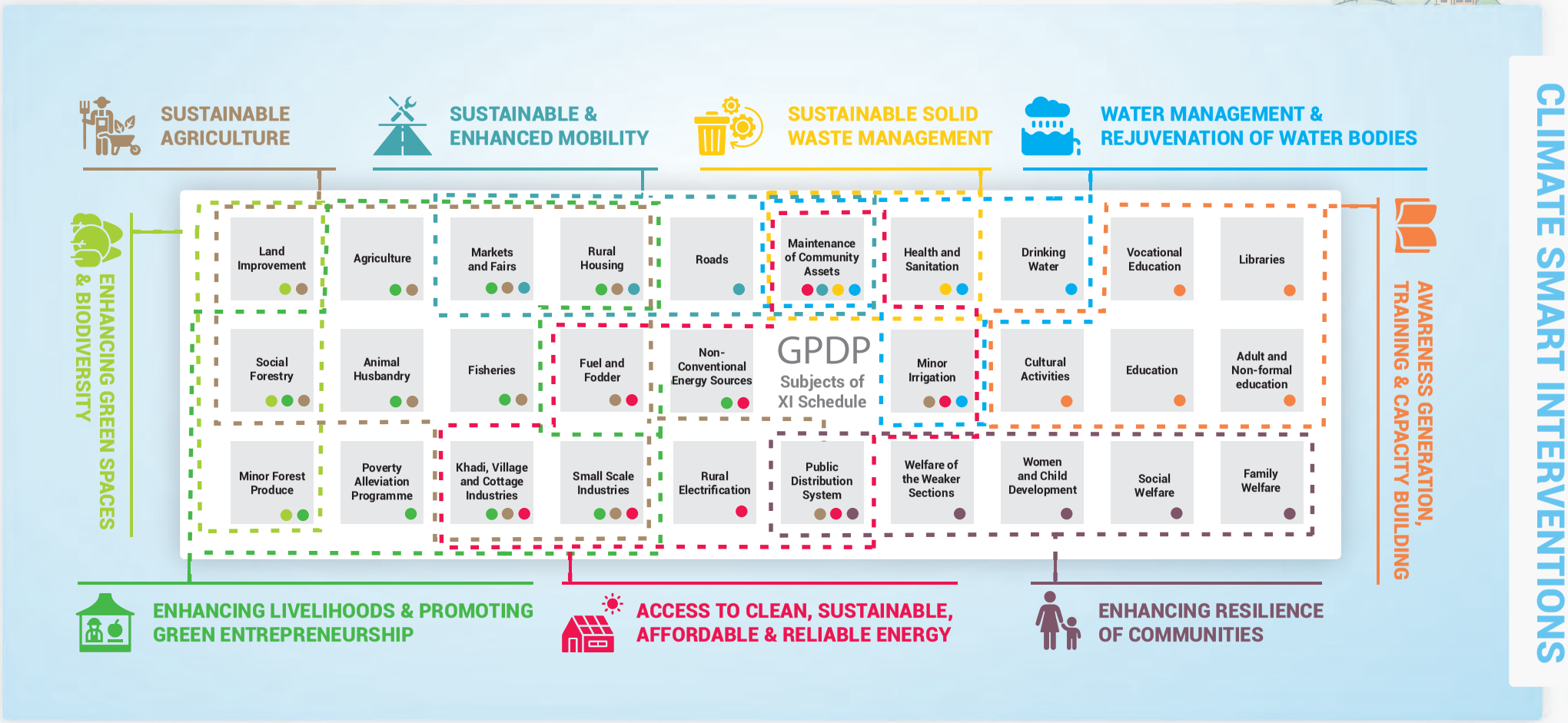
a. Broad-basing existing development initiatives and activities with a climate perspective
b. Dovetailing ongoing National and State Programmes on climate change with the proposed development activities in the GPDP

The interventions and annual targets in this Action Plan can be implemented in convergence with the planned activities of the Yadavpatti GPDP. The existing budgetary allocations earmarked for certain programs under the GPDP can be used for climate adaptation and mitigation activities proposed in this plan. For example, water body rejuvenation carried out through schemes like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) will have climate change adaptation benefits as well. Similarly, funds earmarked under the "non-conventional energy" subject of the Eleventh Schedule (basis of GPDP) can be utilised to scale up renewable energy deployment.

The total emissions avoided/mitigated through this plan is estimated to be ~2,591 tonnes carbon dioxide equivalent (tCO_2e) per annum and sequestration potential goes up to 72,800 tCO_2 over the next 20-25 years. The total cost estimated for the implementation of this plan across the three phases is approximately ₹23 crores (for 11 years). From this, 30-35 percent (approximately 7 crores) of the required funding can be availed from Central and State Schemes/Missions/Programmes. In addition to the finance available through various Central and State Government Schemes/Programmes, the Government of Uttar Pradesh has adopted an innovative approach of 'Panchayat-Private-Partnerships,' to engage CSR and mobilise private finance.

Climate Smart and Sustainable Gram Panchayats by 2035

Mainstreaming Climate Action with Development



2 Gram Panchayat Profile

Yadavpatti

Yadavpatti Gram Panchayat at a Glance†

Location	Kunda Block, Pratapgarh District
Total Area	234.38 ha
Composition	4 Revenue Villages 8 Hamlets
Total Population[4]	2,868
No. of Males	1,570
No. of Females	1,298
Total Households[5]	516

Panchayat Infrastructure

3 (Panchayat Bhawan, 1 Primary School, Anganwadi Centre)

Primary Economic Activity

Agriculture

Land-use

~112 ha Agriculture Land

~ 0.75 ha Common Land

~ 122 ha Other land

7 Orchard/Fruit Gardens

Water Resources

4 Ponds

11 Wells

1 River (Ganga)

Agro-climatic Zone[6]

Eastern Plain

- Climatic conditions: Characterised by hot summers, cold winters, and moderate rainfall
- Maximum Temperature: 45.2 °C
- Minimum Temperature: 5 °C
- Average Annual Rainfall: 1,134 mm
- Soil: Predominantly alluvial
- Suitable crops: Maize, pulses and vegetables

Composite Vulnerability Index

Low

Sectoral Vulnerability of District[7]

- Water Vulnerability: High
- Energy Vulnerability: High
- Agriculture Vulnerability: Moderate
- Forest Vulnerability: Moderate
- Rural Development Vulnerability: Moderate
- Health Vulnerability: Moderate
- Disaster Management Vulnerability: Low

4 Census 2011 data notes: Total Population 837; Male- 442; Female- 395

5 451 pucca houses and 65 kaccha houses (mud and tile)

6 Source: UP Agriculture Department

7 UP SAPCC 2.0

† Data from Field Survey conducted for preparation of the Plan (March-April, 2023)

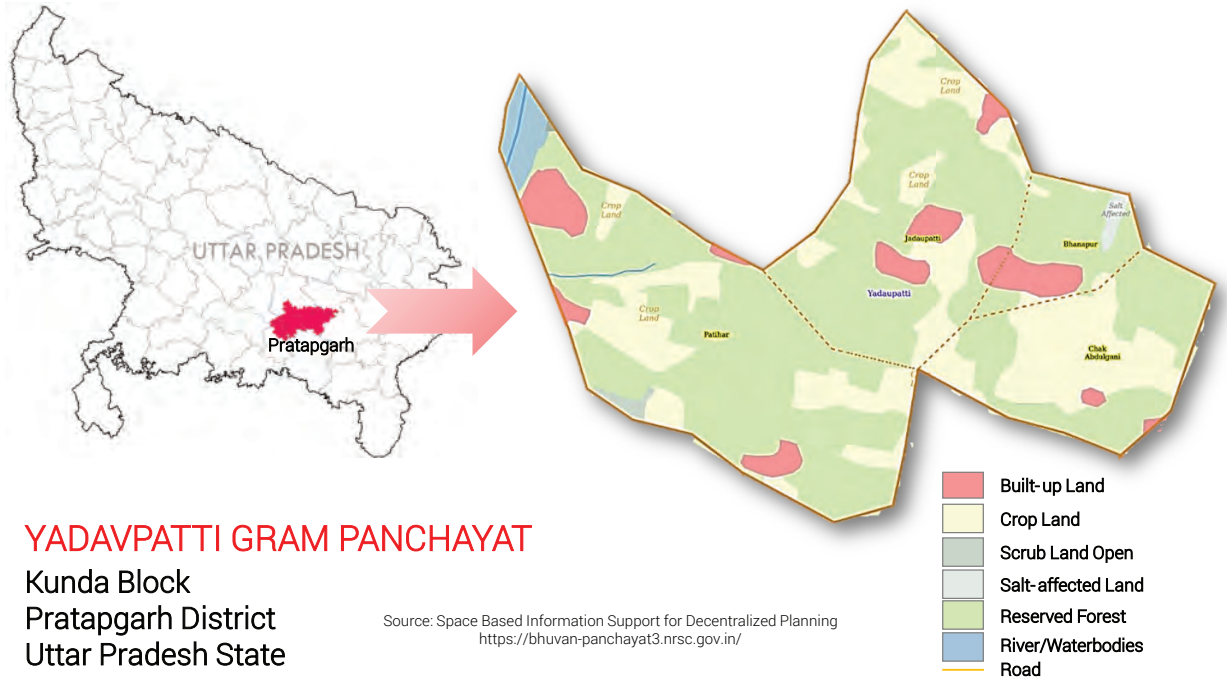


Figure 1: Land-use map of Yadavpatti Gram Panchayat, Pratapgarh District

Climate Variability Profile

The climate variability data received from India Meteorological Department (IMD) – temperature and rainfall[8] – indicates that in 2019, the annual average minimum temperature saw an increase of 2.24 °C compared to 1991, while the annual average maximum temperature did not convey any significant trends (see Figure 2). During the same timeframe, annual rainfall shows a slight decreasing trend (see Figure 3).However, IMD data does not capture granular temperature variability at the gram panchayat level and further, there are days for which data was not available.

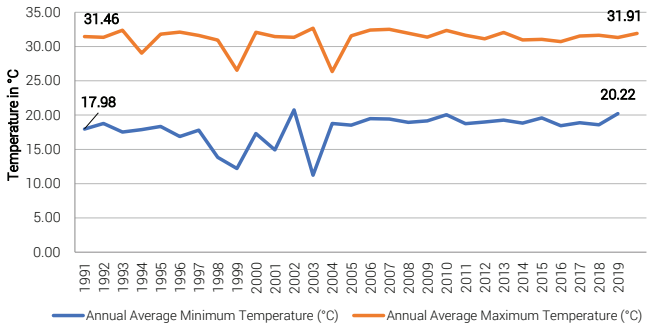


Figure 2: Annual average maximum and minimum temperature in Yadavpatti, 1991- 2019

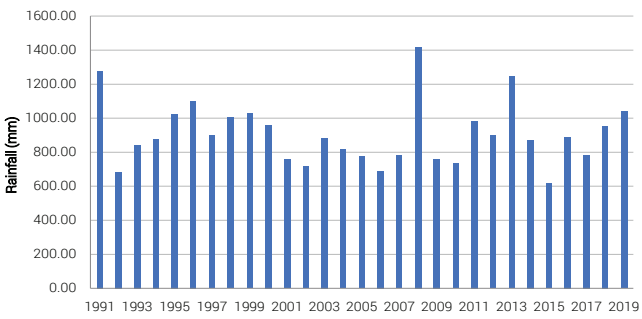


Figure 3: Annual rainfall (mm) in Yadavpatti, 1991-2019

A recent report by World Meteorological Organization, indicates that Asia as a whole has warmed faster than the global land and ocean average between 1991 to 2023 and there has been an evident surge in warm days across large parts of South Asia in the decade of 2010-2020[9]. Similar findings are also confirmed by IPCC[10], and MoES, Government of India[11].

8 Daily temperature (maximum and minimum) data and daily rainfall data taken from Barabanki, Fursatganj, Faizabad, Sultanpur and Sultanpur 1 stations (closest IMD stations to Yadavpatti GP).

9 State of the Climate in Asia 2023 (wmo.int)

10 AR6 Synthesis Report: Climate Change 2023 (ipcc.ch)

11 Assessment of Climate Change over the Indian Region: A Report of the Ministry of Earth Sciences (MoES), Government of India | SpringerLink (https://link.springer.com/book/10.1007/978-981-15-4327-2)

Further, the perception of communities on weather changes informed from the field survey and focus group discussion indicates that across the decade of 2010-2020, the GP has witnessed an increase in the number of summer days by 15 days and decrease in the number of winter days by approximately 20 days. The number of rainy days has also decreased by approximately 20 days. The climate variability analysis undertaken for the GP accounted for both IMD data as well as community perception to bring out a balanced view of the prevailing climate variability in the GP.

Key Economic Activities

Agriculture serves as the primary source of income, engaging nearly 54 percent of households (see Figure 4). This is followed by engagement in non-farm related wage labour (19 percent) and animal husbandry (~9 percent). Some other households are involved in the service sector, small-scale/ cottage industries and running local businesses.

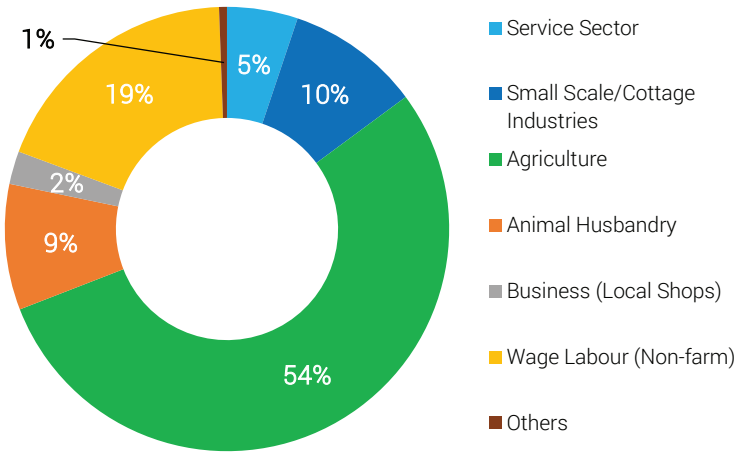


Figure 4: Sources of income by number of households in Yadavpatti

At the time of the survey, around 8 percent of the households were below poverty line (BPL) in the GP. The ration card data reveals that 87 percent of the households benefit from the public distribution schemes and hold ration cards. Of these, 40 households hold Antyodaya cards[12] (Figure 5).

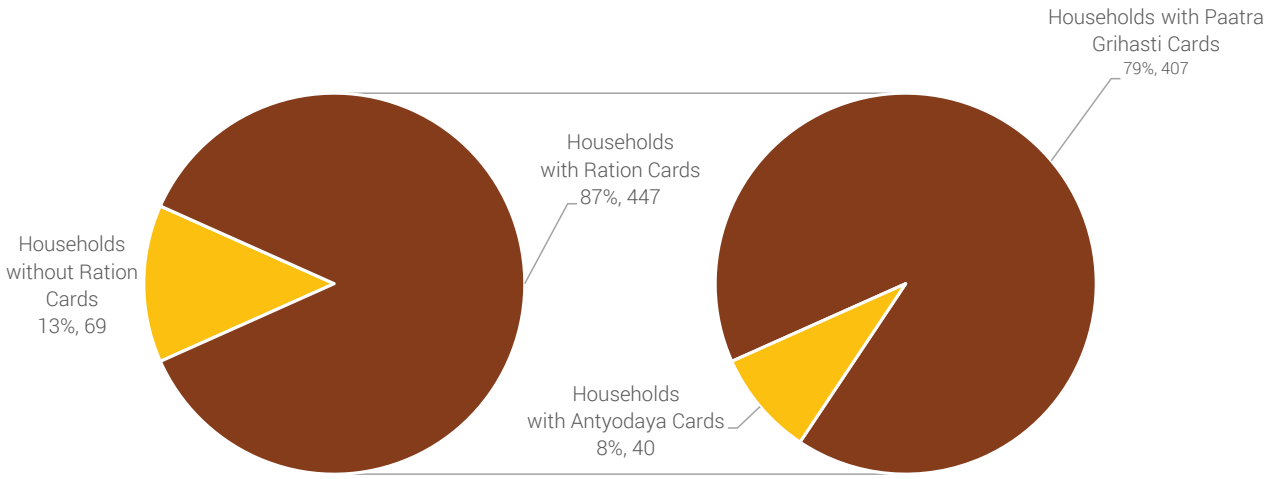


Figure 5: : Households with ration cards in Yadavpatti

Women's Employment

There are around 40 working women in Yadavpatti who are mostly engaged in agriculture and wage labour activities. Some women are involved in the service sector and animal husbandry. There are 78 women-headed households[13] (around 15 percent of the total households) in the GP. The field survey also indicates that there are 2 active Self-Help Groups which are mostly involved in tailoring.

12 National Food Security Portal

13 Women-headed households are those households where women are sole/primary earners

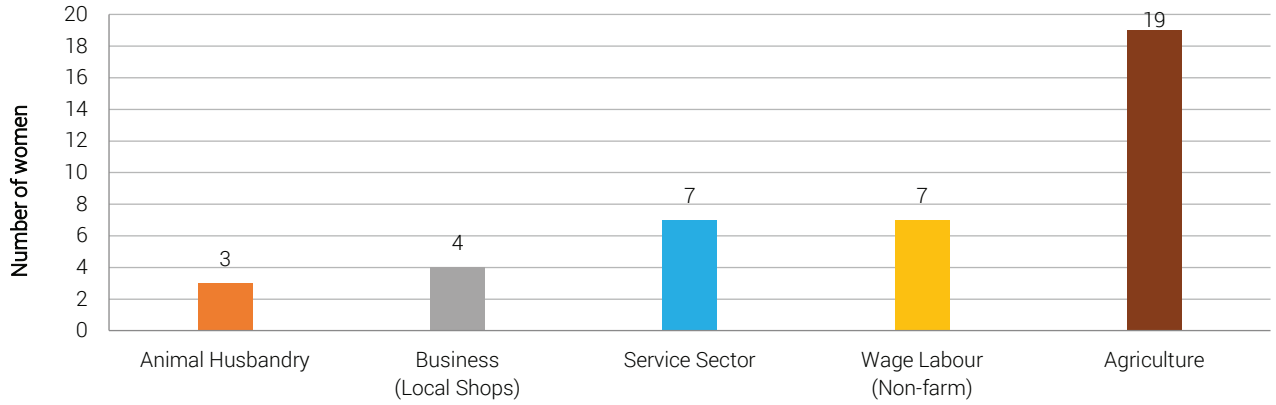


Figure 6: Sector-wise engagement of women in Yadavpatti

Agriculture

Over half the households (54 perecent) in Yadavpatti are dependent on agriculture for their livelihoods and they are engaged in various ways[14] as shown in Figure 7.

The net sown area in Yadavpatti is approximately 112 ha while the gross cropped area is ~ 195 ha (see Figure 8). The major *kharif* crops grown in the GP are rice, maize, *urad dal,* and *moong dal*. The major *rabi* crops grown in the area are wheat, sugarcane and turmeric. The main source of irrigation is rainwater and groundwater (through tubewells and canals). There are 8 grid connected electric pumps and 4 diesel pumps in use in the GP.

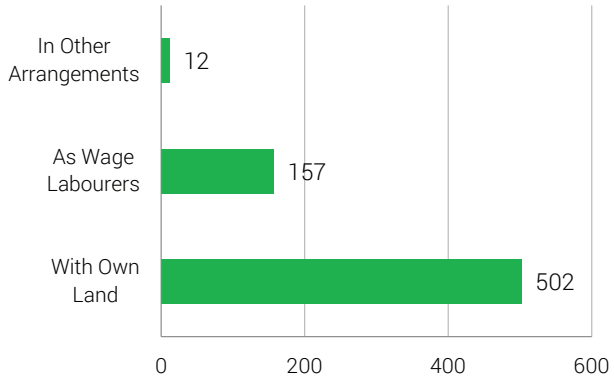


Figure 7: Agriculture only dependent households in Yadavpatti

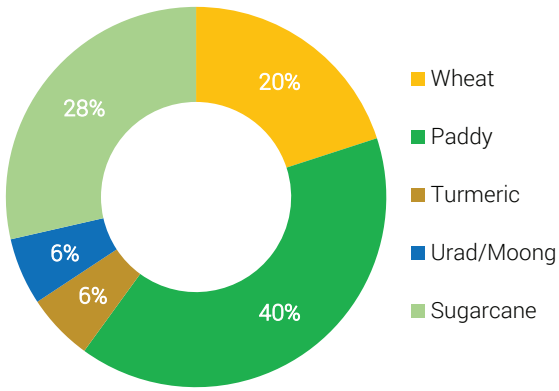


Figure 8: Crop-wise distribution of area in Yadavpatti

Additionally, only 9 percent of the population of the GP is engaged in animal husbandry. The total livestock population is 2,055 (465 cows, 590 buffaloes, 1,000 goats) in Yadavpatti. There are a small number of pigs (10) in Yadavpatti.

Natural Resources

Yadavpatti has 4 ponds and 11 wells, as per the field survey. Agroforestry plantations have been carried out near water bodies. Field survey has noted that plantations exist on around 81 ha of land, which is mostly owned privately. Commonly planted tree species include, teak, *neem*, *sheesham and jamun* (with a survival rate of 90%)[15]. There are also a few mango orchards[16] in the gram panchayat.

14 It may be noted that a number of households may be engaged in agriculture in more than one way. For example, small landowners could also be working as wage-labourers on larger farms. Additionally, large-land owning farmers could also be practicing contract farming

15 As reported during the field survey

16 As reported in the HRVCA

Amenities in Yadavpatti

Electricity & LPG

- Electricity access: ~98 % households
- LPG coverage: ~ 95 % households[17]

Water

- Main source of water for household use and GP level supply: Groundwater
- Handpumps- 144[18]

Waste

- Open Defecation (ODF) status achieved
- Household toilet coverage: 100%

Mobility and Market Access

- Connectivity to State Highway 1 (Prayagraj-Lucknow) at a distance 3 km
- Railway station at a distance 15 km
- Bus station at a distance of 14 km
- Government ration shop at a distance 7 km
- Agriculture market at a distance of 0.5 km
- Post office at a distance of 14 km

Education

- 1 Primary Schools

Health

- Anganwadi Centre

17 As reported by the Panchayat Secretary
18 Piped water supply data not available

3 Carbon Footprint

While the Carbon Footprint (in other words, Greenhouse Gas (GHG) emissions) from rural areas is not significant, this exercise has been carried out to develop a complete baseline of the gram panchayat. It may be noted that the objective of this plan is not to develop a carbon neutral GP, but a Climate Smart GP. However, the recommendations will have emission reduction benefits which perhaps will help make the GP carbon neutral or even carbon negative. Keeping this in view, this exercise therefore does not include GHG projections.

Further, the carbon footprint also aids in providing recommendations to ensure sustainable development that aligns with the principles of the LiFE Mission. Overall, in 2022, Yadavpatti GP emitted approximately 2,249 tonnes of carbon dioxide equivalent (tCO_2e) from a wide range of activities (see Figure 9).

Activities in the agriculture, energy and waste sectors contributed to the carbon footprint of Yadavpatti. Agriculture sector emissions include those due to rice cultivation, application of fertilisers on agricultural fields, emission from livestock and manure management, and crop residue burning. Energy sector emissions are due to electricity consumption[19], combustions of fuelwood and LPG for cooking, use of diesel pumps for irrigation, use of generators for power backup and use of fossil fuel in various means of transport. Emissions due to domestic wastewater are included in the waste sector.

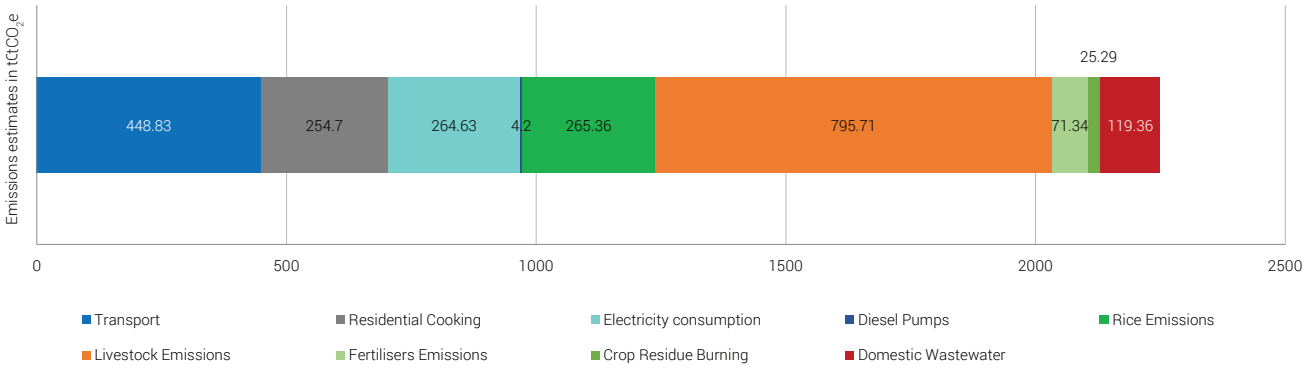


Figure 9: Carbon footprint of various activities in Yadavpatti in 2022

Emissions from the agriculture sector accounted for nearly 52 percent of the total emissions of Yadavpatti GP, with emissions from livestock (795.71 tCO_2e) and rice cultivation (265.36 tCO_2e) emissions being the leading causes of GHG emissions. The energy sector accounted for 43 percent of the total emissions. Within the sector, transport category (~449 tCO_2e) was the key emitter, this was followed by residential cooking (254.7 tCO_2e), and electricity consumption (264.63 tCO_2e). The waste sector accounted for around 5 percent of the total emissions.

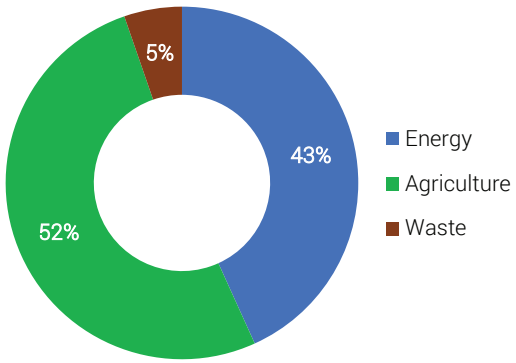


Figure 10: Share of sectors in carbon footprint of Yadavpatti in 2022

19 Emissions due to electricity consumption are categorized as Scope 2 emissions, as the fuel (coal) combustion for electricity generation takes place outside the GP boundary

4 Broad Issues Identified

The broad issues identified are based on the data collected and analysis conducted to establish the GP baseline, the inherent characteristics of the agro-climatic zone in which the GP is located as well as the inputs received from the community members during the field surveys, and focus group discussions.

Wherever possible, this information was corroborated with available government data sources. However, certain issues are completely based on information from the community because for these GP level data was not available for corroboration. The issues identified in the GP are summarised below. Further, the detailed issues are listed in the respective themes of the recommendations section.

Broad Issues:

- Changes in seasonal durations and erratic rainfall affecting sowing time, harvesting time and increased irrigation needs of crops among other impacts in the GP
- Frequent waterlogging issues in July to October. Drought conditions experienced in 2018 and 2022
- Unsustainable agricultural and animal husbandry practices. Frequent incidences of pests and crop diseases leading to crop losses
- Lack of proper waste management practices leading to dumping of waste in public areas, wells and ponds
- Poor maintenance of natural resources including water bodies, leading to reduction in number of ponds and functional wells in the gram panchayat
- Dependence on fossil fuels and traditional fuels for cooking, agricultural and transport needs
- Lack of maintenance of drainage infrastructure which adds to the problem of waterlogging experienced in the gram panchayat
- Improper maintenance of road infrastructure hampering mobility and the problem is exacerbated by waterlogging issue
- Lack of awareness about climate change and its impacts
- Lack of awareness about various schemes and programmes of the Central and State governments on clean energy and climate change

5 Proposed Recommendations

Each thematic issue consists of several interventions, with focus on both mitigation and adaptation that address the key issues identified in the previous section. The interventions are described with **phased targets** and **cost estimates**[20] (to the extent possible). The targets are spread across three phases: Phase-I (2024-25 to 2026-27); Phase-II (2027-28 to 2029-30); and Phase-III (2030-31 to 2034-35).

Targets under each phase can be further distributed into annual targets (year-on-year targets) ensuring effective and monitored implementation. The template for developing year-on-year targets can be referred from the document 'Standard Operating Procedure (SOP) for Development of Climate Smart Gram Panchayat Action Plan'. The SOP is a step-by-step approach to be used by Gram Padhans, community members or any other stakeholder to develop Climate Smart Action Plans for their respective Gram Panchayats.

The financing avenues identified include Central or State schemes, various tied and untied funds of the Gram Panchayat or private finance through CSR interventions have been identified. The detailed recommendations are in the following section:

Recommendations suggested in the action plan span across the following themes:

1. **Sustainable Agriculture**
2. **Management and Rejuvenation of Water Bodies**
3. **Enhancing Green Spaces and Biodiversity**
4. **Sustainable Solid Waste Management**
5. **Access to Clean, Sustainable, Affordable and Reliable Energy**
6. **Sustainable and Enhanced Mobility**
7. **Enhancing Livelihoods and Green Entrepreneurship**

Further, while not forming a part of the recommendations, a list of possible initiatives has also been listed out for consideration by the Panchayats. These initiatives have been implemented successfully in some parts of India and could be replicated here as well. However, since these initiatives are not covered by any ongoing schemes/programmes of the Government of Uttar Pradesh, the funding for these initiatives at this point in time will have to be borne by the communities or by exploring CSR and private sources. Hence, they are not included in the main recommendation.

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20 Costs have been estimated based on different methods like: inputs from key members of the Gram Panchayat,

- OR cost estimates as per relevant schemes and policies,
- OR approximate per unit costs of inputs required
- OR schedules of rates of various departments.

1. Sustainable Agriculture

Context & Issues[21]

- The total area under agriculture in Yadavpatti is 112 ha and the gross cropped area is nearly ~ 195 ha.
- Nearly 54 percent of the households in the GP depend on agriculture and ~ 9 percent households depend on animal husbandry as a source of income.
- The major *kharif* crops grown in the GP are rice, maize, *urad dal,* and *moong dal*. The major *rabi* crops grown in the area are wheat, sugarcane and turmeric.
- Yadavpatti has experienced incidences of changes in seasonal duration, changes in rainfall (unseasonal and erratic). The gram panchayat has experienced drought in 2018 and 2022 (mostly during June-August).
- Changes in the sowing season for paddy has shifted from early June to July due to late arrival of monsoon. Similarly, sowing of wheat has now shifted from November to December due to the late onset of winter.
- Farmers use around 38 tonnes of urea and other nitrogenous fertilizers per year which leads to GHG emissions of ~71 tonnes CO_2e per year. The farmers also rely on other chemical inputs such as pesticides and weedicides.
- Frequent pests and crop diseases occurring almost every year between 2018-2022 (September to January period).
- In the years 2021 and 2022, crop loss (rice) has been caused due to disease (rust). The loss amounted to a total of 170 quintals of produce or around ₹1,68,000 (corroborated by prevailing MSP of the respective years).
- Natural farming is not practiced in Yadavpatti.
- Agricultural water use has increased as reported in the field surveys, stressing on the need for water conservation and improved irrigation techniques.

The above points highlight a need for adopting sustainable and drought resilient agricultural practices to enhance adaptive capacity.

21 As understood from the community during field surveys and FGDs and corroborated by relevant sources

Building Climate Resilience in Agriculture

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Promotion and adoption of micro irrigation practices on suitable agricultural area[22] 2. Construction of bunds with trees around agricultural fields if required 3. Adoption of drought tolerant variety of rice (Ratna, Pant-12, Narendra-80, 2026) and shift to dry direct seeded rice (Direct seeded Rice Saket-4) to reduce water requirement of the crop[23] 4. Adoption of drought tolerant variety of wheat 5. Crop rotation and mixed cropping with drought resistance crops such as millets and legumes 6. Promote artificial recharge by building farm ponds where feasible 7. Creating awareness about various insurance programmes for farmers to protect them from crop loss	1. Extension of micro irrigation 2. Extension of bunds 3. Construction of more farm ponds as required 4. Expansion of phase I activities to adopt drought tolerant varieties of rice & wheat 5. Crop rotation and mixed cropping with drought resistance crops such as millets and legumes 6. Continue the initiatives on creating awareness and provide support to farmer to avail various insurance programmes to protect them from crop loss	1. Extension of micro irrigation 2. Expansion of Phase II activities to adopt drought tolerant varieties of rice & wheat
Target	1. Micro irrigation on 30% of suitable agricultural land 2. Construction of bunds ~748 ha of (50%) of agricultural land 3. Construction of farm ponds of 300 m^3 capacity each as feasible and as required	1. Micro irrigation on additional 40% of suitable agricultural land 2. Construction of bunds around remaining ~ 748 ha of agricultural land (100%)	1. Micro irrigation on 100% suitable agricultural land 2. Maintenance of bunds and farm ponds

22 Suitable agricultural land includes land under mustard, potato and other vegetables

23 Agriculture Contingency Plan for District: Pratapgarh (https://agriwelfare.gov.in/sites/default/files/UP66-Pratapgarh-31.07.14_0.pdf)

Estimated Cost	1. Cost of micro irrigation per hectare: ₹1,00,000 2. Bunds: Around ₹1,12,250 3. Cost of 1 farm pond of 300 m^3 capacity: ₹90,000 *Total cost: over ₹1,12,250*	1. Micro irrigation: As per requirement 2. Bunds: Around ₹1,12,250 3. Farm pond: cost as per requirement *Total cost: over ₹1,12,250*	Micro irrigation: As per requirement

Transition to Natural Farming

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Promote natural farming through the use of organic fertiliser, bio-pesticides and bio-weedicides. » Training and demonstration » Development of nursery and local seed bank » Organic/natural farming certification process to initiated » Market linkages to be explored 2. Promotion and adoption of practices such as mixed cropping, crop rotation, mulching, zero tillage 3. Use of mulching to minimise evaporation losses from irrigated fields 4. Promotion of Agro-Eco System Analysis (AESA) based Integrated Pest Management (IPM) strategies	Expansion of Phase I activities	Expansion of Phase I activities

Target	Transitioning ~17 ha (15%) of land to natural farming	Transitioning additional ~ 45 ha (cumulative 40%) of land to natural farming	Transitioning remaining ~50 ha (cumulative 100%) of land to natural farming
Estimated Cost	1. Cost of training (one time): ₹60,000 2. Transition of land to natural farming: ₹41,51,280 *Total cost: ₹42,11,280*	1. Cost of training (one time): ₹60,000 2. Transition of land to natural farming: ₹1,10,70,080 *Total cost: ₹1,11,30,080*	1. Cost of training (one time): ₹60,000 2. Transition of land to natural farming: ₹1,24,53,840 *Total cost: ₹1,25,13,840*

Sustainable Livestock Management

Phase	**I** 2024-25 to 2026-27	**II** 2027-28 to 2029-30	**III** 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Raising awareness and capacity building for households engaged in animal husbandry for livestock management 2. Training community members as animal health workers/ para-vet training for improving access to livestock health services Refer to section *"Additional Recommendations"* for intervention on reducing methane emission from livestock.	1. Expansion of training and capacity building activities 2. Scaling up para-vet training as per requirement	1. Expansion of training and capacity building activities 2. Scaling up para-vet training as per requirement

Target	1. Workshops organised for households engaged in animal husbandry on sustainable rearing practices, disease prevention, and management of livestock health 2. Training of 2 para-vets[24]	1. Additional workshops on disease prevention and sustainable rearing practices organised 2. Continued training and capacity building for livestock management	1. Additional workshops on disease prevention and sustainable rearing practices organised 2. Continued training and capacity building for livestock management
Estimated Cost	Cost of workshop and para-vet training: As per requirement	As per requirement	As per requirement

Existing Schemes and Programmes

- Drought management and proofing practices can be supported through funds and subsidies from Pradhan Mantri Krishi Sinchai Yojana (PMKSY), UP Millets revival programme, Pradhan Mantri Fasal Bima Yojana, National Agricultural Insurance Scheme, Weather-based Crop Insurance Scheme, Gramin Krishi Mausam Seva Scheme.
- Drought proofing activities and creation of nurseries and seed banks can be streamlined through MGNREGA
- Organic farming practices can be supported through funds and subsidies provided under various schemes such as: Paramparagat Krishi Vikas Yojana (PKVY) and Soil Health Management Scheme
- Technical and knowledge support as well as organic farming demonstrations for farmers can be enabled through National and Regional Centres for Organic Farming (NCOF & RCOF), Krishi Vigyan Kendra (KVK), nearest Organic Farming Cell of the Department of Agriculture, Cooperation and Farmer Welfare.
- Agricultural Technology Management Agency (ATMA) can be tapped into for support for training and capacity building of the farmers and FPOs for technology upgradation and sustainable farming.
- Krishi Raksha Scheme supports farmers in pest control through different ecological resources and to promote use of bio-chemicals.
- Para-veterinarian training and capacity building can be leveraged through state schemes like State Rural Livelihood Mission, Uttar Pradesh Pashudhan Swasthya Evam Rog Niyantran Yojana, and Rashtriya Gokul Mission.

24 Number of community-based animal health workers trained to based on requirement of the GP

Other Sources of Finance

- Set-up & operationalise: cold-storage facility to help minimise post-harvest losses (in alignment with schemes mentioned in 'Access to Clean, Sustainable, Affordable and Reliable Energy' section)
- Raising awareness: information on organic farming practices and benefits, inputs required, demonstrations, relevant sources of information and guidance, registration process, verification and certification process, market linkages and weather-based information services etc.
- Provide guidance, training, and capacity building for farmers, FPOs, SHGs and other community members to avail insurance, benefits of different schemes as well as for technical aspects of implementing Climate Smart Agriculture practices including adoption of organic fertilisers, eventual transition to organic farming, drought proofing agriculture and sustainable livestock management.
- Further, capacity building of farmers, FPOs, SHGs and other community members engaged in sustainable agriculture in Yaduapatti can be carried out in collaboration with technical experts and institutes in the region, local NGOs, CSOs and corporates.

Key Departments

- Department of Agriculture, Cooperation and Farmer Welfare
- Department of Horticulture and Food Processing
- Centre for Integrated Pest Management (CIPM)
- Department of Land Resources
- Jal Shakti Department
- Agriculture Technology Management Agency (ATMA)
- Animal Husbandry Department
- Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA)
- Regional Centres for Organic Farming
- Krishi Vigyan Kendra, Pratapgarh

2. Management and Rejuvenation of Water Bodies

Context & Issues[25]

- The primary source of water in Yadavpatti is groundwater. Households also rely on handpumps for water[26]. There are 144 handpumps being used in the gram panchayat.
- There are 4 ponds[27] and 11 wells in the gram panchayat. However, these ponds and wells are poorly maintained and filled with silt, debris, weeds and plastics. Of these, one pond is being developed as an *Amrit Sarovar*.
- Waterlogging is a key concern in Yadavpatti, particularly in the monsoon season – July to October. It is exacerbated by inefficient and poorly maintained drainage infrastructure.
- Yadavpatti is mostly dependent on seasonal sources of water for irrigation and residents have noted that water requirement for agriculture practices has increased over the years.

Dependence on groundwater highlights the urgent need for watershed management to conserve water and replenish groundwater resources. The following recommendations are proposed to reduce vulnerability, build resilience, and improve water availability in Yadavpatti.

25 As understood from the community during field surveys and FGDs and corroborated by relevant sources

26 Piped water supply data supply not available for the gram panchayat

27 Refer to HRVCA for exact locations

Rejuvenation and Conservation of Water Bodies

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Cleaning, desilting, deepening of pond and fencing of ponds 2. Cleaning and repair of wells 3. Reboring of hand pumps to improve availability of water 4. Tree plantation around water bodies with tree guards. 5. Capacity building of the existing Village Water and Sanitation Committee (VWSC) to enhance awareness among various key community groups improve water use efficiency and water conservation	1. Regular maintenance of ponds 2. Maintenance of wells and handpumps 3. Additional tree plantation around pond 4. Capacity building of the community and other stakeholders	Regular maintenance of ponds
Target[28]	1. 4 ponds cleaned and desilted 2. 10 of 11 wells cleaned and repaired 3. Deepening of 1 pond 4. Construction of 70 recharge pits 5. 47 handpumps rebored 6. Plantation of 1,000 trees with tree guards around ponds	1. Maintenance of 12 ponds 2. Maintenance of 4 wells and handpumps 3. 1,000 additional trees planted around ponds	Maintenance of 12 ponds

28 Refer to HRVCA for exact locations

Estimated Cost	1. Cleaning & desilting of ponds: ₹12,00,000 2. Cleaning & repair of 10 wells: ₹7,65,000 3. Deepening of 1 pond: ₹8,00,000 4. Reboring of handpumps: ₹28,20,000 *Plantation around water bodies: covered in section "Enhancing Green Spaces and Biodiversity"* *Total cost: ₹55,85,000*	1. Maintenance of ponds: ₹15,00,000 2. Maintenance of wells and handpumps: as per requirement *Plantation around water bodies: covered in section "Enhancing Green Spaces and Biodiversity"* *Total cost: ₹15,00,000*	Maintenance of ponds: ₹15,00,000 *Total cost: ₹15,00,000*

Enhancing Drainage Infrastructure

Phase	**I** 2024-25 to 2026-27	**II** 2027-28 to 2029-30	**III** 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Construction of new drains 2. Cleaning, desilting, and repair of existing drains	Phase I activities continue	Phase I activities continue
Target	1. Construction of drains in 8 locations of total length around 1.54 km[29] 2. Cleaning of 0.85 km of existing drains (includes deepening of drains in certain locations[30]) 3. Construction of culvert in strategic locations	Regular maintenance of drains in the GP	Regular maintenance of drains in the GP

29 Exact locations of drains given in HRVCA

30 Refer to HRVCA for exact locations of drains (new & existing)

Estimated Cost	1. Construction of drains: ₹40,70,000 2. Cleaning of existing drains: ₹8,20,000 3. Construction of culvert in 3 locations[31]: ₹17,00,000 *Total cost: ₹65,90,00*	As per requirement	As per requirement

Rainwater Harvesting (RwH) Practices

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. RwH structures installation in Panchayati Raj Institution (PRI) buildings 2. Recharge pits for recharging groundwater 3. Incorporating RwH system in all new buildings	1. Installation of RwH structures in residential buildings 2. Digging of more recharge pits/trenches in the identified catchment areas 3. Incorporating RwH system in all new buildings	1. Installation of RwH structures in residential buildings 2. Incorporating RwH system in all new buildings
Target	1. RwH in all PRI buildings- Installation of recharge pit of storage capacity 10 m^3 2. Recharge pits for recharging groundwater	1. Households having a plot size above 1,500 sq. ft. households to install RwH structures with an average storage capacity of 10 m^3 2. Additional recharge pits dug as per requirements	1. Households having a plot size above 1,000 sq. ft households to install RwH structures with an average storage capacity of 10 m^3 2. Maintenance of recharge pits
Estimated Cost	1. RwH: ₹1,05,000 for 3 units 2. Cost of 70 recharge pits: ₹ 9,90,000 *Total cost: ₹10,95,000*	1. RwH: cost as per requirement (₹35,000 for 1 rainwater harvesting structure with 10 m^3 capacity) 2. Recharge pits: Cost as per requirement	Cost as per requirement

31 As indicated in HRVCA

Existing Schemes and Programmes

- Development of rainwater harvesting systems can be carried out through provisions and resources made available through Jal Shakti Abhiyan: 'Catch the Rain' campaign.
- UP State Annual Budget under Irrigation Department can be channeled for GP level water body conservation and restoration activities.
- Annual budgets under MGNREGA and Watershed Development Component under Pradhan Mantri Krishi Sinchai Yojana (PMKSY) can be leveraged for watershed development activities.

Other Sources of Finance

- Corporate/ CSR can be encouraged to 'adopt a water body' to contribute to the maintenance and upkeep of water bodies and wells

Key Departments

- Department of Rural Development
- Irrigation and Water Resources Department, Ministry of Jal Shakti
- Uttar Pradesh Department of Land Resources

3. Enhancing Green Spaces and Biodiversity

Context & Issues[32]

- Agroforestry plantations have been carried out near water bodies in Yadavpatti.
- Field survey has noted that plantations exist on around 81 ha of land, which is mostly owned privately. Commonly planted tree species include, teak, *neem*, *sheesham and jamun* (with a survival rate of 90%)[33]. There are also a few mango orchards in the gram panchayat.
- Yadavpatti has no demarcated forest land.

While these activities are being carried out in Yadavpatti, with the availability of some common land there is further potential to enhance the green spaces in Yadavpatti. This will not only improve thermal comfort and provide shade but also help improve soil health and water levels in the long term, in addition to enhancing carbon sink in the GP.

32 As understood from the community during field surveys and FGDs and corroborated by relevant sources

33 As reported during the field survey

Improving Green Cover

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Annual community-based plantation activities[34] through various initiatives: » **Green Stewardship programme**[35] for students (5 students selected) » Creation of a **Food Forest** by planting indigenous fruit trees 2. Development of Arogya Van **-** procurement and preparation of land, species selection and plantation of various medicinal herbs[36], shrubs and trees	1. Existing plantations maintained 2. Plantation activities continued and enhanced with creation of **Bal Van**[37] 3. Farmers encouraged to adopt agroforestry on suitable land 4. Arogya Van is established	1. Plantation activities to continue and maintained- **Bal Van**, Food Forest and other plantations 2. 100% of land suitable for agroforestry is covered under agro-forestry initiative 3. **Arogya Van** maintained and units for production of natural medicines and supplements established
Target	1. 1,000 saplings of common and endangered trees to be planted and ensure at least 65% survival rate (using tree guards). *Sequestration potential 5,600 tCO_2 to 10,000 tCO_2 in 15-20 years* 2. Around 0.1 ha of land allocated/demarcated to establish *Arogya Van*	1. Another 1,500 to 2,000 saplings planted, along roads, pathways and around water bodies in the GP *Sequestration potential 9,800 tCO_2 to 17,500 tCO_2 in 15-20 years*	1. Another 1,500 to 2,000 saplings planted *Sequestration potential 9,800 tCO_2 to 17,500 tCO_2 in 15-20 years* 2. Agro-forestry adopted in the remaining land suitable for agroforestry i.e. ~30 ha, and 3,000 trees planted *Sequestration potential of teak plantation=16,800 tCO_2 to 30,000 tCO_2 in 20 years*

34 Trees species listed in Annexure VI

35 School students will be engaged in planting trees and Student Leaders will be picked from each class who will motivate their fellows as well as the GP community to plant trees.

36 Suitable species are listed in Annexure VI

37 New parents will be gifted with saplings of indigenous evergreen trees as a celebration of birth of their children and be encouraged to nurture the plants through their children's life

Target		2. Agro-forestry adopted in ~20 ha land (40% of land suitable for agroforestry[38]), 2,000 trees planted *Sequestration potential of teak plantation= 11,200 tCO_2 to 20,000 tCO_2 in 20 years* 3. Arogya Van established and maintained 4. Capacity building of FPOs, Women's groups, youth groups to manufacture and market natural medicines and supplements	3. Arogya Van maintained and production of natural medicines and supplements continues
Estimated Cost	Plantation activities: ₹12,70,000 *Total Cost: ₹12,70,000*	1. Plantation activities: ₹ 19,05,000 to ₹25,40,000 2. Agro-forestry activities: Around ₹8,00,000 *Total Cost: ₹27,05,000 to ₹33,40,000*	1. Plantation activities: ₹19,05,000 to ₹25,40,000 2. Agro-forestry activities: Around ₹12,00,000 *Total Cost: ₹ 31,05,000 to ₹37,40,000*

Establishing a Nursery

Phase	**I** 2024-25 to 2026-27	**II** 2027-28 to 2029-30	**III** 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Establish a nursery for the gram panchayat by employing SHGs 2. Train SHGs to maintain and run the nursery	Maintenance of nursery	Maintenance of nursery

38 The agricultural land under wheat and pulses (~50 ha) is considered suitable for agroforestry.

Target	Establish one nursery on gram panchayat land to help improve green cover and also provide additional income to women[39]	Maintenance of 1 nursery	Maintenance of 1 nursery
Estimated Cost	Cost of construction and operation of nursery: ₹2,00,000 *Total cost: ₹2,00,000*	As per requirement	As per requirement

People's Biodiversity Register

Phase	**I** 2024-25 to 2026-27	**II** 2027-28 to 2029-30	**III** 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Updating People's Biodiversity Register 2. Build awareness	1. Updating of People's Biodiversity Register continued 2. Strengthen awareness	1. Updating of People's Biodiversity Register continued 2. Strengthen awareness
Target	1. Formation and capacity enhancement of the Biodiversity Management Committee (BMC) 2. Participatory update of the People's Biodiversity Register	Participatory update of the People's Biodiversity Register continues	Participatory update of the People's Biodiversity Register continues
Estimated Cost	Formation of BMC and training cost[40]: ₹25,000		

39 As given in the HRVCA: Individual forestry work of 1,000 trees like *amla*, mango, guava, papaya, karonda, jamun with the help of SHGs (100 women to be engaged)

40 Guidelines for Operationalising Biodiversity Management Committees (BMCs), 2013, National Biodiversity Authority. http://nbaindia.org/uploaded/pdf/Guidelines%20for%20BMC.pdf

Existing Schemes and Programmes

- Plantation activities can be aligned and carried out through provisions under 'Trees Outside Forests in India' initiative by MoEFCC, Green India Mission, Jal Jeevan Mission and UP State Plantation Targets.
- Annual budgeting under UP State Compensatory Afforestation Fund Management and Planning Authority Fund (State CAMPA fund) can be directed for:
  - » Afforestation, enrichment of biodiversity, improvement of wildlife habitat, and soil and water conservation activities in the GP.
- Plantation activities can be aligned with MGNREGS and the local community can also be engaged in providing '*shramdaan'.*
- The Sub-Mission on Agroforestry under the National Mission on Sustainable Agriculture can be leveraged to:
  - » Avail ₹28,000 per ha of agroforestry plantation.
  - » Assistance for plantations can be availed in year-wise proportion of 40:20:20:20 for four years.
- Skill development and training programme of the Central Institute of Medicinal and Aromatic Plants, Lucknow can be helpful in setting up *Arogya Van* in the GP.
- Programmes by the National Biodiversity Authority and Uttar Pradesh State Biodiversity Board can be tapped into for training and capacity building of BMCs.

Other Sources of Finance

- Resources allocated to Gram Panchayat under 15th Finance Commission and Own Source Revenue (OSR).
- CSR funds for purchase of saplings, organising plantation drive, erection of tree guards to ensure protection of saplings can be availed. CSR support can be utilised for creation of Aarogya Van and establishing production units for herbal products as described in the recommendation on 'Enhancing Livelihoods and Promoting Green Entrepreneurship'.

Key Departments

- Department of Environment, Forest and Climate Change
- State Biodiversity Board
- Panchayati Raj Department
- Department of Rural Development
- Central Institute of Medicinal and Aromatic Plants, Lucknow

4. Sustainable Solid Waste Management

Context & Issues[41]

- The total waste generated from all domestic activities (households, public and semi-public spaces, and commercial areas) in the GP is approximately ~229 kg per day, with approximately 133 kg per day of biodegradable/organic waste and around 110 kg per day of non-biodegradable waste (see Annexure IV for estimation methodology).
- Field survey has noted that there is limited waste collection and segregation being practiced in the gram panchayat. Garbage is often found littered in public spaces and drains. This leads to waterlogging issues due to clogged drains.
- The gram panchayat has 100 per cent household toilet coverage.
- The total livestock population is 2,055 (465 cows, 590 buffaloes, 1,000 goats). The estimated dung output is roughly 14 tonnes per day which can be managed substantially through interventions such as composting, vermicomposting, natural fertilisers production and biogas generation[42]. With such a large livestock population, there is an opportunity to manage livestock waste through the construction of biogas plants (see *'Access to Clean, Sustainable, Affordable and Reliable Energy'* section). There are a small number of pigs (10) in Yadavpatti.

Against this backdrop, the following solutions are proposed to ensure 100 percent solid waste management as well as boosting the economy and creating livelihood opportunities

41 As understood from the community during field surveys and FGDs and corroborated by relevant sources

42 Assuming cows produce 10 kg dung/day, buffaloes produced 15 kg dung/day and goats produce 150 g/dung/day

Establishing a Waste Management System

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Setting up GP-level segregation and storage facility: for non-biodegradable waste 2. 1 Electric vehicle for collection and transportation of waste from households to GP-level storage facility 3. Installation of waste collection bins at strategic locations 4. Setting up partnerships between Panchayat, SHGs, informal ragpickers, local scrap dealers, local businesses, and Micro, Small, and Medium Enterprises (MSMEs)	1. Maintenance of GP-level segregation and storage facility 2. Maintenance of existing waste bins installed and additional installation of bins at new strategic locations, as per requirement 3. Scaling up partnership beyond GP to other villages/districts	1. Maintenance of GP-level: segregation and storage facility 2. Maintenance of existing waste bins installed 3. Scaling up partnership beyond GP to other villages/districts
Target	1. 1 EV for daily waste collection 2. 516 households (100%) covered under GP's waste management system 3. Installation of 15 waste bins at strategic locations[43]	Maintenance of existing facilities and waste management system (additional EVs added for waste collection; additional dustbins installed as required)	Maintenance of existing facilities and waste management system

43 Refer to HRVCA for exact locations

Estimated Cost	1. 1 EV: ₹1,00, 000 2. 15 waste bins/ containers: ₹ 2,30,000 *Total cost: ₹3,30,000*	As per requirement	As per requirement

Management of Organic Waste

	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Phase			
Suggested Climate Smart Activities	1. Setting up of Nadep pit and vermicompost pits 2. Partnership building between Panchayat and relevant stakeholders	1. Setting up of additional compost pits for treatment of biodegradable/organic waste 2. Regular maintenance of vermicompost pits 3. Scaling up partnership beyond GP to other villages/districts	1. Setting up of additional compost pits for treatment of biodegradable/organic waste 2. Regular maintenance of vermicompost pits 3. Scaling up partnership beyond GP to other villages/districts
Target	1. Setting up of 55 Nadep pit and 70 vermicompost pits at specific locations[44] 2. Partnership model between panchayat, community members and farmer groups for (*explained in detail in 'Enhancing Livelihoods and Green Entrepreneurship' section*): » Production and sale of compost » Sale of agricultural waste	1. Setting up of additional compost pits for treatment of all (100%) of biodegradable/organic waste from households, public/semi-public facilities, commercial set ups and agriculture 2. Maintenance of Nadep and vermicompost pits 3. Scaling up partnership	1. Setting up of additional compost pits for treatment of all (100%) of biodegradable/organic waste from households, public/ semi-public facilities, commercial set ups and agriculture 2. Maintenance compost pits 3. Scaling up partnership

44 Refer to HRVCA for location details

Estimated Cost	1. Cost of 55 Nadep pits: ₹ 4,00,000 2. Cost of 70 vermicompost pits: ₹ 5,70,000 *Total cost: ₹ 9,70,000*	As per requirement	As per requirement

Ban on Single Use Plastics

Phase	**I** **2024-25 to 2026-27**	**II** **2027-28 to 2029-30**	**III** **2030-31 to 2034-35**
Suggested Climate Smart Activities	1. Awareness, training, and capacity-building programs for: » Village Water and Sanitation Committee (VWSC) » Students & youth groups » Community members & commercial establishments 2. Partnership model between panchayat women and SHGs for manufacturing products from plastic alternative products (explained in detail in 'Enhancing Livelihoods and Green Entrepreneurship' section)	1. Regular awareness, training, and capacity-building programs 2. Scaling up partnership beyond GP to other villages/districts	1. Regular awareness, training, and capacity-building programs 2. Scaling up partnership beyond GP to other villages/districts

Target	1. Complete ban on Single Use Plastics (SUPs) 2. 100-120 women to be engaged in manufacturing plastic alternative products (out of the 150 women currently engaged with SHGs)	1. Ban on SUPs upheld 2. Increased engagement in manufacturing plastic alternative products from this GP & nearby villages of: » Additional 200 women » Additional SHGs, MSMEs & individual entrepreneurs	1. Ban on SUPs upheld 2. Consumer-wide plastic use diminishes as alternatives are available readily

Enhancing Sanitation Infrastructure

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	Construction of community/public toilets and repair of any household level toilets	1. Construction of community toilets as required 2. Regular maintenance of community toilet	1. Additional individual toilets constructed as per requirement 2. Additional community toilets constructed as per requirement 3. Regular maintenance of community toilet
Target	Construction of 14 individual household toilets[45] and repair of 212 household level toilets	1. Construction of public/ community toilet as required 2. Maintenance of community toilets	Maintenance of community toilets
Estimated Cost	Cost of construction and repair: ₹18,40,000	As per requirement	As per requirement

45 Refer to HRVCA for exact locations

Existing Schemes and Programmes

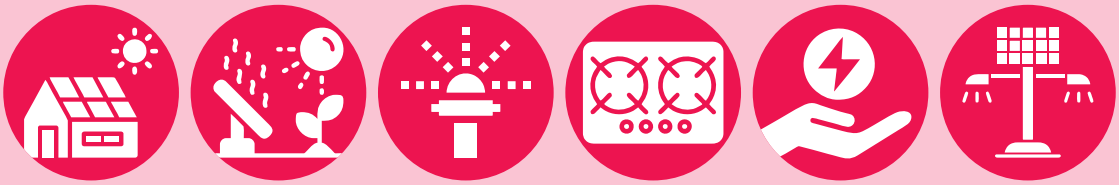
- MGNREGA can be tapped into for the construction of community-based composting facilities, waste collection and segregation pits; segregation and storage shed
- The development of infrastructure and training and capacity building can be supported by initiatives under the Swachh Bharat (Gramin) Mission

Other Sources of Finance

- CSR funding and Panchayat-Private-Partnership (PPP) models can help to develop and operate infrastructure like plants, segregation yard, plastic-alternative enterprises, marketing, procurement of e-vehicles for waste transport, etc.
- Further, CSR support will be crucial in increasing awareness, training, and capacity building of all stakeholders involved in the production of alternative products for plastic, composting processes and to promote sustainable consumption behaviour at the individual level.
- GP's own resources, including ties and untied funds, can be utilised to develop the required infrastructure for waste management as per Swachh Bharat Mission – Gramin (SBM-G) guidelines.

Key Departments

- Panchayati Raj Department
- Department of Health and Family Welfare
- Department of Rural Development
- Department of Agriculture
- Uttar Pradesh Khadi and Village Industries Board



5. Access to Clean, Sustainable, Affordable and Reliable Energy

Context & Issues[46]

- Yadavpatti GP consumed approximately 32,2714 units of electricity in 2022-23. Around 98 percent of households have electric connectivity in the gram panchayat. During the field survey, the residents noted that the power supply is not 24*7. On an average the GP experiences ~8 hours of power cuts every day.
- Incandescent lamps, CFL (compact fluorescent) lights and other electrical fixtures and appliances with low efficiency are in use in many homes and public utilities.
- Around 95 percent households have LPG connections[47]. Cowdung and fuelwood is used for cooking in ~5 per cent of households. There is a need to transition to cleaner cooking solutions that will not only lead to reduction in emissions but also co-benefits like improved indoor air quality
- With increasing temperature, thermal comfort levels in homes are reducing and there is a need for sustainable space cooling.

Based on the energy related concerns of the GP, in combination with the recently launched as well as ongoing programmes of the Central and State Government, such as the PM Surya Ghar Bijli Muft Yojana, PM KUSUM scheme, UP State Solar Policy 2022 , among others, the following solutions are proposed for implementation in Yadavpatti. The intent of the suggested activities is to ensure access to clean, sustainable, affordable and reliable energy for communities in the GP. This would not only enhance their quality of life but also help to supplement incomes through productive use of energy.

46 As understood from the community during field surveys and FGDs and corroborated by relevant sources

47 As reported by the Gram Pradhan

Solar Rooftop Installation

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	Solar rooftops to be installed on all government buildings[48]	1. All new construction can be installed with solar PV 2. Solar rooftop to be installed on pucca households	1. All new construction can be installed with solar PV 2. Solar rooftop set-up for remaining pucca households
Target	Solar rooftop capacity installed on: ▪ Panchayat Bhawan: 10 kWp ▪ 1 Primary School (~2,000 sq.m rooftop area available): 10 kWp ▪ Anganwadi Centre: 10 kWp Total solar rooftop capacity installed: 30 kWp Total annual electricity generated: 40,176 kWh per year (~ 110 units per day) GHG emissions avoided: approximately 33 tCO_2e per year *In light of much needed and ambitious targets of the recently launched PM Surya Ghar Yojana, households can also be part of if this phase of solar PV installation on rooftops*	Solar rooftop capacity installed on 180 (~40%) of pucca houses[49] Solar rooftop capacity installed: 541 kWp Total annual electricity generated: ~ 7,24,775 kWh per year[50] (1,986 units per day) GHG emissions avoided: approximately 594 tCO_2e per year[51]	Solar rooftop capacity installed on remaining 271 (100% covered) of pucca houses Solar rooftop capacity installed: 812 kWp Total annual electricity generated: ~ 10,87,163 kWh per year[52] (2,979 units per day) GHG emissions avoided: approximately 891 tCO_2e per year

48 Solar installation in PRI buildings capped at 10kWh. About 10sq.m area is required to set up 1 kWp grid connected rooftop solar system (https://upneda.org.in/faqs.aspx)

49 Average area of households considered to be 130 sq.m; 3 kWp rooftop installation estimated per household

50 This generation is manifold higher than the current electricity consumption in the GP

51 The emissions avoided will help move the GP towards carbon neutrality.

52 This generation is manifold higher than the current electricity consumption in the GP

Estimated cost	*Total Cost:* ₹*15,00,000 (₹50,000 /kWp)*	Total Cost: ₹2,70,60,000 Indicative subsidy[53]: ~40% (State + CFA) *Effective cost:* ₹*1,62,36,000*	Total Cost: ₹4,05,90,000 Indicative subsidy: ~40% (State + CFA) *Effective cost:* ₹*2,43,54,000*

Agro-photovoltaics

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	Awareness generation amongst farmers, farmer groups, etc.	Agro-photovoltaic installed on area portion of suitable agricultural land (under horticulture and legume crops)	Agro-photovoltaic installed on area portion of suitable agricultural land (under horticulture and legume crops)
Target	Organising awareness campaigns and orientation sessions to encourage uptake of agro-photovoltaic initiatives amongst farmers	Agro-photovoltaic installed on 2 ha Capacity installed: 500 kWp Electricity generated: 6,69,600 kWh per year (~ 1,835 units per day) GHG emissions avoided: 549 tCO_2e per year	Agro-photovoltaic installed on 2 ha Capacity installed: 500 kWp Electricity generated: 6,69,600 kWh per year (~1,835 units per day) GHG emissions avoided: 549 tCO_2e per year
Estimated cost	As per the requirement	*Total Cost:* ₹*5,00,00,000*[54]	*Total cost:* ₹*5,00,00,000*

53 Subsidies are dynamic and are subject to change as per various parameters fixed by the State and Central government from time to time. Hence, the subsidy amount assumed is based on past trends and averages and may not be exact at prevailing time.

54 With advancements in technology, the cost of agro-photovoltaic has been decreasing. However, a conservative estimate of the cost on the higher side has been taken. Further, it has been assumed that farmers tend to practice crop rotation even on land earmarked for horticulture and other similar crops. Hence, only a percentage of the land available under horticulture has been taken into consideration for installation of agro-photovoltaic.

Solar Pumps

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Replacing all existing diesel pump sets (4) with solar pumps* 2. Encouraging purchase/ use of all new pump sets to be solar-powered **If solar pumps are not feasible then, energy efficient pumps (Kisan Urja Daksh Pumps by EESL) can be considered*	1. Solarisation of all grid-connected electric pumps in GP 2. Encouraging purchase/ use of all new pump sets to be solar-powered	Encouraging purchase/use of all new pump sets to be solar-powered
Target	Capacity installed: 22 kW Solar based electricity generated: 29,462 kWh per year (~81 units per day) Diesel consumption avoided: 1,560 liters/year Emissions avoided: 4 tCO_2e per year	Solarisation of any additional of grid connected electric pumps in GP	Solarisation of any additional of grid connected electric pumps in GP
Estimated Cost	Total cost: ₹12,00,000 to ₹20,00,000 (₹3,00,000 to ₹5,00,000/7.5 HP Solar pump) Indicative subsidy: 60 percent (State +CFA) *Effective cost: ₹4,80,000 to 8,00,000*	As per requirement	As per requirement

Clean Cooking

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	*Scenario 1:* Household Biogas + LPG *Scenario 2:* Solar powered induction cookstoves + LPG *Scenario 3:* Improved chulhas + LPG	*Scenario 1:* Household Biogas + LPG *Scenario 2:* Solar powered induction cookstoves + LPG *Scenario 3:* Improved chulhas + LPG All new household constructions include improved chulahs/ solar-powered cookstoves and/ or household biogas plants	*Scenario 1*: Household Biogas + LPG *Scenario 2:* Solar powered induction cookstoves + LPG *Scenario 3:* Improved chulhas + LPG All new household constructions include improved chulahs/ solar-powered cookstoves and/ or household biogas plants
Target	*Scenario 1:* 20 households use Biogas plants (~25% of households having cattle to install biogas) *Scenario 3:* 25 households (100% of households that currently use biomass to have improved chulhas) This also includes the continued use of LPG in the GP. *Additionally, solar induction cookstoves can also be considered as clean cooking solution where feasible*	*Scenario 1:* 20 additional households use Biogas plants (cumulative ~50% of households having cattle) *Scenario 3:*Any additional households that use biomass to use improved chulhas This also includes the continued use of LPG in the GP (all 516 households having LPG connections)	*Scenario 1:* 40 additional households use Biogas plants (100% of households having cattle) *Scenario 3:* Any additional households that use biomass to use improved chulhas
Estimated Cost	*Scenario 1:* ₹10,00,000 for biogas plants (₹50,000 for 2 m^3 to 3 m^3 biogas plant) *Scenario 2:* ₹45,000 for 1 solar induction cookstove *Scenario 3:* ₹75,000 for improved chulhas *Average cost across scenarios: over ₹3,58,333*	*Scenario 1:* ₹10,00,000 for biogas plants (₹50,000 for 2 m^3 to 3 m^3 biogas plant) *Scenario 2:* ₹45,000 for 1 solar induction cookstove *Scenario 3:* ₹3,000 for 1 improved chulha *Total cost: Over ₹10,00,000*	*Scenario 1:* ₹20,00,000 for biogas plants (₹50,000 for 2 m^3 to 3 m^3 biogas plant) *Scenario 2: ₹45,000 for 1 solar induction cookstove* *Scenario 3: ₹3,000 for 1 improved chulha* *Total cost: Over ₹10,00,000*

Energy Efficient Fixtures

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. All light fixtures and fans to be replaced with energy efficient fixtures in all government/ public/semi-public buildings (Primary Schools, Panchayat Bhawan, Anganwadi) 2. At least 1 incandescent/ CFL bulb in all households to be replaced by LED bulb or 1 fluorescent tube lights to be replaced with LED tube light 3. Residents must also be encouraged to upgrade other household appliances energy efficient appliances (4-5 star rated by BEE)	1. All incandescent bulbs in households to be replaced by LED bulbs and all fluorescent tube lights to be replaced with LED tube light 2. At least 1 conventional fan to be replaced with energy efficient fans 3. Residents must also be encouraged to upgrade other household appliances energy efficient appliances (4-5 star rated by BEE)	All fans in all households to be replaced with energy efficient fans
Target	1. All tube lights and fans to be replaced in all government building 2. 516 LED tube light installed in households (1 energy efficient tube light installed per household) & 516 LED bulbs installed in households (1 energy efficient bulb installed per household)	1. Additional LED bulb and tube lights installed in all households as per requirement 2. 516 energy efficient fans installed in each household (1 fan replaced per households	Additional energy efficient fans installed in all households (1 fans replaced per household) as per requirement
Estimated Cost	Cost of LED bulbs: ₹36,120 Cost of LED tubelights: ₹1,13,520 Cost of energy efficient fans: As per requirement *Total cost: ₹1,49,640*	Cost of LED bulbs: As per requirement Cost of LED tubelights: As per requirement Cost of energy efficient fans: ₹5,72,760 *Total cost: ₹5,72,760*	Cost of energy efficient fans: As per requirement

Solar Streetlights

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	Install solar LED street lights along roads, public spaces and other key locations[55]	Install solar LED street lights along roads, public spaces and other key locations	Regular maintenance and addition of street lights as required
Target	Installing high-mast solar LED street lights at key locations (primary school, Panchayat Bhawan, water bodies) as per gram panchayat requirement OR Installing solar LED street lights along the roads and pathways as per gram panchayat requirement	1. Installing additional high-mast solar LED street lights at key locations as required 2. Installing additional solar LED street lights along the roads and pathways as required	Regular maintenance and addition of street lights as required
Estimated Cost	Cost of 1 high mast solar street light: ₹50,000 Cost of 1 LED solar street light: ₹10,000	As per requirement	As per requirement

Existing Schemes and Programmes

- The Uttar Pradesh Solar Energy Policy, 2022[56] provides:
  - » Subsidy on solar installations in residential sector: from ₹15,000/kW to a maximum limit of ₹30,000/- per consumer over and above the Central Financial Assistance by MNRE.
  - » Provision for solar installations in institutions in RESCO[57] mode by themselves or in consultation with UPNEDA with consultancy fee of 3 percent cost of the plant.
- Central Financial Assistance by MNRE through Grid Connected Solar Rooftop Programme:
  - » CFA up to 40% will be given for RTS systems up to 3 kW capacity. For RTS systems of capacity above 3 kW and up to 10 kW, the CFA of 40 percent would be applicable only for the first 3 kW capacity and for capacity above 3 kW (up to 10 kW) the CFA would be limited to 20 percent.
  - » For Group Housing Societies/Residential Welfare Associations (GHS/RWA) CFA will be limited

55 Based on inputs received from the GP during field surveys and further discussions with Gram Pradhan

56 https://invest.up.gov.in/wp-content/uploads/2023/02/Uttar_Pradesh_Solar_Energy_Policy_2022.pdf

57 Third party (RESCO mode) {Renewable Energy Supply Company}

to 20 percent for installation of RTS plant for supply of power to common facilities. The capacity eligible for CFA for GHS/ RWA will be limited to 10 kWp per house and total not more than 500 kWp.

  - » Solar rooftop installations for poor households can be undertaken under the PM-Surya Ghar: Muft Bijli Yojana[58]. The scheme provides a CFA of 60 percent of system cost for 2 kW systems and 40 percent of additional system cost for systems between 2 to 3 kW capacity. The CFA will be capped at 3 kW. At current benchmark prices, this will mean Rs 30,000 subsidy for 1 kW system, Rs 60,000 for 2 kW systems and Rs 78,000 for 3 kW systems or higher.

- PM KUSUM Yojana provides:
  - » Component A of PM KUSUM Yojana, promotes setting up of 500 kW and larger solar power plants on agriculture land.
  - » Under Components B & C of the PM KUSUM scheme, the Centre and State government will provide a subsidy of 30 percent each per pump basis. Farmers will only need to pay an upfront cost of 10 percent and rest can be paid to the bank in instalments.
- Contribution of U.P. government to PM KUSUM Yojana:
  - » Under Component C-1: Solarisation of installed on-grid pumps with 60 percent subsidy to farmers (70 percent subsidy to the Scheduled Tribe, Vantangia and Musahar caste farmers); this is in addition to subsidy available from central government through MNRE's PM KUSUM Scheme.
  - » Under Component C-2: Solarisation of Segregated Agriculture feeders by State government providing Viability Gap Funding (VGF) of ₹50 lakhs per megawatt in addition to subsidy being provided by Central government through MNRE's PM KUSUM Scheme.
- LED Street lighting projects in Gram Panchayats[59]:
  - » EESL replaces conventional streetlights with LED streetlights at its own cost and provides free replacement and maintenance of LED bulbs for up to 7 years.
  - » Atal Jyoti Yojana and MNRE Solar Street Light Programme provide subsidies for installation of solar street lights with 12 Watt LEDs and 3 days battery back-up.
- GRAM UJALA scheme[60]:
  - » LED bulbs available at an affordable price of ₹10 per bulb.
  - » Rural customers will be given 7-watt and 12-watt LED bulbs, with a three-year warranty, in exchange for working incandescent bulbs.
- Subsidies for cold storage set ups:
  - » Government assistance in the form of credit linked back ended subsidy of 35 percent of the project cost is available through 2 schemes
    - ➢ Department of Agriculture Cooperation and Farmers Welfare (DAC&FW) is implementing Mission for Integrated Development of Horticulture (MIDH).
    - ➢ National Horticulture Board (NHB) is implementing a scheme namely 'Capital Investment Subsidy for Construction/Expansion/Modernisation of Cold Storages and Storages for Horticulture Products.'

58 https://pmsuryaghar.gov.in/

59 Street Lighting National Programme by EESL.

60 Gram Ujala scheme distributes One Crore LED bulbs in rural areas (Feb 2023), PIB.

- » Under the Pradhan Mantri Kisan Sampada Yojana, the component on Integrated Cold Chain, Value Addition and Preservation Infrastructure provides financial assistance in the form of grant-in-aid at the rate of 35 percent can be obtained for creation of infrastructure facility along the entire supply chain[61] for facilitating distribution of non-horticulture, horticulture, dairy, meat and poultry. The scheme allows flexibility in project planning with special emphasis on creation of cold chain infrastructure at farm level.

- EESL plans to initiate market-based interventions for Solar based Induction cooking solutions by leveraging Carbon financing.
- Leveraging funds through the 15th Finance Commission and schemes like GOBARDHAN (Galvanising Organic Bio-Agro Resources Dhan) scheme under Swachh Bharat Mission - Gramin (SBM-G).
  - » The GOBARDHAN scheme under SBM-G provides financial assistance up to ₹50 lakhs lakh per district for the period of 2020-21 to 2024-25 for setting up of cluster/community level biogas plants[62].
- UP Bio-Energy Policy 2022[63] provides incentives for setting up CBG plants in addition to incentives available from Govt. of India under the GOBARDHAN scheme:
  - » The incentive of ₹75 lakhs/tonne to the maximum of ₹20 Crore on setting up Compressed Biogas (CBG) Production Plant.
  - » Exemption on development charges levied by development authorities.
  - » Exemption of 100 percent Stamp duty and Electricity duty.
- MNRE implemented the Waste to Energy (WTE) Programme under the umbrella of the National Bio-energy Programme:
  - » The programme supports the setting up of plants for the generation of Biogas from urban, industrial, and agricultural waste.
  - » Financial assistance available for Biogas generation is ₹0.25 crore per 12000 m^3/day[64].

Other Sources of Finance

- Explore tie ups with local banks, microfinance institutions and cooperative banks for loans to procure solar rooftop, solar pumps. etc.
- Explore partnerships with solar developers for agro-photovoltaics.
- CSR funds can be utilised:
  - » To cover the capital cost for installation of solar rooftops/Agro-Photovoltaics/solar pumps over and above the scheme/programme subsidy through a revolving fund model similar to those given by micro-finance institutions.
  - » Provide 'Operation and Maintenance' training to village community members/SHGs members for the various clean technologies adopted in the GP.
  - » Organise awareness campaigns on existing government schemes/programmes that promote rooftop solar (UP Solar Policy, 2022) and solar irrigation (PM-KUSUM, UP Solar Irrigation Scheme).

61 viz. pre-cooling, weighing, sorting, grading, waxing facilities at farm level, multi product/multi temperature cold storage, CA storage, packing facility, IQF, blast freezing in the distribution hub and reefer vans, mobile cooling units

62 https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1883926

63 https://invest.up.gov.in/bio-energy-enterprises-promotion-programme-2022/

64 https://pib.gov.in/PressReleasePage.aspx?PRID=1896067

Key Departments

- Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA)
- Uttar Pradesh Power Corporation Limited (UPPCL)
- Purvanchal Vidyut Vitran Nigam Limited
- Panchayati Raj Department
- Rural Development Department
- Department of Agriculture
- Education Department

6. Sustainable and Enhanced Mobility

Context & Issues[65]

- There are a total of 275 internal combustion engine (ICE) vehicles; 262 two-wheelers, 7 cars, 4 autorickshaws and 7 jeeps. Further, there are vehicles categorised as farm machinery i.e tractors (5). Additionally, there are 15 e-rickshaws in the GP[66].
- The total fuel consumption by the ICE vehicles is around ~ 176 kilo litre (kL) of petrol and 13 kL of diesel per annum. Overall, the fuel consumed in the transport sector has led to ~448 tonnes of CO_2e emissions in 2022.
- Further, the poor condition and accessibility of the main roads as well as that of internal roads/ pathways was highlighted by the community during the field survey and the focused group discussions.

Therefore, there is significant scope for improving transport infrastructure and initiating a transition to e-mobility solutions.

Enhancing Road Infrastructure

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	Road construction, RCC/ Interlocking and any other repair work necessary to improve accessibility and mobility in GP	Regular maintenance of road infrastructure and repairs as required	Regular maintenance of road infrastructure and repairs as required

65 As understood from the community during field surveys and FGDs

66 As per inputs received during field surveys

Target[67]	1. Road construction of 300m 2. RCC work for ~1.4 km road length 3. Interlocking of roads for length of ~1.75 km	As per requirement	As per requirement
Estimated Cost	1. Road construction: ₹19,40,000 2. RCC work: ₹64,50,000 3. Road interlocking works: ₹98,50,000 *Total Cost: ₹1,82,40,000*	As per requirement	As per requirement

Facility to Hire Electric Goods Transport Vehicle and Hire E-tractors

Phase	**I** 2024-25 to 2026-27	**II** 2027-28 to 2029-30	**III** 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Promote electric alternatives of diesel tractors and goods transport vehicles 2. Sensitise user groups (farmers/logistic owners/entrepreneurs) towards long term benefits of e-vehicles over ICE vehicles (described in enhancing livelihood section)	Continue the sensitisation of various user groups towards long term benefits of e-vehicles over ICE vehicles as well as the schemes and programmes available for their benefit	Continue the sensitisation of various user groups towards long term benefits of e-vehicles over ICE vehicles as well as the schemes and programmes available for their benefit
Target	Total 5 e-tractors and 5 e-goods carriers purchased	Additional e-vehicles and e-tractors procured if required	Additional e-vehicles and e-tractors procured if required
Estimated Cost	Total cost of 5 e-tractors is ~₹30,00,000 Total cost of 5 e-commercial vehicles: ₹25,00,00 – 50,00,000 *Total cost: ₹55,00,000 – ₹80,00,000*		

67 Refer to HRVCA for exact location

Intermediate Public Transport

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	Replacing autorickshaws in the GP with e-autorickshaws	Introducing more e-autorickshaws to improve last mile connectivity	Additional e-autorickshaws can be procured based on demand
Target	4 e-autorickshaws replaced to GP's IPT fleet	Additional e-autorickshaws added to fleet as required	Additional e-autorickshaws added to fleet as required
Estimated Cost	Cost of one e-autorickshaws[68]: around ₹3,00,000 Available subsidy: up to ₹12,000 per vehicle *Effective cost of 4 e-autorickshaws: ₹11,52,000* GHG emissions avoided: 7 tCO_2e[69]	As per requirement	As per requirement

Existing Schemes and Programmes

- Road infrastructure can be repaired and enhanced with support from Pradhan Mantri Gram Sadak Yojana and MGNREGS.
- UP Electric Vehicle Manufacturing and Mobility Policy, 2022 provides:
  - » 100% registration fee and Road Tax exemption to buyers (during the Policy period).
  - » Purchase Subsidy as early bird incentives[70] to buyers (one time) through dealers over a period of 1 year – E-goods Carriers: @10% of ex-factory cost up to ₹1,00,000 per vehicle; 2-Wheeler EV:

68 The cost of e-autorickshaws ranges from a band of Rs. 1,50,000 - Rs. 4,00,000 and more, depending on the configurations, battery type, amongst others. Price of e-autorickshaws is assumed to be at the middle of the price band primarily factoring in possible subsidies/ grants/seed capital/viability gap funding from philanthropies and other funding agencies

69 GHG emissions avoided are estimated to be 1.8 tCO_2e per autorickshaw based on inputs from the community. Replacing diesel auto rickshaws with e-autorickshaws will reduce this emission and contribute towards the GP becoming carbon neutral or even carbon negative.

70 Subsidies provided by the government are subject to periodic changes both in terms of the quantum and number of beneficiaries. Hence, subsidies mentioned in any section of this plan are only indicative, and need to be confirmed at the time of procurement.

@15 percent of ex-factory cost up to ₹5000 per vehicle; 3-Wheeler EV: @15% of ex-factory cost up to ₹12,000 per vehicle.

- Subsidies for e-rickshaws can also be availed under the Faster Adoption and Manufacturing of Electric Vehicles in India Phase II (FAME II) Scheme.

Other Sources of Finance

- GP's resource envelope and OSR.
- Loans from banks and micro-finance institutions in tandem with CSR support.

Key Departments

- Infrastructure and Industrial Development Department
- Transport Department
- Panchayati Raj Department
- Department of Rural Development
- Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA)

7. Enhancing Livelihoods and Green Entrepreneurship

Context & Issues[71]

Agriculture is the mainstay of the GP engaging around 54 percent of the households. The sector is vulnerable to impacts of changing climate like frequent extreme weather events, erratic rainfall, etc. Unsustainable cultivation practices coupled with climate related impacts leaves a significant portion of the population with uncertainty in terms of livelihoods. Other key sources of income in the GP are non-farm wage labour and animal husbandry. In the past 5 years nearly 50 families have migrated out of the GP in search for better livelihood. This is a trend seen in most rural areas.

With limited opportunities for jobs within the GP, beyond the activities mentioned. The recommendations mentioned in this action plan provide multiple avenues for new businesses and job opportunities in the coming years. These are detailed in the following table:

Engage already Existing SHGs in Manufacture of Sustainable Products

Suggested Climate Smart Activities

1. Engaging women and SHGs for manufacturing of sustainable products (bags, home décor, cutlery, stationery items, furniture, etc.)
2. Capacity building for:
   a. Diversification of product range
   b. Marketing/selling of the products within & outside the GP

71 As understood from the community during field surveys and FGDs and corroborated by relevant sources

Target

Initial engagement of:

1. 100 women
2. 2 SHGs (currently involved in tailoring activities)
3. Utilise locally available raw materials

Long-term engagement from this GP & nearby villages:

1. Additional 200 women
2. Additional SHGs, MSMEs & individual entrepreneurs

Composting & Selling of Organic Waste as Fertiliser

Suggested Climate Smart Activities

1. Partnership model between panchayat, community members and farmer groups for production & sale of compost
2. Capacity building of community members and farmer groups
   a. Composting & vermi-composting techniques
   b. Marketing & selling compost within & outside the GP

Target

Immediate target:

Compost generated from domestic waste (organic):133 kg per day; ~4,000 kg per month (as per current waste generation)

Long-term target:

Scaling up compost generation as per organic waste generation (based on population growth)

Facility to Hire E-goods Carriers and E-tractors

Suggested Climate Smart Activities

1. Commercial hiring (rental basis) of e-Goods carriers & e-tractors presents green entrepreneurship opportunities through incentives under UP EV Policy 2022 and FAME-India Scheme phase-II
2. Sensitising user groups (farmers/logistic owners) towards use of e-tractors & e-goods carriers

Target

Immediate target:

1. 2 or 3 e-tractors (Estimated cost: ₹6 lakhs per e-tractor)
2. 2 or 3 EV mini goods transport trucks (Estimated cost of mini goods EV transport truck: Approximately ₹9.2 lakhs)

Mid-term target:

Additional procurement of 2/3 e-tractors, 2/3 EV mini goods transport trucks
(Note: It is assumed that a 35 HP e-tractor is typically required in Yadavpatti that costs around ₹6 lakhs)

Improving Livelihoods through Use of Solar Powered Cold Storage

Suggested Climate Smart Activities

1. Entrepreneurship opportunities through renting out of solar-powered cold storage space to smaller and medium farmers (within the GP & nearby villages) to minimise post-harvest losses
2. Business model/tie-up between entrepreneurs, farmer groups, cooperatives (like PARAS) and other institutional buyers for storage of fruits, vegetables, milk and milk products

Target

Setting up of cold storage with 5 to 10 MT capacity

Cost: approx. ₹8,00,000 to ₹15,00,000

(GP can leverage the mango orchards within boundary to supplement income)

Arogya Van for Production & Sale of Natural Medicines and Supplements

Suggested Climate Smart Activities

1. Livelihood generation for communities through development and maintenance of Arogya Van for production of natural medicines & supplements
2. Partnering with Central Institute of Medicinal and Aromatic Plants, Lucknow for skill development & training

Target

Around 0.2 ha of land to be established as *Arogya Van*

O&M of various RE installations (Solar and Biogas)

Suggested Climate Smart Activities

1. Training and capacity building of community members esp. graduates, youth groups and farmer groups for skill development in RE maintenance.
2. Support from CSR, upskilling schemes of central and state government in establishing Solar and Bio-gas installation and O&M businesses within the GP.

Financing & Skill Development

- Sensitising banking & financial institutions to support green entrepreneurship & livelihoods (through various credit schemes, partnership/revenue models). Government loan schemes such as Mudra Loan, Stree Shakti Yojana, etc. can support women entrepreneurs.
- Necessary skill development provided through supporting government schemes and programmes like: Make in India, Entrepreneur Development Programme run by Department of Science and Technology (DST), National Skill Development Missions and Atal Innovation Mission.

6 List of Additional Projects for Consideration

Given below is a list of possible projects for additional consideration for implementation at the GP level by respective Panchayats. These projects have been successfully implemented in various parts of India and in geographies that may have a lot of similarities with Uttar Pradesh. The reason for not including them in the main recommendation is that these projects do not fall or come under the ambit of any ongoing schemes or programmes of the Government of Uttar Pradesh or through Centrally Sponsored Schemes. Hence, the implementation of these projects would have to be done through alternate financing options such as self-financing, CSR, or other such sources.

If implemented, these projects could have the potential to further strengthen the adaptive capacities of communities and may also result in livelihood enhancements.

1. Solar-powered cold storage unit (FPO/SHG/Individual farmers)

- A solar-powered cold storage unit to enhance post-harvest efficiency and reduction in loss.
- It helps farmers avoid distress sales and improves farmers' income

This activity will strengthen initiatives discussed in the 'Enhancing Livelihood and Entrepreneurship' section

Case Example / Best Practice[72,73,74]:

Kattangur Farmers Producers Company Ltd in Hyderabad, Telangana

Ghummar Farmer Producer Organisation (FPO) is based at village Nana of Bali tehsil of Pali district of Rajasthan

2. Solar Passive Design and Passive Cooling

For new construction and retrofitting (wherever possible): Promoting sustainable design and vernacular (local/traditional) materials in public and administrative buildings along with scaling up to residential houses to reduce energy demand and increase energy efficiency:

- Building orientation as per solar geometry
- Allow efficient movement of natural air
- Wind tower coupled with solar chimney
- Allow natural lighting through light vaults (minimizing conventional light load)
- Energy conservation activities0
- Water bodies and designed landscape (plantation/horticulture)

This activity will strengthen initiatives discussed in the 'Access to Clean, Sustainable, Affordable and Reliable Energy' section

72 https://selcofoundation.org/wp-content/uploads/2023/08/Compendium_Updated_20230922.pdf
73 https://www.opportunityindia.com/article/empowering-women-fpo-through-solar-power-ghummar-fpo-34521
74 https://www.ecozensolutions.com/ecofrost/fpos-leverage-agri-infra-funds-for-ecofrost.html

Case Example / Best Practice:

The Rajkumari Ratnavati Girl's School[75], rural Thar desert, Rajasthan: for more than 400 girls that live below the poverty line.

- Building orientation to maximize thermal comfort
- Solar panel installations to run lighting and fans
- Solar panel canopy and Jallis/screens keep the heat out
- The elliptical shape of the canopy creates cooling (airflow)
- Building walls allow air penetration and keep the sun/sand out
- Use of local/vernacular material for construction

Solar Passive Complex, Punjab Energy Development Agency (PEDA), Chandigarh[76]

- 25 kWp building integrated solar power plant
- Orientation as per solar geometry
- Building envelope (design+material) to provide thermal comfort (e.g., Cavity walls, insulated roofing)
- Conditioned air and light by controlling solar access (e.g., Light vaults, Wind Tower coupled with Solar Chimneys)
- Small ponds and plantations (trees, shrubs, and grass) for cooling and air purification

3. Solar-powered RO water filtration system/ Water ATM Kiosk (community-based)

Solar-based RO water purification systems offer a sustainable and cost-effective solution by utilizing solar energy. It ensures a safe drinking water supply to the community while promoting the reuse of water. This initiative can be beneficial for Gram Panchayat facing issues with the quality of drinking water.

Case Example / Best Practice:

Hiwra lahe village, District - Washim, State- Maharashtra[77]

- Installing solar-powered RO water filtration system with CSR support
- Improvement in the socio-economic status of the community
- Enabling Village Water and Sanitation Committee for the operation and management of the system
- Similar initiatives have been implemented in the states of Gujarat, Telangana, Rajasthan, etc.

75 https://www.avontuura.com/rajkumari-ratnavati-girls-school-diana-kellogg-architects/

76 https://peda.gov.in/solar-passive-complex

77 https://yraindia.org/wp-content/uploads/2019/12/RO-plant-Success-story-in-Village-Hiwara-HDB-project.pdf

4. Solar-powered cattle sheds

Cattle sheds are an adaptive measure for livestock to protect them from heat and cold waves; this initiative can be supplemented to enable climate change mitigation by deploying solar power installations over the cattle shed roofs. This can power lighting, reduce energy demand (passive cooling and ventilation), support fodder preparations, and any other operations in the sheds. Excess power can be fed into the grid thereby generating additional income for farmers.

Cattle sheds will also help in waste management through biogas generation and fertilizer preparation from animal waste (dung). Cattle sheds will also help in reducing the transmission of communicable diseases in livestock by providing proper segregated and secure spaces.

This activity can strengthen the Sustainable Livestock Management suggestions in the 'Sustainable Agriculture' section of the recommendations.

Case Example / Best Practice:

Districts: Ludhiana, Bathinda & Tarn Taran, Punjab[78,79]

- The project is being implemented in 3 districts targeting 3000 Households of small & marginal farmers having landholdings of 1-2 ha and 5-15 dairy animalsClimate proofing of cattle sheds and promoting sustainable livelihoods of small and marginal livestock farmers

Nirmal Gujarat Campaign[80]

- The animal hostels in Himmatnagar, Gujarat help to keep the villages cleanSuch shelters collect dung to generate biogas and vermicompost for villagers. Further, vermicompost can be sold to raise funds for village welfare

Additionally, there is a "Cattle Shed Subsidy Scheme under Scheduled Castes Sub Plan (SCSP)[81]" which is implemented by the Directorate of Animal Husbandry, Agriculture, Farmers Welfare and Co-operation Department, Government of Gujarat. Under this scheme, financial assistance (either ₹30,000/- or 50 percent of the cost of the cattle shed, whichever is less) is given to Scheduled Caste beneficiaries for the construction of a Cattle Shed for 2 animals.

5. Cool Roofs

Painting the roofs of households, and public and government buildings with solar-reflective paint

Case Example / Best Practice:

Slum households in Jodhpur, Bhopal, Surat, and Ahmedabad[82]

- Local community workers trained the households to paint their own cool roof
- Demonstration outreach: more than 460 roofs
- Indoor temperatures lower by 2 - 5°C compared to traditional roofs

This activity links to the section 'Access to Clean, Sustainable, Affordable, and Reliable Energy.'

78 https://pscst.punjab.gov.in/en/climate-resilient-livestock-production-system
79 https://moef.gov.in/wp-content/uploads/2017/08/Punjab.pdf
80 https://jayshaktiengg.com/gujarat-government-launches-solar-scheme-for-farmers/
81 https://www.myscheme.gov.in/schemes/csssscspscc
82 https://www.nrdc.org/bio/anjali-jaiswal/cool-roofs-community-led-initiatives-four-indian-cities

6. Reduction of methane emissions from cattle through the use of feed supplements

The Indian Council of Agricultural Research (ICAR) -National Institute of Animal Nutrition and Physiology has developed feed supplements (Harit Dhara and Tamarin Plus) to help reduce methane emissions from livestock.

This activity links to the section on 'Sustainable Agriculture'

- The usage of these supplements can potentially lead to the reduction of enteric methane emissions upto 17-20 percent[83] when incorporated with feedstock.
- These feed supplements as reported by the ICAR cost ₹6 per kg

7. Solar-powered vertical fodder grow units (household level/community level)

A solar-powered, microclimate-controlled, vertical fodder grow unit enables users to harvest fresh fodder daily with less than a bucket of water. Such units will ensure the availability of fodder for livestock even in the event of droughts.

This activity links to the section on 'Sustainable Agriculture'

Case Example / Best Practice:

In the states of Andhra Pradesh, Rajasthan, Karnataka, and Bihar[84]

- Adoption of fodder grow units results in increased availability of green fodder for livestock
- It leads to an increase in farmers' income

8. Panchayat level Water Budgeting

Water management and 'Water budgeting' for climate-compatible agriculture-based livelihoods

- Calculation of annual/quarterly Water Budget
- Compute 'Water Deficit' and 'Water Surplus' at the village level
- Annual crop production planning based on water availability
- Water audit to account for any wastage

This activity links/adds to the initiatives Sustainable Agriculture and Water Resource Management sections of the Action Plan. This initiative supports multiple interventions like crop selection/planning, farm ponds, improved irrigation methods, water recharge, etc.

83 As reported by Indian Council for Agriculture (https://testicar.icar.gov.in/content/icar-nianp-commercializes-anti-methanogenic-feed-supplement-%E2%80%9Charit-dhara%E2%80%9D)

84 https://india.mongabay.com/2024/04/amid-fodder-crisis-hydroponics-offers-new-hope-for-indian-farmers/

Case Example / Best Practice:

7 Gram Panchayats (GP) and the neighboring hamlets, Rangareddy and Nagaurkurnool districts, Telangana[85]

- Current status of water consumption, measures to optimize consumption
- Planning for each agriculture season i.e., Kharif (monsoon), Rabi (winter), and Zaid (summer)

9. Enabling rural women entrepreneurs in climate impact sectors

Creating a women-led grassroots entrepreneurship support ecosystem in villages:

- Women sell clean/green technology-based products
- Women educate communities on the importance of clean-technologies
- e.g., clean cooking (solar cookstoves), portable Solar water purifiers, energy-efficient light fixtures, etc.
- Providing business expansion loans to women
- Facilitating rural marketing and distribution linkages

Vocational skills development, Training, and capacity building to enable rural women into the entrepreneurship ecosystem.

This initiative intends to strengthen women's role and engagement in clean energy technologies and climate impact sectors. It links to and adds to the Enhancing Livelihoods and Green Entrepreneurship section of the Action Plan.

Case Example / Best Practice:

14 districts across 4 states (Maharashtra, Bihar, Gujarat and Tamil Nadu)[86]

Swayam Shishan Prayog (SSP) enabling women as clean energy entrepreneurs and climate change leaders in their rural communities:

1. Enabled more than 60,000 rural women entrepreneurs in clean energy, sustainable agriculture, health and nutrition, and safe water and sanitation
2. More than 1,000 women entrepreneurs trained in clean-energy technologies and started businesses

10. Community Seed Banks

- Community seed banks will promote crop diversification and sustainability in the region while mainstreaming local seed systems, and climate resilience. Such seed banks will encourage farmers to grow drought-tolerant and climate-resilient varieties of cropsEnsure safety nets for farmers, especially during unfavorable weather conditions and food shortages

85 https://wotr.org/2018/03/31/water-budgeting-in-telangana-the-need-and-the-objective-of-the-campaign/

86 https://unfccc.int/climate-action/momentum-for-change/women-for-results/rural-community-leaders-combatting-climate-change

Case Example / Best Practice:

Community Seed Bank, Dangdhora, Jorhat, Assam (UNEP-GEF project)[87]

- Seed bank-associated farmers are trained to harvest, treat, store, and multiply seeds that are of better quality than those available in the local marketSeed bank initiatives in the region forward participatory crop improvement and knowledge-sharing strategiesFarmers and smallholders are provided with cheaper and easier access to quality seeds; bridging farmers and markets together.
- These seed systems and value chains safeguard both sustainability and food security.

11. Setting up Bio-Resource Centre (BRC)

Bio-inputs Resources Centres (BRCs) prepare and supply bio-inputs to facilitate the adoption of natural farming without individual farmers having to prepare them on their own, as preparation of bio-inputs is a time-consuming and labor-intensive activity.

- The locally prepared products/formulations utilizing biological entities or biologically derived inputs useful for improving soil health, crop growth, pest, or disease management are made available for purchase by farmers.
- BRC serves as a single-stop shop for all bio input needs of farmers in the area.

Case Example / Best Practice:

In the state of Andhra Pradesh[88]

- Contributes to sustainable climate-friendly agriculture
- Helps farmers adapt to climate change because high soil organic matter content makes soils more resilient to floods, droughts, and land degradation processes
- Minimizes risk as a result of stable agro-ecosystems and yields, and lowers production costs

87 https://alliancebioversityciat.org/stories/community-seed-banks-empower-farmers-address-climate-risk-india

88 https://www.apmas.org/pdf/csv/casestudy-1.pdf

7 Linkages to Adaptation, Co-Benefits & Sustainable Development Goals

Sustainable Agriculture

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Building Climate Resilience 	▪ Food security through Eco-DRR[89] approach to increase resilience of crops from droughts, heat impacts, pests etc ▪ Increased agricultural productivity and profit ▪ Improved soil health ▪ Improved water quality due to reduced use of chemical inputs ▪ Improved crop planning and management ▪ Reduced losses and increased productivity of livestock during cold waves and heat waves ▪ Improved air quality and reduced emissions	**SDG 2: Zero Hunger** ▪ Target 2.3 ▪ Target 2.4 ▪ Target 2.a; Article 10.3.e **SDG 6: Clean Water and Sanitation** ▪ Target 6.4 ▪ Target 13.1 **SDG 13: Climate Action** ▪ Target 13.2 ▪ Target 13.3 
b. Transition to Natural Farming 		
c. Sustainable Livestock Management 		

89 Eco-Disaster Risk Reduction

Management and Rejuvenation of Water Bodies

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed[90]
a) Rejuvenation and conservation water bodies 	▪ Nature-based Solutions (NbS) enhances coping ability from water scarcity and water stress ▪ Improved groundwater recharge ▪ Enhanced water quality ▪ Increased resilience to disasters like droughts, heatwaves, etc. ▪ Improved agricultural and livestock productivity ▪ Boost to local biodiversity	**SDG 6: Clean Water and Sanitation** ▪ Target 6.1 ▪ Target 6.4 ▪ Target 6.5 **SDG 11: Sustainable Cities and Communities** ▪ Target 11.4 **SDG 12: Ensure Sustainable Consumption and Production Patterns** ▪ Target 12.2 **SDG 13: Climate Action** ▪ Target 13.1 ▪ Target 13.2 **SDG 15: Life on Land** ▪ Target 15.1 ▪ Target 15.5 
b) Enhancing drainage infrastructure 		
c) Rainwater harvesting (RWH) practices 		

90 Detail list of relevant SDG and respective targets in Annexure V

Enhancing Green Spaces and Biodiversity

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a) Improving Green Cover  b) Establishing a Nursery  c) People's Biodiversity Register 	▪ Natural buffer from climate events/disasters ▪ Regulating the micro-climate will aid in adaptation from heatwaves and heat stress ▪ Health benefits from access to medicinal plants ▪ Nature-based Solutions (NbS) for improved soil stability, water conservation and corresponding agricultural benefits ▪ Improved livestock productivity ▪ Revenue generation from agroforestry, production of natural medicines, etc. ▪ Improved environment and habitat for biodiversity, enhancing ecosystem health	**SDG 11: Sustainable Cities and Communities** ▪ Target 11.7 ▪ Target 11.4 **SDG 12: Ensure Sustainable Consumption and Production Patterns** ▪ Target 12.2 **SDG 13: Climate Action** ▪ Target 13.1 ▪ Target 13.2 ▪ Target 13.3 **SDG 15: Life on Land** ▪ Target 15.1 ▪ Target 15.2 ▪ Target 15.3 ▪ Target 15.5 ▪ Target 15.9 

Sustainable Solid Waste Management

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Establishing a Waste Management System	▪ Reduced waterlogging ▪ Reduction in water and land pollution/ improved sanitation ▪ Good health and a relatively disease-free environment due to 100% waste management and reduction in occurrence of public health risks and epidemics ▪ Livelihood and income generation ▪ Revenue and profit generation ▪ Enhanced inputs for sustainable agriculture	**SDG 3: Good Health and Well being** ▪ Target 3.3 ▪ Target 3.9 **SDG 6: Clean Water and Sanitation** ▪ Target 6.3 ▪ Target 6.8 **SDG 8: Decent Work and Economic Growth** ▪ Target 8.3 **SDG 9: Industries, Innovation and Infrastructure** ▪ Target 9.1 **SDG 12: Ensure Sustainable Consumption and Production Patterns** ▪ Target 12.4 ▪ Target 12.5 ▪ Target 12.8 **SDG 13: Climate Action** ▪ Target 13.1 ▪ Target 13.2 ▪ Target 13.3 **SDG 15: Life on Land** ▪ Target 15.1
b. Management of Organic Waste		
c. Ban on Single Use Plastics		
d. Enhancing sanitation infrastructure		

Access to Clean, Sustainable, Affordable and Reliable Energy

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Solar Rooftop Installation 	▪ Energy security ▪ Thermal comfort ▪ Enhanced livelihood options ▪ Additional revenue generation ▪ Provides relief from high temperatures/ sun exposure, thus resulting in yield stability and boost in productivity ▪ Decline in toxic emissions/local air pollution ▪ Economic benefits after pay-back period ▪ Reduction in indoor air pollution ▪ Improvement of health, especially of women ▪ Eliminates drudgery/ physical labour of fuelwood collection ▪ Enhanced ability to cope with grid failures during disasters	**SDG 6: Clean Water and Sanitation** ▪ Target 6.4 **SDG 7: Affordable & Clean Energy** ▪ Target 7.1 ▪ Target 7.2 ▪ Target 7.3 ▪ Target 7.a ▪ Target 7.b **SDG 9: Industries, Innovation and Infrastructure** ▪ Target 9.1 **SDG 13: Climate Action** ▪ Target 13.2 ▪ Target 13.3
b. Agro-photovoltaic installation 		
c. Solar pumps 		
d. Clean cooking 		
e. Energy efficiency fixtures 		
f. Solar street lights 		

Sustainable and Enhanced Mobility

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Enhancing Road Infrastructure 	▪ Decline in local air pollution leading to improved human and ecosystem health ▪ Improved accessibility for at-risk and vulnerable people ▪ Additional revenue generation ▪ Enhanced last-mile connectivity of goods and services ▪ Improved resilience through strengthening road infrastructure with co-benefits like reduced waterlogging	**SDG 7: Affordable & Clean Energy** ▪ Target 7.2 **SDG 11: Sustainable Cities and Communities** ▪ Target 11.2 **SDG 9: Industries, Innovation and Infrastructure** ▪ Target 9.1 **SDG 13: Climate Action** ▪ Target 13.2 ▪ Target 13.3 
b. Facility to Hire Electric Goods Transport Vehicle and Hire E-tractors 		
c. Intermediate Public Transport (IPT) 		

Enhancing Livelihoods and Green Entrepreneurship

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Engage already existing SHGs in manufacture of sustainable products	▪ Reduction in water and land pollution ▪ Enhanced inputs for sustainable agriculture ▪ Good health and a relatively disease-free environment due to 100% waste management and reduction in occurrence of public health risks and epidemics ▪ Additional revenue generation ▪ Enhanced livelihood options ▪ Health benefits from access to medicinal plants ▪ Revenue generation from agroforestry, production of natural medicines, etc. ▪ Improved environment and habitat for biodiversity, enhancing ecosystem health ▪ Decline in local air pollution leading to improved human and ecosystem health ▪ Enhanced last-mile connectivity of goods and services	**SDG 5: Achieve Gender Equality and Empower All Women and Girls** ▪ Target 5.5 **SDG 8: Decent Work and Economic Growth** ▪ Target 8.3 **SDG 12: Ensure Sustainable Consumption and Production Patterns** ▪ Target 12.2 ▪ Target 12.4 ▪ Target 12.5 ▪ Target 12.8 **SDG 13: Climate Action** ▪ Target 13.1 ▪ Target 13.2 ▪ Target 13.3
b. Composting & selling of organic waste as fertiliser		
c. Facility to hire e-goods carriers and e-tractors		
d. Improving livelihoods through use of solar powered cold storage		
e. *Arogya Van* for production & sale of natural medicines and supplements		
f. O&M of various RE installations (solar and bio-gas)		

8 Way Forward

The proposed recommendations on implementation will help to not only reduce Greenhouse Gas (GHG) emissions of Yadavpatti but also to achieve energy, food and water security, thereby, making the Gram Panchayat climate smart, resilient and sustainable. This will foster a holistic and sustainable development of the GP to meet the aspirations of its residents. Additionally, these recommendations would improve quality of life while promoting a harmonious co-existence with nature. This Climate Smart Action Plan for Yadavpatti will make it *'Aatma Nirbhar'* through various aspects like reduction of expenditure on energy, farming inputs, water, etc. and will open new avenues for economic development.

Further, with the implementation of proposed interventions, Yadavpatti would also contribute to the State's vision and targets on climate action as envisaged in the UP State Action Plan On Climate Change II, 2022, which in turn, would add to the country's endeavours to address climate change meeting the contributions listed in the NDC, 2015 and its updated version, 2022 and also meet the Sustainable Development Goals by 2030.

Addressing climate issues requires tailor-made solutions at the local level, which can only be successful with the availability of adequate climate finance and other means of implementation. This can be achieved by integrating the climate action both mitigation and adaptation into ongoing activities as envisaged in the Gram Panchayat development Plan supported under Central and State Schemes and mobilising additional financial resources. This would entail enhanced collaboration and cooperation between all relevant stakeholders: community, government administration, elected representatives and private sector. Post implementation of the Action Plan, continued action in the form of efficient management of the new infrastructure/technology will be the key in ensuring Yadavpatti becoming a model climate smart gram panchayat. The success of the present plan will possibly influence other Gram Panchayats to follow the process to make themselves smart, resilient and sustainable. To achieve this vision, it will be crucial to promote a sense of community ownership and behavioural change for adoption of a sustainable lifestyle, along the lines of LiFE Mission as envisioned by the Hon'ble Prime Minister Shri Narendra Modi.

9 Annexures

Annexure I: Background and Methodology

Background

The State of Uttar Pradesh (UP) is making rapid strides towards climate action. Under the visionary and inspirational leadership of the Hon'ble Chief Minister Shri Yogi Adityanath, the State has initiated a wide-range of climate actions across different levels of governance. One such initiative is to develop action plans for 'Climate Smart Gram Panchayats.' This concept was envisaged by the Chief Minister of Uttar Pradesh in June, 2022. To take this work ahead, a rapid multi-criteria assessment was conducted to identify climate friendly Gram Panchayats in 39 vulnerable districts[91] of UP. The selected Gram Panchayats were announced and several of these were felicitated during the 'Conference of Panchayats' (COP) held on 5th June, 2022.

The Climate Smart Gram Panchayat Action Plan[92] for Yadavpatti has been developed by the Department of Environment, Forest and Climate Change, Government of UP in collaboration with Vasudha Foundation, and Gorakhpur Environmental Action Group. The action plan aims to provide a customised blueprint for mainstreaming climate action at the Gram Panchayat level. This in turn would strengthen localised climate initiatives to not only build climate resilience but also reduce emissions with the aim of becoming zero carbon/carbon neutral by 2030.

The participatory approach adopted in developing this action plan reinforces the concept of bottom-up planning. The key recommendations provided in this action plan can be converted into individual pilot projects that can be funded through a range of financing options such as CSR funds, existing State and Central Government Programmes, innovative Public-Private Partnerships, carbon finance, and private investments.

To make this feasible, the action plan also has an outline for forging Panchayat-Private-Partnership (PPP) and enhanced collaboration and cooperation between state actors and non-state actors to ensure effective implementation of this action plan.

Methodology

This report comprises the main Climate Smart Gram Panchayat Action Plan as well as the inputs received from field in the form of filled questionnaire, the HRVCA report, social and resource map of the Gram Panchayat enclosed as annexures.

To develop the Climate Smart Gram Panchayat Action Plan, the following steps were undertaken:

- *Preparation of survey questionnaire*: to understand the ground situation and develop a baseline scenario of the Gram Panchayat a questionnaire was developed with inputs from key stakeholders

91 39 highly vulnerable districts of UP were identified from the State Action Plan on Climate Change 2.0 of UP and the Scoping Assessment for Climate Change Adaptation Planning in Uttar Pradesh by DoEFCC, GoUP

92 This document comprises of: the main Climate Smart Gram Panchayat Action Plan and includes the following as annexures: detailed methodology; filled questionnaire; the Hazard, Risk, Vulnerability and Capacity Assessment (HRVCA) report, and the social and resources map of the Gram Panchayat.

and sectoral experts. The questionnaire covered various aspects such as demography, socio-economic indicators, climate variability, climate perception (past 5 years), energy, agriculture & livestock, land resources, sanitation, and health. The survey also aimed to understand the penetration of Central and State government schemes in the Gram Panchayat.

- *Stakeholder consultation & Capacity building:* Consultations and capacity building workshops were conducted for local NGO partners, Gram Pradhans, Panchayat Secretaries. The stakeholders were briefed about the objective and components of the Climate Smart Gram Panchayat Action Plan, the process of development of these action plans and their individual roles in the same.
- Additionally, NGO partners were also given training on key climate change concepts, the surveying techniques to be adopted and the questionnaire developed for focus group discussions.
- *Field survey*: To ensure maximum participation from the community, a few rounds of Gram Sabha and focus group discussions were organised to collect primary data.
  - » Field survey included a transect walk of the GP to develop the social and resource maps of the GP.
  - » A Hazard, Risk, Vulnerability and Capacity Assessment (HRVCA) was also carried out to understand the various issues faced by the GP.
  - » Focus Group Discussions were held to identify key climate change-related issues faced by Yadavpatti GP as well as identify the development priorities of the GP.
- Based on the inputs received, the plan was developed and baseline assessments were conducted for the Gram Panchayat. This included identification of climate-smart activities that not only address the environmental and climatic issues that have been identified but also take into account the prevailing agro-climatic characteristics of the GP.
- Information gaps were identified and addressed through multiple rounds of one-on-one discussions with the Gram Pradhan, community and Panchayat Secretary.
- The draft plan was presented to the Gram Panchayat for review.
- Post accommodating required updates based on inputs from the Gram Panchayat, the action plan was finalised and presented to the GP for endorsement.

Annexure II: Questionnaire

उत्तर प्रदेश क्लाइमेट स्मार्ट ग्राम पंचायत की सर्वे प्रश्नावली

ग्राम पंचायत :- यादवपट्टी विकासखण्ड :- कुण्डा जनपद :- प्रतापगढ़

I. गाँव की रुपरेखा

		विवरण	संख्या (सूचना का स्रोत– समुदाय के सदस्य)
1		राजस्व गाँव की संख्या	4
2		टोलों की संख्या	8
3	a	कुल जनसंख्या	2868
	b	कुल पुरुषों की जनसंख्या	1570
	c	कुल महिलाओं की जनसंख्या	1298
	d	विकलांगजनों की जनसंख्या	14
	e	कुल बच्चों की जनसंख्या	489
	f	वरिष्ठ नागरिक (60 वर्ष से अधिक आयु वर्ग)	286
4		कुल परिवार की संख्या	516
	a	गरीबी रेखा से नीचे जीवन यापन करने वाले परिवार की संख्या	40
5		कुल भोगौलिक क्षेत्रफल	234.388 Hct
6	a	साक्षरता दर	86%
7	a	पक्का घरों की संख्या	**451**
	b	कच्चा घरों की संख्या (मुख्य रूप से उपयोग की गई सामग्री का उल्लेख करें)	**65 (मिट्टी व खपरैल से बने घर)**

II. सामाजिक आर्थिक

8	ग्राम पंचायत में केवल कृषि (प्रकार) पर आश्रित परिवार	कुल परिवारों की संख्या
	निजी भूमि/स्वयं की भूमि	502
	किराए की भूमि (हुण्डा)	Nil
	अनुबंध खेती	Nil
	दिहाड़ी मजदूर	157
	अन्य व्यवस्था (रेहन, अधिया आदि)	12
	अन्य सूचनाएं/जानकारी (एक से अधिक कृषि गतिविधि में शामिल परिवार, उल्लेख करें)	6
9	**ग्राम पंचायत में आय के स्रोत**	**कुल परिवारों की संख्या**
	सेवा क्षेत्र (उदाहरणः अध्यापन, बैंक, सरकारी नौकरी आदि)	45
	कुटीर उद्योग	85
	कृषि	474
	कला/हस्तकला	Nil
	पशुपालन	80
	व्यवसाय (स्थानीय दुकान)	21
	व्यवसाय/उद्यम	Nil
	दैनिक/दिहाड़ी मजदूर (अकृषिगत)	164
	अन्य	5

10		पलायन		हां	नहीं
	a	क्या पिछले पांच वर्षों में आप के ग्राम पंचायत से ग्रामीणों ने पलायन किया है?		हां	☐
	b	पलायन करने वाले स्थान	पिछले पांच वर्षों में पलायन करने वाले परिवार/ व्यक्तिगत की संख्या		पलायन के मुख्य कारण
		अन्य गांव	0		रोजगार/व्यवसाय की तलाश
		निकट के शहर	12		,,
		राज्य के प्रमुख शहर	24		,,
		देश के प्रमुख महानगर	50		,,
	c	क्या पिछले पांच वर्षों में आप के ग्राम पंचायत में परिवार/व्यक्ति ने प्रवास किए है?		हां	नहीं
				☐	नहीं

	d	पिछले पांच वर्षों में आपके ग्राम पंचायत में कितने परिवार प्रवास किए हैं? मुख्य कारण स्पष्ट करें।	Nil

11		महिलाओं की स्थिति	
	a	महिला प्रमुख परिवारों की संख्या (आय का मुख्य स्रोत– महिला)	**78**
	b	खेती में कार्यरत महिलाएं	कुल संख्या
		निजी भूमि/स्वयं की भूमि	20
		किराए की भूमि/हुण्डा	Nil
		अनुबंध खेती	Nil
		दिहाड़ी/दैनिक मजदूर	18
		अन्य व्यवस्था	Nil
		अन्य सूचनाएं/जानकारी (एक से अधिक कृषि गतिविधि में संलग्न महिलाएं, उल्लेख करें)	(अधिकांश महिलाएं कृषि के साथ बागवानी का भी कार्य करती हैं)
	c	नौकरी/अन्य क्षेत्र में कार्यरत महिलाएं	कुल संख्या
		सेवा क्षेत्र (उदाहरणः अध्यापन, बैंक, सरकारी नौकरी आदि)	7
		कुटीर उद्योग	Nil
		कृषि	19
		कला/हस्तकला	Nil
		पशुपालन	03
		व्यवसाय (स्थानीय दुकान)	04
		दैनिक/दिहाड़ी मजदूर (अकृषिगत)	07
		अन्य	0

12	स्वयं सहायता समूहों				
	स्वयं सहायता समूह का नाम	सदस्यों की संख्या	अपनायी गई गतिविधियाँ	वार्षिक बचत (रु0)	बैंकों से जुड़ाव/अजुड़ाव
	देवा स्वयं सहायता समूह	10	सिलाई	2360	हां
	अम्बेडकर स्वयं सहायता समूह	10	सिलाई	3250	हां
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13	कृषक उत्पादक संगठन (एफ0पी0ओ0)					
	एफ0पी0ओ0 का नाम	क्या इस संगठन की प्रमुख महिला हैं?	प्रत्येक एफ0पी0ओ0 में सदस्यों की संख्या	एफ0पी0ओ0 से प्राप्त वार्षिक राजस्व/ बचत	कृषि उत्पाद	पोस्ट हार्वेस्ट की गतिविधियां/ गतिविधियों का क्षेत्र
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				

14	अन्य समुदाय आधारितसंगठन/					
	सामाजिक संगठन/ समितियों के नाम	क्या महिला प्रमुख संगठन/समिति हैं?	सदस्यों की संख्या	प्राप्त वार्षिक राजस्व/बचत	उत्पाद/सेवा	विपणन/लक्षित उपभोगकर्ता
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				
	Nil	☐				

15		योजनाएं					
	A	योजना के नाम	पंजीकृत लाभार्थी की संख्या	लाभ प्राप्त लाभार्थियों की संख्या	विगत वर्ष ग्राम पंचायत में प्राप्त कुल भुगतान (रू0)	अन्य कोई बकाया (रू0)	की गई गतिविधियाँ/कार्य
		मनरेगा	217	93	1009800.00	0	खडंजा,मिट्टी कार्य,नाली,नाला एवं इंटरलाकिंग
		प्रधानमंत्री गरीब कल्याण अन्न योजना/एन.एफ.एस.ए.	452	152			5kg प्रति लाभार्थी
		प्रधानमंत्री उज्जवला योजना	153	153			गैस,चूल्हा,सिलेंडर
		प्रधानमंत्री कृषि सिंचाई योजना	2	2			विद्युत आधारित
		प्रधान मंत्री कुसुम योजना	Nil	-			
	B	अन्य योजनाएं					
		ग्राम उज्जवला योजना	20	- 15			
		ऊर्जा दक्षता योजना	Nil	-			

		प्रधानमंत्री रोजगार सृजन कार्यक्रम	Nil	-			
		प्रधानमंत्री आवास योजना	19	19	2280000		आवास बना
		सार्वजनिक वितरण प्रणाली (पी0डी0एस0)	452	452			5kgप्रति व्यक्ति
		कम्प्यूटर प्रशिक्षण कार्यक्रम	Nil				
		उत्तर प्रदेश कौशल विकास मिशन	Nil				
		राष्ट्रीय कौशल विकास योजना (RKVY)	Nil				
		मौसम आधारित फसल बीमा	Nil				
		प्रधानमंत्री फसल बीमा योजना (PMFBY)	22				
		मृदा स्वास्थ्य कार्ड	20				
		किसान क्रेडिट कार्ड	130				
		स्वच्छ भारत मिशन	286	286	3432000		शौचालय बना है
		सौर सिंचाई पम्प योजना	1	1	84000		स्पिन्कलर सेट
		नई/नवीन भारतीय बायोगैस व कार्बनिक खाद कार्यक्रम	Nil				
		विकेन्द्रित अनाज क्रय केन्द्र योजना	Nil				
		गोवर्धन योजना	Nil				
		जल पुनर्भरण योजना	Nil				
		रेनवाटर हार्वेस्टिंग	1	1			**प्राथमिक विद्यालय**
		समन्वित वाटरशेड विकास कार्यक्रम	Nil				
		अन्य वाटरशेड विकास योजनाएं	Nil				
		अन्य (एक जिला–एक उत्पाद, मेक इन इण्डिया, अन्य)	Nil				
		उद्यमिता सहायतित योजनाएं आदि	Nil				

16	सक्रिय बैंक खाताधारकों की संख्या	1780
17	ई–बैंकिंग/डिजीटल भुगतान एप/यू.पी.आई आदि से भुगतान करने वाले खाताधारकों की संख्या	310

8	निकट कृषि बाजार/क्रय केन्द्र/सरकारी केंद्र	क्या ग्राम पंचायत द्वारा बाजार/कय केन्द्र का उपयोग होता है		यदि नही, तो बाजार/केन्द्र का उपयोग क्यों नही किया जाता	उत्पादित फसल(कु0)	बिक्री हुई फसल (कु0)	ग्राम पंचायत से दूरी (यदि ग्राम पंचायत से दूर है) (कि0मी0)
		हां	नहीं				
	क्रय केंद्र कुंडा	हाँ	□	गेहूं	2259	90	15Km
	,,	√□	□	धान	2811	118	15 Km
		□	□				
		□	□				

19		शिक्षा (केवल ग्राम पंचायत में)				
		प्रकार/स्तर	उपलब्ध छत का क्षेत्रफल (वर्ग मी0)	कुल नामांकित विद्यार्थियों की संख्या	विगत वर्ष में कुल ड्राप आऊट विद्यार्थियों की संख्या	ड्राप आऊट के मुख्यकारण(स्वास्थ्य (1), पहुँच/उपलब्धता–(2), आर्थिक समस्या–(3), अन्य–(4) उल्लेख करें)
	A	प्राथमिक विद्यालय	2000	91	0	-
	B	जू0 हाई स्कूल	Nil	Nil	-	--

	C	हाई स्कूल	Nil	Nil	-	-
	D	अन्य संस्थान	Nil	Nil	-	-
						-

20	कौशल विकास/व्यवसायिक प्रशिक्षण/पुनः कौशल संस्थान (केवल ग्राम पंचायत में)	उपलब्ध छत का क्षेत्रफल (वर्ग मी0)	संस्थान के प्रकार (सरकारी 1, निजी 2)	नामांकित व्यक्तियों की संख्या	नामांकित व्यक्तियों की आयु
	Nil				
	Nil				
	Nil				
	Nil				

21	राज्य/राष्ट्रीय राजमार्ग की उपलब्धता			
	राजमार्ग का नाम	राज्य मार्ग 1, राष्ट्रीय राजमार्ग 2	ग्राम पंचायत से दूरी	सम्पर्क मार्ग की स्थिति अच्छा (1), खराब (2), घटिया (3), सबसे घटिया (4)
	प्रयागराज लखनऊ राजमार्ग	1	3Km	1

III. भूमि संसाधनों संबंधित सूचनाएं/जानकारी

22		वन भूमि का विवरण	
	A	वन का क्षेत्र	Nil
	B	वन विभाग द्वारा अधिसूचित क्षेत्र	Nil
	C	सार्वजनिक उपयोग हेतु उपलब्ध वन क्षेत्र	Nil
	D	कितने क्षेत्र पर अतिक्रमण है?	Nil
	E	विगत पांच वर्षों में कोई वन उन्मूलन/वन कटाई की गतिविधियां	Nil
	F	अनुमानित वन उन्मूलन/वन कटाई का क्षेत्रफल (एकड़)	Nil

23		अन्य भूमि का वर्गीकरण			
	A	ग्राम पंचायत के पास ग्राम सभा की कितनी भूमि उपलब्ध है?	0.746 हे0		
	B	कितनी भूमि पर अतिक्रमण है? (एकड़)	1.6(एकड़)		
	C	ग्राम पंचायत में खनन गतिविधियां	हां □	नहीं √□	आच्छादित क्षेत्रफल
		खनन के प्रकार बालू खनन 1, खनिज खनन–(उल्लेख करें) 2, अन्य (उल्लेख करें) 3	Nil		
		अतिरिक्त सूचनाएं	Nil		

24		जल निकाय क्षेत्र		
		विवरण	हां	नहीं
	a	क्या आप के ग्राम पंचायत में जल निकाय क्षेत्र है?	√□	□

	b	ग्राम पंचायत में कुल जल निकाय क्षेत्रों की संख्या	5	
	c	क्या जल निकाय क्षेत्र में अतिक्रमण है?	☐	√
	d	जल निकाय क्षेत्र में अतिक्रमण कब से है?	Nil	
	e	क्या जल निकाय क्षेत्र के आस–पास के भूमि पर अतिक्रमण किया गया है?	Nil	

25		**जल आपूर्ति**	
	a	**ग्राम पंचायत में घरों हेतु जल आपूर्ति का मुख्य स्रोत क्या है?** नहर (1) वर्षा जल–(2) भूमिगत जल–(3) तालाब/झील–(4) अन्य– (5)	3
	b	**क्या उपरोक्त जल आपूर्ति के स्रोत मौसमी या बारहमासी है?**	**बारहमासी**
	c	**घरों में जल आपूर्ति कैसे होती है?** पाइप जलापूर्ति (1) ग्राम पंचायत में सामान्य संग्रह केन्द्र (2) पानी टंकी (3) महिलाओं/बच्चों द्वारा दूर से लाया गया (4) हैण्डपम्प (5) ऊँचा सतही जलाशय (6) कूंआ (7) अन्य (8), उल्लेखित करें। अगर 4 है, तो कितनी दूर से लाया जा रहा है?	5 7
	d	कितने घरों में जलापूर्ति पाइप से है?	Nil
	e	क्या पानी का बहाव/प्रवाह दर कम, अधिक या संतोषजनक है?	Nil
	f	पइप जलापूर्ति की नियमितता 24× 7 घण्टे(1)	Nil

		काफी नियमित (2) अनियमित (3)	
	g	**ग्राम पंचायत में कृषि सिंचाई हेतु जल आपूर्ति का मुख्य स्रोत क्या है?** नहर (1) वर्षा जल (2) भूमिगत जल – (नलकूप (3A), कूआ (3B) तालाब/झील (4) पानी टैंक (5) नदी (6) अन्य (7)	 1 2 3A
	h	**क्या उपरोक्त जल आपूर्ति स्रोत मौसमी या बारहमासी है?**	**बारहमासी**
	i	क्या जलापूर्ति का बहाव/प्रवाह दर कम/अधिक या संतोषजनक है?	संतोषजनक
	j	अतिरिक्त जानकारी (उदाहरण : क्या घरेलू, कृषि व संबंधित गतिविधियों, उद्योगों आदि के लिए जल आपूर्ति पर्याप्त है) क्या विगत वर्षों में भूजल, नदी या नहर से जल की उपलब्धता बढ़ी/घटी या सूख गया? क्या सूखे या गर्मी के मौसम में पानी की टंकियों का उपयोग बढ़ जाता है?	सामान्य है। घटी है गर्मी के मौसम में पानी का उपयोग बढ़ जाता है

IV. जलवायु की धारणा

तापमान व वर्षा में प्रमुख परिवर्तन/बदलाव					
26					
	a	गर्मी के माह में देखा गया	तापमान के कारण जलवायु परिवर्तन		
	b	गर्मी के तापमान में देखे गए बदलाव (पिछले पांच वर्षों में)	गर्म दिनों में वृद्धि	गर्म दिनों में कमी	गर्म दिनों में कोई परिवर्तन नहीं
			√	☐	☐
	c	दिनों की संख्या	15 - 18 दिन		
	d	अन्य सूचनाएं (गर्मी माह में कोई परिवर्तन)	Nil		
27					
	a	सर्दी के माह में महसूस किया गया	क्म दिनों में तेज ठण्ड		
	b	सर्दियों के तापमान में कोई परिवर्तन पाया गया (विगत पांच वर्षों में)	ठण्ड दिनों में वृद्धि	ठण्ड दिनों में कमी	ठण्ड दिनों में कोई परिवर्तन नहीं
			☐	√	☐
	c	दिनों की संख्या		20 - 28 दिन	
	d	अन्य सूचनाएं (सर्दी माह में कोई परिवर्तन)	Nil		
28					
	a	मानसून माह में महसूस किया गया	तापमान वृद्धिके कारण क्म दिनों में तेज वर्षा		
	b	मानसून ऋतु की वर्षा में कोई परिवर्तन देखा गया (विगत पांच वर्षों में)	वर्षा के दिनों में वृद्धि	वर्षा के दिनों में कमी	वर्षा के दिनों में कोई परिवर्तन नहीं
			☐	√	☐
	c	दिनों की संख्या		20 - 26 दिन	
	d	अन्य सूचनाएं (मानसून माह में कोई परिवर्तन)	Nil		
29					
	a	क्या गैर मानसून ऋतु की वर्षा में परिवर्तन हुआ है? (विगत पांच वर्षों में)	वर्षा के दिनों में वृद्धि	वर्षा के दिनों में कमी	वर्षा के दिनों में कोई परिवर्तन नहीं
			☐	√	☐
	b	ग्रीष्म ऋतु की वर्षा में देखे गये परिवर्तन	वर्षा दिनों में वृद्धि	वर्षा दिनों में कमी	वर्षा के दिनों में कोई परिवर्तन नहीं
			☐	√	☐
	c	दिनों की संख्या		5 - 6 दिन	
	d	शरद ऋतु की वर्षा में देखे गये परिवर्तन	वर्षा के दिनों में वृद्धि	वर्षा के दिनों में कमी	वर्षा के दिनों में कोई परिवर्तन नहीं
			☐	√☐	☐

	e	दिनों की संख्या		4 - 5 दिन	
	f	अन्य सूचनाए / जानकारी	Nil		

चरम मौसम की घटनाएं

30	**सूखा**						
	A	सूखे की घटना	प्रथम वर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थ वर्ष (2019)	पंचम वर्ष (2018)
			☐	☐	☐	☐	☐V
	B	किस माह में सूखा देखा गया					जून–जुलाई
	C	सूखे का प्रबन्धन कैसे किया गया (सरकारी सहायता, निजी सहायता, कुएं खोदा आदि)	घरेलू स्तर पर प्रबन्धन कुछ नहीं करते हैं।			कृषि स्तर पर प्रबन्धन अतिरिक्त सिंचाई	
	D	सूखे की आवृत्ति : सूखे की घटना (पिछले पांच वर्षों में)	वृद्धि	क्मी	कोई परिवर्तन नहीं		
			☐v	☐	☐		
	E	अतिरिक्त सूचना कोई पुरानी प्रमुख घटना–1, स्वास्थ्य पर प्रभाव–2	यादव पट्टी ग्रामपंचायत में वर्ष 1965, 1971 व 2018 में सूखा की घटना हुई, जिससे 516 परिवार प्रभावित हुए थे।				
31	**बाढ़**						
		बाढ़ की घटना	प्रथम वर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थ वर्ष (2019)	पंचम वर्ष (2018)
			☐	☐	☐	☐	☐
	b	किस माह में बाढ़ देखा गया	Nil				
	c	बाढ़ का प्रबन्धन कैसे किया गया (सरकारी सहायता, निजी सहायता आदि)					
	d	बाढ़ की आवृत्ति : बाढ़ की घटना (पिछले पांच वर्षों में)	वृद्धि	क्मी	कोई परिवर्तन नहीं		
			☐	☐v	☐		
	e	अतिरिक्त सूचना कोई पुरानी प्रमुख घटना–1, स्वास्थ्य पर प्रभाव–2	1980 में बाढ आयी थी जिसमें कृषि पर प्रभाव पड़ा था।				
32	**भूस्खलन**						
	a	भूस्खलन की घटना	प्रथम वर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थ वर्ष (2019)	पंचम वर्ष (2018)
			☐	☐	☐	☐	☐
	b	किस माह में भूस्खलन देखी गई	Nil				
	c	भूस्खलन का प्रबन्धन कैसे किया गया (सरकारी सहायता, निजी सहायता आदि)					
	d	भूस्खलन की आवृत्ति : भूस्खलन की घटना (पिछले पांच वर्षों में)	वृद्धि	क्मी	कोई परिवर्तन नहीं		
			☐	☐	☐V		

	e	अतिरिक्त सूचना कोई पुरानी प्रमुख घटना–1, स्वास्थ्य पर प्रभाव–2	Nil				
33		**ओलावृष्टि**					
	a	ओलावृष्टि की घटना	प्रथम वर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थ वर्ष (2019)	पंचम वर्ष (2018)
			☐	☐	☐	√☐	☐
	b	किस माह में ओलावृष्टि हुई				फरवरी में	
	c	ओलावृष्टि का प्रबन्धन कैसे किया गया (सरकारी सहायता, निजी सहायता आदि)	निजी सहायता से प्रबन्धन कुछ नहीं करते है				
	d	ओलावृष्टि की आवृत्ति : ओलावृष्टि की घटना (पिछले पांच वर्षों में)	वृद्धि	क्मी	कोई परिवर्तन नहीं		
			☐	√☐	☐		
34		**फसलों के कीट/बीमारी**					
	a	कीट/बीमारी की घटनाक्रम	प्रथम वर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थ वर्ष (2019)	पंचम वर्ष (2018)
			☐√	☐√	☐	☐	☐
	b	किस माह में कीट/बीमारी को देखा गया?	सितम्बर, फरवरी, मार्च, अगस्त,	सितम्बर, दिसम्बर, जनवरी, फरवरी, मार्च, अगस्त,	सितम्बर, अक्टूबर, दिसम्बर, जनवरी, फरवरी, मार्च, अगस्त,	सितम्बर, दिसम्बर, जनवरी, फरवरी, मार्च, अगस्त,	सितम्बर, दिसम्बर, जनवरी, फरवरी, मार्च, अगस्त,
	c	किस प्रकार के टिड्डी कीट/बीमारी को देखा गया?	माहो, गंधी कीट, गेरूई (रस्ट), झुलसा, फलछेदक	माहो, गंधी कीट, गेरूई (रस्ट), झुलसा, फलछेदक	माहो, गंधी कीट, गेरूई (रस्ट), झुलसा, फलछेदक	माहो, गंधी कीट, गेरूई (रस्ट), झुलसा, फलछेदक	माहो, गंधी कीट, गेरूई (रस्ट), झुलसा, फलछेदक
	c	कीट/बीमारी का प्रबन्धन कैसे किया गया? (सरकारी सहायता, निजी सहायता आदि)	किसानों ने स्वयं दवा खरीद कर खेतों में प्रयोग किया				
	d	कीट/बीमारी की आवृत्ति : कीट बीमारी का घटनाक्रम (पिछले पांच वर्षों में)	वृद्धि	क्मी	कोई परिवर्तन नहीं		
			☐√	☐	☐		
		अतिरिक्त जानकारी/सूचनाएं	Nil				

35	**ग्राम पंचायत में आपदा की तैयारी**	
		ग्राम पंचायत स्तर पर क्या आपदा प्रबन्धन/तैयारी के उपाय उपलब्ध है?	**क्या ग्रामीणों तक इसकी पहुँच/उपलब्धता है?**

	आपदा तैयारी के उपाय	ळां	नहीं	हां	नहीं
	ग्राम आपदा प्रबन्धन योजना	☐	☐√	☐	☐
	ग्राम आपदा प्रबन्धन समिति	☐	√☐	☐	☐
	पूर्व चेतावनी प्रणाली/मौसमी चेतावनी प्रणाली/कृषि चेतावनी प्रणाली	☐	☐√	☐	☐
	आपातकाल अनाज बैंक	☐	☐√	☐	☐
	अन्य	☐	√☐	☐	☐

36		अनाज भण्डारण	
	a	ग्राम पंचायत के आपातकालिन खाद्य/अनाज बैंक में किस प्रकार का भोजन भण्डारित किया जाता है?	
		अनाज (विवरण दें)	Nil
		ेल्ल	Nil
		चेनी	Nil
		अन्य खाद्य पदार्थ – उल्लेख करें	Nil
	b	क्या ग्राम पंचायत में शीतगृह है, अगर है तो उसकी क्षमता क्या है?	Nil

37	ग्राम पंचायत में मौसम की चेतावनी, पूर्व चेतावनी प्रणाली, कृषि आधारित चेतावनी के लिए उपलब्ध जानकारी के स्रोत	
	स्थानीय कृषि अधिकारी	√
	समाचार पत्र/समाचार/रेडियो	√
	मोबाईल फोन/एप	√
	मौखिक	NIL
	कृषि विज्ञान केन्द्र/कृषि ज्ञान केन्द्र	√
	पशुपालन विभाग	Nil
	उद्यान विभाग	Nil
	अन्य	Nil

	कृषि एवं संबंधित गतिविधियों पर प्रभाव (विगत पांच वर्षों में)
38	फसल हानि

	a	घटना का वर्ष	हानि की ऋतु / मौसम खरीफ (1) रबी (2) जायद / अन्य ऋतु (3)	फसल का नाम	हानि के कारण रोग, चरम, घटनाक्रम– गर्मी, ठण्ड, वर्षा, ओलावृष्टि, मिट्टी आदि	अनुमानित हानि की मात्रा (कुन्तल)	परिणाम स्वरुप आय में हानि (औसत रु0)
		प्रथम वर्ष (2022)	खरीफ (1)	धान	रस्ट रोग	100	140000
		द्वितीय वर्ष (2021)	खरीफ (1)	धान	रस्ट रोग	70	28000
		तृतीय वर्ष (2020)					
		चतुर्थ वर्ष (2019)					
		पंचवां वर्ष (2018)					
	b	क्या आप फसल बीमा के बारे में जानते हैं?	हां	नहीं			
			☐	√☐			
		अतिरिक्त जानकारी (फसल बीमा के लाभार्थी– बड़े किसान, लघु एवं सीमान्त किसान आदि) फसल बीमा लाभार्थी का संतुष्टि स्तर क्या है?	फसल बीमा **का लाभ कृषकों को नहीं मिल पाता है** Nil				

39		फसल पद्धति में बदलाव				
	a	सामान्य फसल	खरीफ धान,मक्का,बाजरा	रबी गेहूं,सरसों,मटर,आलू एवं सब्जी	जायद / अन्य ऋतु उर्द,मूग एवं सब्जी	
	b	फसल का नाम	पारम्परिक बोआई का समय	विगत 5 वर्षों में बोआई के समय में परिवर्तन हुआ है / देखा है	अभी बोआई का समय	परिवर्तन के कारण
		धान	जून के अंतिम सप्ताह	जून से जुलाई	जुलाई	वर्षा कम होने के कारण
		गेहूं	नवम्बर	नवम्बर से दिसम्बर	नवम्बर	ठण्ड दिनों में कमी
		सरसों	अक्टूबर	अक्टूबर से नवम्बर	अक्टूबर	----
	c	अन्य सूचना / जानकारी (विलुप्त फसल / प्रजाति आदि उल्लेख करें)	मोटे अनाज की फसले कम बोई ज़ाती है			

40		सिंचाई प्रणाली / पद्धति में परिवर्तन				
	a	फसल का नाम	वर्तमान में सिंचाई पद्धति का उपयोगफव्वारा सिंचाई (1), टपक विधि (2), नहर (3), वर्षा आधारित (4), पारम्परिक (5), अन्य (6) (उल्लेखित करें)	वर्तमान में उपयोग किए गए पानी की मात्रा (रुपया / एकड़)	पूर्व में सिंचाई पद्धति का उपयोगफव्वारा सिंचाई (1), टपक विधि (2), नहर (3), वर्षा आधारित (4), पारम्परिक (5), अन्य (6) (उल्लेखित करें)	पूर्व में उपयोग किए गए पानी की मात्रा (रुपया / एकड़)
		धान	1,2,4,5	2200	1,2,4,5	1400
		गेहूं	1,2,5	1600	1,2,5	900

	b	ग्राम पंचायत में सिंचाई हेतु पम्पों की संख्या	डीजल आधारित	विद्युत आधारित	सौर पम्प	पारम्परिक सिंचाई विधियां	
			4	8	-		
	c	अन्य सूचनाएं/जानकारी अगर कोई है	Nil				
41		**पशु पालन/पशुधन**					
	a	ग्राम पंचायत में प्रचलित पशुधन और पशुपालन सम्बन्धित गतिविधियां श्रेणी : डेयरी (1) मुर्गी पालन (2) मत्स्य पालन (3) सूअर पालन (4) मधुमक्खी पालन (5) अन्य– स्पष्ट करें (6)		1 2 3 4 6			
	b	डेयरी पर प्रभाव	पशु हानि गाय (1) भैंस (1) अन्य (6)	पशु हानि की संख्या (प्रत्येक पशु को उल्लेख करें)	हानि के कारण (रोग, आयु, दुर्घटना आदि)	हानि का मौसम	उत्पादकता में कोई परिवर्तन देखा गया? वृद्वि (1) कमी (2) परिवर्तन नहीं (3)
		प्रथम वर्ष (2022)	गाय (1) भैंस (1) अन्य (6)	गाय=02 भैस=03 बकरी=14	रोग /शीत लहर	बरसात,सर्दी	2
		द्वितीय वर्ष(2021)	गाय (1) भैंस (1) अन्य (6)	गाय=04 भैस=02 बकरी=18	रोग /शीत लहर	बरसात,सर्दी	2
		तृतीय वर्ष (2020)	गाय (1) भैंस (1) अन्य (6)	गाय=02 भैस=02 बकरी=17	रोग /शीत लहर	बरसात,सर्दी	2
		चतुर्थ वर्ष(2019)	गाय (1) भैंस (1) अन्य (6)	गाय=03 भैस=01 बकरी=18	रोग /शीत लहर	बरसात,सर्दी	2
		पंचम वर्ष(2018))	गाय (1) भैंस (1) अन्य (6)	गाय=01 भैस=01 बकरी=20	रोग /शीत लहर	बरसात,सर्दी	2

		अन्य जानकारी / सूचनाएं					
	c	मुर्गी पालन पर प्रभाव	पक्षी हानि मुर्गी (1) बत्तख (2) अन्य (3)	पक्षी हानि की संख्या (प्रत्येक पक्षी का उल्लेख करें)	हानि के कारण	हानि के मौसम / ऋतु	उत्पादकता में कोई परिवर्तन पाया गया है? वृद्धि (1) कमी (2) परिवर्तन नहीं (3)
		प्रथम वर्ष (2022)	1	150 चूजे	रोग	बरसात,सर्दी	2
		द्वितीय वर्ष(2021)	1	200 चूजे	रोग	बरसात,सर्दी	2
		तृतीय वर्ष (2020)	1	250 चूजे	रोग	बरसात,सर्दी	2
		चतुर्थ वर्ष(2019)	1	210 चूजे	रोग	बरसात,सर्दी	2
		पंचम वर्ष(2018))	1	200 चूजे	रोग	बरसात,सर्दी	2
		अन्य जानकारी / सूचनाएं	Nil				
	d	अन्य पशुओं पर प्रभाव	पशु हानि (कृपया निर्दिष्ट करें कि कौन से है)	पशु हानि की संख्या (प्रत्येक पशु का उल्लेख करें)	हानि के कारण	हानि की ऋतु	उत्पादकता में कोई परिवर्तन पाया गया है? वृद्धि (1) कमी (2) परिवर्तन नहीं (3)
		प्रथम वर्ष (2022)	Nil				
		द्वितीय वर्ष(2021)	Nil				
		तृतीय वर्ष (2020)	Nil				
		चतुर्थ वर्ष(2019)	Nil				

V. कृषि व पशुपालन

42	A	प्रमुख उगाई जाने वाले फसलें व सम्बन्धित सूचनाएं/जानकारी											
					उर्वरक उपयोग			कीटनाशक उपयोग			खरपतवारनाशी		
		फसल (अनाज, तिलहन, दलहन, उद्यान एवं फूल आदि)	ऋतु/ मौसम	उपज (कु0) प्रति एकड़	उर्वरक के प्रकार	औसत प्रयुक्त मात्रा (किग्रा0/ एकड़)	क्या विगत पांच वर्षों में उपयोग किये गये उर्वरकों की मात्रा में वृद्धि (1) कमी (2) परिवर्तन नही है (3)	कीटनाशकों के प्रकार	औसत प्रयुक्त मात्रा (किग्रा/ एकड़)	क्या विगत पांच वर्षों में उपयोग किये गये कीटनाशकों की मात्रा में वृद्धि (1) कमी (2) परिवर्तन नहीं है (3)	खरपतवार नाशीं के प्रकार	औसत प्रयुक्त मात्रा (किग्रा/एकड़)	क्या विगत पांच वर्षों में उपयोग किये गये खरपतवार की मात्रा में वृद्धि (1) कमी (2) परिवर्तन नहीं है (3)
		धान गेहूं गन्ना हल्दी	सर्दी गर्मी सर्दी सर्दी	12 9 120 65	यूरिया डाई NPK कम्पोस्ट	40 48 50 60	1	ब्युटाक्लोर, सल्फोस्ल्फ्यूरान, क्लोरोफिरिफास, डायाजीनान	200gm	1	2-4D	250ML	1
	B	क्या ग्राम पंचायत में फसल अवशेष जलायें जाते हैं	हां ☐	नहीं ☐V	जलाये गये खेतो का कुल क्षेत्रफल (एकड़)	क्या यह फसल अवशेष पूर्व में जलाये जाते थे	अगर नही तो, कब से जलाना आरम्भ किया	क्या फसल अवशेष प्रबन्धन की योजनाओं को जानते/जागरूक है? हां					

		-	-	नहीं	-	-	-	-

43	जैविक खेती सम्बन्धित गतिविधियां				
	फसल	क्षेत्रफल	प्रति फसल आय (रू0 / कुन्तल)	बिकी हेतु बाजार	तृतीय पक्ष द्वारा प्रमाणित / सत्यापित
	Nil	Nil			
	Nil	Nil			
	Nil	Nil			
	Nil	Nil			
	Nil	Nil			
	Nil	Nil			

44	अन्य स्थाई खेती सम्बन्धी गतिविधियां (जैसे शून्य / जीरो बजट प्राकृतिक खेती)			
	फसल	स्थाई गतिविधियां (शून्य जुताई, मल्चिंग, फसल चक्र, अर्न्तःफसलें, वर्मी कम्पोस्ट, कम्पोस्ट, मिश्रित फसले, प्राकृतिक कीट प्रबन्धन, जैव पदार्थ में वृद्धि आदि)	क्षेत्रफल (एकड़)	प्रति फसल प्राप्त आय (रूपया)
	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil

45	कृषि वानिकी, सामाजिक वानिकी, परती भूमि विकास और अन्य वृक्षारोपण गतिविधियां										
	पौध रोपण गतिविधियों के प्रकार	आच्छादित क्षेत्रफल	स्थान	योजना अन्तर्गत राष्ट्रीय कृषि वानिकी मिशन (1), समन्वित वाटरशेड प्रबन्धन कार्यक्रम (2), वर्षा आधारित क्षेत्र कार्यक्रम (3), मनरेगा (4), वृक्षारोपण जन आन्दोलन (5), अन्य (6)– उल्लेख करें	मोनोक्लचर (1), मिश्रित प्रजाति (2)	रोपित प्रजातियां	आरम्भ दिनांक	सफलता (प्रतिशत)	कृषि वानिकी गतिविधियों के लाभ तक लोगों की पहुंच/अवसर	पिछले 10 वर्षों में पहुंच/अवसर में परिवर्तन, वृद्धि (1), कमी (2), कोई परिवर्तन नहीं (3)	परिवर्तन के कारण– लाभ में वृद्धि (1), लाभ में कमी (2) प्रजाति सम्बन्धित (2), वन उन्मूलन (3) अन्य (4)– उल्लेख करें
	कृषि वानिकी	81 हेक्टेयर	निजी खेत व तालाब के पास	राष्ट्रीय कृषि वानिकी मिशन (1),		2,4,5ता	2	90	1	1	

46	अपनाये गये स्थायी पशुधन प्रबन्धन तकनीक			
	पशुधन के प्रकार	ग्राम पंचायत में कुल संख्या (लगभग)	अपनाई गई गतिविधियां (चारा में परिवर्तन, पोषण पूरक अर्थात् पशुआहार, खुले में चराई आदि)	प्राप्त/उत्पादित आय प्रति पशुधन वार्षिक
	गाय (देशी नस्ल)	250	पशुआहार,खुले में चराई	8000/–
	गाय (संकर नस्ल)	215	पशुआहार,खुले में चराई	7500/–
	भैंस (देशी नस्ल)	400	पशुआहार,खुले में चराई	13500/–
	भैंस (संकर नस्ल)	190	पशुआहार,खुले में चराई	8200/–
	बकरी	1000	खुले में चराई	6000/–
	सुअर	10	खुले में चराई	5000/–
	मुर्गी	1500	दाना	250/– प्रति पशुधन बेचने पर
	मत्स्य	2तालाब	मछली चारा	300/–
	अन्य	Nil		

VI. स्वच्छता एवं स्वास्थ्य

47		जल की गुणवत्ता (पेयजल या नल जल से आपूर्ति परिवार)						
	a	आपूर्ति किये जाने वाले पानी की गुणवत्ता कैसी है?	उपयुक्त	अनुपयुक्त				
			√	□				
	b	जल का स्वाद कैसा लगता है?	तीक्ष्ण	नमकीन	सामान्य			
			□	□	√			
	c	आपूर्ति होने वाले जल में सामान्यतः दूषित पदार्थ क्या है?	नमकीन	गन्दा	मटमैला	बालू/कीचड़	गन्ध	
			□	□	□	√	□	
	d	जल को शुद्व करने के लिए आप किस विधि का प्रयोग करते हैं?	उबालकर	जल शोधक	आयोडीन/फिटकरी मिलाकर	सौर शुद्धीकरण	क्ले वेसल फिल्ट्रेशन	अन्य, (कृपया उल्लेख करें)

			√□ □	□	√□	□	□	□

48		ठोस अपशिष्ट उत्पादन/अपशिष्ट प्रबन्धन						
	A	अपने घर में प्रतिदिन उत्पन्न होने वाला अपशिष्ट पदार्थ/कचरा	सब्जी छिलके आदि	1 किलो से 2 किलो				
	B	आपके ग्राम पंचायत में अपशिष्ट पदार्थ/कचरा कैसे इकट्ठा किया जाता है?	हां					
	C	कचरा संग्रह कितनी बार होता है?	□प्रतिदिन	√साप्ताहिक	□वैकल्पिक दिन			
			हां					
	D	क्या आपके क्षेत्र में कोई स्थान है, जहां कचरा इकट्ठा डाला जा सकता है? यदि हां तो कृपया आपकी ग्राम पंचायत से कितनी दूरी पर है या किस स्थान पर है?	□	√	ग्राम पंचायत से दूरी/ग्राम पंचायत में अवस्थिति		2 किमी	
	E	क्या आपके ग्राम पंचायत क्षेत्र में सामान्य कूड़ेदान रखे गये हैं?	√	□				
	F	क्या आप कचरे को सूखे और गीले कचरे की श्रेणी में बांटते हैं?	√	□	गीला,सूखा			
	G	आप गृह स्तर पर कचरे का उपचार कैसे करते हैं?	पुनःचक्रमण	कम्पोटिंग	वर्मी कम्पोस्ट	अपशिष्ट	जलाना	अन्य (उल्लेखित करें)
			□	□	□		√	

49		खुले में शौच मुक्त स्थिति			
	A	क्या आपका गांव खुले में शौच मुक्त घोषित है?	□हां	□नहीं	
	B	स्वयं के शौचालय वाले परिवारों की संख्या	516	□	
	C	सामुदायिक शौचालय/इज्जत घर की संख्या	2	□	प्रमुख स्थान यादवपट्टी,अलीनगर
	D	क्या शौचालय का उपयोग किया जा रहा है?	हाँ		
	E	अगर शौचालय का उपयोग नहीं किया जा रहा है तो क्यों? (साफ–सफाई का अभाव, रख–रखाव का अभाव, बहुत दूर आदि)	Nil		

50		अपशिष्ट जल	घरेलू	व्यवसायिक	औद्योगिक	कृषि गतिविधियां	गंदा नाला
	A	अपशिष्ट जल का क्या स्रोत है?	√□	□	□	□	□
	B	उत्पन्न अपशिष्ट जल की मात्रा (अनुमानित लीटर प्रतिदिन)	80 प्रति परिवार				
	C	गांव में किया गया अपशिष्ट जल उपचार, यदि कोई है तो–	Nil				
	D	अपशिष्ट जल पुनःचक्रण या पुनः उपयोग की गतिविधि, यदि कोई हैं तो–	Nil				

51		स्वास्थ्य देखभाल की सुविधा			
		स्वास्थ्य केन्द्र की उपलब्धता	हां	नहीं	उपलब्ध छत का क्षेत्रफल (वर्गमीटर)
	A	प्राथमिक स्वास्थ्य केन्द्र	□	√□	
	B	सामुदायिक स्वास्थ्य केन्द्र	□	√□	
	C	उपस्वास्थ्य केन्द्र	□	√□	
	D	आंगनवाड़ी	√□	□	
	E	आशा	√□	□	
	F	स्वाथ्य कैम्प/मेला	√□	□	
	G	डिजीटल स्वास्थ्य देखभाल	□	√□	

52		रोग/बीमारी								
		विगत वर्ष निम्नवत् बीमारी/रोग से कितने लोग प्रभावित हुंए हैं?	प्रभावित कुल व्यक्तियों की संख्या	प्रभावित आयु समूह			सामान्य उपचार का विकल्प			
				प्रभावित बच्चों की संख्या	प्रभावित व्यवस्कों की संख्या	प्रभावित वरिष्ठ नागरिकों की संख्या	स्थानीय स्वास्थ्य देखभाल सुविधाएं (उल्लेख करें)	घरेलू देखभाल	घर–घर जाने वाला	अन्य (उल्लेख ा करें)
	A	वेक्टर–जनित रोग (मलेरिया, डेंगू, चिकेनगुनिया आदि)	21	11	4	6		√	√	
	B	जल–जनित रोग (हैजा/डायरिया/टाईफाई ड/ हैपेटाइटिस आदि)	33	14	9	10		√	√	

	C	श्वास सम्बन्धी रोग जो वायु प्रदूषण से होते हैं (इनडोर एण्ड आउटडोर)	21	1	3	17		□√	√□	
	D	कुपोषण	1	1			आशा,ANM	□	□	Health Camp

VII. उर्जा

53			
	A	आपके ग्राम पंचायत में कुल कितने घर विद्युतकृत हैं	**508**
	B	ग्राम पंचायत में निम्नलिखित अनुमानित विद्युत उपकरणों की संख्या	
		ए0सी0	02
		एयर कुलर	**202**
		रेफ्रिजेटर/फ्रीज	**112**

54		विद्युत कटौती की आवृत्ति	
	A	दिन में कुछ बार	√□
		दिन में एक बार	□
		विद्युत कटौती नही	□
	B	प्रतिदिन कितने घण्टे गुल रहती है?	8 घंटे
		यदि प्रतिदिन नही तो सप्ताह में कितने घण्टे बिजली गुल होती है?	Nil

55	वोल्टेज अस्थिरता/ उतार–चढ़ाव की आवृत्ति क्या है?	
	दिन में कुछ बार	□√
	दिन में एक बार	□
	अस्थिरता/उतार–चढ़ाव नहीं	□

56	पावर बैकअप का मतलब विद्युत कटौती के दौरान उपयोग	संख्या
	डीजल चलित जेनरेटर	2

	सौर उर्जा	37
	इमरजेंसी लाईट	304
	इन्टवटर्स	106
	अन्य साधन (उल्लेख करें)	Nil

57		नवीकरणीय/अक्षयऊर्जा के स्रोत		
	A	क्या गांव में निम्नलिखित में से कोई स्थापना है?	इंस्टालेशन (स्थापना) की संख्या	कुल स्थापित क्षमता (किलोवाट)
		घर की छतों पर सौर उर्जा स्थापना	15	
		विद्यालय की छत पर सौर उर्जा स्थापना	Nil	
		चिकित्सालय की छत पर सौर उर्जा स्थापना	Nil	
		ग्राम पंचायत भवन पर सौर उर्जा स्थापना	01	
		अन्य सौर उर्जा स्थापना	Nil	
		सौर स्ट्रीट लाईट	37	
		बायोगैस	Nil	
		विकेन्द्रित नवीनीकरण उर्जा/मिनी ग्रीड	Nil	
	B	क्या आप सौर उर्जा स्थापना के लिए उपलब्ध अनुदान के बारे में जानते हैं (कुछ योजनाओं/कार्यक्रमों का उल्लेख करें)	Nil	

58	भोजन बनाने हेतु प्रयुक्त ईधन	परिवारों की संख्या	प्रति परिवार प्रयुक्त औसत मात्रा (किग्रा/महीना)
	पारम्परिक जलौनी (उपले/जलौनी लकड़ी)	25	
	बायोगैस	Nil	
	एलपीजी गैस	491	
	विद्युत	Nil	
	सौर उर्जा	Nil	

	अन्य (कोयला, मिट्टी का तेल, चारकोल आदि)	Nil	

59	वाहन की संख्या			
	वाहन के प्रकार	ग्राम पंचायत में वाहन संख्या (अनुमानित)	प्रयुक्त ईधन के प्रकार	तय की गई औसत दूरी (किमी प्रतिदिन)
A	जीप	6	डीजल	45
B	कार	7	डीजल पेट्रोल	76
C	दो पहिया वाहन	262	पेट्रोल	95
D	विद्युत चालित वाहन	Nil		
E	आटो	4	डीजल	30
F	ई–रिक्शा	15	इलेक्ट्रॉनिक	20
G	अन्य	Nil		

60	कृषि यंत्र	ग्राम पंचायत में कृषि यंत्रों/मशीनों की सख्या	प्रयुक्त ईधन के प्रकार	तय की गई औसत दूरी (किमी प्रतिदिन)
A	टैक्ट्रर	5	डीजल	15
B	कम्बाईन हारवेस्टर	Nil		
C	अन्य (कृपया उल्लेख करें)	Nil		

61	ग्राम पंचायत में अवस्थित पेट्रोल पम्प (अगर कोई है)										
	ईधन के प्रकार	प्रतिदिन की बिक्री	पम्प से आपूर्ति वाले गांव की संख्या	कितने प्रकार के वाहनएक दिन/महीना में पेट्रोल पम्प से ईधन लेते हैं? (समय/ अवधि का उल्लेख करें)							
				टैक्ट्रर	कृषि यंत्र	जीप	कार	दो पहिया वाहन	आटो	ई–रिक्शा	अन्य
A	Nil	Nil									

	B	Nil	Nil									

62		औद्योगिक इकाई			
		उद्योग के प्रकार	**संख्या**	उर्जा के स्रोतः ग्रिड विद्युत (1), डीजल जेनरेटर (2), नवीनीकरण/अक्षय उर्जा (3)	उर्जा की खपत प्रति माह विद्युत का उपयोग (किलोवाट) ईधन उपयोग (लीटर प्रतिदिन)
		Nil	Nil		
		Nil	Nil		
		Nil	Nil		
		Nil	Nil		

Annexure III: HRVCA Report

ration

क्लाइमेट पंचायत विकास

स्मार्ट

ग्राम

योजना

ग्राम पंचायत – यादव पट्टी

ब्लाक – कुंडा, जनपद – प्रतापगढ़ (उ०प्र०)

|Climate Smart Gram

यादव ग्राम

पट्टी पंचायत-

एक दृष्टि में

साथी - उ0प्र0

ग्राम पंचायत	यादव पट्टी
विकास खण्ड	कुण्डा
जिला	प्रतापगढ़
ग्राम प्रधान का नाम	सौरभ सिंह
राजस्व गॉव की संख्या	4
टोलों की संख्या	8
कुल जनसंख्या	2868

कुल पुरूषों की जनसंख्या	1570
कुल महिलाओं की जनसंख्या	1298
जनसँख्या विभाजन	**सामान्य**- 20% **पिछड़ी**- 42% **दलित**- 38%
विकलांग जनों की संख्या	14
कुल बच्चों की जनसंख्या	489
कुल परिवार की जनसंख्या	516
गरीबी के रेखा से नीचे जीवन यापन करने वाले परिवार की संख्या	40
कुल भगौलिक क्षेत्रफल	234.388 हे0
साक्षरता दर	86 प्रतिशत
पक्का घरों की संख्या	431
कच्चा घरों की संख्या	85
इण्डिया मार्का हैण्डपम्प	144
कूएं	11

खतरा जोखिम, नाजकुता एवं क्षमता विश्लेषण

जलवायु परिवर्तनशीलता– प्रवृत्ति/परिवर्तन, मुख्य चुनौतियॉं झटके एवं तनाव –
प्रतापगढ़ जिले की ग्राम पंचायत–**यादव पट्टी** में सभी मौसम सर्दी, गर्मी एवं बरसात का प्रभाव रहता है। दो दशक पूर्व सर्दी नवम्बर माह से मार्च माह तक पड़ती थी। किन्तु सर्दी अब देर से शुरू हो रही है और फरवरी माह में ही समाप्त हो रही है। पिछले वर्ष 2022 में जून माह में बारिश हुई ही नही। जुलाई माह में भी दो–तीन दिन छोड़कर बारिश बहुत कम मात्रा में हुई। सूखा जैसे स्थिति दिखाई पड़ी, परन्तु कृषि कार्य करने वाले लोगों से पता चला कि आज से 20 वर्ष पूर्व धान की फसल में केवल एक बार सिंचाई करनी पड़ती थी किन्तु ग्लोबल वार्मिंग के प्रभाव से अब धान की फसल 2020 में तीन–चार बार सिंचाई करनी पड़ रही है। गॉव के लोगों ने बताया कि पहले गर्मी मई, जून से लेकर अगस्त तक होती थी, किन्तु अब गर्मी 15 मार्च के बाद से सितम्बर तक रहती है। विभिन्न प्रक्रिया के तहत पी.आर.ए0 विधियों का उपयोग करते हुए विभिन्न टूल्स के माध्यम से कई गतिविधियां सम्पादित की गई। इन गतिविधियों से प्राप्त सूचनाएं एवं आकड़ों के आधार पर जलवायुगत आपदा खतरा जोखिम प्रोफाइल में अपेक्षित सूचनाओं का संकलन किया गया। आपदा–खतरा जोखिम प्रोफाइल से सम्बन्धित सूचनायें निम्नवत है–

1. **गॉव को प्रभावित करने वाली आपदाओं की पहचान करना एवं प्राथमिकीकरण**–समुदाय के साथ आपदाओं के बारे में विस्तृत रूप से चर्चा व विचार विमर्श किया गया, जिनसे उनकी दैनिक दिनचर्या, आजीविका,

शिक्षा, स्वास्थ्य, पेयजल एवं साफ–सफाई प्रभावित होती है। चर्चा के आधार पर आपदाओं की एक सूची बनाया गया। इस सूची में सम्मिलित आपदाओं के प्रभाव को एवं इससे उत्पन्न समस्याओं का तुलनात्मक अध्ययन किया गया। इस गॉव की मुख्य आपदा ओलावृष्टि के साथ जलजमाव भी है, जिससे खेती, आजीविका, स्वास्थ्य एवं पेयजल, साफ–सफाई आदि में जोखिम की संभावना अधिक बढ़ जाती है।

आपदा का इतिहास एवं क्षति – समुदाय के साथ आपदाओं के बारे में विस्तृत रूप से चर्चा व विचार–विमर्श किया गया, जिनका अब तक समुदाय एवं संसाधनों पर व्यापक और सामान्य दोंनों तरह से प्रभाव पड़ा है। गॉव के लोगों ने बताया कि यादव पट्टी ग्रामपंचायत में वर्ष 1965, 1971 व 2018 में सूखा की घटना हुई, जिससे फसलों की काफी क्षति हुई थी। ***आपदा की पहचान एवं प्राथमिकीकरण के आधार पर निम्न आपदायें यादव पट्टी ग्राम पंचायत को प्रभावित करती हैं।***

	Jan	Feb	Mar	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
जल जमाव												
सूखा												
ओलावृष्टि												
ऑधी तूफान												
लू												
शीतलहर												

आपदा का ऐतिहासिक मानचित्रण व मौसमी कैलेण्डर बनाने से और समुदाय के साथ चर्चा के दौरान यह स्पष्ट हुआ कि कम दिनों में अधिक वर्षा और वर्षा–विहीन दिनों की संख्या में वृद्धि के साथ तापमान चरम पर पहुॅचने से पर्यावरण में स्पष्ट परिवर्तन देखने को मिल रहा है।

जल जमाव इस ग्राम पंचायत की प्रमुख समस्या है, जो प्रत्येक वर्ष समुदाय के आवागमन, पशुपालन, खेती एवं मजदूरी को पूरी तरह प्रभावित करती है। साथ ही मई, जून में अत्यधिक गर्मी का पड़ना, सामान्यतः मानसून के दिनों में जून, जुलाई में वर्षा का न होना, कम होना आदि सूखा पड़ने के संकेत विगत कई वर्षो से देखने को मिल रहा है। जिसका दूरगामी प्रभाव सिंचाई, पेयजल, खाद्यान्न, उत्पादन एवं पशुपालन के चारे का संकट पूरे वर्ष झेलना पड़ता है। पिछले 10 वर्षो से खरीफ की फसल लगातार प्रभावित हो रही है। वहीं दूसरी तरफ रबी की फसल भी ओलावृष्टि के कारण प्रभावित होती है।

2–जलवायु परिवर्तन जनित आपदा के जोखिम/खतरों का मानचित्रण एवं आकलन –

उपरोक्त आपदाओं के आधार पर होने वाले अनुमानित प्रभाव एवं उनसे प्रभावित समुदाय संसाधन आदि का विस्तृत विवरण/ जानकारी प्राप्त किया गया। यह जानकारी समुदाय के सभी वर्गो महिला, पुरूष, दलित एवं वंचित समुदाय की सक्रिय भागीदारी से प्राप्त किये गये हैं।

आपदाओं का ग्राम पंचायत यादवपट्टी के पर्यावरण आधारभूत संरचना के साथ ही मानवजीवन, आजीविका एवं स्वास्थ्य आदि पर नकारात्मक प्रभाव पड़ रहा है। जल जमाव के कारण विभिन्न संसाधन एवं व्यवस्थाएं जोखिमपूर्ण हो जाती हैं। इस गॉव के लोगों को जलवायु परिवर्तन जनित आपदा के जोखिम से निम्न समस्याओं का सामना करना पड़ता है।

जो निम्नवत है:–

क्र0 सं0	आसन्न आपदा /खतरे	संभावित जोखिम का क्षेत्र	संभावित जोखिम प्रभावित क्षेत्र			
			जोखिम	आबादी	घर	संसाधन
1	**जलजमाव**	पेयजल	पेयजल का दूषित होना, जल जनित बीमारी का जोखिम	पूरा गॉव	470	120हैण्डपम्प का जल दूषित हो जाना
		स्वच्छता	ठोस अपशिष्ट बहकर फैल जाना	पूरा गॉव	470	सड़क खड़न्जा इण्टरलॉकिंग
		स्वास्थ्य	जल जनित बिमारियों का होना	पूरा गॉव	516	225 लोग प्रभावित
		शिक्षा	आवागमन बाधित होने तथा पूरे गॉव से विद्यालय में उपस्थिति कम होना	पूरा गॉव	516	सड़क व विद्यालय परिसर में पानी होना
		समाजिक सुरक्षा	वृद्धजन, बच्चे, विकलांग जन व महिलाओं का घायल होना	पूरा गॉव	470	सड़के क्षतिग्रस्त हो जाना
		कृषि	खरीफ की फसल का नुकसान, धान की नर्सरी का नुकसान, रबी फसल की बोआई मे विलम्ब	पूरा गॉव	470	10–15 एकड़
		उद्यान सब्जी	पेड़–पौधे व सब्जी फसल खराब होना	पूरा गॉव	270	2200 पेड़–पौधे 10 एकड़ सब्जी
		पशुपालन	पशुओं में बीमारी का प्रकोप	पूरा गॉव	470	गाय, भैस, बकरी, मुर्गी पालन
		आजीविका	स्थानीय स्तर पर मजदूरी न मिलना	217 जॉब कार्ड	217	93 सक्रिय जाबकार्ड धारक
		जल निकाय	जल निकाय में गंदा पानी भरना	पूरा गॉव	470	05 जल निकाय क्षेत्र
		खुले क्षेत्र	खुले में खरपतवार, खासपात की अधिकता व कीट–पतंगों का प्रकोप			खुले में खरपतवार, घास–पात की अधिकता
2	**सूखा**	पेयजल का संकट	जलस्तर का नीचे चला जाना	पूरा गॉव	470	पूरी ग्राम पंचायत
		कृषि	उपज प्रभावित होना	पूरा गॉव	470	60 हे0 खेती
		उद्यान सब्जी	पेड़–पौधे व सब्जी फसल खराब होना	पूरा गॉव	270	2200 पेड़–पौधे 10 एकड़ सब्जी
		पशुपालन	पशुओं में बीमारी का प्रकोप	पूरा गॉव	470	गाय, भैस, बकरी, मुर्गी पालन

3	लू	स्वास्थ्य	मानव एव पशुओ को लू लगना, स्वास्थ्य खराब होना, टीकाकरण में बाधा	पूरा गांव	470 घर	स्वास्थ्य सेवाएं बाधित होना, पेयजल स ंकट चारा का सूख जाना
		शिक्षा	बच्चों का स्वास्थ्य प्रभावित		लगभग 200 बच्चे	बच्चों कीं शिक्षा बाधित
4	**शीतलहर**	स्वास्थ्य	मानव व जानवरों को ठण्ड लगना	बुजुर्गो ं स्वांस की बीमारी में वृद्वि	वृद्धजन एवं बच्चें	शीतलहर के प्रकोप से मानव स्वास्थ्य की हानि
		कृषि	शीतलहर से फसलो ं को नुकसान			खेती
		पशुपालन	पशु क्षति, खेत में फसलों को नुकसान	पूरा गांव	50 पशुपालक घर	प्रत्येक वर्ष 40 से 50 बकरियों की मृत्य
5	**ओलावृष्टि**	मानव स्वास्थ्य व पेयजल का संकट	छोटे बच्चें, वृद्वजन, महिलाएं के गिरने, चोट लगने का खतरा, जानवरों के घायल होने का खतरा	पूरे गाँव में आम के बाग व कच्चे घरों की क्षति	516	कच्चे घरों व फसलों का क्षतिग्रस्त होना

आजीविका के साधनों पर आपदा का प्रभाव– ग्राम पंचायत यादव पट्टी में आजीविका का मुख्य साधन कृषि, कृषिगत मजदूरी एवं पशुपालन है। जलजमाव के दौरान आजीविका हेतु लोग पलायन करते है। आजीविका के साधन आपदा से सर्वाधिक प्रभावित होते है।

(विस्तृत विवरण के लिए संलग्नक-2देखें)

नाजुकता विश्लेषण– आपदाओं का बार–बार सामना करने से प्रभावित समुदाय सामाजिक व आर्थिक रूप से बहुत कमजोर हो जाता है। समुदाय द्वारा ग्राम पंचायत को आपदा की दृष्टि से सुरक्षित बनाने की दिशा में नाजुक समुदाय, नाजुक संसाधन, नाजुक स्थल का जानना अति आवश्यक है। इसे जानने के लिये समुदाय के साथ आशा, ऑगनवाड़ी कार्यकत्री आदि के मदद से नाजुक वर्ग व स्थलों की जानकारी ली गयी है।

जलजमाव– जलवायु परिवर्तन व आपदा के प्रभाव स्वरूप यादव पट्टी ग्राम पंचायत में जल जमाव एक प्रमुख समस्या है।गॉव की मुख्य सड़क प्रयागराज–लखनऊ राजमार्ग से जुड़ा हुआ है। यह गांव गंगा नदी के तट पर बसा है। कहने के लिए गांव के बीचों बीच एक नाला है, परन्तु इसकी साफ सफाई न होने के कारण जाम हो जाने से जल निकासी नहीं हो पाती।

समुदाय पर जल–जमाव का प्रभाव–जलजमाव का समुदाय पर प्रभाव निम्नवत् है–

जल जमाव से 25–30 घर प्रभावित होते हैं। घर की दीवारों एवं फर्श में सीलन रहता है। बरसात में जल जमाव के कारण आवागमन बाधित रहता है।

आम के बाग में लगातार जलजमाव से पेड़ भी सूख जाते है।

मच्छरों का प्रकोप हमेशा बने रहने से लोग बीमार रहते है।

सूखा– समुदाय के साथ चर्चा से यह तथ्य निकलकर आया कि सूखा गॉव की दूसरी बड़ी आपदा है। आज से 20 वर्ष पहले यहाँ जून माह से सितम्बर माह तक बरसात होती थी। वर्ष 2022 में जून में बारिश नहीं हुई। जुलाई में दो से तीन दिन ही बारिश हुई। फिर कई दिनों तक बारिश नही हुई, इससे सूखे की स्थिति बनती जा रही है। सूखे की स्थिति में निम्न गतिविधियॉ और वृद्धि कर रही है।

- गॉव के खेतों में मेड़बन्दी जैसी जल संरक्षण की गतिविधियों की कमी है।
- आम की बाग अधिक होने से यह गांव फल पट्टी एरिया में आता है।
- गॉव में आम की बाग अधिक मात्रा में है। सागौन, शीशम, नीम, जामुन के वृक्ष भी कुछ जगहों पर व्यक्तिगत रूप से लगे है।
- गॉव के कुल 10 कूँएं हैं, जो भूमिगत जलस्तर का प्रबन्धन कर सकते हैं। इसमें 3 कूओं का पानी साफ है। शेष कूँएं में गंदगी मिट्टी आदि भरा हुआ है। इसके परिणाम स्वरूप तालाब की जल धारण क्षमता प्रभावित हो रही है। सड़कों के किनारे, खेत के मेड़ों पर कृषि व सार्वजनिक स्थलों पर वृक्ष लगे हुये है।

सूखा का समुदाय पर प्रभाव –सूखे का समुदाय पर प्रभाव निम्नवत् है–

- सूखे से पेयजल प्रभावित हो जाता है। गर्मी के दिनों में इण्डिया मार्का हैण्डपम्प का जलस्तर काफी नीचे चला जाता है।
- सूखे के प्रभाव से खरीफ की फसल में सिंचाई की लागत बढ़ गयी है। पिछले वर्ष 2022 में सूखे से धान का उत्पादन कम हुआ है।
- सूखे से जानवरों को चारे की कमी हो जाती है। तापमान बढ़ने से पशुओं को विभिन्न प्रकार की बीमारी हो जाती है। दुग्ध उत्पादन भी कम हो जाता है।

लू– लू स्थानीय समुदाय पर निम्न तरीके से प्रभाव डालता है–

लू आपदा भी गॉव को प्रभावित करती है। समुदाय के साथ चर्चा के दौरान निकलकर आया कि गर्मियों के दिनों में 15 मई से 15 जून तक मौसम का तापमान अत्यधिक बढ़ जाता है और गर्म हवाये चलने लगती हैं। इससे समुदाय के स्वास्थ्य पर इसका नकारात्मक प्रभाव पड़ता है। मनुष्य व पशुओं को लू लगने से उनका स्वास्थ्य खराब हो जाता है। विशेषकर बच्चों एवं बुजुर्गो पर इसका विशेष प्रभाव पड़ता है बच्चों की शिक्षा एवं स्वास्थ्य सेवाये प्रभावित होती हैं। विशेषकर छोटे बच्चों के टीकाकरण आदि में बाधा आती है। पशुओं को चारा एवं पेयजल हेतु पानी की समस्या बढ़ जाती है।

शीतलहर–गंगा नदी के किनारे बसे होने के कारण शीतलहर भी गॉव को प्रभावित करने वाली आपदा है। सर्दियों के मौसम में 15 दिसम्बर से 15 जनवरी तक शीतलहर का प्रभाव रहता है। शीतलहर मनुष्य व पशुओं के स्वास्थ्य व कृषि को भी प्रभावित करता है। शीतलहर के प्रभाव से पशुओं पर नकारात्मक प्रभाव पड़ता है। बकरियों को पीपीआर बीमारी होती है। गाय, भैस के दूध उत्पादन में कमी आ जाती है। शीतलहर के कारण कृषि कार्य, मजदूरी आदि आजीविका प्रभावित होती है। बच्चों में निमोनिया, खांसी एवं दस्त की समस्या हो जाती है। फसलों में मुख्यतः आलू, दलहन एवं तिलहन पर पाले का प्रभाव पड़ता है। परिणाम स्वरूप पौधों की बढ़वार थम जाती है और फसल सूख जाती है। कीट पतंगों का प्रभाव बढ़ जाता है। जलावनी लकड़ी की व्यवस्था हेतु महिलाओं को अधिक मेहनत करनी पड़ती है।

उपरोक्त के अतिरिक्त समुदाय की व्यवहारगत एवं ढाँचागत संरचना में कमियाँ है, जो निम्नवत है–

- गॉव में समुदाय आधारित संस्थाओं की कमी है। कृषि केन्द्र, बीज केन्द्र, किसान संगठन, सामुदायिक अनाज बैक, युवामण्डल दल, महिला मण्डल, सामाजिक संगठन की कमी है। इस कारण आपदा के समय समुदाय को सरकारी एवं वाह्य सहायता पर निर्भर रहना पड़ता है।
- लोगों में जानकारी एवं जागरूकता का अभाव है। लोगों को कृषिगत, कल्याणकारी योजनाओं की जानकारी का अभाव है। गाँव के लोग पशुपालन तो करते हैं, किन्तु जानकारी न होने के कारण नस्ल सुधार, पशुओं का बीमा, फसल बीमा आदि नहीं कराते हैं।

- गांव में सौर उर्जा सम्बधित गतिविधियां नहीं है। यहॉ लगभग 83 प्रतिशत से अधिक घरों पर पक्की छत है। जहॉ पर सौर उर्जा लगाया जा सकता है।
- गॉव में सूखा एवं गीला कचरा एक साथ इकठ्ठा होकर गलियों, सड़कों एवं खड़न्जा आदि के किनारे पड़ा रहता है। लोगों में कचरा प्रबन्धन के बारे में जानकारी व जागरूकता का अभाव है। परिणाम स्वरूप मानसून के दिनों में यह कचरा बहकर जल निकास तंत्र को बाधित करता है एवं जलजमाव की समस्या को बढ़ाता है।
- मानूसन के दिनों में जल जनित मच्छर–मक्खियों से होने वाली बीमारी की आशंका बनी रहती है। यहाँ टायफाइड, मलेरिया, सांस सम्बन्धित बीमारियॉ अक्सर होती रहती है।
- गॉव में अधिकांशतः मुख्य फसले गेंहूँ सरसों एवं धान ही उगातेहै। खेती में विविधता, मिश्रित खेती, मिश्रित फसलों एवं कम लागत, स्थाई कृषि आदि से सम्बन्धित गतिविधियॉ नही है। जिससे किसानों को आपादा के समय जोखिम का ज्यादा सामना करना पड़ता है।
- कृषिगत गतिविधियों में उर्वरक, कीटनाशक, खर–पतवार नाशक का अत्यधिक प्रयोग किया जाता है।
- गॉव में गाय, भैंस आदि पशुपालन, होने के बावजूद भी गोबर का प्रयोग जैविक खाद एवं कम्पोस्ट खाद का प्रयोग नही करते है गॉव के लोग गोबर का प्रयोग जलावन/कण्डे के रूप में करते हैं।
- प्राथमिक विद्यालय के पास ऑगनवाड़ी भवन बना हुआ है। जो पूरी तरह जर्जर है। आंगनवाड़ी में 0–6 माह के 30 बच्चे 3 से 6 वर्ष के 130 बच्चें गर्भवती 23 एवं धात्री महिलाये 26 को स्वास्थ्य सेवाये एवं पोषाहार का वितरण किया जाता है। गॉव में जन सुविधा केन्द्र के नहीं होने से विभिन्न प्रकार की कल्याणकारी सरकारी कार्यक्रमों एवं योजनाओं की जानकारी और पहुँच से लोग वंचित रह जाते हैं।
- ग्राम स्तर पर लघु/ सूक्ष्म उद्योग, पारम्परिक रोजगार में कमी दिखाई दी। जैसे– कुल्हड़ बनाना, रस्सी बनाना, बढ़ईगीरी आदि की कमी पायी गयी है।

क्षमता विश्लेषण–

आपदाओं के सन्दर्भ में गॉव को क्लाइमेट स्मार्ट बनाने की दृष्टि से गॉव स्वयं में कितना सक्षम है, इसकी जानकारी हेतु समुदाय के साथ मिलकर समग्र ग्राम पंचायत का क्षमता आकलन किया गया। जलवायु परिवर्तन से उत्पन्न होने वाली आपदाओं एवं खतरों से गॉव के साथ ही आसपास उपलब्ध संसाधन भी प्रभावित होते हैं। यह संसाधन भौतिक, पर्यावरणीय एवं मानव संसाधन के रूप में मददगार होते हैं।

- ग्राम पंचायत यादव पट्टी प्रयागराज लखनऊ राजमार्ग से 03 कि0मी0 दक्षिण दिशा में स्थित है। इस गॉव में ग्रामीणों की सुविधा के लिये सामुदायिक शौचालय, बच्चों की शिक्षा

हेतु एक प्राथमिक विद्यालय है, ग्राम पंचायत यादव पट्टी में लगभग 83 प्रतिशत घरों में पक्की छत है। गॉव की सड़के कई जगहों पर टूटी–फूटी है। जिसके कारण बरसात के दिनों में जलजमाव रहता है। आवागमन में समस्या का सामना करना पड़ता है। गॉव के सामुदायिक जल आपूर्ति हेतु पानी की टंकी तो प्रस्तावित है, परन्तु अभी उसका कोई अता पता नहीं है। गॉव में एक तालाब **अमृत सरोवर** भी बनाने हेतु प्रस्तावित है। संगठन के तौर पर ग्राम पंचायत यादव पट्टी में 02 महिला स्वयं सहायता समूह कार्यरत है। जिसमें से दोनों समूह बैंक से लिंकेज है। सुविधा**,** संसाधन मानचित्र से लिये गये आकड़े एवंम् तथ्य, विशेषकर संसाधनों के सन्दर्भ में किये गये क्षमता आकलन को तीन भागों में बॉटकर किया गया, जिसमें गॉव में उपलब्ध भौतिक एवं पर्यावरणीय संसाधनो को सामाजिक मानचित्र पर अंकित किया गया। जबकि मानव संसाधन के बारे में समुदाय के साथ चर्चा कर सूचनायें प्राप्त की गयी जो निम्नवत है–

भौतिक संसाधनो की उपलब्धता एवं गॉव से दूरी

विवरण	संख्या	गॉव से दूरी
प्राथमिक विद्यालय	1	0.3 कि0मी0
पंचायत भवन	1	0.4 कि0मी0
सरकारी राशन की दुकान	1	0.5 कि0मी0
थाना	1	1.5 कि0मी0
कचहरी तह0–कुण्डा	1	14 कि0मी0
जिला चिकित्सालय	1	65 कि0मी0
एम्बुलेंस व्यवस्था	1	14 कि0मी0
विकास खण्ड कार्यालय	1	14 कि0मी0
सामु0 स्वास्थ्य केन्द्र	1	14 कि0मी0
पोस्ट ऑफिस	1	14 कि0मी0
बिजली विभाग	1	14 कि0मी0
बस स्टेशन कुण्डा	1	14 कि0मी0
रेलवे स्टेशन कुण्डा	1	15 कि0मी0
खाद, बीज, दवा केन्द्र	1	08 कि0मी0
बैंक	1	14 कि0मी0

प्राकृतिक संसाधन संख्या एवं दूरी:

संसाधन	संख्या	दूरी
तालाब	4	0.3 कि0मी0

कुँआ	11	0.3 कि0मी0
नाला	6	0.4 कि0मी0
बग	7	0.3 कि0मी0
न्दी	1	0.3 कि0मी0
कृषिगत क्षेत्र	111.654 हे0	0.6 कि0मी0
सामुदायिक भूमि	0.746 हे0	0.3 कि0मी0

मानव संसाधनः

ग्राम प्रधान	सौरभ सिंह	9455907717
शिक्षक	संजीव कुमार	9125530090
राजस्व निरीक्षक	अनिल दूबे	8840938149
तकनीकी सहायक	अनिल कुमार पाण्डेय	8737008554
ग्राम विकास अधिकारी	विजय कुमार	8565084143
थाना प्रभारी	मनीष पाण्डेय	9454404119
पंचायत सहायक	शालू सिंह	7388761104
शिक्षा मंत्री	राकेश कुमार	9628457267
ए0एन0एम0	मनीष पाण्डेय	7233969822
आंगनवाड़ी	शाली देवी	7565860354
आंगनवाड़ी	अनीता देवी	9918473267
आंगनवाड़ी	श्यामकली	8726933635
आशा	सुनीता देवी	7310266724
आशा	शोभा देवी	9919700738

क्लाइमेट स्मार्ट ग्राम पंचायत यादव पट्टी की कार्य योजना का निर्माण
ब्लाक–कुण्डा, जनपद–प्रतापगढ़।

क्लाइमेट स्मार्ट ग्राम पंचायत विकास योजना बनाने हेतु सभी अभ्यासों एवं प्रयासों के उपरान्त राजस्व गॉव वार जानकारी प्राप्त करने के लिए समूह चर्चा किया गया। इस बैठक के दौरान सभी 04 राजस्व गॉवों के अन्तर्गत आने वाली विभिन्न बिन्दुओं पर ग्राम पंचायत में वर्तमान स्थिति, समस्याऍं और उन समस्याओं का निराकरण हेतु एक विशिष्ट कार्य योजना के बारे में जानकारी प्राप्त की गई। प्राप्त सूचानाओं, तथ्यों ग्रामीणों से विचार–विमर्श के बाद ''क्लाइमेट स्मार्ट ग्राम अवधारणा के तहत **क्लाइमेट स्मार्ट ग्राम पंचायत विकास योजना** को तैयार किया गया है, जिसमें आपदा जोखिम, जोखिमता के कारण व समाधान आदि के बारे में संकलन कर तैयार किया गया है। राजस्व गांववार क्लाइमेट स्मार्ट ग्राम पंचायत यादव पट्टी के राजस्व गॉव– यादव पट्टी, चक अब्दुल गनी, पाटीहार एवं भानापुर की कार्य योजना तालिका–

क्र0 सं0	कार्य का क्षेत्र	कार्य का नाम	कार्य का विवरण	परि सम्पत्ति का स्थान	अनुमानित धनराशि	अवधि	योजना का परिव्यय
01	मानव विकास एवं सामाजिक सुरक्षा साफ– सफाई एवं स्वच्छता	गंदे एवं पटे 10 कुऍं की सफाई सुरक्षा एवं मरम्मत का कार्य	पाटीहार से छाताहार जाते समय रास्ते में प्रा0 वि0 में, भानापुर रास्ते मे, पंचायत भवन में, यादव पट्टी रास्ते में, तीन सदस्य के घर के पास	पाटीहार–2, भानापुर–3, यादवपट्टी–2, चक अब्दुलगनी–3	7.65 लाख	2 माह	15 वॉ वित्त आयोग
02		शौचालय निर्माण एवं मरम्मत कार्य	महिला, पुरूष एवं दिब्यांगजन हेतु शौचालय निर्माण	प्रा0वि0 के पास एवं सभी राजस्व गॉव में 14 सार्वजनिक शौचालय घर बनाने तथा 212 शौचालयों की मरम्मत हेतु	18.40 लाख	5 माह	15 वॉ वित्त आयोग
03		नाडेप/वर्मी कम्पोस्ट जैविक खाद का पिट निर्माण	मिट्टी को नम बनाये रखने के लिए व्यक्तिगत 70 वर्मी कम्पोस्ट पिट का निर्माण कार्य	यादव पट्टी– 19 पाटीहार–12 भानापुर–11 धरौली–15, आंगन का पुरवा–8, दुर्गा का पुरवा–05	5.70 लाख	6 माह	15 वॉ वित्त आयोग
			मिट्टी को नम बनाये रखने के लिए व्यक्तिगत 55 नाडेप कम्पोस्ट पिट का निर्माण कार्य	धरौली–12, छाताहार.–11 आंगन का पुरवा–10, अलीनगर–12	4.00 लाख	6 माह	15 वॉ वित्त आयोग

				चक अब्दुलगनी–10			
04		हैण्डपम्प रिबोर इण्डिया मार्क–2	पेयजल की उपलब्धता हेतु 47 इण्डिया मार्क हैण्डपम्पों का रीबोर एवं प्लेटफार्म निर्माण हेतु	यादवपट्टी–09 पाटीहार–14 भानापुर–11 चक अब्दुलगनी–13	28.20 लाख	5 माह	15 वॉ वित्त आयोग
05		पानी की सफाई हेतु जलशोधन केन्द्र	गंदे जल की सफाई हेतु 10 जलशोधन केन्द्र की स्थापना	प्रस्तावित अमृत सरोवर के पास–3, पाटीहार तालाब–2, नहर के पास–3, यादव पट्टी–2	19.40 लाख	6 माह	15 वॉ वित्त आयोग
06		सड़क निर्माण	पुल से पंचायत भवन आर0सी0सी0 सड़क 300 मीटर निर्माण हेतु	यादव पट्टी	19.50 लाख	1 माह	15 वॉ वित्त आयोग
07		नाला निर्माण	सड़क से पंचायत भवन तक 450 मीटर तक नाला निर्माण।	यादव पट्टी	22.70 लाख	2 माह	15 वॉ वित्त आयोग
08		नाला की सफाई एवं खुदाई	प्रा0 वि0 से पक्की सड़क तक 350 मी0 नाले की खुदाई	यादव पट्टी	5.00 लाख	3 माह	15 वॉ वित्त आयोग
			गंगा नहर से छाताहार तक 500 मी0 नाले की सफाई	यादव पट्टी	3.20 लाख	3 माह	15 वॉ वित्त आयोग
09		पुलिया निर्माण	नाले पर 02 एवं नहर पर 01 का निर्माण होना है।	भानापुर और यादव पट्टी	17 लाख	3 माह	15 वॉ वित्त आयोग
10		नाली निर्माण	कमलेश के घर से मन्दिर तक 210 मी0 नाली राम सजीवन के घर ददौली वार्ड तक 250 मी0 इस्तियाक के घर से तालाब तक 200 मी0 नाली निर्माण कड़ेदीन के घर से बाग तक नाली 110 मी0	धरौली, आंगन का पुरवा भानापुर	18 लाख	6 माह	15 वॉ वित्त आयोग

			शंकर के घर से नन्हे के घर तक नाली 300 मी0 लालजी के घर से दूधनाथ के घर तक 210 मी0 नाली इन्द्रपाल के घर से तालाब तक 110मी0 नाली	भानापुर चक अब्दुलगनी चक अब्दुलगनी आंगन का पुरवा			
11		गंदे पानी के निकासी हेतु संरचना	पानी निकास हेतु मोटे पाइप, सीमेन्टेड पाइप और लोहे के चैम्बर का निर्माण – 78	यादवपट्टी–34 पाटीहार–23 भानापुर–21	28 लाख	6 माह	15 वॉ वित्त आयोग
12		जल निकासी हेतु मोटे साइफन को लगवाना	खराब जल को गॉव से बाहर निकास हेतु मोटे साइफन लगवाना	गंदे नाले से माइनर तक	9 लाख	2 माह	15 वॉ वित्त आयोग
13		चेक डैम	नाले पर 3 चेक डैम का निर्माण कार्य	गन्दे नाले पर	5 लाख	1 माह	15 वॉ वित्त आयोग एवं मनरेगा
14	बुनियादी/आधार भूत संरचना एवं पर्यावरण संरक्षण	तालाब संरक्षण	तालाब संरक्षण का कार्य सफाई, चौहद्दी,चबूतरा, वृक्षारोपण, सीमेन्टेड पाइप, साइफन आदि का कार्य	धरौली	12 लाख	6 माह	15 वॉ वित्त /मनरेगा/ वन विभाग
15		तालाब की खुदाई,	तालाब की गहरी खुदाई एवं सौन्दर्यीकरण का कार्य	भानापुर	8 लाख	3 माह	15 वॉ वित्त /मनरेगा एवं वन विभाग
16		सोख्ता गड्ढ़ा	भू–गर्भजल प्रबन्धन हेतु 70 सोख्ता गड्ढ़े का निर्माण।	यादव पट्टी	9.90 लाख	2 माह	15 वॉ वित्त आयोग
17		आंगनवाड़ी केन्द्र का निर्माण	एक केन्द्र यादव पट्टी में और दूसरा पाटीहार में निर्माण कार्य।	यादवपट्टी पाटीहार,	39 लाख	3 माह	15 वॉ वित्त आयोग

18		उपस्वास्थ्य केन्द्र का निर्माण	उप स्वास्थ्य केन्द्र यादव पट्टी में निर्माण करना है।	यादव पट्टी	23.50 लाख	3 माह	15 वॉ वित्त आयोग
19		सड़क इण्टरलॉकिंग एवं आर0सी0सी0 निर्माण	दुर्गा मन्दिर से सिकन्दर के घर तक सी0सी0 रोड–210.मी0 कल्लू के घर से कान्ती के घर तक सी0सी0 रोड–150.मी0 नीरज के घर से मोतीलाल के घर तक सी0 सी0 रोड–90 मी0 लवकुश के घर से सुभाष के घर तक सीसी0रोड–160मी शंकर के घर से नन्हे के घर तक सी0सी0 रोड–200. मी0 नहर से श्याम लाल के घर तक आर0सी0सी0 रोड–250. मी0 अवधेश के घर से राम सुख के घर तक सी0सी0रोड–120.मी0 पक्की सड़क से बाग तक सी0सी0 रोड– 190. मी0	धरौली धरौली धरौली आंगन का पुरवा आंगन का पुरवा भानापुर भानापुर भानापुर	64.50 लाख	6 माह	15 वॉ वित्त आयोग / मनरेगा

		इण्टरलॉकिंग	प्रा0वि0 से पक्की सड़क तक इण्टर लॉकिंग –120.मी0 सन्तोष के घर से बाग तक इण्टर लॉकिंग –300.मी0, बैजनाथ के घर से बृजेश के घर तक इण्टरलॉकिंग–150.मी0, पिन्टू के घर से तालाब तक इण्टरलॉकिंग –100.मी0 महेन्द्र के घर से बाग तक इण्टर लॉकिंग–100.मी0 सरकारी सबमर्सिबल पम्प से नन्हे के घर तक इण्टरलॉकिंग–150.मी0 प्रेम के घर से उमेश के घर तक इण्टरलॉकिंग–180मी संजू के घर से दूधनाथ के घर तकइण्टरलॉकिंग–140.मी0 नीरज के घर से पक्की सड़क तक इण्टरलॉकिंग–120.मी0 पक्की सड़क से शीतला प्रसाद के घर तक इण्टर लॉकिंग –150.मी0 पक्की सड़क से रामराज के घर तक इण्टरलॉकिंग –110.मी0	यादव पट्टी यादव पट्टी भानापुर भानापुर चक अब्दुल गनी भानापुर धरौली आंगन का पुरवा धरौली	98.50 लाख	6 माह	15 वॉ वित्त आयोग / मनरेगा

				आंगन का पुरवा आंगन का पुरवा पाटीहार			
	बुनियादी/आधारभूत संरचना एवं पर्यावरण	सड़क की मरम्मत कार्य	पक्की सड़क से अर्जुन एवं अमरजीत के घर तक सड़क मरम्मत कार्य 460.मी0 राम सजीवन के घर से ददौली वार्ड तक 300. मी0	पाटीहार छाताहार	26 लाख	2 माह	15 वॉ वित्त आयोग एवं मनरेगा
		वृक्षारोपण एवं उनकी सुरक्षा	1200 छायादार फलदार, वृक्षो का रोपड़ और उनकी सुरक्षा हेतु जाली निमार्ण	भानापुर व धरौली में तालाब एवं नालो व खेतों के आस–पास	18.50 लाख	3 माह	15 वॉ वित्त आयोग/मनरेगा/वन विभाग
		सौर उर्जा द्वारा प्रकाश की व्यवस्था	108 घरो हेतु छतो पर सौर उर्जा पैनल द्वारा प्रकाश व्यवस्था	पाटीहार–10 भानापुर–25 धरौली–27, छाताहार.–5 आंगन का पुरवा–15, दुर्गा का पुरवा–06 चक अब्दुलगनी–05 अलीनगर–15	21.60 लाख	2 माह	

24		पशु–शेड	55 घरो में छोटे पशुपालको के लिए पशु शेड की व्यवस्था	यादव पट्टी–10 पाटीहार–04 भानापुर–08 धरौली–15, छाताहार.–03 आंगन का पुरवा–05, अलीनगर–06 दुर्गा का पुरवा–02 चक अब्दुलगनी–02	22 लाख	3 माह	15 वॉ वित्त आयोग एवं मनरेगा
25		कूड़ादान/ घर	15 स्थानों पर कूड़ा घर निर्माण कार्य एवं मरम्मत की व्यवस्था	पाटीहार–02 भानापुर–02 धरौली–02 छाताहार.–02 आंगन का पुरवा–02, अलीनगर–02 दुर्गा का पुरवा–02 चक अब्दुलगनी–01	2.30 लाख	2 माह	15 वॉ वित्त आयोग एवं मनरेगा
26		नर्सरी का निर्माण	महिला समूह के माध्यम से नेट हाउस एवं पाली हाउस बनाकर नर्सरी तैयार करना	यादवपट्टी ग्राम सभा	2 लाख	6 माह	मनरेगा/वन विभाग
27		सिंचाई प्रणाली एवं कीट प्रबन्धन	114 लाभार्थी कृषकों को टपक सिंचाई, स्पिंकलर सेट की व्यवस्था और कीट प्रबन्धन हेतु दवा एवं स्प्रे मशीन की व्यवस्था	यादव पट्टी–17 पाटीहार–14 भानापुर–13 धरौली–13, छाताहार.–14 आंगन का पुरवा–15, अलीनगर–10 दुर्गा का पुरवा–11 चक अब्दुलगनी–07	5.60 लाख	3 माह	कृषि विभाग
			क्लाइमेट स्मार्ट परियोजना पर कुल लागत		**रू0 564.15 लाख**		

क्लाइमेट स्मार्ट ग्राम पंचायत विकास योजना के निरूपण की सहभागी प्रक्रिया :–

वातावरण निर्माण – ग्राम पंचायत यादव पट्टी हेतु क्लाइमेट स्मार्ट ग्राम पंचायत विकास योजना के निरूपण हेतु ग्राम पंचायत के समग्र जन की सहभागिता सुनिश्चित करने की दृष्टि से ग्राम प्रधान सौरभ सिंह की अध्यक्षता में खुली बैठक आयोजित की गई। इसके 03 दिन पूर्व पूरे गांव का भ्रमण कर सामाजिक अगुवाओं से मिलकर प्रस्तावित क्लाइमेट स्मार्ट ग्रामपंचायत योजना के उद्देश्यों के बारे में चर्चा भी की गयी थी।

खुली बैठक – ग्राम पंचायत यादव पट्टी में क्लाइमेट स्मार्ट ग्राम पंचायत कार्य योजना निरूपण हेतु ग्रामसभा की खुली बैठक दिनांक–10/02/2023 पंचायत भवन में आयोजित की गयी इस बैठक में ग्राम प्रधान, पंचायत सदस्य स्वयं सहायत समूह के अध्यक्ष, आंगनवाड़ी कार्यकत्री, आशा, ए0एन0एम0 ग्राम विकास अधिकारी, लेखपाल, ग्राम के सम्मानित व्यक्ति तरूण चेतना संस्थान के निदेशक श्री नसीम अन्सारी, भीष्म प्रताप सिंह, सन्तोष कुमार चर्तुवेदी उपस्थित हुये। इस ग्राम पंचायत के पुरूष 46 महिला 37 बच्चे 19 कुल 102 लोगों ने प्रतिभाग किया। बैठक के अध्यक्षता ग्राम प्रधान द्वारा किया गया बैठक के प्रारम्भ में सभी का परिचय तरूण चेतना संस्थान के सन्तोष कुमार चर्तुवेदी द्वारा किया गया, बैठक के उद्देश्य पर प्रकाश डालते हुए बताया गया कि जलवायु परिवर्तन का असर पूरा विश्व झेल रहा है। इसका पूरा प्रभाव हमारे ग्राम पंचायत एवं ग्राम वासियों पर पड़ रहा है। सरकार इस दिशा में सतत् प्रयास कर रही है। यह बैठक इसी उद्देश्य पर कार्य करने हेतु आयोजित की गई है। उत्तर प्रदेश के 39 जनपद जो कि जलवायु परिवर्तन के अत्यधिक प्रभाव झेल रहे है। उसमें प्रतापगढ़ का यादव पट्टी को भी चयनित किया गया है। पहले भी हमारे ग्राम पंचायत की विकास योजना बनी है। परन्तु इन चार से पॉच दिनो में जलवायुगत मौसम से सम्बन्धित समस्याओं के समाधान हेतु विकास के सभी मुद्दो के साथ जलवायु स्मार्ट ग्राम पंचायत योजना के निर्माण की प्रक्रिया पूर्ण करनी है। जिसमें आप सभी की सक्रिय सहभागिता अपेक्षित है।

ग्राम भ्रमण – समग्र ग्राम पंचायत के जलवायुगत आपदा एवं जोखिम को समझने की दृष्टि से खुली बैठक में उपस्थित ग्राम प्रधान पंचायत सदस्य, स्वयं सहायता समूह अध्यक्ष समुदाय के सभी वर्गों के सदस्यों के साथ चारो राजस्व गॉव में ग्राम भ्रमण कार्य किया गया।

पंचायत भवन से ग्राम भ्रमण कार्य शुरू होकर यादव पट्टी,पाटीहार, मानापुर, चक अब्दुल गनी से ग्राम भ्रमण करते हुए पुनः पंचायत भवन पर समाप्त हुई।

ग्राम भ्रमण/ट्रान्जेक्ट वाक के दौरान देखी गई स्थितियां–

तालाब– गॉव में कुल चार तालाब है, जिनमें से एक तालाब **अमृत सरोवर** के लिये प्रस्तावित है। इनके जीर्णोद्धार की आवश्यकता है।

नाला– ग्राम पंचायत के उत्तर दिशा में निकालाजाता है।

- पूरब दिशा से भी निकलकर भी एक नाला जाता है।
- ग्राम पंचायत में पानी की टंकी प्रस्तावित है।
- ग्राम पंचायत में 01 आंगनवाड़ी भवन है। शेष 02 आंगनवाड़ी भवन प्रस्तावित हैं।
- ग्राम पंचायत में प्राथमिक विद्यालय बना है।

सम्पर्क मार्ग–गांव के सम्पर्क मार्ग जलजमाव के कारण खराब हो गये हैं।

सामाजिक मानचित्रण – सभी मजरों के भ्रमण के उपरान्त ग्रामवासियों की उपस्थिति में सामाजिक मानचित्रण तैयार किया गया, जिसके आधार पर सूचनाये निम्नवत है।

विवरण	संख्या	विवरण
ग्राम पंचायत की चौहद्दी की क्षेत्रफल	234.388 हे0	चारो राजस्व ग्रामों, बाग–बगीचा व खेती को मिलाकर
कुल राजस्व गॉव की संख्या	4	यादव पट्टी, भानापुर,पाटीहार, चक अब्दुल गनी
कुल घरो की संख्या	516	प्रत्येक टोलो में अधिकांश पक्के मकान है।
कुल कच्चे घरो की संख्या	85	

विकलांग जन की संख्या	14	3 महिला 11 पुरूष
महिला मुखिया परिवारों की संख्या	78	सभी टोलो को मिलाकर

जातिगत/श्रेणीगत विवरण	
सामान्य जाति के घरों की संख्या	14
पिछड़ी जाति के घरों की संख्या	245
अनुसूचित जाति के घरों की संख्या	257
योग–	**516**

क्लाइमेट स्मार्ट ग्राम पंचायत

ग्राम सभा समिति -यादव पट्टी, कुंडा , प्रतापगढ़

क्र० स०	नाम	पिता पतिका नाम	वार्ड न०	जाति	पद
.1	सौरभ सिंह	सुरेश सिंह	प्रधान	सामान्य	अध्यक्ष
.2	मालती देवी	अमरेश कुमार	1	अनुसूचित जाति	सदस्य
.3	तारा देवी	नन्द लाल	2	पिछड़ी जाति	सदस्य
.4	त्रिलोकीनाथ	बद्रीप्रसाद	3	सामान्य	सदस्य
.5	सिकन्दर	विन्देशवरी	4	सामान्य	सदस्य
.6	बृजरानी	वीरेन्द्र	5	सामान्य	सदस्य
.7	राम सजीवन	गयाप्रसाद	6	पिछड़ी जाति	सदस्य
.8	कमलेश कुमार	रामजियावन	7	पिछड़ी जाति	सदस्य

.9	प्रेमलता	शम्भूलाल	8	अनुसूचित जाति	सदस्य
.10	रामकिशुन	भगौती	9	सामान्य	सदस्य
.11	अफसरन	बचऊ	10	पिछड़ी जाति	सदस्य
.12	पूजा देवी	पिन्टू	11	अनुसूचित जाति	सदस्य
.13	राजेश कुमार	सुन्दर लाल	12	अनुसूचित जाति	सदस्य
.14	सुमित कुमार	शिव दर्शन	13	सामान्य	सदस्य

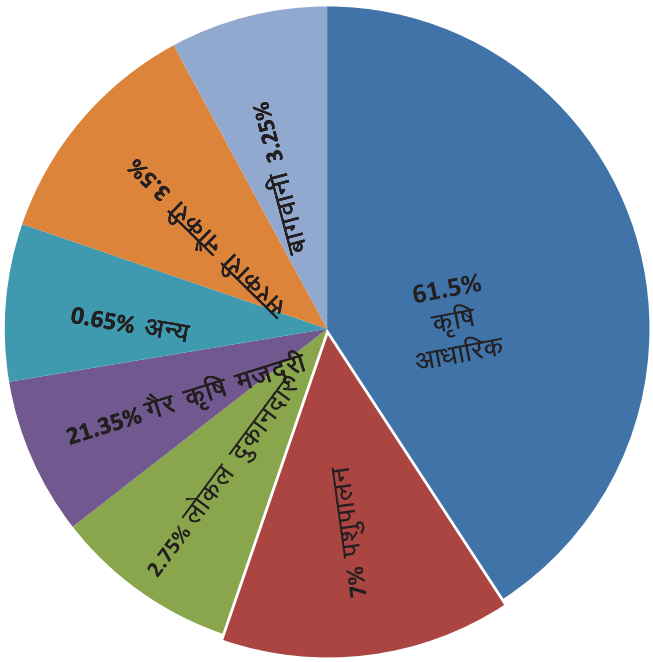
ग्राम पंचायत की 06 उप समितियों के विवरण:

1- नियोजन एवं विकास समिती			2- निर्माण कार्य समिति		
1	सौरभसिंह	अध्यक्ष 9455907717	1	सुमितकुमार	अध्यक्ष 9335962123
2	सुमितकुमार	सदस्य	2	त्रिलोकीनाथ	सदस्य
3	त्रिलोकीनाथ	सदस्य	3	रामसजीवन	सदस्य
4	रामसजीवन	सदस्य	4	बृजरानी	सदस्य
5	बृजरानी	सदस्य	5	मालतीदेवी	सदस्य
6	मालतीदेवी	सदस्य	6	रामकिशुन	सदस्य
7	तारादेवी	सदस्य	7	राजेशगौतम	सदस्य

3. शिक्षासमिति			4 स्वास्थ्य एवं कल्याण समिति		
1	सौरभसिंह	अध्यक्ष 9455907717	1	त्रिलोकीनाथ	अध्यक्ष 9236434777
2	त्रिलोकीनाथ	सदस्य	2	सुमितकुमार	सदस्य
3	रामसजीवन	सदस्य	3	मालतीदेवी	सदस्य
4	बृजरानी	सदस्य	4	कमलेशमौर्य	सदस्य
5	मालतीदेवी	सदस्य	5	प्रेमलतासरोज	सदस्य
6	कमलेशमौर्य	सदस्य	6	रामकिशुन	सदस्य
7	अफसरन	सदस्य	7	अफसरन	सदस्य

5-प्रशासनिक समिति					6. जलप्रबन्धन समिति
1	सौरभसिंह	अध्यक्ष 9455907717	1	रामसजीवन	अध्यक्ष 9455907717
2	रामसजीवन	सदस्य	2	सुमितकुमार	सदस्य
3	बृजरानी	सदस्य	3	त्रिलोकीनाथ	सदस्य
4	मालतीदेवी	सदस्य	4	कमलेशमौर्य	सदस्य
5	कमलेशमौर्य	सदस्य	5	मालतीदेवी	सदस्य
6	प्रेमलतासरोज	सदस्य	6	प्रेमलतासरोज	सदस्य
7	पूजादेवी	सदस्य	7	तारादेवी	सदस्य

आजीविका के साधन



- सरकारी नौकरी
- छोटे उद्योग धन्धे / बागवानी
- कृषि आधारित
- कला एवं शिल्पकार
- पशुपालन
- स्थानीय दुकान
- गैर कृषि मजदूरी

आजीविका के साधन	व्यक्तियों की संख्या
सरकारी नौकरी	24
छोटे उद्योग धन्धे / बागवानी	25
कृषि आधारित	474
हस्तकला एवं शिल्पकार	–
पशुपालन	55
लोकल दुकान	21
गैर कृषि मजदूरी	164
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आपदाओं का ऐतिहासिक समय रेखा एवं घटना क्रम –

ग्राम पंचायत यादव पट्टी ब्लाक कुण्डा जनपद–प्रतापगढ़ उ0प्र0 का ऐतिहासिक समय रेखा, आपदाओं एवं उसके प्रभाव को जानने के बाद समुदाय के साथ यह भी जानने का प्रयास किया गया कि ये आपदायें इस ग्राम पंचायत को कब–कब प्रभावित कर रही हैं। इस क्रम में जल जमाव एक ऐसी आपदा है, जो लगातार समुदाय को प्रभावित कर रही है। साथ ही प्रत्येक वर्ष बढ़ भी रही है। हाल के वर्षो में सूखा, लू, एवं शीतलहर का प्रकोप ग्राम पंचायत के लागों को झेलना पड़ रहा है। इसी के साथ विगत दो वर्षो से कोरोना नामक महामारी नई आपदा के रूप में उभर के आयी।इस बीमारी से बचाव के लिये पूरे देश में लॉकडाउन लग जाने के कारण लोग अपने घरो में बन्द

हो गये थे। इसका सबसे अधिक प्रभाव खेती में तैयार उत्पाद के लिये बाजार न मिलने के रूप में था। बाजार, दुकान आदि सब कुछ बन्द हो जाने के कारण बड़े पैमाने पर लोगों की आजीविका प्रभावित हुई है।

स्थानीय लागों से प्राप्त सूचनाओं को निम्नवत् दर्ज किया गया :–

वर्ष	खतरा	घटना के कारण	प्रभावित लोगों की संख्या	आर्थिक क्षति	न्यूनीकरण हेतु कार्य किया गया
1965	बाढ़	बरसात अधिक होने के कारण	45 घर	फसल बर्बाद हुई	घरेलू स्तर पर प्रबन्धन किया गया
1986	सूखा	बरसात कम हुई	पूरा गॉव	फसल का नुकसान	सरकार द्वारा सहायता
2019	ओलावृष्टि	धूप न निकलने व अधिक ठंड पड़ने के कारण	पूरा गॉव	फसल व आम का नुकसान	सरकार द्वारा सहायता
2020 से 2021	कोरोना	कोरोना के कारण	शहर से लोग गॉव आये	100 से अधिक लोग	टीकाकरण कराया गया
2022	सूखा	बारिश कम हुई	पूरा गॉव	फसल प्रभावित	कोई सहायता नही

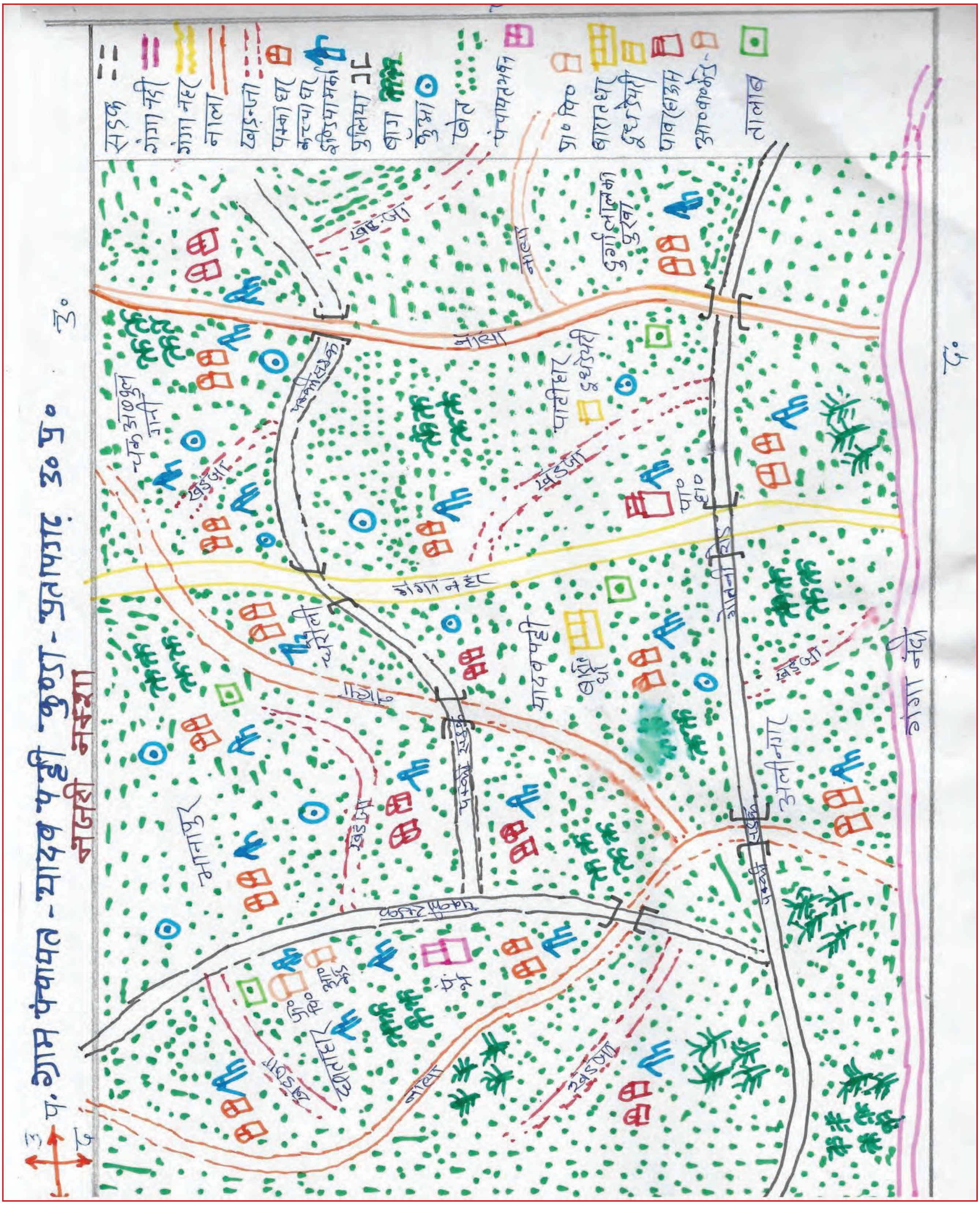
संलग्नक–2

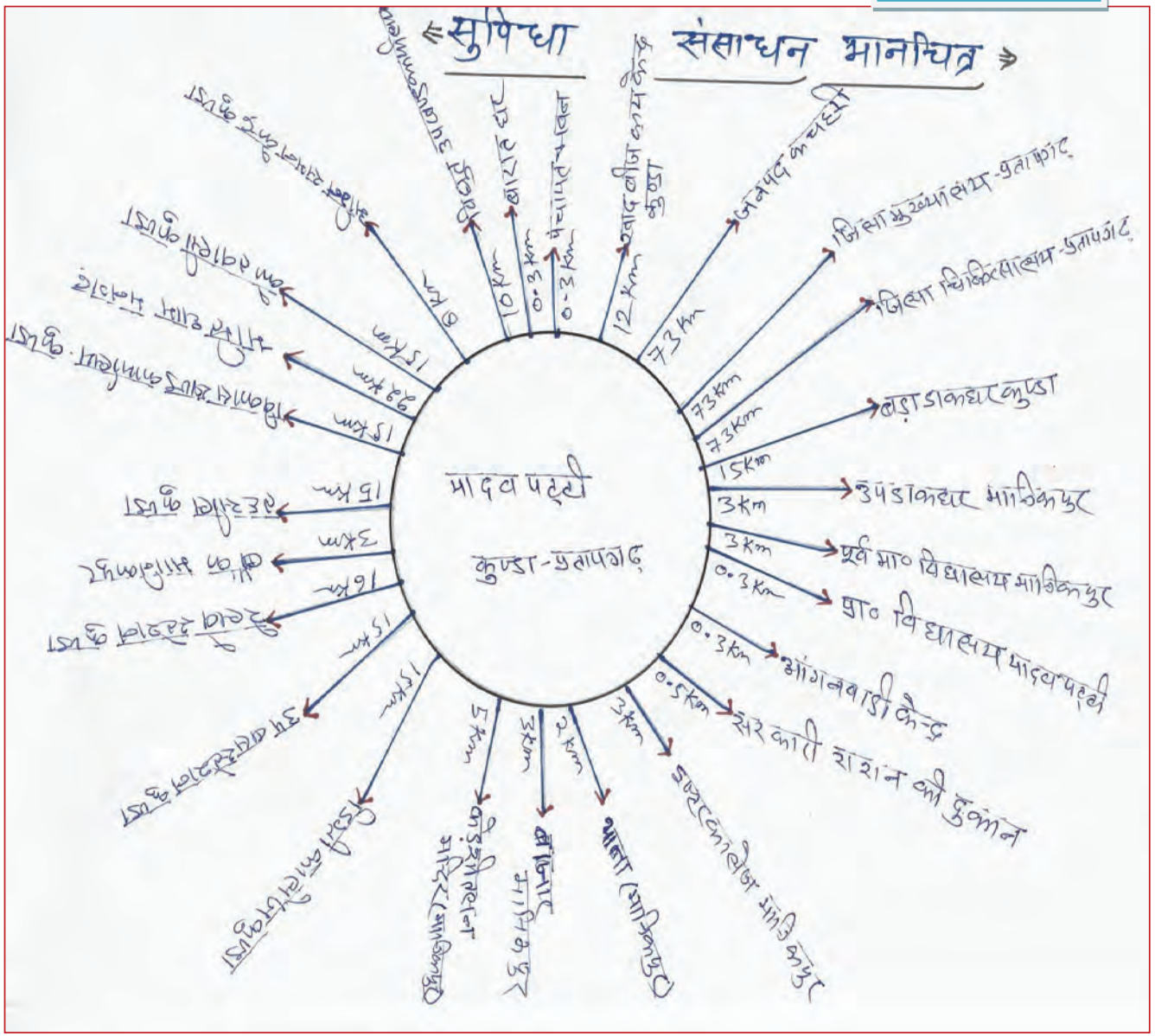
क्रम	आजीविका के प्रकार	परिवार की संख्या	आपदा	आपदा का प्रभाव			क्या प्रभाव पड़ता है ?
				कम	मध्यम	अधिक	
1	कृषि	216	जलजमाव				• जलजमाव के कारण 10 एकड़ फसल नष्ट हो जाती हैं, जिससे आर्थिक हानि होती है। • एक मोहल्ले से दूसरे मोहल्ले में आवागमन बन्द होने के कारण कृषि गतिविधियॉ प्रभावित हुई। • लगभग 03 एकड़ में रवी की बुआई नही हो पाती है। • धान में हर्दिया रोग हो जाता है • कम दिन के जलजमाव वाले क्षेत्र की पैदावार भी प्रभावित होता है।
			सूखा				• खेत की खड़ी फसल सूख जाती है। • सिंचाई खर्च अधिक लगता

							• पशुओं में खुरपका बीमारी हो जाती है।
			सूखा				• पशुओं में दुग्ध उत्पादन कम हो जाता है। • गाय–भैंसों को नहलाने के लिए पानी नहीं मिलता। • पशुओं का चारा कम हो जाता है। • ज्यादा धूप के कारण पशुओं में भयंकर बीमारी का हो जाती हैं। • मुर्गीपालन में चूजे मर जाते है।
			शीतलहर				• पशुओं में बीमारियां हो जाती है। • पशुओं में दुग्ध उत्पादन कम हो जाती है। • बकरियों में पोकनी की बीमारी होने से बकरियों की मृत्यु हो जाती है। • मुर्गी पालन में चूजों की मृत्यु

							• स्वास्थ्य खराब रहता है। • खर्चा बढ़ जाता है।
4	निजी व्यवसाय	21	जलजमाव				• दुकान का सामान लाने में असुविधा होती है। • अवागमन न होने से सामान महंगा हो जाता है। • कच्चा माल कम बिकने से खराब हो जाता है। • जलजमाव के कारण माल के रखरखाव में समस्या होती है।
			शीतलहर				• आवागमन कम होने से व्यवसाय मंद पड़ जाता है।

संसाधन मानचित्र :




संसाधन मानचित्र
सुविधा
माधव पहाड़ी
कुण्डा-प्रतापगढ़
जनपद कचहरी
जिला मुख्यालय-प्रतापगढ़
जिला चिकित्सालय-प्रतापगढ़
बड़ा डाकघर कुण्डा
उप डाकघर मांडीकपुर
पूर्व मा० विद्यालय मांडीकपुर
प्रा० वि० विद्यालय माधव पहाड़ी
आंगनबाड़ी केन्द्र
सरकारी राशन की दुकान
सुपर मार्केट मांडीकपुर
आलू (मांडीकपुर)
प्राथमिक पाठशाला
कोदंडेश्वर महादेव मंदिर (मांडीकपुर)
3km
0.5km
0.3km
15km
7.3km
12km
10km
9km

संसाधन चार्ट

टीम का नाम

श्री नसीम अंसारी

श्री संतोष चतुर्वेदी

श्री सोनिया गुप्ता

The End

Annexure IV: Estimating Targets and Costs

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
Enhancing Green Spaces and Biodiversity				
1	Plantation activities	**Phase 1:** Similar to current level of plantation activities that the GP does (to be asked during consultation with the Pradhan) **Phase 2:** Increase plantation targets by 500-1000 based on availability of land **Phase 3:** Further increase target by 500-1000 based on availability of land	Tree plantation (preparation, sapling, labour, etc.)[93] = **Rs. 70 per tree** (saplings are also available at no cost from DoEFCC, GoUP) Tree Guards (metal)[94] = **Rs. 1,200 per unit** Maintenance of plantations: **1.5 lakh/ha**	
2	Arogya van	For a GP with area less than **300-400 ha**, one Arogya van can be suggested with **0.1 ha** area For a GP with area of around **1000 ha**, one Arogya van can be suggested with an area of **0.2- 0.5 ha** based on availability of land		Sequestration potential estimated based on teak species - 5.6 to 10 tCO_2e sequestered per tree Plantation density for agro forestry is considered 100 trees/ha
3	Agro-forestry	(Can be subjective and agro-forestry activities can be started from **Phase 1**) **Phase 2:** 40 % of total agricultural land; with +100 trees planted per hectare **Phase 3:** Remaining agricultural land; with + 100 trees planted per hectare	Cost of agroforestry[95] = **Rs 40,000/ hectare**[96]	

93 Cost as per plantation guidelines and inputs from GPs
94 Cost as per market rates
95 Cost as per Sub-mission on Agroforestry Guidelines, National Mission for Sustainable Agriculture
96 https://link.springer.com/article/10.1007/s42535-022-00348-9

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
Sustainable Agriculture				
1	Micro irrigation- drip and sprinkler irrigation	**Phase 1:** 30% of total agricultural land to be covered **Phase 2:** 70% of total agricultural land to be covered **Phase 3:** 100% of total agricultural land to be covered	Rs 1 lakh per hectare	
2	Construction of bunds	**Phase 1:** 50% of total agricultural land to be covered **Phase 2:** 100% of total agricultural land to be covered **Phase 3**: Maintenance of bunds - Bunding is done on periphery of agricultural fields - Farmers in GP have land holdings of various sizes **Assumption**: all fields are square	**1m of bunding[97]= Rs 150**	
3	Construction of farm ponds	**Phase 1**: 5-10 ponds **Phase 2**: 15- 20 ponds Phase: More if required + Maintenance of ponds Capacity of 1 farm pond= 300 m^3 Depends on number of large farms in GP + requirement of ponds (based on conversation with Pradhan)	Construction of 1 farm pond[98]= **Rs 90,000**	

97 Cost as per inputs received from GPs in HRVCA
98 Cost as per inputs received from GPs in HRVCA

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
4	Transition to natural farming	**Phase 1**: 15% of total agricultural land to be covered **Phase 2**: 40% of total agricultural land to be covered **Phase 3**: 100% of total agricultural land to be covered	A. Training & demonstration (3 sessions): **Rs 60,000** B. Certification (based on expert consultation): **Rs 33,000** C. Introduction of cropping system- organic seed procurement; planting nitrogen harvesting plants--> Cost per acre = **Rs 2,500** D. Integrated manure management - Procuring liquid bio fertiliser & its application; Procuring liquid biopesticide & its application; Natural pest control mechanism set up; Phosphate rich organic manure ---> Cost per acre= **Rs 2,500** E. Calculation (cost of transition per acre)= A+B+C+ D= Rs 1,00,000 Total Cost[99]: Area (ha) * E -> 2.471 * 1,00,000 = **Rs 2,47,100**	

99 UP State Organic Certification Agency (UPSOCA_Tariff_20March.pdf (apeda.gov.in)) and National Mission for Sustainable Agriculture (NMSA) Guidelines

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
Management & Rejuvenation of Water Bodies				
1	Rainwater Harvesting (RwH) Structures	**Phase 1**: Installation of rainwater harvesting structures (RwH) in all PRI buildings + recharge pits (as recommended in HRVCA) **Phase 2**: Installation of RwH structures in residential buildings above a plot size of 1500 sq. ft. + Additional recharge pits + Incorporating RwH system in all new buildings **Phase 3**: Installation of RwH structures in residential buildings 1000 sq. ft.+ Incorporating RwH system in all new buildings	Cost of 1 Rainwater harvesting structure with 10 m^3 capacity[100]= **Rs 35,000** Cost of 1 recharge pit= **Rs 35,000**	
2	Maintenance of water bodies (cost not to be double counted if these plantations are a part of the overall green space enhancement initiative as mentioned above)	**Phase 1**: Cleaning, desilting & fencing of water bodies + Tree plantations (1000) around periphery of water bodies (along with tree guards) **Phase 2**: Additional 100 tree plantations (along with tree guards) around water bodies + continued maintenance of water bodies **Phase 3**: Continued maintenance of water bodies	Approximate Cost[101]: 1. Restoration (cleaning, desilting, increase in catchment area, etc.) of 1 pond = **Rs. 7 Lakhs** 2. Construction of 1 Retention Pond (300 m^3 capacity) = **Rs. 7 Lakhs** 3. Tree plantation with tree guard = **Rs. 1,200 per unit** 4. Maintenance Cost: a. 1 Pond/water body = **Rs. 3, 75,000** b. 1 Retention Pond = **Rs. 50,000** c. Tree with tree guard = **Rs. 20 per unit**	

100 Rooftop Rainwater Harvesting Guidelines, Indian Standards (IS 15797:2008)

101 Cost as per inputs received from GPs in HRVCA

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
3	Improved Drainage and Sewerage Infrastructure	**Phase 1**: Cleaning & desilting of existing drains + enhancing drainage infrastructure (construction of new drains) **Phase 2** & 3: Continued activities carried out in Phase 1	Refer mostly to the costs provided in the HRVCA document	

Sustainable and Enhanced Mobility

1	Enhancing existing road infrastructure	**Phase 1**: Road elevation works + Road Rcc/ Interlocking works **Phase 2** & 3: Continued maintenance of roads	Cost per km of road upgradation/ repair[102]: **Rs 50,00,000 per km**	
2	Enhancing Intermediate Public Transport	E-rickshaws as per inputs on requirement of GP	Cost of 1 e-rickshaw: **~ Rs. 50,000** Available subsidy: up to **Rs. 10,000 per vehicle**	
3	Facility to hire e-tractors & e-goods vehicles	**Phase 1**: Promote electric alternatives of diesel tractors and goods transport vehicles + sensitising farmers about long-term benefits of e-vehicles **Phase 2 & 3**: Continued sensitisation	Cost of 1 e-tractor= **Rs 6,00,000** Cost of 1 commercial e-vehicle= Rs 5 to 10 lakhs	

102 Cost as per Pradhan Mantri Gram Sadak Yojana (PMGSY) rate/km and inputs received from GPs in HRVCA

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
Sustainable Solid Waste Management				
1	Establishing a waste management system	**Phase 1**: a. Coverage of 100% households under GP's door-to-door waste collection system b. Provision for Electric Garbage Vans to collect 100% of existing waste generated c. Installation of waste bins d. Building partnership with other stakeholders (SHGs, local scrap dealers, local businesses, and MSMEs)	Total waste generated = Primary data, if not available, take average per capita waste generated in the GP as approximately **80 g per day**; biodegradable/ organic waste-58% non-biodegradable /inorganic waste - 42% No. of e-garbage Vans required[103] = Total waste generated / capacity of each van (310 kg) No. of waste bins = from HRVCA or can be estimated by identifying strategic locations (PRI buildings, public buildings, parks, etc.)	
		Phase 2: a. Installation of additional waste bins b. Provision for additional Electric Garbage Vans c. Maintenance of existing facilities/ infrastructure d. Scaling up partnership	Additional waste bins = from HRVCA or estimated by identifying strategic locations (PRI buildings, public buildings, parks, etc.)	

103 Cost as per market rates

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
		Phase 3: a. Maintenance works b. Scaling up partnership	COST[104]: 1. 1 Electric Garbage Van = Rs. 95,000 to 1,00,000 2. 1 waste bin/ container[105] = Rs. 15,000	
2	Management of organic waste	**Phase 1**: a. Setting up Compost & vermi-compost pits through community involvement b. Partnership model between panchayat, community members and farmer groups for: 1. production & sale of compost 2. sale of agricultural waste	Total biodegradable/ organic waste generated = Primary data Organic waste from houses, commercial shops, PRI buildings, public buildings and open spaces, etc. = xxx kg per day (as per primary data) Potential compost quantity (kg per day) which can be generated[106] = xxx kg/day of organic waste / 2 Periodic composting of __ kg per year of agricultural waste (as per primary data)	

104 Cost as per market rates

105 Cost as per SBM guidelines and inputs in HRVCA reports

106 https://www.biocycle.net/connection-CO_2-math-for-compost-benefits/#:~:text=In%20the%20process%20of%20making%20compost%20the%20microbes,food%20waste%20turns%20into%2050%20kg%20of%20compost

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
		Phase 2 and 3: a. Maintenance and increasing compost pits capacity b. Scaling up partnership	Cost[107]: 1. Compost Pits cost reference: 30 vermicomposting and 15 Nadep compost pits = **Rs. 4,50,000** 2. Solid Waste Management Yard (for both organic and inorganic waste) cost[108] reference: **Rs. 35,00,000**	
3	Ban on single-use plastics	**Phase 1**: a. Complete ban on Single Use Plastics b. Awareness, training, and capacity-building programs c. Leveraging RACE Campaign and LiFE Mission d. Partnership model between panchayat, women and SHGs	Engagement of 100 women in manufacturing	
		Phase 2: a. Continued Awareness, training, and capacity-building programs b. Increased engagement from this GP & nearby villages of women, SHGs, MSMEs & individual entrepreneurs	Additional 200 women	
		Phase 3: a. Continued Awareness, training, and capacity-building programs b. Increased engagement from this GP & nearby villages of women, SHGs, MSMEs & individual entrepreneurs	Additional 300 women	

107 Cost as per inputs received from GPs in HRVCA
108 Cost as per inputs received from GPs in HRVCA

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
Access to Clean, Sustainable, Affordable and Reliable Energy				
1	Solar rooftops	**Phase 1:** PRI buildings (Panchayat Bhawan, schools, anganwadi, PHC, CHC, CSC etc) Assumption- 70% of rooftop area is available for solar rooftop installation	Use MNRE solar rooftop portal to calculate solar potential.[109] Annual clean electricity generated (in kWh) = installed capacity (kWp) *310 (sunny days)*24 (hrs)*0.18 (CUF) (calculate this for each PRI building and add up for total) Installed capacity- from the above website Total installed capacity= Panchayat Bhawan+ School 1+ School 2.... + any other PRI buildings Cost per kWh= **Rs 50,000** No. of units of clean electricity generated per day= Electricity generated/ 365	Annual electricity generated (kWh)* 0.82/ 1000= ____ tonnes of CO_2e

109 https://Solarrooftop.gov.in/rooftop_calculator

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
		Phase 2 & 3: Households Assumption- 70% of rooftop area is available for solar rooftop installation Installed capacity taken to be 3 kWp **Phase 2**: 40% of total pucca houses to install **Phase 3**: 100% of total pucca houses to install	Average Installed capacity per HH= 3 kWp Total capacity installed at HH level= No. of HH * 3 kWp Annual clean electricity generated (in kWh)=Total capacity installed at HH level (kWp) *310 (sunny days)*24 (hrs)*0.18 (CUF) Cost per kWh= Rs 50,000[110] No. of units of clean electricity generated per day= Annual Electricity generated/ 365	

110 Cost as per MNRE and current market rates

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
2	Agro-photovoltaic	**Phase 2**: 25 % of suitable agricultural area **Phase 3**: 50% of suitable agricultural area Suitable agri area- area under legumes & vegetables (keep the value under 10 ha)	250 kWp installed per hectare Total capacity installed = Area (ha) * 250 kWp Annual clean electricity generated (in kWh)=Total capacity installed (kWp) *310 (sunny days)*24 (hrs)*0.18 (CUF) Cost per kWh= **Rs 1 lakh**[111] No. of units of clean electricity generated per day= Annual Electricity generated/ 365	

111 Cost as per market rate of installation

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
3	Solar pumps	**Phase 1**: 20% of diesel pumps replaced **Phase 2**: 50% of diesel pumps replaced **Phase 3**: 100% of diesel pumps replaced	Installed capacity = 5.5 kWh per pump Total installed capacity= No.of pumps replaced * 5.5 kWh Annual clean electricity generated= Total installed capacity (kWh) *310 (days)*24 (hrs)*0.18 (CUF) No. of units of clean electricity generated per day= Annual Electricity generated/ 365 Cost per pump = Rs 3 to 5 lakhs[112]	Diesel consumption avoided= 390 litres/ per/ year Total diesel consumption avoided per year= No.of pumps replaced * 390 Emissions avoided= 1.05 tonnes CO_2e per pump per year
4	Clean cooking	**Phase 1**: 25% of households having cattle to install biogas + 25% of households in the top income groups to have solar induction cookstoves + 50% of households that currently use biomass to have improved chulhas **Phase 2**: 50% of households having cattle to install biogas + 50% of households in the top income groups to have solar induction cookstoves + 100% of households that currently use biomass to have improved chulhas **Phase 3**: 100% of households having cattle to install biogas + 100% of households in the top income groups to have solar induction cookstoves	Cost for 1 biogas plant= **Rs 50,000** for 2 to 3 m^3 biogas plant Cost for 1 for double burner solar cookstove without battery= **Rs 45,000** Cost for 1 improved Chulhas= **Rs 3,000**[113]	

112 Cost as per market rates and PMKSY guidelines

113 Costs as per market rates

Sl. No.	Suggested Actions	Broad Guidelines to decide targets of various activities (can be subject to change based on Gram Panchayat context)	Calculation/ formula for estimating quantitative target	Sequestration potential/ emissions avoided
5	Energy efficiency (EE)	**Phase 1**: All PRI buildings to replace all fixtures and fans with energy efficient fixtures and fans + All HH to replace 1 incandescent/CFL bulb with LED bulb or 1 fluorescent tube lights with LED tube light **Phase 2**: All incandescent/CFL bulbs replaced with with LED bulb & all fluorescent tube lights replaced with LED tube light + 1 conventional fan replaced with EE fan in all HH **Phase 3**: All fans in all HH to be replaced with EE fans	Cost of 1 LED bulb= **Rs 70** Cost of 1 LED tubelight= **Rs 220** Cost of 1 EE fan= **Rs 1,110**[114]	
6	Solar streetlights	Based on inputs from Pradhan High-mast solar street light- 1 (or more as per requirement) for each PRI building, pond/lake, green space/parks/ playground/ gardens/ arogya van	Cost of 1 high-mast= **Rs 50,000** Cost of 1 solar LED street light= **Rs 10,000**[115]	
Enhancing Livelihoods and Green Entrepreneurship				
1	Construction & renting out of solar-powered cold storage	Setting up of cold storage	Capacity : **1 unit = 5 - 10 metric** tonnes based on production of vegetables and fruits/ and/or milk and milk products Cost: **Rs 8-15 lakh per unit**[116]	

114 Costs as per UJALA scheme guidelines by Ministry of Power (https://static.pib.gov.in/WriteReadData/specificdocs/documents/2022jun/doc202261464801.pdf)

115 Costs as per market rates

116 Costs as per market norms

Annexure V: Relevant SDGs & Targets

SDG 2: Zero Hunger

Target 2.3: Double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Target 2.a; Article 10.3.e: Development of sustainable irrigation programmes

SDG 3: Good Health and Well being

Target 3.3: End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Target 3.9: Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

SDG 6: Clean Water and Sanitation

Target 6.1: Achieve universal and equitable access to drinking water

Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

Target 6.4: Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals

Target 6.5: Implement integrated water resources management at all levels

Target 6.8: Support and strengthen the participation of local communities

Target 6.a: Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including wastewater treatment, recycling and reuse technologies

SDG 7: Affordable & Clean Energy

Target 7.1: Ensure universal access to affordable, reliable and modern energy services

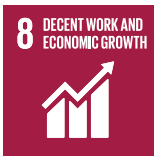
Target 7.2: Increase share of renewable energy in energy mix

Target 7.3: Double the global rate of improvement in energy efficiency

Target 7.a: Enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

Target 7.b: Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries in accordance with their respective programmes of support.

SDG 8: Decent Work and Economic Growth



Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services

SDG 9: Industries, Innovation and Infrastructure

Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure

SDG 11: Sustainable Cities and Communities

Target 11.2: Safe, affordable, accessible and sustainable transport systems for all

Target 11.4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage

Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

SDG 12: Ensure sustainable consumption and production patterns

Target 12.2: Achieve the sustainable management and efficient use of natural resources

Target 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

Target 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

SDG 13: Climate Action

Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Target 13.2: Integrate climate change measures into national policies, strategies and planning

Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

SDG 15: Life on Land

Target 15.1: Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

Target 15.5: Take urgent and significant action to reduce degradation of natural habitats, halt loss of biodiversity

Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies

Annexure VI: Suitable Species for Plantation Activities

Name of plants	Family	Local names	Uses/ Medicinal properties
Timber Trees			
Acacia nilotica	Fabaceae	Babul	It is used for such products as bodies and wheels of carts, instruments and tools
Ficus religiosa	Moraceae	Peepal	Has medicinal properties and religious value
Azadirachta indica A. Juss.	Meliaceae	Neem	All parts of the neem tree- leaves, flowers, seeds, fruits, roots and bark have been used traditionally for treatment. The wood is ideal for furniture, both strong and termite resistant.
Tectona grandis	Lamiaceae	Sagaun	It is used in the manufacture of outdoor furniture and boat decks
Dalbergia sissoo	**Fabaceae**	Sheesham	It has several applications in aircraft and marine plywood, as charcoal for heating and cooking food, creating musical instruments etc
Madhuca longifolia	**Sapotaceae**	Mahua	It provides quality timber wood for various uses
Shorea robusta	Dipterocarpaceae	Sal	It is used for railway sleepers, ship-building, and bridges.
Cinnamomum tamala	Lauraceae	Indian bay leaf	It helps manage various health issues and used in cooking.
Fruits and Wild Food Plants			
Mangifera indica	Anacardiaceae	Aam, Mango	All parts are used in traditional treatments
Artocarpus heterophyllus	Moraceae	Kathahal, Jackfruit	The timber is used for furniture. Many parts of the plant, including the bark, roots, leaves, and fruits, are known for their medicinal properties in traditional and folk medicine.
Psidium guajava	Myrtaceae	Guava, Amrood	It is a common and popular traditional remedy for various gastric ailments
Agaricus campestris L	Agaricaceae	Dharti Ka Phool	A type of mushroom
Alangium salvifolium (L.f.) Wang	Alangiaceae	Dhera, Ako	Ripe fruits are eaten
Amorphophallus paeoniifolius Dennst	Araceae	Elephant foot, Zimi Kand	Eaten as vegetable.

Name of plants	Family	Local names	Uses/ Medicinal properties
Crotolaria juncea L.	Fabaceae	Sanai	Light boiled buds eaten as vegetable.
Manilkara hexandra (Roxb) Dub	Sapoataceae	Khirini	The fruits are made into pickles & sauces.
Eugenia jambolana	Myrtaceae	Jamun	The root, leaves, fruits and bark have numerous medicinal properties
Aegle marmelos	Rutaceae	Bael	The unripe fruit, root, leaf, and branch are used to make medicine.
Morus rubra	Moraceae	Mulberry	Mulberries can be eaten raw and are also used to make jams, pies etc. They also have medicinal properties
Trees with Medicinal properties			
Withania somnifera	Solanaceae	Ashwagandha	It is useful for different types of diseases
Bacopa monnieri	Plantaginaceae	Brahmi	It is used to manage different respiratory ailments
Andrographis paniculata	Acanthaceae	Kalmegh	It helps to boost immunity and is used to manage the symptoms of the common cold, sinusitis and allergies
Rauvolfia serpentina	Apocynaceae	Sarpagandha	It is used for the treatment of many different ailments.
Endangered trees with medicinal properties			
Acorus calamus L.	Araceae	Bach, Bal, Ghorbach	A useful ethnomedicinal plants for curing bronchitis, cough, and cold
Asparagus adscendens Roxb.	Liliaceae	Satavar	Helps in treating conditions related to hormone imbalance
Celastrus paniculatus Wild.	Celastraceae	Umjain, Mujhani, Malkangani, Kakundan	Useful in the treatments of a variety of ailments
Other Trees			
Populus ciliata	Salicaceae	Semal, kapok	Its leaves are used for animal fodder and herbal teas
Eucalyptus globulus	Myrtaceae	Tailapatra	Used in medicines to treat coughs and the common cold and also used to make essential oil


प्रधान कक्ष


ग्राम पंचायत

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