CLIMATE SMART GRAM PANCHAYAT ACTION PLAN

BALIPATTI RANI GAON 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–**बलीपट्टी रानी गॉव, विकास खण्ड राजेपुर, जनपद फर्रुखाबाद** 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** को धन्यवाद करता हूँ और आशा करता हूँ कि निर्मित कार्ययोजना ग्राम पंचायत को क्लाइमेट स्मार्ट ग्राम पंचायत बनाने में सहयोगी होगी।

।। शुभकामनाओं सहित ।।

भवनिष्ठ,
27.09.2024
(डा0 वी0के0 सिंह)

अरविन्द कुमार मिश्र
(आई.ए.एस)

मुख्य विकास अधिकारी
जनपद फर्रूखाबाद
उत्तर प्रदेश।
पत्रांक:– 1192
दिनांक:– 25-9-2024

:: संदेश ::

जिस प्रकार हम और हमारी ग्राम पंचायतें जलवायु परिवर्तन से उत्पन्न चुनौतियों का सामना कर रही है। 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 बढावा दें।

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।

मै क्लाइमेट स्मार्ट **ग्राम पंचायत–बलीपट्टी रानीगॉव विकास खण्ड राजेपुर जनपद फर्रूखाबाद** 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** उत्तर प्रदेश के समर्पित प्रयासों के लिए आभार व्यक्त करता हूँ।

एक बार पुनः क्लाइमेट कार्य योजना तैयार करने में अमूल्य योगदान के लिये मैं आप सभी को धन्यवाद देता हूँ तथा योजना के सफल कार्यान्वयन और समुदाय एवं पर्यावरण पर इसके सकारात्मक प्रभाव की आशा करता हूँ।

।। शुभकामनाओं सहित ।।

भवदीय

(अरविन्द कुमार मिश्र)

कार्यालय ग्राम पंचायत बलीपट्टी रानीगांव पोस्ट अमृतपुर
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मेसर्स वसुधा फाउन्डेशन, नई दिल्ली
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आभार

सर्वप्रथम आप सभी को प्रधान, ग्राम पंचायत बलीपट्टी रानीगांव, विकास खण्ड़ राजेपुर, जनपद फर्रूखाबाद की ओर से सादर नमस्कार और अभिनंदन। मुझे आशा ही नहीं पूर्ण विश्वास है कि आप सभी स्वास्थ्य होंगे। मैं अपनी ग्राम पंचायत को क्लाइमेट स्मार्ट ग्राम पंचायत बनाने की ओर हेतु बढ़ाये गये प्रथम कदम प्रयास को आपसे साझा करते हुए रोमांचित हूँ एंव आपके प्रति कृतज्ञ हूँ।

जलवायु परिवर्तन से उत्पन्न चुनौतियों हर दिन अधिक स्पष्ट होती जा रही है और हमारे समुदाय और भावी पीढ़ियों की भलाई के लिये उन पर कार्य करना हमारी सामूहिक जिम्मेदारी है। इस विषय की गम्भीरता को समझते हुए सभी ग्रामवासियों की सर्वसहमति से हमने अपनी ग्राम पंचायत को क्लाइमेट स्मार्ट ग्राम पंचायत बनाने की प्रक्रिया को प्रारम्भ किया। सर्वप्रथम आवशयक था ग्राम पंचायत में जलवायु परिवर्तन संबंधी समस्याओं और मुद्दों की पहचान करना जिसके लिये सामुदायिक सहभागिता के साथ ग्राम सभा की बैठक एवं समूह केन्द्रित चर्चा के आयोजन के अतिरिक्त व्यक्तिगत चर्चा की गयी और आंकड़ों को एकत्र किया गया। आंकडे एकत्र करने की प्रक्रिया को पंचायत में क्रियान्वित करने के लिये मैं स्थानीय सहयोगी संस्था गोरखपुर एनवायरमेंट एक्शन ग्रुप (जी.ई.ए.जी), गोरखपुर के द्वारा आंकडे एकत्र करने में हमारे सभी ग्रामवासियों के समर्थन और सक्रिय भागीदारी के लिये ह्रदय से धन्यवाद। हम सभी साथ मिलकर हमारी पंचायत में एक पर्यावरण अनुकूल वातावरण बनायेंगे जो न केवल हमारे प्राकृतिक संसाधनों की रक्षा करेगा अपितु प्रत्येक ग्रामीण के जीवन की समग्र गुणवत्ता को भी बढ़ायेगा।

इसके साथ ही में पर्यावरण, वन एवं जलवायु परिवर्तन विभाग, उत्तर प्रदेश और तकनीकी सहयोगी पार्टनर वसुधा फाउंडेशन, नई दिल्ली, का भी आभारी हूँ जिन्होंने एकत्र किये गये आंकड़ों को कार्ययोजना का स्वरूप दिया तथा मार्गदर्षन एवं तकनीकी सहयोग प्रदान किया।

मैं सभी ग्रामवासियों अपनी पंचायत को क्लाइमेट स्मार्ट ग्राम पंचायत बनाने के लिये हाथ मिलाकर आगे बढ़ने का आग्रह करता हूँ। आइये हम सभी एक सकारात्मक बदलाव की ओर आगे बढ़े और दूसरों के लिये उदाहरण स्थापित करें।

धन्यवाद !

शशीप्रभा शुक्ला
(शशीप्रभा शुक्ला)
प्रधान/अध्यक्ष
ग्राम पचायत बलीपट्टी रानीगाँव
वि० ख० राजेपुर (फर्रूखाबाद

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1 Executive Summary

The Balipatti Rani Gaon Gram Panchayat in the District of Farrukhabad lies in Central plain agro-climatic zone of Uttar Pradesh. The Climate Smart Gram Panchayat Action Plan of Balipatti Rani Gaon 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 Balipatti Rani Gaon is formulated in a manner that it can be easily and effectively integrated with the existing Gram Panchayat Development Plan (GPDP) of Balipatti Rani Gaon GP.

The action plan[1] captures the key demographic and socio-economic aspects, key issues pertaining to the Central plain 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 Balipatti Rani Gaon 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 Balipatti Rani Gaon.

The GP has five revenue villages and two hamlets and 610 households with a total population[2] of 2,445 as reported during field surveys. The main economic activities include animal husbandry and agriculture. A baseline assessment shows

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 resource 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 Balipatti Rani Gaon.
- *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 Balipatti Rani Gaon.
- *Proposed recommendations:* Recommendations were developed for Balipatti Rani Gaon based on the environmental and climatic issues identified. These recommendations also take into account the prevailing agro-climatic characteristics of Central plain. Additionally, sector-wise adaptation needs & mitigation potential of Balipatti Rani Gaon 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.

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

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

2 As reported in Census 2011 data notes: Total Population- 1,026

that Balipatti Rani Gaon GP has a carbon footprint ~1,864 tCO_2e[3].

A few priority areas identified for immediate action in Balipatti Rani Gaon are:

- Adoption of measures such as diversion channels, installation of filter chambers and tree plantation around water bodies to reduce the impact of floods and enhance community resilience.
- Promotion of sustainable agricultural practices such building of farm ponds, machan farming and natural farming practices, to improve adaptive capacity of the community towards climate change impacts and manage flood impacts.
- Reducing dependence on traditional fossil fuels to meet energy needs with sustainable alternatives such as biogas and solar cookstoves.
- Promoting Renewable Energy (RE) solutions such as solar-powered pumps, energy efficient pumps, and solar rooftop installation.

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 (2024-27), Phase II (2027-30) & Phase III (2030-35). The phase-wise targets can be further distributed into annual targets as per the discretion of the Gram Panchayats. Moreover, the financing avenues for the suggested activities have been indicated along with phase-wise targets, potential costs, supporting Central and State schemes.

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

CSGPAP will supplement and complement the Balipatti Rani Gaon 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..

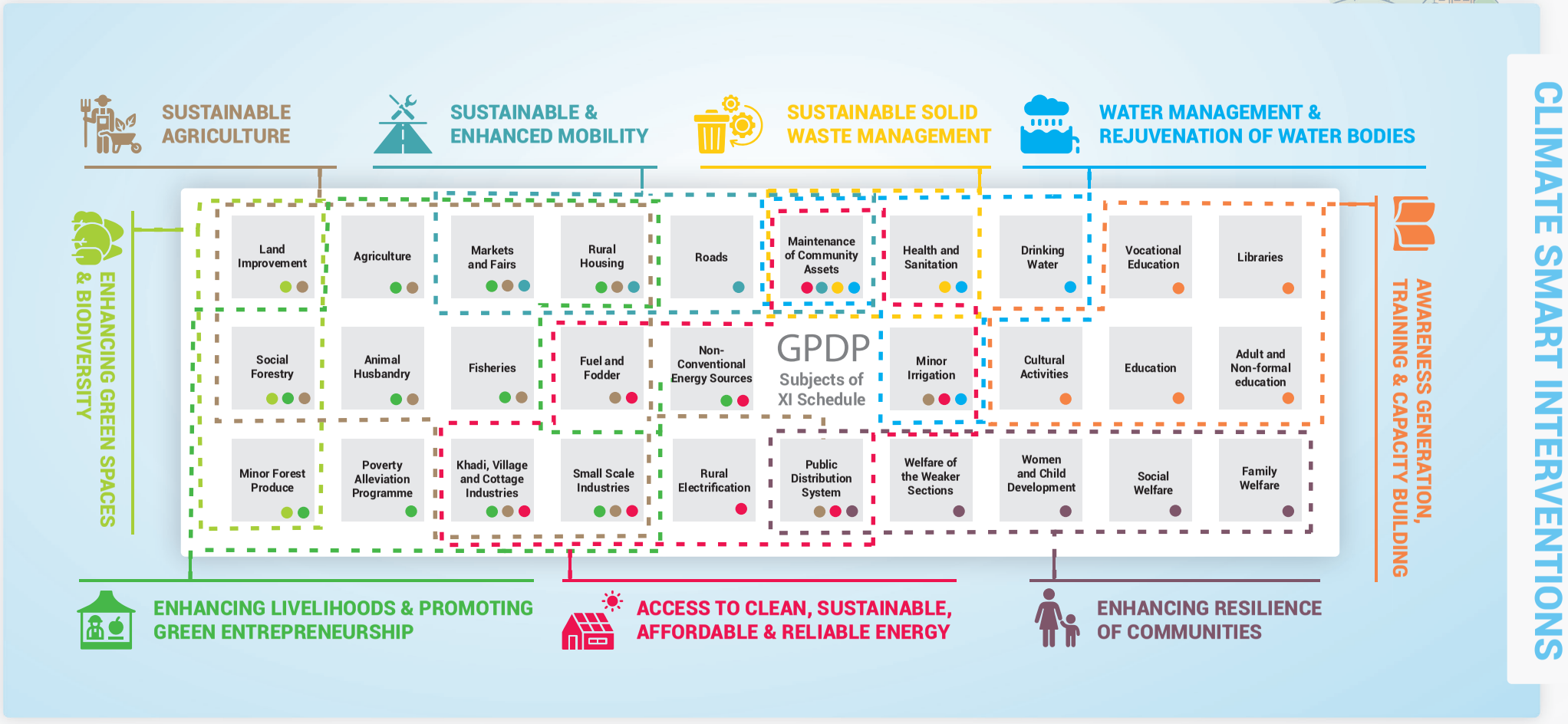
The interventions and annual targets under this Action Plan can be implemented in convergence with the planned activities of the Balipatti Rani Gaon GPDP. The existing budgetary allocations earmarked for certain programs under the GPDP can be used for climate adaptation and mitigation activities proposed 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 implementation of this plan is estimated to be 3,123 tonnes carbon dioxide equivalent (tCO_2e) per annum and sequestration potential goes up to 3,64,000 tCO_2 over the next 20-25 years. The total cost estimated for the implementation of this plan across the three phases is approximately 54 crores (for 11 years), comprising of community investment, public finance, private finance and potential CSR funding. From this, 30-35 percent (approximately ₹19 crores) of the required funding can be availed from Central and State Schemes/Missions/Programmes, while the remaining cost can be secured from CSR and private funds. The Government of Uttar Pradesh has adopted an innovative approach of 'Panchayat-Private-Partnerships' to potentially engage CSR and mobilise private finance.

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

Climate Smart and Sustainable Gram Panchayats by 2035

Mainstreaming Climate Action with Development



2 Gram Panchayat Profile

Balipatti Rani Gaon

Balipatti Rani Gaon Gram Panchayat at a Glance†

Location	Rajepur Block, Farrukhabad District
Total Area	1,052 ha
Composition	5 Revenue Villages 2 Hamlets
Total Population[4]	2,445
No. of Males	1,287
No. of Females	1,158
Total Households[5]	610
Panchayat Infrastructure	4 (Panchayat Bhawan, 2 Primary Schools, Anganwadi Centre)
Primary Economic Activities	Animal Husbandry and Agriculture
Land-use[6]	1,012 ha Agriculture Land ~0.4 ha Common Land ~39.6 ha Remaining Land (Settlements and Water Bodies)

Water Resources

7 Ponds

Ganga River

Agro-climatic Zone[7]

Central Plain

- Climatic conditions: hot summers and cold winters with moderate rainfall
- Minimum Temperature: 5.5 °C
- Maximum Temperature: 45 °C
- Average Annual Rainfall: 863 mm
- Soil: Alluvial soil suitable for crops like wheat and vegetables

Composite Vulnerability[8] **Index**

High

Sectoral Vulnerability of District

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

† Data from Field Survey conducted for preparation of the Plan (February 2023)

4 Census 2011 data notes: Total Population- 1,026; Male – 531; Female – 495

5 Based on inputs received from Primary field survey - 538 pucca houses and 72 (mud, thatched, tin) kaccha houses

6 Based on inputs received from Primary field survey

7 UP Department of Agriculture

8 Uttar Pradesh SAPCC 2.0

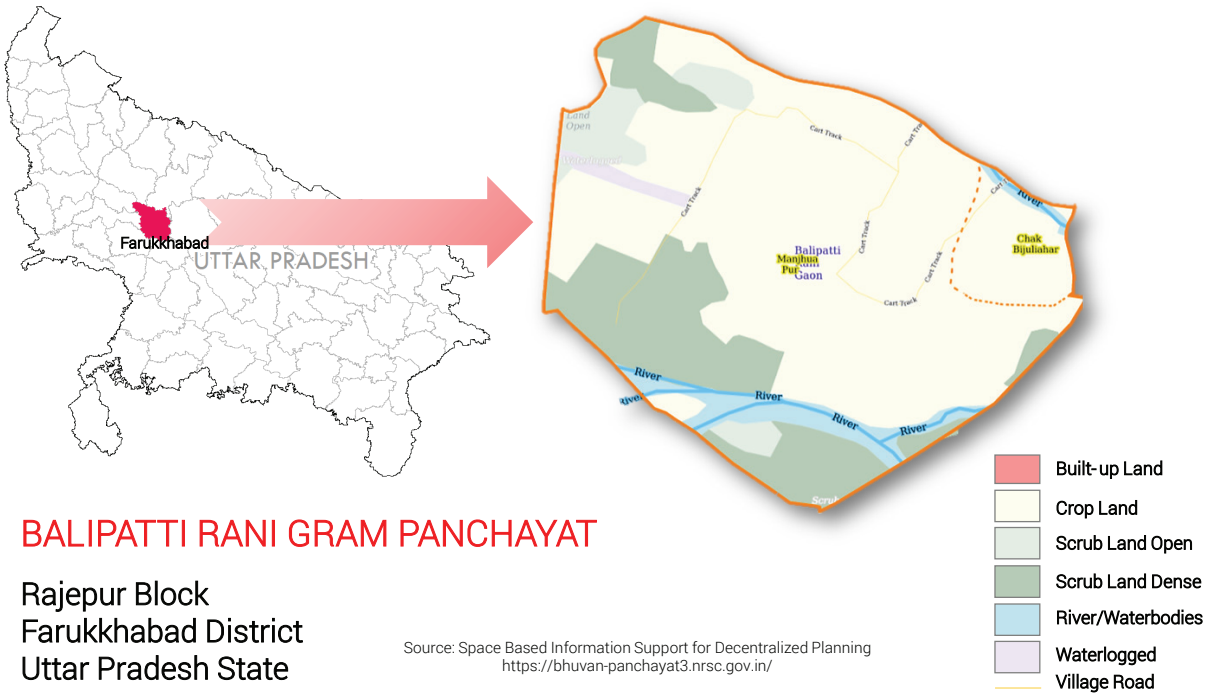


Figure 1: Land-use map of Balipatti Rani Gaon Gram Panchayat, Farrukhabad District

Climate Variability Profile

The climate variability data (temperature and rainfall) received from the India Meteorological Department (IMD)[9] - indicates that there has been an increase in the maximum and minimum temperature in the region between 1990 and 2020 (Figure 2). In 2020, the annual average maximum temperature was up by 0.51°C and annual average minimum temperature was up by 0.47°C as compared to 1990. During the same timeframe, annual rainfall shows an increasing trend which most likely implies more intense rainfall in fewer days (see Figure 3). However, the IMD data does not capture granular temperature variability at the Panchayat level and further, there are days for which data was not available.

A recent report by World Meteorological Organisation, 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[10]. Similar findings are also confirmed by IPCC[11] and MoES, Government of India[12].

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 45 days and decrease in the number of winter days by approximately 30 days. They also indicated that the number of rainy days has also decreased by roughly 30 days[13].

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.

9 Daily temperature (maximum and minimum) data and daily rainfall data taken from Hardoi nearest monitoring station.

10 State of the Climate in Asia in 2023 https://library.wmo.int/records/item/68890-state-of-the-climate-in-asia-2023

11 AR6 Synthesis Report: Climate Change 2023(ipcc.ch) https://www.ipcc.ch/report/ar6/syr/

12 Assessment of Climate Change over the Indian Region: A Report of Ministry of Earth Sciences (MoES); https://link.springer.com/book/10.1007/978-981-15-4327-2

13 Data from the field survey conducted for preparation of the plan

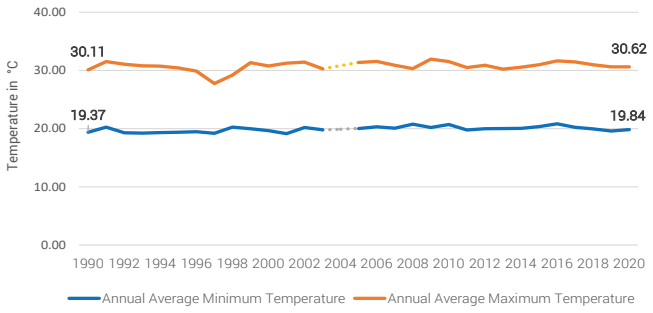


Figure 2: Annual average maximum and minimum temperature in Balipatti Rani Gaon, 1990-2020

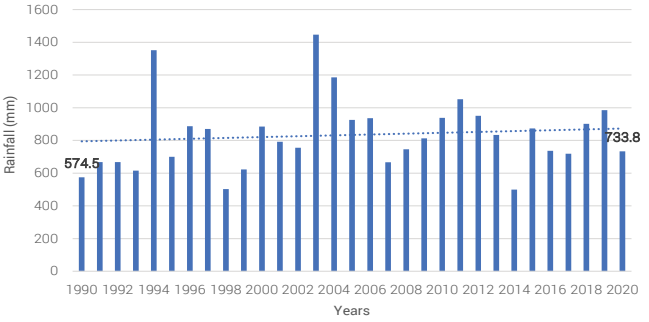


Figure 3: Annual rainfall (mm) in Balipatti Rani Gaon, 1990 - 2020

Key Economic Activities

Animal husbandry and agriculture serve as the primary sources of income, engaging nearly 66 percent of households (see Figure 4). This is followed by engagement in non-farm wage labour (23 percent). Some other households are involved in the service sector, local businesses and cottage industries, etc.

Household level income estimates from the primary survey revealed that a significant number of the households (53 percent) earn less than ₹50,000 per annum, while a small number of the households (4 percent) earn more than ₹5,00,000 (see Figure 5).

The ration card data reveals that nearly 47 percent of the households benefit from the public distribution schemes and hold ration cards. Of these, around 73 households hold *Antyodaya* cards[14] (see Figure 6).

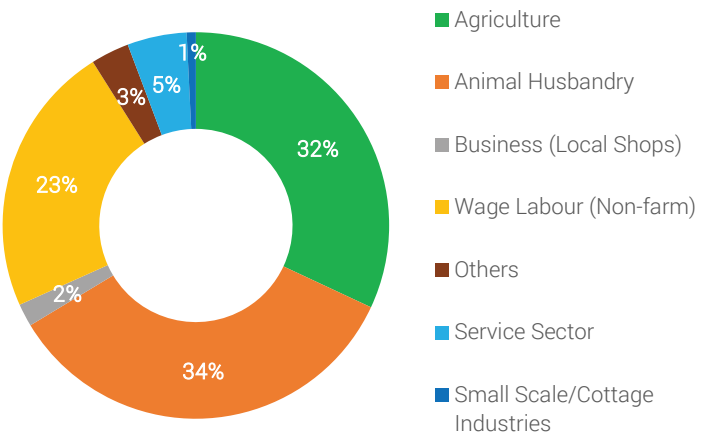


Figure 4: Household level primary sources of income in Balipatti Rani Gaon

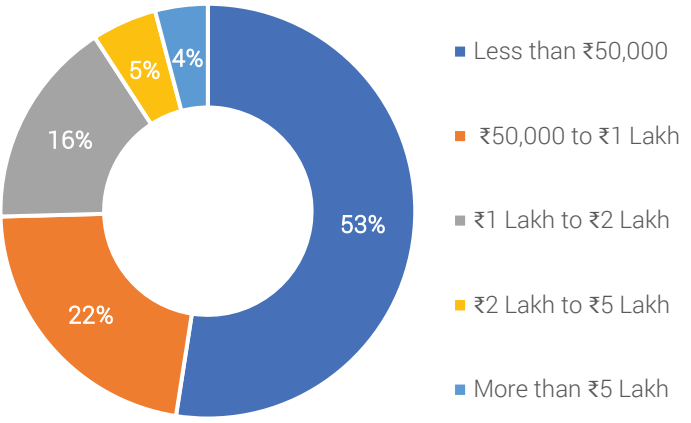


Figure 5: Household level income distribution in Balipatti Rani Gaon

14 National Food Security Portal https://nfsa.up.gov.in/Food/citizen/ReportNikayWise.aspx?val=NCMxNDkjUiMwMDE5OTIjMDU5NTYx

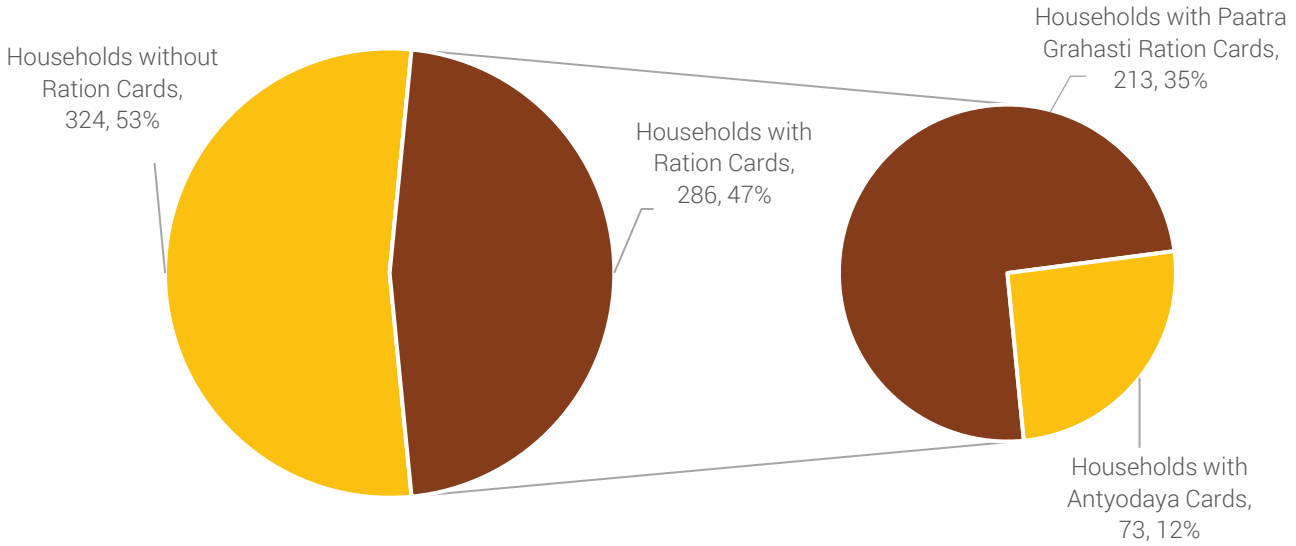


Figure 6: Households with ration cards in Balipatti Rani Gaon

Women's Employment

In Balipatti Rani Gaon GP, there are 484 working women as reported in the field survey. These women are mostly engaged in animal husbandry and agriculture. A small number of women are involved in the tailoring and service sector such as teaching, banking, and in government jobs (see Figure 7). There are 60 women-headed households that make up only ~10 percent of the households[15] in the GP. The field survey also indicates that there is two Self-Help Group involved in tailoring activities.

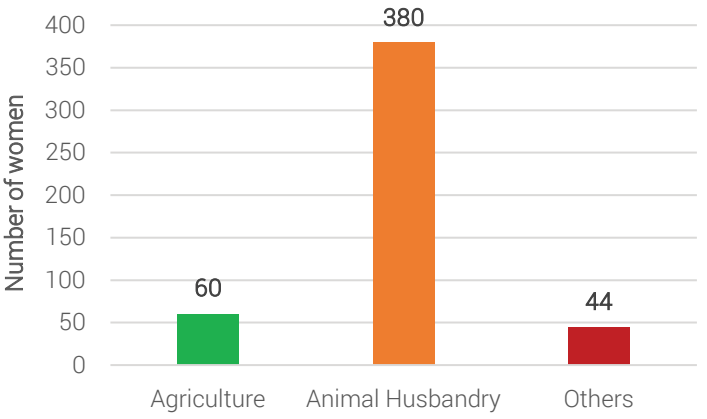


Figure 7: Number of women engaged in various economic activities in Balipatti Rani Gaon

Agriculture

In the Gram Panchayat, 32 percent households are dependent on agriculture for their livelihood as seen in Figure 4. These households are engaged in agriculture in various ways- as tenants, wage laborers, practicing on their own land etc.

The total agricultural land available in the GP is ~ 1,012 ha. Inputs from the Gram Pradhan and field survey indicate that a portion is not cultivated due to monsoon flooding, therefore the current gross-cropped area is 969 ha. The

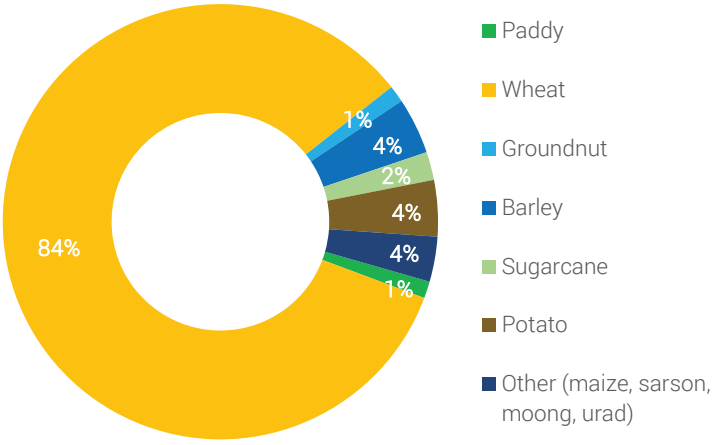


Figure 8: Crop-wise distribution of gross cropped area in Balipatti Rani Gaon

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

major *kharif* crops grown are sugarcane (~2,023 quintals), paddy (~121 quintals) and groundnut (~90 quintals). The major *rabi* crops grown are wheat (~8,093 quintals), barley (~404 quintals) and potato (~323 quintals). Other crops grown in the GP include maize, mustard and *urad*. The main source of irrigation is borewell. There are 210 diesel pumps and 6 solar pumps used for irrigation.

Additionally, around 34 percent of the population of the GP is engaged in animal husbandry. The total livestock population is 1,350 (250 cows, 300 buffaloes, 400 goats and 400 sheep).

Natural Resources

Balipatti Rani Gaon has 8 water bodies including seven ponds covering 2.24 ha of land and the Ganga River as per the field survey. Plantation activities have been implemented through MGNREGA and covers a total of 8 ha. Currently, *peepal*, *banyan*, mango and *pakaria (Ficus virens)* tree species are grown in these plantations.[16]

16 As per inputs received from the field survey/community

Amenities in Balipatti Rani Gaon

Electricity & LPG

- Electricity Access: 100% Households
- LPG Coverage: 65% Households

Water

- Main Source of Water for Household Use and GP Level Supply - Groundwater & Pipeline
- Households with Piped Water Supply: 100%

Waste

- Open Defecation Free (ODF) Status: Achieved
- Household Toilet Coverage: 51%

Mobility and Market Access

- State Highway (SH 43): 500 m
- Nearest Railway Station, Farrukhabad: 8 km
- Government Ration Shop within the GP
- Post Office: 2.5 km

Educational Institutions

- Primary School, Balipatti Rani Gaon
- Primary School, Ratanpur Amroha

Health Institutions

- Anganwadi Centre
- Primary Health Centre: 1.5 km

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, Balipatti Rani Gaon emitted ~1,864 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 Balipatti Rani Gaon. Agriculture sector emissions include those due to rice cultivation, application of fertiliser on agricultural fields, emission from livestock and manure management, and crop residue burning. Energy sector emissions are due to electricity consumption[17] , 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.

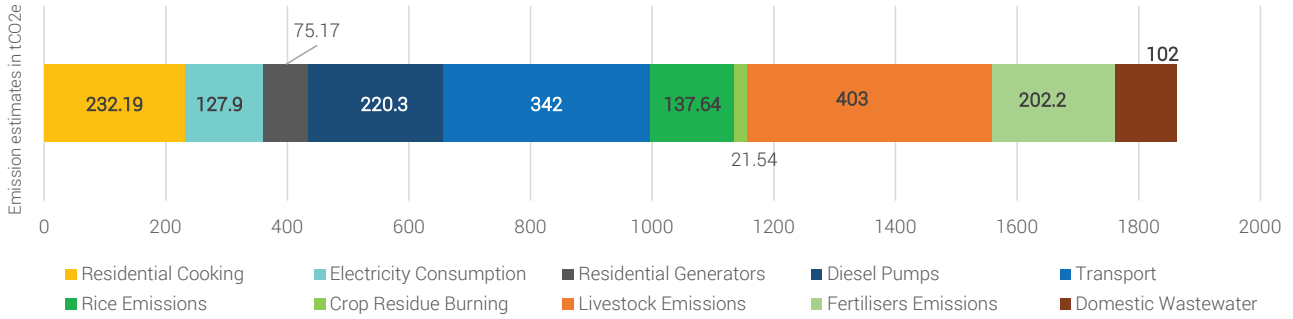


Figure 9: Carbon footprint of various activities in Balipatti Rani Gaon in 2022

The energy sector accounted for 54 percent of the total emissions. Within the sector, transport was the key emitter (342 tCO_2e), this was followed by residential cooking (~232 tCO_2e), diesel pumps (~220 tCO_2e) electricity consumption (~128 tCO_2e), and residential generators (~75 tCO_2e). The agriculture sector accounted for 41 percent of the total emissions, with emissions from livestock (~403 tCO_2e) and rice cultivation (~138 tCO_2e) being the leading causes of GHG emissions. The waste sector accounted for 5 percent of the total emissions.

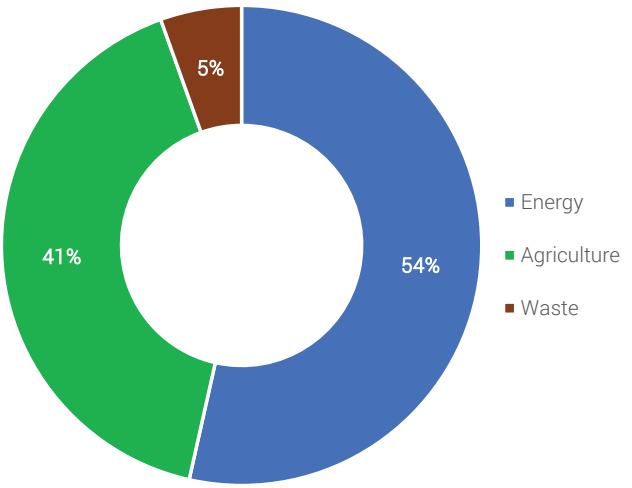


Figure 10: Share of sectors in carbon footprint of Balipatti Rani Gaon in 2022

17 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 summarized below. Further, the detailed issues are listed in the respective themes of the recommendations section.

Broad Issues:

- Frequent occurrence of floods in the months of July to October causes water contamination and waterlogging problem.
- Poor maintenance of water bodies
- Limited sanitation and waste management practices
- Limited inter village connectivity due to poor road infrastructure.
- Changes in seasonal durations and erratic rainfall affecting sowing time, harvesting time and irrigation needs of crops among other impacts in the GP
- Unsustainable agricultural and animal husbandry practices
- Dependence on fossil fuels and traditional fuels for cooking, irrigation and transport needs
- Lack of awareness about climate change 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**[18] (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. **Management and Rejuvenation of Water Bodies**
2. **Sustainable Agriculture**
3. **Enhancing Green Spaces and Biodiversity**
4. **Sustainable Solid Waste Management**
5. **Sustainable and Enhanced Mobility**
6. **Access to Clean, Sustainable, Affordable and Reliable Energy**
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 recommendations.

18 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. Management and Rejuvenation of Water Bodies

Context & Issues[19]

- The primary sources of water for domestic use in Balipatti Rani Gaon are groundwater and piped water supply. Additionally, there are 48 handpumps. For irrigation, the GP relies on individual borewell, rainwater, and the Ganga River.
- Flooding is a key concern in Balipatti Rani Gaon, particularly due to erratic and intense rainfall in fewer days. There have been frequent (five) incidences of floods typically in the month of August between 2018-2022. This results in crop loss, which threatens the livelihood of farmers.
- Waterlogging is another major issue in Bhatta and Ratanpur Ramhoa hamlets, particularly in monsoon season (August). It affects connectivity in GP, leading to accumulation of waste in low-lying areas, which causes rise in number of waterborne disease incidences and contaminates drinking water sources. These issues are aggravated due to inefficient and poorly maintained drainage.
- There are 7 ponds in Balipatti Rani Gaon, which are poorly maintained and filled with silt, debris, and waste and therefore they need to be cleaned and rejuvenated.

Dependence on groundwater and frequent incidence of floods highlight the need for watershed management to conserve water and replenish groundwater resources.[20] The following recommendations are proposed to reduce vulnerability, build resilience and improve water security in Balipatti Rani Gaon.

19 As understood from the community during field surveys and FGDs and corroborated by relevant resources.

20 Based on inputs received during field survey

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. Installation of filter chambers on drains 3. Construction of diversion channels 4. Installation of siphons for outflow of water	Regular maintenance of existing infrastructure	Regular maintenance of existing infrastructure
Target[21]	1. Construction of 785 m of new drains 2. Installation of filter chamber on drains at strategic locations 3. Construction of diversion channels to carry excess flood water away from the settlements and agricultural area 4. Installation of siphons for outflow of water at strategic locations	Regular maintenance of drainage network	Regular maintenance of drainage network
Estimated Cost	1. Construction of drains: ₹8,68,000 2. Installation of filter chamber: ₹30,000 3. Cost of diversion channels and siphons as per requirement *Total Cost: ₹8,98,000*	As per requirement	As per requirement

21 Cost as per HRVCA

Maintenance 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 and deepening of ponds 2. Creation of retention ponds (linked to diversion channels) to manage flood water 3. Tree plantation around ponds with tree guards 4. 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. Creation of additional retention ponds 3. Additional tree plantation around ponds 4. Expansion of phase I activities 5. Capacity building of the community and other stakeholder	1. Regular maintenance of ponds 2. Expansion of phase I & phase II activities
Target	1. Cleaning and deepening of 7 ponds 2. Creation of 10 retention ponds 3. Plantation of 1,000 trees with tree guards (around water bodies)	1. Maintenance of 7 ponds 2. Creation of additional retention ponds as per requirement 3. Additional 1,000 trees planted around water bodies with tree guards	1. Maintenance of 7 ponds 2. Expansion of phase I & phase II activities as required
Estimated Cost	1. Cleaning and deepening of 7 ponds: ₹35,00,000 2. 10 Retention Ponds (300 m3 capacity): ₹70,00,000 Plantation around water bodies: covered in section[22] "Enhancing Green Spaces and Biodiversity": ₹12,70,000 *Total Cost: ₹1.05 crores*	1. Maintenance of 7 ponds: ₹26,25,000 2. Plantation around water bodies: covered in section 'Enhancing Green Spaces and Biodiversity': ₹12,70,000 *Total Cost: ₹26.25 lakhs*	Maintenance of 7 ponds: ₹26,25,000 *Total Cost: ₹26.25 lakhs*

22 Can also be done around river banks to reduce/control the impact of flooding

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. Incorporating RwH system in all new buildings	1. Installation of RwH structures in residential buildings above a plot size of 1500 sq. ft. 2. Incorporating RwH system in all new buildings	1. Installation of RwH structures in residential buildings 1000 sq. ft. 2. Incorporating RwH system in all new buildings
Target	RwH structures in 4 PRI buildings	1. 31 pucca households to install RwH structures with an average storage capacity of 10 m^3. 2. Construction recharge pits as per requirement	357 pucca households to install RwH structures with an average storage capacity of 10 m^3.
Estimated Cost	RwH: ₹1,40,000 *Total Cost: ₹1,40,000*	RwH: ₹10,85,000 *Total Cost: ₹10.85 lakhs*	RwH: ₹1,24,95,000 *Total Cost: ₹1.24 crores*

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 channelled 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. CSR support can be utilised for installation of gravity based/ solar powered RO water filtration system in GP.

Key Departments

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

2. Sustainable Agriculture

Context & Issues[23]

- The total agricultural land in the Gram Panchayat is approximately 1,012 hectares. However, because of monsoon flooding, not all of this land is cultivable, resulting in a current gross-cropped to 969 hectares.
- 34 percent of the households in the GP depend on animal husbandry and 32 percent households depend on agriculture practices as a source of income.
- The major crops grown are paddy (~12 ha), wheat (~809 ha), groundnut (~12 ha), sugarcane (~20 ha) and potato (~40 ha) across *kharif* and *rabi* seasons.
- The GP has experienced floods in 2018, 2019, 2020, 2021 and 2022 typically during August[24], leading to crop failure.
- In the past 5 years, crop losses have been caused due to erratic rainfall, floods as well as crop diseases. The losses amount to around 5,400 quintals of produce (paddy, maize and wheat) or approximately ₹94 lakhs (corroborated by prevailing MSP of the respective years).
- Adoption of crop insurance by farmers is low in the GP due to lack of sufficient information on schemes available. There is a need for capacity building initiatives that can help farmers to adopt crop insurance schemes to avoid loss and minimise risks.
- Farmers in Balipatti Rani Gaon use ~86 tonnes of urea, ~126 tonnes of DAP, and other nitrogenous fertilizers per year which leads to GHG emissions of ~202 tonnes CO_2e per year. The farmers also rely on other chemical inputs such as pesticides and weedicides.
- Natural farming is not practiced in Balipatti Rani Gaon.
- As reported in the field survey, GP does not have farmers producer organisation and seed bank resulting in farmers failing to manage the risk during extreme weather events.

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

23 As understood from the community during field surveys and FGDs and corroborated by relevant resources

24 Based on inputs from the community during field surveys

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 like drip irrigation and sprinkler irrigation 2. Construction of bunds with trees around agricultural fields to protect them during flooding 3. Promote artificial recharge by building farm ponds where feasible 4. Promote adoption of *Machaan* farming or multi-layer system to address flooding related food security issues[25] 5. Adoption of millets cultivation 6. 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. Adoption of flood tolerant variety of paddy such as *Swarna*-Sub[26] 5. 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 to flood tolerant variety
Target	1. Micro irrigation practices introduced in 34 ha (100% of agricultural land under vegetable, groundnut and sugarcane) 2. 506 ha to have bunds with trees (50% of total agricultural area) 3. Construction of 10 farm ponds of 300 m^3 capacity each where feasible	1. All agriculture land 506 ha (100% of agricultural land) to have bunds with trees 2. Construction of 20 farm ponds where feasible	Maintenance of bunds and farm ponds

25 Multi-layer vegetable-based farming system can be practiced both on farmland as well as in backyard and crops can be grown across three seasons (Zaid, Rabi and kharif); https://www.geagindia.org/uploads/publication_files/1552600205.pdf

26 https://rkvy.nic.in/Uploads/ProjectMonitoring/UTTAR%20PRADESH/2019023529Stress%20tolerant%20rice%20varieties.pdf

Estimated Cost	1. Micro irrigation: ₹34,00,000 2. Bunds: Around ₹3,37,000 3. 20 farm ponds of 300 m^3 capacity: ₹18,00,000 *Total Cost: ₹55.37 lakhs*	1. Bunds: Around ₹3,37,000 2. 20 farm ponds: ₹18,00,000 *Total Cost: ₹21.37 lakhs*	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 natural 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 to enhance soil health	1. Continuing the transition of agricultural land to natural farming (nursery, seed bank, certification mechanism & market linkages established) 2. Promotion and adoption of practices implemented in Phase I	100% expansion of transitioning agricultural land to natural farming
Target	Transitioning 152 ha (15% of agricultural land to natural farming)	Transitioning 405 ha (additional 40% of agricultural land to natural farming)	Transitioning remaining 455 ha (100% agricultural land to natural farming)

Estimated Cost	1. Cost of training (one time): ₹60,000 2. Transition of land to natural farming: ₹3,75,59,200 *Total Cost: ₹3.7 crores*	1. Cost of training (one time): ₹60,000 2. Transition of land to natural farming: ₹10,00,75,500 *Total Cost: ₹10 crores*	1. Cost of training (one time): ₹60,000 2. Transition of land to natural farming: ₹11,24,30,500 *Total Cost: ₹11 crores*

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[27]	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

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

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.*

Other Sources of Finance

- Set-up & operationalise (in alignment with schemes mentioned in "Access to Clean, Sustainable, Affordable and Reliable Energy" section) cold-storage facility to help minimise post-harvest losses.
- 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 Balipatti Rani Gaon 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)
- Fisheries Department
- 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, Farrukhabad

3. Enhancing Green Spaces and Biodiversity

Context & Issues

- The GP has a demarcated forest area of 0.4 ha. Plantation activities have been implemented through MGNREGA and these plantations cover a total of 8 ha.
- Currently, *peepal*, *banyan,* mango and *pakaria* (*Ficus virens*) tree species are grown in the GP.[28] As mentioned in the HRVCA, the GP has open spaces which could potentially be utilised for greening activities.

Balipatti Rani Gaon gram panchayat has potential to enhance lung spaces, as it will not only improve thermal comfort and provide shade but also improve soil health and water levels in the long term, in addition to enhancing carbon sink in the GP.

28 As per inputs received from the field survey/community

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[29] through various initiatives: » **Green Stewardship programme**[30] 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, shrubs and trees 3. Awareness and training sessions for students, youth and local communities on: » Importance of forest and green cover » How to plant and nurture trees	1. Maintenance of existing plantations and nursery 2. Additional plantation of saplings with creation of ***Bal Van***[31] 3. Farmers are encouraged to adopt agroforestry 4. ***Arogya Van*** is established 5. Awareness and training sessions for students, youth and local communities	1. Plantation activities expanded and maintained- ***Bal Van*** and other plantations 2. ~ 324 ha (100% of land suitable for agroforestry) is covered under agro-forestry initiative[32] ***3.*** ***Arogya Van*** maintained and units for production of natural medicines and supplements established 4. Awareness and training sessions for students, youth and local communities

29 Trees species listed in Annexure VI

30 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

31 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

32 The agricultural land under wheat cultivation ~324 ha is considered suitable for agroforestry

Target	1. Plantation of 1,000 saplings of common and endangered trees to be planted around ponds, rivers, roads and other locations in the GP and ensure at least 65% survival rate (using tree guards) Sequestration potential[33]: 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 1,000 to 1,500 saplings planted Sequestration potential: 7,000 tCO_2 to 12,500 tCO_2 in 15-20 years 2. *Arogya Van* established and maintained 3. Agro-forestry adopted in 130 ha land (40% of land suitable for agroforestry), 13,000 trees planted Sequestration potential of teak plantation: 72,800 tCO_2 to 1,30,000 tCO2 in 20 years	1. Additional 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 remaining 194 ha land, 19,400 trees planted Sequestration potential: 1,08,640 tCO2 to 1,94,000 tCO_2 in 20 years 3. *Arogya Van* maintained and production of natural medicines and supplements continues (as described in the 'Enhancing Livelihoods and Green Entrepreneurship' section)
Estimated Cost	Plantation activities: ₹12,70,000 *Total cost: ₹12.7 lakhs*	1. Total cost of tree plantation: ₹15,87,500 2. Cost of agro-forestry: ₹51,84,000 *Total cost: ₹67.71 lakhs*	1. Total cost of tree plantation: ₹22,22,500 2. Cost of agro-forestry: ₹77,76,000 *Total cost: ₹99.9 lakhs*

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 polyhouse for nursery by employing SHGs 2. Train SHGs to maintain and run the nursery	Maintenance of nursery	Maintenance of nursery

33 Sequestration potential estimated based on teak species

Target	Establish a polyhouse for nursery to help improve green cover and provide additional income to women	Maintenance of nursery	Maintenance of nursery
Estimated Cost	Cost of construction and operation of nursery: ₹3,00,000 *Total cost: ₹3,00,000*	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. Participatory update of the People's Biodiversity Register 2. Build awareness amongst community and all stakeholders	1. Regular updating of People's Biodiversity Register 2. Strengthen awareness	1. Regular updating of People's Biodiversity Register 2. Strengthen awareness
Target	1. Formation and capacity enhancement of the Biodiversity Management Committee 2. Participatory update of the People's Biodiversity Register	Participatory update of the biodiversity register continues	Participatory update of the biodiversity register continues
Estimated Cost	Formation of Biodiversity Management Committees (BMCs) and training cost[34]: ₹25,000		

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

Existing Schemes and Programmes

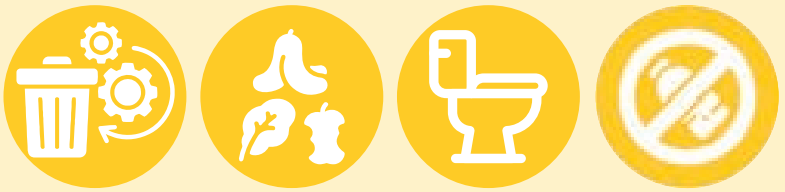
- Plantation activities can be aligned and carried out through provisions under 'Trees Outside Forests in India' initiative by MoEFCC, Green India Mission, Jal Jeevan Mission and UP State Plantation Targets.
- Annual budgeting under UP State Compensatory Afforestation Fund Management and Planning Authority 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.
- Activities like Horticulture nursery can leveraged through Mission for Integrated Development of Horticulture (MIDH)
- 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[35]

Context & Issues

- The total waste generated[36] from all domestic activities (household, public and semi-public spaces, and commercial areas) in the GP is approximately 196 kg per day. Out of this, ~113 kg per day of biodegradable/organic waste and ~83 kg per day of non-biodegradable waste.
- As per inputs received during field survey, there is a lack of public awareness about waste segregation and effective waste management leading to dumping of waste in open areas, and around ponds. The large quantities of agricultural and animal waste also add to the waste management issues in Balipatti Rani Gaon. The total livestock population in the GP is 1,350 (250 cows, 300 buffaloes, 400 goats and 400 sheep) and the estimated dung output is roughly 7 tonnes per day which can be managed substantially through interventions such as composting, vermicomposting, natural fertilisers production and biogas generation in Balipatti Rani Gaon[37]. 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).
- The household toilet coverage is ~51%. The field surveys and focus group discussions highlighted the need for improving access to toilets in the GP.

Against this backdrop the following solutions are proposed to ensure 100% solid waste management as well as boost the economy and create livelihood opportunities

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

36 Refer to Annexure IV for estimation methodology

37 Assuming cows produce 10 kg dung/day, buffalos produce 15 kg dung/day, goats and sheep produce 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. Electric vehicle for collection and transportation of waste from households to GP-level storage facility 3. Installation of waste collection bins at strategic location 4. Setting up partnerships between Panchayat, SHGs, informal ragpickers, local scrap dealers, local businesses, and MSMEs	1. Maintenance of GP level segregation and storage facility 2. Maintenance of existing waste bins 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 » Segregation and storage facilities » Electric garbage collection vans » Waste bins installed 2. Scaling up partnership beyond GP to other villages/districts
Target	1. 610 households (100 percent) covered under waste management facility 2. 1 electric garbage collection van 3. Installation of 10 waste bins 4. Building partnership for collection/ transportation of waste between Panchayat and local businesses, and MSMEs, SHGs, informal ragpickers and local scrap dealers	1. Installation of additional waste bins as per requirement 2. Maintenance of existing facilities 3. Scaling up partnership	1. Additional waste bins as per requirement 2. Maintenance of existing facilities 3. Scaling up partnership

Estimated Cost	1. 1 EV for daily garbage collection: ₹1,00,000 2. 10 waste bins: ₹1,50,000 *Total cost: ₹2,50,000*	As per requirement	As per requirement

Sustainable Management of Organic Waste

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 vermicomposting and Nadep compost pits 2. Establishing enterprises for production of organic fertilisers (see "Enhancing Livelihoods & Green Entrepreneurship" section for further details)	Regular maintenance of vermicomposting and Nadep compost pits	Regular maintenance of vermicomposting and Nadep compost pits
Target[38]	1. Setting up of 80 vermicompost 2. Setting up of 100 Nadep compost pits 3. Compost/manure generated from domestic waste (organic): ~58 kg per day	1. Increasing capacity/ setting up new compost pits as per requirement 2. 100 percent of biodegradable/organic waste treated	1. Additional compost pits as per requirement 2. Maintenance of compost pits
Estimated Cost	1. Vermicompost pits: ₹21,60,000 2. Nadep compost pits: ₹17,00,000 *Total cost: ₹38.6 lakhs*	As per requirement	As per requirement

38 Setting up of compost pits at strategic location considering the geography (flood prone) of the GP

Improving 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	1. Enhancing household toilet coverage 2. All new households/ construction should have toilets	1. Expanding toilet coverage in the remaining households 2. All new households/ construction should have toilets	1. Maintenance of existing infrastructure 2. All new construction/ households should have toilets
Target	Construction of twin pit toilets in 148 households (out of the nearly 297 households that do not have household level toilets)	Construction of twin pit toilets in remaining 149 households	Maintenance of existing infrastructure
Estimated Cost	Cost of twin pit toilets: ₹25,90,000 *Total cost: ₹25.9 lakhs*	Cost of twin pit toilets: *₹26,07,500* *Total cost: ₹26.07 lakhs*	As per requirement

Ban on Single Use Plastic

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: see "Enhancing Livelihoods & Green Entrepreneurship" section for further details	Awareness, training, and capacity-building programs continue	1. Additional individual toilets constructed as per requirement 2. Additional community toilets constructed as per requirement 3. Regular maintenance of community toilet
Target	1. Complete ban on Single Use Plastics (SUPs) 2. Engagement of 100 women in manufacturing plastic alternative products	1. Ban on Single Use Plastics (SUPs) 2. Increased engagement from this GP & nearby villages of: » Additional 200 women » Additional SHGs, MSMEs & Individual Entrepreneurs	1. Ban on Single Use Plastics (SUPs) 2. Increased engagement from this GP & nearby villages of: » Additional 300 women » Additional SHGs, MSMEs & Individual Entrepreneurs

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. Sustainable and Enhanced Mobility

Context & Issues

- Balipatti Rani Gaon has a total of 564 internal combustion engine (ICE) vehicles; 520 - two-wheelers, 26 cars, and 18 tractors.[39]
- Additionally, there are 2 e-rickshaws in the GP
- The total fuel consumption by the ICE vehicles is ~27 kilo litre (kL) of diesel and ~114 kL of petrol per annum. Overall, the fuel consumed in the transport sector has led to over 341 tCO_2e emissions.

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

Enhancing Existing 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	1. Interlocking works at specific location[40] 2. Road elevation for stretches identified as affected by waterlogging	Maintenance of road infrastructure and repairs when necessary	Continued maintenance of road infrastructure and repairs if necessary
Target[41]	Interlocking works for a total road length of 70m	Regular and timely maintenance/repair of roads	Regular and timely maintenance/repair of roads

39 As per inputs received during field surveys
40 Refer to HRVCA for location specific details
41 Refer to HRVCA for exact location

Estimated Cost	Interlocking works: ₹20,00,000 *Total cost: ₹20 lakhs*	As per requirement	As per requirement

Enhancing 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	Introducing e-autorickshaws to improve last mile connectivity	Introducing more e-autorickshaws to the GP's fleet	Additional e-autorickshaws can be procured based on demand
Target	E-autorickshaws added to the fleet as per requirement	Additional e-autorickshaws procured if required	Additional e-autorickshaws procured if required
Estimated Cost	Cost of one e-autorickshaws[42]: around ₹3,00,000 Available subsidy: up to ₹12,000 per vehicle	As per requirement	As per requirement

42 The cost of e-autorickshaws ranges from a band of ₹1,50,000 - ₹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

Promoting Adoption of E-vehicles and 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 3. Establish facility to hire e-tractors and e-goods 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	1. 5 e-tractors: ₹30,00,000 2. 5 e-goods carrier: ₹25,00,000 – ₹50,00,000 *Total cost: ₹55 lakhs – ₹80 lakhs*	Cost as per market rate	Cost as per market rate

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[43] 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: @15% of ex-factory cost up to ₹5000 per vehicle; 3-Wheeler EV: @15% of ex-factory cost up to ₹12000 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.

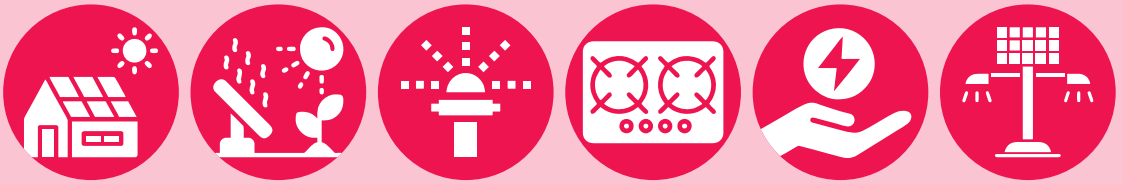
Other Sources of Finance

- 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)

43 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.



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

Context & Issues

- Balipatti Rani Gaon GP consumed approximately 1,56,067 units of electricity in 2022-23. While ~100% of households in the GP have electricity connection, the power supply, as understood from the community members is not 24*7. The GP experience a power cut of upto 11 hours per day.[44]
- Due to the power cuts, there are 10 diesel generators operating in the GP[45] for power back-up and they consume about ~29 kL of fuel annually.
- There are 210 diesel pumps used for irrigation[46] which consume ~82 kL of fuel annually.
- CFL (compact fluorescent) lights, other electrical fixture and appliances with low efficiency are in use in many homes and public utilities. Additionally, the GP has expressed a need for 50 solar street lights.[47]
- In Balipatti Rani Gaon, ~65% households use LPG for cooking, while cowdung and fuelwood is used for cooking in over 220 households. Therefore, there is a need to transition to cleaner cooking solutions that will not only lead to a reduction in emissions but also yield co-benefits such as improved indoor air quality.
- With increasing temperature, thermal comfort levels in homes are reducing and there is need for sustainable space cooling.

Based on the energy related concerns identified 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 Balipatti Rani Gaon. The intent of the suggested activities is to ensure access to clean, sustainable, affordable and reliable energy for the communities in the GP. This would not only enhance their quality of life but also help to supplement incomes through productive use of energy.

44 As shared by the community in field survey
45 As reported during field surveys
46 Based on inputs from community during field surveys
47 Based on inputs received from 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	Installation of rooftop solar panels on PRI/ government buildings[48]	1. Installation of rooftop solar panels on pucca houses 2. Installation of rooftop solar panels on all new buildings (constructed during Phase II) 3. Regular maintenance of solar rooftops	1. Scaling up installation of rooftop solar panels on pucca houses 2. Installation of rooftop solar panels on all new buildings (constructed during Phase III) 3. Regular maintenance of solar rooftops
Target	1. Panchayat Bhavan: 66 sq.m.; 10 kWp 2. Primary school: 123 sq.m.; 10 kWp 3. Primary school: 84 sq.m.;10 kWp 4. Anganwadi centre: 53 sq.m.; 10 kWp Total solar rooftop capacity installed in this phase: 40 kWp Electricity generated: 53,568 kWh per year (146 units per day) GHG emissions avoided: ~44 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*	1. Installation of solar panels on rooftops of 215 pucca houses (40% of existing pucca houses) [49] Solar rooftop capacity installed: 3 kWp Solar rooftop capacity installed in this phase: 646 kWp Electricity generation potential: 8,64,587 kWh[50] per year (2,368 units per day) GHG emissions avoided: 708 tCO_2e per year 2. Maintenance of solar rooftops	1. Installation of solar panels on rooftops of remaining 323 pucca houses (100% of existing pucca houses) Solar rooftop capacity installed in this phase: 968 kWp Electricity generation potential: 12,96,881 kWh[51] per year (3,553 units per day) GHG emissions avoided: 1,063[52] tCO_2e per year 2. Maintenance of solar rooftops

48 Solar installation in 4 PRI buildings capped at 10 kWh with 70% rooftop area
49 Average area of households considered to be 130 sq.m
50 This generation is over 8 times higher than the current electricity consumption in the GP
51 This generation is over 12 times higher than the current electricity consumption in the GP
52 The emissions avoided will help move the GP towards carbon neutrality

Estimated cost	Cost: ₹20,00,000 *Total Cost: ₹20 lakhs*	Cost: ₹3,22,80,000 Indicative Subsidy[53]: ~40% (State + CFA) *Effective cost: ₹1.93 crore*	Cost: ₹4,84,20,000 Indicative Subsidy: ~40% (State + CFA) *Effective cost: ₹2.9 crores*

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.	Installation of agro-photovoltaic on area under horticulture vegetables	Scaling up installation of agro-photovoltaic on area under horticulture vegetables
Target	Organising awareness campaigns and orientation sessions to encourage uptake of agro-photovoltaic initiatives amongst farmers	Installation of agro-photovoltaic on 2 ha of horticulture Capacity installed: 500 kWp (250 kWp per ha) Electricity generated: 6,69,600 kWh per year; 1,835 units per day GHG emissions avoided: 549 tCO_2e per year	Installation of agro-photovoltaic on 2 ha of horticulture Capacity installed: 500 kWp (250 kWp per ha) 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[54]: ₹5 Crore*	*Total cost: ₹5 Crore*

53 Subsidies are dynamic and are subject to change as per various parameters fixed by 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 The cost of agro PV has been reducing as technology advances. 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 for land areas earmarked for horticulture and other similar crops. Hence, only a percent of the land available under horticulture has been taken into consideration for installation of agro PV

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	Replacing existing diesel pump sets in the GP with solar pumps* **If solar pumps are not feasible then, energy efficient pumps (Kisan Urja Daksk Pumps by EESL) can be considered*	1. Replacing more diesel pump sets in the GP with solar pumps 2. Encouraging purchase/ use of all new pump sets to be solar-powered	1. Replacing additional diesel pump sets in the GP with solar pumps 2. Encouraging purchase/ use of all new pump sets to be solar-powered
Target	Replacing 42 existing diesel pump sets with solar pumps Capacity installed: 231 kW Electricity generated: 3,09,355 kWh per year Diesel consumption avoided: 16,380 litres/year GHG emissions avoided: 44 tCO_2e per year	Replacing 63 more diesel pumps with solar pumps (i.e. 50% of the existing diesel pumps replaced in Phase I and II) Capacity installed: 347 kW Electricity generated: 4,64,032 kWh per year Diesel consumption avoided: 24,570 litres/year GHG emissions avoided: 66 tCO_2e per year	Replacing remaining 105 diesel pumps with solar pumps (i.e. 100% of the existing diesel pumps replaced in Phase I, II and III) Capacity installed: 578 kW Electricity generated: 7,73,388 kWh per year Diesel consumption avoided: 40,950 litres/year GHG emissions avoided: 110 tCO_2e per year
Estimated Cost	Total cost: ₹1,26,00,000 - ₹2,10,00,000 Subsidy: ~60% (State + CFA) *Effective cost: ₹50 lakhs - ₹84 lakhs*	Total cost: ₹1,89,00,000 - ₹3,15,00,000 Subsidy: ~60% (State + CFA) *Effective cost: ₹75 lakhs - ₹1.2 crores*	Total cost: ₹3,15,00,000 - ₹5,25,00,000 Subsidy: ~60% (State + CFA) *Effective cost: ₹1.2 crores - ₹ 2 crores*

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 cook stoves + LPG Scenario 3: Solar powered induction cook stoves + *Improved chulhas* + LPG	Scenario 1: Household Biogas + LPG Scenario 2: Solar powered induction cook stoves + LPG Scenario 3: Solar powered induction cook stoves + *Improved chulhas* + LPG	Scenario 1: Household Biogas + LPG Scenario 2: Solar powered induction cook stoves + LPG Scenario 3: Solar powered induction cook stoves + *Improved chulhas* + LPG
Target	Scenario 1: 113 Households use biogas plants (25% households having cattle) + 498 household use LPG Scenario 2: 14 Households use solar powered induction cookstoves (25% households in the top income groups) + 596 use LPG Scenario 3: 14 Households use solar powered induction cookstoves (25% households in the top income groups) + 55 households use *improved chulha* (50% households that currently use biomass) This also includes the continued use of LPG in the GP	Scenario 1: 113 more households use biogas plants (cumulative 50% of households) + 385 households use LPG Scenario 2: 14 more households use solar powered induction cookstoves (additional 25% households in the top income groups) + 582 LPG use Scenario 3: 14 more households use Solar powered induction cookstoves (additional 25% households in the top income groups) + 55 more households use *improved chulha* (remaining 50% of households that currently use biomass) This also includes the continued use of LPG in the GP	Scenario 1: Additional 224 households use biogas plants (100% households having cattle) + 161 households use LPG Scenario 2: 28 more households use solar powered induction cookstoves (100% of households in the top income groups) + 554 household use LPG Scenario 3: 28 more households use solar powered induction cookstoves (100% of households in the top income groups) + 110 households already using *improved chulha* (as in Phase II) This also includes the continued use of LPG in the GP

Estimated Cost	Scenario 1: ₹56,25,000 for biogas plants Scenario 2: ₹6,30,000 for solar induction cookstoves Scenario 3: ₹7,95,000 for solar induction cookstoves + improved *chulha* *Total Cost: ₹23.5 lakhs*	Scenario 1: ₹56,25,000 for biogas plants Scenario 2: ₹6,30,000 for solar induction cookstoves Scenario 3: ₹7,95,000 for solar induction cookstoves + improved *chulha* *Total Cost: ₹23.5 lakhs*	Scenario 1: ₹1,12,00,000 for biogas plants Scenario 2: ₹12,60,000 for solar induction cookstoves Scenario 3: ₹15,90,000 for solar induction cookstoves + improved *chulha* *Total Cost: ₹46 lakhs*

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. Replacing all light fixtures and fans with energy efficient fixtures in all PRI buildings 2. Replacing at least 1 CFL bulb with LED bulb 3. Replacing at least 1 fluorescent tube light with LED tube light 4. Residents must also be encouraged to upgrade other household appliances energy efficient appliances (4-5 star rated by BEE)	1. Scaling up replacement of CFL bulbs with LED bulbs 2. Scaling up replacement of tube light with LED tube light 3. Replacing 1 conventional fan in houses with energy efficient fan 4. Residents must also be encouraged to upgrade other household appliances energy efficient appliances (4-5 star rated by BEE)	Scaling up replacement of conventional fan in houses with energy efficient fans
Target	1. 100% replacement of existing fixtures with LED tube lights and energy efficient fans in all PRI/ government buildings 2. Replacing 262 existing CFL with LED tube lights in all houses (1 per household) 3. Replacing 15 existing tube lights with LED tube lights in all houses (1 per household)	1. Replacing additional 262 existing CFL with LED tube lights in all houses (1 per household) 2. Replacing 233 energy efficient fans in all (100%) houses (1 in each house)	Replacing 233 energy efficient fans in all (100%) houses (1 in each house)

Estimated Cost	Cost of LED bulbs: ₹18,340 Cost of LED tube light: ₹3,300 *Total cost: ₹21,640*	Cost of LED bulbs: ₹18,340 Cost of energy efficient fans: ₹2,58,630 *Total cost: ₹2,76,970*	Cost of energy efficient fans: ₹2,58,630 *Total cost: ₹2,58,630*

Solar Streetlight[55]

Phase	I 2024-25 to 2026-27	II 2027-28 to 2029-30	III 2030-31 to 2034-35
Suggested Climate Smart Activities	1. Install solar LED streetlights along roads, public spaces and other key location 2. Installation of high-mast solar LED streetlights at key locations	1. Installing of new solar LED streetlights as required 2. Installation of more high-mast solar LED as required	Regular maintenance and addition of streetlights as required
Target	1. Installing 50 solar LED streetlights at specific locations 2. Installing 10 high-mast solar LED streetlights	1. Installing additional solar LED streetlights 2. Additional 10 high-mast solar LED streetlights	Regular maintenance and addition of streetlights as required
Estimated Cost	1. Installation of 25 solar LED streetlights: ₹2,50,000 2. 10 high-mast solar LED streetlights: ₹5,00,000 *Total cost: ₹7,50,000*	1. Installation of 25 solar LED streetlights: ₹2,50,000 2. 10 high-mast solar LED streetlights: ₹5,00,000 *Total cost: ₹7,50,000*	As per requirement

55 Based on the inputs received from the Gram Pradhan

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% 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% 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%.
  - » For Group Housing Societies/Residential Welfare Associations (GHS/RWA) CFA will be limited to 20% 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% of system cost for 2 kW systems and 40% 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% each per pump basis. Farmers will only need to pay an upfront cost of 10% 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% subsidy to farmers (70% 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 Streetlight 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.

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}
58 https://pmsuryaghar.gov.in/
59 Street Lighting National Programme by EESL. Link
60 Gram Ujala scheme distributes One Crore LED bulbs in rural areas (Feb 2023), PIB. Link

- Subsidies for cold storage set ups:
  - » Government assistance in the form of credit linked back ended subsidy of 35% 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.'
  - » 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% 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% 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 for small biogas plants (1-25 cubic meter/day plant capacity) is Rs. 9800/- to Rs. 70,400/- per plant based on size of the plant.
  - » 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.

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

- 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).

Key Departments

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

7. Enhancing Livelihoods and Green Entrepreneurship

Context & Issues

Animal husbandry and agriculture are the mainstay of the GP and more than 65 percent of the households are engaged in these activities. Both the sectors are fraught with livelihood insecurities, particularly due to the frequent droughts, changing climate and the current unsustainable production practices in animal husbandry. Thus, the livelihoods of a large fraction of the population are uncertain. Other key sources of income in the GP are agriculture based and/or running local businesses/shops. In the past 5 years nearly 70 individuals have migrated to nearby cities in search for better livelihood. This is a trend seen in most rural areas.

Presently, there are 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

Target

Initial engagement of:

1. 100 women
2. 2 SHGs
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): ~56 kg per day; ~1,680 kg per month (as per current waste generation)

Long-term target:

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

Improving Livelihoods through Aquaculture (GP has sufficient surface water resources)

Suggested Climate Smart Activities

1. Promotion of sustainable aquaculture practices[65] (aquaculture can also be defined as the breeding, growing, and harvesting of fish and other aquatic plants)
2. Capacity building of farmers/SHGs/FPOs for adoption of sustainable aquaculture practices

65 Practices such as productivity enhancement, use of natural feed and effective micro-organism for maintaining availability of planktons for enhanced production of fish without increasing input cost

Target

Immediate target:

Promoting the sustainable aquaculture practices

Long term target:

Establishing marketing linkages through Fisheries cooperatives, SHGs, State Fisheries Development Board, Fish Farmer Producer Organisations etc.

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 Balipatti Rani Gaon 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 (tonnes based on production of vegetables and fruits/ and/or milk products)

Cost: approx. ₹8,00,000 to ₹15,00,000

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 0.1 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[66,67,68]:

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

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

Case Example / Best Practice:

The Rajkumari Ratnavati Girl's School[69], 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[70]

- 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[71]

- 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.

69 https://www.avontuura.com/rajkumari-ratnavati-girls-school-diana-kellogg-architects/
70 https://peda.gov.in/solar-passive-complex
71 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[72,73]

- 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[74]

- 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)[75]" 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[76]

- 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.'

72 https://pscst.punjab.gov.in/en/climate-resilient-livestock-production-system
73 https://moef.gov.in/wp-content/uploads/2017/08/Punjab.pdf
74 https://jayshaktiengg.com/gujarat-government-launches-solar-scheme-for-farmers/
75 https://www.myscheme.gov.in/schemes/csssscspscc
76 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[77] 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[78]

- 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.

77 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)

78 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[79]

- 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)[80]

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

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

80 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)[81]

- 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[82]

- 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

81 https://alliancebioversityciat.org/stories/community-seed-banks-empower-farmers-address-climate-risk-india
82 https://www.apmas.org/pdf/csv/casestudy-1.pdf

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

Management and Rejuvenation of Water Bodies

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed[83]
a) Enhancing Drainage and Sewage Infrastructure	▪ 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 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) Maintenance of Water Bodies		
c) Promoting Rainwater Harvesting (RwH) Structures		

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

Sustainable Agriculture

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Building Climate Resilience  b. Transition to Natural Farming  c. Sustainable Livestock Management 	▪ Increased agricultural productivity and profit ▪ Improved soil health ▪ Improved water quality due to reduced use of chemical inputs ▪ Improved agricultural water security ▪ 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 

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

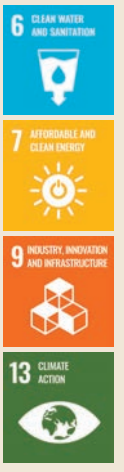
Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Establishing a Waste Management System	▪ Reduced waterlogging ▪ Reduction in water and land pollution/ improved sanitation ▪ Good health and a relatively disease-free environment due to 100% 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 ▪ Promotion of waste-based agricultural circular economy	**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. Sustainable Management of Organic Waste		
c. Ban on Single Use Plastics		
d. Enhancing Sanitation Infrastructure		

Sustainable and Enhanced Mobility

Suggested Climate Smart Activities	Adaptation Potential and Co-benefits	SDGs and Respective Targets Addressed
a. Enhancing Road Infrastructure  b. Enhancing Intermediate Public Transport (IPT)  c. Promoting Adoption of E-vehicles & E-tractors 	▪ Decline in local air pollution leading 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 

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 Light 		



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	▪ Enhanced livelihood options through locally sourced raw material ▪ 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 ▪ 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 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. Improving Livelihoods through Aquaculture		
d. Facility to Hire E-goods Carriers and E-tractors		
e. Improving Livelihoods through use of Solar Powered Cold Storage		
f. *Arogya Van* for Production & Sale of Natural Medicines and Supplements		
g. 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 Balipatti Rani Gaon 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 Balipatti Rani Gaon 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, Balipatti Rani Gaon 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 Balipatti Rani Gaon 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[84] 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[85] for Balipatti Rani Gaon 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 of 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

84 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

85 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 Balipatti Rani Gaon 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

उत्तरप्रदेश क्लाइमेट स्मार्ट ग्रामपंचायत की सर्वे प्रश्नावली

ग्रामपंचायत : बलीपटटीरानीगांव विकासखण्ड : राजेपुर जनपद : फर्रूखाबाद

I. गाँव की रुपरेखा

		विवरण	संख्या (सूचना का स्रोत–समुदाय के सदस्य)
1		राजस्वगाँव की संख्या	5 (2 आबद 3 गैर आबाद)
2		टोलों की संख्या	2
3	a	कुलजनसंख्या	2445
	b	कुलपुरुषों की जनसंख्या	1287
	c	कुलमहिलाओं की जनसंख्या	1158
	d	विकलांगजन की जनसंख्या	16
	e	कुलबच्चों की जनसंख्या	416
	f	वरिष्ठनागरिक (60 वर्ष से अधिकआयु वर्ग)	66
4		कुलपरिवार की संख्या	610
	a	गरीबीरेखा से नीचे जीवन यापनकरनेवालेपरिवार की संख्या	73
5		कुलभोगौलिक क्षेत्रफल	540.95 Hct.
6	a	साक्षरतादर	92%
7	a	पक्का घरों की संख्या	538
	b	कच्चा घरों की संख्या (मुख्य रूप से उपयोग की गईसामग्री का उल्लेख करें)	72 मिटटी की गोंदी से एवं बांस और फूस से निर्मित

II. सामाजिकआर्थिक

8	ग्रामपंचायतमेंकेवलकृषि (प्रकार) परआश्रितपरिवार	कुलपरिवारों की संख्या
	निजीभूमि/स्वयं की भूमि	418
	किराए की भूमि (हुण्डा)	78
	अनुबंध खेती	Nil
	दिहाड़ी मजदूर	298
	अन्य व्यवस्था (रेहन, अधिया आदि)	55
	अन्य सूचनाएं/जानकारी (एक से अधिककृषिगतिविधि में शामिलपरिवार, उल्लेख करें)	Nill
9	**ग्रामपंचायतमेंआय के स्रोत**	**कुलपरिवारों की संख्या**
	सेवा क्षेत्र (उदाहरणः अध्यापन, बैंक, सरकारीनौकरी आदि)	65
	कुटीरउद्योग	10
	कृषि	418
	कला/हस्तकला	Nil
	पशुपालन	450
	व्यवसाय (स्थानीय दुकान)	25
	व्यवसाय/उद्यम	Nil
	दैनिक/दिहाड़ीमजदूर (अकृषिगत)	298
	अन्य	42

10		पलायन		हां	नहीं
	A	क्यापिछलेपांचवर्षोंमेंआप के ग्रामपंचायत से ग्रामीणों ने पलायनकियाहै?		☑	☐
	B	पलायनकरनेवालेस्थान	पिछलेपांचवर्षोंमेंपलायनकरनेवालेपरिवार/व्यक्तिगत की संख्या		पलायन के मुख्य कारण
		अन्य गांव	Nil		
		निकट के शहर	Nil		
		राज्य के प्रमुख शहर	Nil		
		देश के प्रमुख महानगर	70 व्यक्ति		रोजगारहेतु
	C	क्यापिछलेपांचवर्षोंमेंआप के ग्रामपंचायतमेंपरिवार/व्यक्ति ने प्रवासकिए है?		हां ☑	नहीं ☐
	D	पिछलेपांचवर्षोंमेंआप केग्रामपंचायतमेंकित	5 परिवारों ने जमीन लेकर प्रवास किया। गंगाा किनारे स्थित खेती के पर्याप्त साधान एवं खेती का मूल्य कम होने के कारण।		

		नेपरिवारप्रवासकिए हैं? मुख्य कारणस्पष्टकरें।	

11		महिलाओं की स्थिति	
	A	महिलाप्रमुख परिवारों की संख्या (आय का मुख्य स्रोत– महिला)	60
	B	खेतीमेंकार्यरतमहिला	कुलसंख्या
		निजीभूमि/स्वयं की भूमि	40
		किराएकी भूमि/हुण्डा	Nil
		अनुबंध खेती	Nil
		दिहाड़ीमजदूर	20
		अन्य व्यवस्था	Nil
		अन्य सूचनाएं/जानकारी (एक से अधिककृषिगतिविधि मेंसंलग्नमहिलाएं, उल्लेख करें)	अधिकांषमहिलांए अपनी खेती से सम्बन्धितकार्यकरतीहै।
	C	नौकरी/अन्य क्षेत्र मेंकार्यरतमहिलाएं	कुलसंख्या
		सेवा क्षेत्र (उदाहरणः अध्यापन, बैंक, सरकारीनौकरी आदि)	2
		कुटीरउद्योग	Nil
		कृषि	40
		कला/हस्तकला	Nil
		पशुपालन	380 डेयरी व्यवसाय से जुड़ी है।
		व्यवसाय (स्थानीय दुकान)	Nil
		दैनिक/दिहाड़ीमजदूर (अकृषिगत)	Nil
		अन्य	42 सिलाई कढ़ाई

12	स्वयं सहायता समूहों

	स्वयं सहायता समूह का नाम	सदस्यों की संख्या	अपनायी गई गतिविधियाँ	वार्षिक बचत (रु0)	बैंकों से जुड़ाव/अजुड़ाव
	गंगा महिला स्वंय सहायता समूह	11	कढ़ाईबुनाई	3000 रूपए वार्षिक बचत	अभी बैंक से जुड़ाव है।

13	कृषकउत्पादकसंगठन(एफ0पी0ओ0)					
	एफ0पी0ओ0 का नाम	क्या इस संगठन की प्रमुख महिलाहैं?	प्रत्येक एफ0पी0ओ0 मेंसदस्यों की संख्या	एफ0पी0ओ0 से प्राप्तवार्षिकराजस्व/ बचत	कृषिउत्पाद	पोस्टहार्वेस्ट की गतिविधियां/ गतिविधियों का क्षेत्र
	Nil	☐				
		☐				
		☐				
		☐				
		☐				

14	अन्य समुदाय आधारितसंगठन/

	सामाजिकसंगठन/समितियों के नाम	क्यामहिलाप्रमुख संगठन/समितिहैं ?	सदस्यों की संख्या	प्राप्तवार्षिकराजस्व/बचत	उत्पाद/सेवा	विपणन/लक्षितउपभोगकर्ता
	Nill	☐				
		☐				
		☐				
		☐				
		☐				
		☐				
		☐				
		☐				

15		योजनाएं					
	a	योजना के नाम	पंजीकृतलाभार्थी की संख्या	लाभप्राप्तलाभार्थियों की संख्या	विगतवर्षग्रामपंचायतमेंप्राप्तकुलभगतान (रू0)	अन्य कोईबकाया (रू0)	की गईगतिविधियाँ/कार्य
		मनरेगा	824	298	45.47 (lakh)		इंटरलाकिंग एवंमिटटी का कार्य
		प्रधानमंत्री गरीबकल्याणअन्न योजना/एन.एफ.एस.ए.	286	286			
		प्रधानमंत्री उज्जवला योजना	275	275			गैसचूल्हा एवंसिलेण्डर
		प्रधानमंत्री कृषिसिंचाई योजना	Nil				
		प्रधानमंत्री कुसुम योजना	6	6			3 KW सोलरपैनलसिंचाई के लिए मिले
	b	**अन्य योजनाएं**	Nil				
		ग्रामउज्जवला योजना	Nil				
		ऊर्जादक्षता योजना	Nil				
		प्रधानमंत्री रोजगारसृजनकार्यक्रम	Nil				
		प्रधानमंत्री आवास योजना	5	5	6 Lakh		लाभार्थियों के आवास बन गये
		सार्वजनिकवितरणप्रणाली (पी0डी0एस0)	286	286			5किलो प्रति युनिट

							35 किलोप्रतिकार्डअन्तयोदि
		कम्प्यूटरप्रषिक्षणकार्यक्रम	0				
		उत्तरप्रदेषकौशलविकासमिषन	0				
		राष्ट्रीय कौषलविकास योजना (RKVY)	0				
		मौसमआधारितफसलबीमा	0				
		प्रधानमंत्री फसलबीमा योजना (PMFBY)	366				फसलबीमाहैलेकिनलाभन हींमिलताहै।
		मृदास्वास्थ्य कार्ड	180				
		किसानक्रेडिटकार्ड	366				
		स्वच्छभारतमिषन	17	17	2 लाख 4 हजार		षौचालय बन गये
		सौरसिंचाईपम्प योजना	6	6	463704		सोलरपैनललगगये
		नई/नवीनभारतीय बायोगैस व कार्बनिक खादकार्यक्रम	1	1	स्वयं का		कार्यरतहै
		विकेन्द्रितअनाज क्रय केन्द्र योजना	Nil				
		गोवर्धन योजना	0				
		जल पुनर्भरण योजना	0				
		रेनवाटरहार्वेस्टिंग	3				2 विद्यालय 1 सामुदायिक शौचालाय
		समन्वितवाटरशेडविकासकार्यक्रम	0				
		अन्य वाटरशेडविकास योजनाएं	0				
		अन्य (एकजिला–एक उत्पाद, मेकइनइण्डिया, अन्य)	0				
		उद्यमितातासहायतित योजनाएंआदि	0				

16	सक्रिय बैंक खाताधारकोंकीसंख्या	2050
17	ई–बैंकिंग/डिजीटलभुगतान एप/यू.पी.आई आदिसे भुगतानकरनेवाले खाताधारकों की संख्या	450

8	निकटकृषिबाजार/क्रय केन्द्र/सरकारीकेंद्र	क्याग्रामपंचायत द्वाराबाजार/क्रय केन्द्र का उपयोगहोताहै		यदि नही, तोबाजार/केन्द्र का उपयोगक्यों नही कियाजाता	उत्पादित फसल(कु0)	बिक्रीहुईफसल (कु0)	ग्रामपंचायत से दूरी(यदि ग्रामपंचायत से दूर है) (कि0मी0)
		हां	नहीं				
	साधनसहकारीसमितिअमृतपुर	☑	☐		3800 गेहूं	1500 QTL	1 KM
	बाजारअमृतपुर	☑	☐		1150 धान	550 QTL	1 K
		☐	☐		1350 गेहूं	600 QTL	1 K
		☐	☐				

19		शिक्षा (केवल ग्रामपंचायत में)				
		प्रकार/स्तर	उपलब्धछत का क्षेत्रफल (वर्ग मी0)	कुलनामांकितविद्यार्थियों की संख्या	विगतवर्षमेंकुलड्रापआऊटविद्यार्थियों की संख्या	ड्रापआऊट के मुख्यकारण(स्वास्थ्य (1), पहुँच/उपलब्धता–(2), आर्थिक समस्या–(3), अन्य–(4) उल्लेख करें)
	a	प्राथमिकविद्यालय				
		बलीपटटीरानीगांव	176 M^2	128	0	ड्रापआऊट नहीं है, किन्तु अधिक ठण्डी एवं बरसात होने पर बच्चों की संख्या कम हो जाती है।
		रतनपुररम्होआ	120 M^2	53	0	ड्रापआऊट नहीं है, किन्तु अधिक ठण्डी एवं बरसात होने पर बच्चों की संख्या कम हो जाती है।
	b	जू0 हाईस्कूल				

	c	हाईस्कूल	Nil			
	d	अन्य संस्थान	Nil			

20	कौशलविकास/व्यवसायिकप्रशिक्षण /पुनः कौशलसंस्थान(केवल ग्रामपंचायत में)	उपलब्ध छत का क्षेत्रफल (वर्ग मी0)	संस्थान के प्रकार (सरकारी 1, निजी 2)	नामांकितव्यक्तियों की संख्या	नामांकितव्यक्तियों की आयु
	Nil				

21	राज्य/राष्ट्रीय राजमार्ग की उपलब्धता			
	राजमार्ग का नाम	राज्यमार्ग 1, राष्ट्रीय राजमार्ग 2	ग्रामपंचायत से दूरी	सम्पर्कमार्ग की स्थितिअच्छा (1), खराब (2), घटिया (3), सबसे घटिया (4)
	फर्रूखाबाद मुरादाबादमार्ग एसएच43	1	500 M	2

III. भूमिसंसाधनोंसंबंधितसूचनाएं/जानकारी

22		वनभूमि का विवरण	
	A	वन का क्षेत्र	Nil
	B	वनविभाग द्वारा अधिसूचित क्षेत्र	Nil
	C	सार्वजनिक उपयोग हेतु उपलब्ध वन क्षेत्र	Nil
	D	कितने क्षेत्र परअतिक्रमणहै?	Nil
	E	विगत पांच वर्षों मे कोई वनउन्मूलन/वनकटाई की गतिविधियां	Nil
	F	अनुमानितवनउन्मूलन/वनकटाई का क्षेत्रफल(एकड़)	Nil

23		अन्य भूमि का वर्गीकरण			
	A	ग्रामपंचायत के पासग्रामसभा की कितनीभूमिउपलब्ध है?	101.425 एकड़		
	B	कितनीभूमिपरअतिक्रमणहै? (एकड़)	30 एकड		
	c	ग्रामपंचायतमें खननगतिविधियां	हां ☐	नहीं ☑	आच्छादित क्षेत्रफल
		खनन के प्रकार बालू खनन 1, खनिज खनन–(उल्लेख करें) 2, अन्य (उल्लेख करें) 3	Nil		
		अतिरिक्तसूचनाएं	Nil		

24		जल निकाय क्षेत्र		
		विवरण	हां	नहीं
	a	क्याआप के ग्रामपंचायतमें जल निकाय क्षेत्र है?	☑	☐
	b	ग्रामपंचायतमेंकुल जल निकाय क्षेत्रों की संख्या	2	
	c	क्या जल निकाय क्षेत्र मेंअतिक्रमणहै?	☑	☐
	D	जल निकाय क्षेत्र मेंअतिक्रमण कब से है?	10 Yaers	

	E	क्या जल निकाय क्षेत्र के आस–पास के भूमिपरअतिक्रमणकियागयाहै?	Yes

25		जल आपूर्ति	
	a	**ग्रामपंचायतमेंघरोंहेतु जल आपूर्ति का मुख्य स्रोतक्याहै?** नहर (1) वर्षा जल–(2) भूमिगत जल–(3) तालाब/झील–(4) अन्य– (5)	भूमिगत जल–(3), पाइप लाइन–(5)
	b	**क्याउपरोक्त जल आपूर्ति के स्रोतमौसमी या बारहमासीहै?**	बाराहमासी
	c	**घरोंमें जल आपूर्तिकैसेहोतीहै?** पाइपजलापूर्ति (1) ग्रामपंचायतमेंसामान्य संग्रहकेन्द्र (2) पानीटंकी (3) महिलाओं/बच्चों द्वारादूर से लायागया (4) हैण्डपम्प (5) ऊँचासतहीजलाशय (6) कूंआ (7) अन्य (8), उल्लेखितकरें। अगर 4 है, तोकितनीदूर से लायाजारहाहै?	पाइपजलापूर्ति (1) पानीटंकी (3) हैण्डपम्प (5)
	d	कितने घरोंमेंजलापूर्तिपाइप से है?	610
	e	क्यापानी का बहाव/प्रवाहदर कम, अधिक या संतोषजनकहै?	संतोषजनक
	f	पइपजलापूर्ति की नियमितता 24×7 घण्टे(1) काफीनियमित (2)	काफीनियमित (2) दो घण्टासुबहदो घण्टा शाम

		अनियमित (3)	
	g	**ग्रामपंचायतमेंकृषिसिंचाईहेतु जल आपूर्ति का मुख्य स्रोतक्याहै?** नहर (1) वर्षा जल (2) भूमिगत जल – (नलकूप (3A), कूआ (3B) तालाब/झील (4) पानीटैंक (5) नदी (6) अन्य (7)	वर्षा जल (2), नदी (6) व्यक्तिगतबोरिंग (7)
	h	**क्याउपरोक्त जल आपूर्तिस्रोतमौसमी या बारहमासीहै?**	व्यक्तिगतबोरिंग का प्रयोगफसल की आवष्यकतानुसारवर्षाजलमौसमीहै।
	i	क्याजलापूर्ति का बहाव/प्रवाहदर कम/अधिक या संतोषजनकहै?	संतोशजनक
		अतिरिक्तजानकारी (उदाहरण : क्या घरेलू, कृषि व संबंधितगतिविधियों, उद्योगोंआदिके लिए जल आपूर्तिपर्याप्त है)	पर्याप्त जल
	j	क्याविगतवर्षोंमेंभूजल, नदी या नहर से जल की उपलब्धता बढ़ी/घटी या सूख गया?	Nil
		क्यासूखे या गर्मी के मौसममेंपानी की टंकियों का उपयोग बढ़ जाताहै?	गर्मी के मौसममेंपानी की टंकीयो का उपयोग बढ़ जाताहै

IV. जलवायु की धारणा

तापमान व वर्षामेंप्रमुख परिवर्तन/बदलाव					
26					
	a	गर्मी के माहमेंदेखा गया			
	b	गर्मी के तापमानमें देखे गए बदलाव (पिछले पांच वर्षों में)	गर्मदिनोंमेंवृद्धि	गर्मदिनोंमें कमी	गर्मदिनोंमेंकोईपरिवर्तननहीं
			☑	☐	☐
	c	दिनों की संख्या	45 Days		
	d	अन्य सूचनाएं (गर्मी माहमेंकोई परिवर्तन)			
27					
	a	सर्दी के माहमेंमहसूसकियागया			
	b	सर्दियों के तापमानमेंकोईपरिवर्तनपायागया (विगत पांचवर्षों में)	ठण्ड दिनोंमेंवृद्धि	ठण्ड दिनोंमें कमी	ठण्ड दिनोंमेंकोईपरिवर्तननहीं
			☐	☑	☐
	c	दिनों की संख्या		30 Days	
	d	अन्य सूचनाएं (सर्दी माहमेंकोई परिवर्तन)			
28					
	a	मानसूनमाहमेंमहसूसकियागया			
	b	मानसून ऋतु की वर्षामेंकोईपरिवर्तनदेखा गया (विगत पांचवर्षों में)	वर्षा के दिनोंमेंवृद्धि	वर्षा के दिनोंमें कमी	वर्षा के दिनोंमेंकोईपरिवर्तननहीं
			☐	☑	☐
	c	दिनों की संख्या		30 Days	
	d	अन्य सूचनाएं (मानसून माहमेंकोई परिवर्तन)	मानसूनपहले से 10–15 दिनदेरी से आताहै।		
29					
	a	क्यागैरमानसून ऋतु की वर्षामेंपरिवर्तनहुआहै? (विगत पांचवर्षों में)	वर्षा के दिनोंमेंवृद्धि	वर्षा के दिनोंमें कमी	वर्षा के दिनोंमेंकोईपरिवर्तननहीं
			☐	☑	☐
	b	ग्रीष्म ऋतु की वर्षामेंदेखेगयेपरिवर्तन	वर्षादिनोंमेंवृद्धि	वर्षादिनोंमें कमी	वर्षा के दिनोंमेंकोईपरिवर्तननहीं
			☐	☑	☐
	c	दिनों की संख्या		30 Days	
	d	शरद ऋतु की वर्षामेंदेखेगयेपरिवर्तन	वर्षा के दिनोंमेंवृद्धि	वर्षा के दिनोंमें कमी	वर्षा के दनोंमेंकोईपरिवर्तननहीं
			☐	☑	☐
	e	दिनों की संख्या		4-5 Days	

	f	अन्य सूचनाए / जानकारी	

चरममौसमकी घटनाएं

30		**सूखा**					
	a	सूखे की घटना सूखा नही है।	प्रथमवर्ष(2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थवर्ष(2019)	पंचमवर्ष (2018)
			☐	☐	☐	☐	☐
	b	किसमाहमेंसूखा देखा गया	Nill	Nill	Nill	Nill	Nill
	c	सूखे का प्रबन्धनकैसेकियागया (सरकारी सहायता, निजीसहायता, कुएं खोदा आदि)	घरेलूस्तरपरप्रबन्धन			कृषिस्तरपरप्रबन्धन	
	d	सूखे की आवृत्ति : सूखे की घटना (पिछले पांचवर्षों में)	वृद्धि	क्मी	कोईपरिवर्तन नहीं		
			☐	☐	☐		
	e	अतिरिक्तसूचनाकोईपुरानीप्रमुख घटना–1, स्वास्थ्य पर प्रभाव–2					
31		**बाढ़**					
		बाढ़ की घटना	प्रथमवर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थवर्ष (2019)	पंचमवर्ष (2018)
			☐	☐	☐	☐	☐
	b	किसमाहमें बाढ़ देखा गया	अगस्त	अगस्ता	0	अगस्त	0
	c	बाढ़ का प्रबन्धनकैसेकियागया (सरकारी सहायता, निजीसहायता आदि)	घरेलूस्तरपरप्रबन्धन ☑ घरों के सामने मिटटी डाल कर ऊँचा करना			कृषिस्तरपरप्रबन्धन ☑ गंगा नदी के बन्धे को जहॉ टूटा है मिटटी डाल कर ठीक करना	
	d	बाढ़ की आवृत्ति : बाढ़ की घटना (पिछले पांचवर्षों में)	वृद्धि	कमी	कोईपरिवर्तन नहीं		
			☐	☑	☐		
	e	अतिरिक्तसूचनाकोईपुरानीप्रमुख घटना–1, स्वास्थ्य पर प्रभाव–2	2010-2011 मेंअधिक बाढ़ आई 1				
32		**भूस्खलन**					
	a	भूस्खलन की घटना नही है।	प्रथमवर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थवर्ष (2019)	पंचमवर्ष (2018)
			☐	☐	☐	☐	☐
	b	किसमाहमेंभूस्खलन देखीगई	Nill	Nill	Nill	Nill	Nill
	c	भूस्खलन का प्रबन्धनकैसेकियागया (सरकारी सहायता, निजीसहायता आदि)	घरेलूस्तरपरप्रबन्धन			कृषिस्तरपरप्रबन्धन	
	d	भूस्खलन की आवृत्ति : भूस्खलन की घटना (पिछले पांचवर्षों में)	वृद्धि	कमी	कोईपरिवर्तन नहीं		
			☐	☐	☐		

	e	अतिरिक्तसूचनाकोईपुरानीप्रमुख घटना–1, स्वास्थ्य पर प्रभाव–2	गंगा नदी द्वारा भूमि कटान लगभग 50 वर्ष पूर्व	तीन गॉव गैरआबाद हो गये।			
33		**ओलावृष्टि**					
	a	ओलावृष्टिकी घटना	प्रथमवर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थवर्ष (2019)	पंचमवर्ष (2018)
			✓ ☐	☐	☐	☐	☐
	b	किसमाहमेंओलावृष्टिहुई	फरवरी	नहीं	नहीं	जनवरी	नहीं
	c	ओलावृष्टि का प्रबन्धनकैसेकियागया (सरकारी सहायता, निजीसहायता आदि)	घरेलूस्तरपरप्रबन्धन ☑			कृषिस्तरपरप्रबन्धन	
	d	ओलावृष्टि की आवृत्ति : ओलावृष्टिकी घटना (पिछले पांचवर्षों में)	वृद्धि	कमी	कोईपरिवर्तन नहीं		
			☐	☑	☐		
34		**फसलों के कीट/बीमारी**					
	a	कीट/बीमारीकी घटनाक्रम	प्रथमवर्ष (2022)	द्वितीय वर्ष (2021)	तृतीय वर्ष (2020)	चतुर्थवर्ष (2019)	पंचमवर्ष (2018)
			✓ ☐	✓ ☐	✓ ☐	✓ ☐	✓ ☐
	b	किस माह मे कीट/बीमारी को देखा गया?	जनवरी फरवरी मार्च जुलाई अगस्त सितम्बर अक्टूबर नवम्बर दिसम्बर	जनवरी फरवरी मार्च जुलाई अगस्त सितम्बर अक्टूबर नवम्बर दिसम्बर	जनवरी फरवरी मार्च जुलाई अगस्त सितम्बर अक्टूबर नवम्बर दिसम्बर	जनवरी फरवरी मार्च जुलाई अगस्त सितम्बर अक्टूबर नवम्बर दिसम्बर	जनवरी फरवरी मार्च जुलाई अगस्त सितम्बर अक्टूबर नवम्बर दिसम्बर
		किस प्रकार की बीमारी को देखा गया	माहुँ, गंधीकीट, झुलसा रोग सब्जी में फल छेदक एवं विषाणू जनित रोग	माहुँ, गंधीकीट, झुलसा रोग सब्जी में फल छेदक एवं विषाणू जनित रोग	माहुँ, गंधीकीट, झुलसा रोग सब्जी में फल छेदक एवं विषाणू जनित रोग	माहुँ, गंधीकीट, झुलसा रोग सब्जी में फल छेदक एवं विषाणू जनित रोग	माहुँ, गंधीकीट, झुलसा रोग सब्जी में फल छेदक एवं विषाणू जनित रोग
	c	कीट/बीमारी का प्रबन्धन कैसे कियागया? (सरकारी सहायता, निजीसहायता आदि)	कीटनाषकछिड़कावस्वयं द्वारा				
	d	कीट/बीमारी की आवृत्ति : कीटबीमारीका घटनाक्रम (पिछले पांचवर्षों में)	वृद्धि	कमी	कोईपरिवर्तन नहीं		
			☑	☐	☐		

		अतिरिक्तजानकारी / सूचनाएं					

35	ग्रामपंचायतमेंआपदा की तैयारी				
		ग्रामपंचायतस्तरपरक्याआपदाप्रबन्धन /तैयारी के उपाय उपलब्ध है?		क्याग्रामीणोंतकइसकीपहुँच / उपलब्धताहै?	
	आपदातैयारी के उपाय	हां	नहीं	हां	न्हीं
	ग्रामआपदाप्रबन्धन योजना	☑	☐	☑	☐
	ग्रामआपदाप्रबन्धनसमिति	☑	☐	☑	☐
	पूर्वचेतावनीप्रणाली / मौसमीचेतावनीप्रणाली / कृषिचेतावनीप्रणाली	☑	☐	☑	☐
	आपातकालअनाजबैंक	☐	☑	☐	☐
	अन्य	☐	☐	☐	☐

36		अनाजभण्डारण	
	a	ग्रामपंचायत के आपातकालिन खाद्य / अनाजबैंकमेंकिसप्रकार का भोजनभण्डारितकियाजाताहै?	
		अनाज (विवरण दें)	Nil
		तेल	Nil
		चीनी	Nil
		अन्य खाद्य पदार्थ–उल्लेख करें	Nil
	b	क्याग्रामपंचायतमें शीतगृहहै, अगरहैतोउसकी क्षमताक्याहै?	Nil

37	ग्रामपंचायतमेंमौसम की चेतावनी, पूर्वचेतावनीप्रणाली, कृषिआधारितचेतावनी के लिए उपलब्ध जानकारी के स्रोत	
	स्थानीय कृषिअधिकारी	☑
	समाचारपत्र / समाचार / रेडियो	☑
	मोबाईलफोन / एप	☑
	मौखिक	☑
	कृषिविज्ञानकेन्द्र / कृषिज्ञानकेन्द्र	Nil
	पशुपालनविभाग	Nil
	उद्यानविभाग	Nil
	अन्य	Nil

		कृषि एवंसंबंधितगतिविधियोंपरप्रभाव (विगत पांचवर्षों में)					
38		फसलहानि					
	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, मिट्टीआदि	अनुमानितहानि की मात्रा (कुन्तल)	परिणामस्वरुपआय मेंहानि (औसत रु0)
		प्रथमवर्ष (2022)		धान	वर्षा कम	2000 QTL	41 Lakh
		द्वितीय वर्ष (2021)		मक्का	वर्षा एवं बाढ़ का जल	600 QTL	8 Lakh
		तृतीय वर्ष (2020)		धान	रोगवर्षा	1800 QTL	27 Lakh
		चतुर्थवर्ष (2019)					
		पंचवांवर्ष (2018)		गेंहू	सूढ़ी रोग के कारण	1000 QTL	18 lakh
	b	क्याआपफसलबीमा के बारेमेंजानतेहैं?	ळां	नहीं			
			☑	☐			
		अतिरिक्तजानकारी (फसल बीमा के लाभार्थी–बड़ेकिसान, लघु एवंसीमान्तकिसान आदि) फसलबीमालाभार्थी का संतुष्टिस्तरक्याहै?	फसलबीमा का लाभ लघु एवंसीमान्तकिसान को नहींमिलपाताहै। बीमा का लाभनहींमिलताइसलिए किसानों ने बीमाकराना बंद करदिया।				

39		फसलपद्धतिमेंबदलाव				
	a	सामान्य फसल	खरीफ धानऔरमक्का	रबी गेंहू, सरसोंआलू	जायद/अन्य ऋतु तरबूज, ककड़ी, और खरबूज	
	b	फसल का नाम	पारम्परिकबोआई का समय	विगत 5 वर्षोंमेंबोआई के समय मेंपरिवर्तनहुआहै/देखा है	अभीबोआई का समय	परिवर्तन के कारण
		गेंहू	नवम्बर	दिसम्बर	दिसम्बर	ठण्डीदेरसे बढ़ना
		आलू	अक्टूबर	नवम्बर	नवम्बर	ठण्डीदेर से आना
		सरसों	अक्टूबर	नवम्बर	नवम्बर	अगैतीबुवाई से माहु का प्रकोप कम होताहै।
		धान	जुलाई	अगस्त	अगस्त	वर्षा की कमी के कारण
		गन्ना	मार्च	अप्रैल	अप्रैल	वर्षा की कमी
		तरबूज	जनवरी	जनवरी	जनवरी	
	c	अन्य सूचना/जानकारी (विलुप्त फसल/प्रजातिआदउल्लेख करें)	मोटे अनाज अब यहां नहीं होता है।			

40		सिंचाईप्रणाली/पद्धतिमेंपरिवर्तन				
	a	फसल का नाम	वर्तमानम सिंचाईपद्धति का उपयोगफव्वारासिंचाई(1), टपक विधि (2), नहर(3), वर्षाआधारित(4), पारम्परिक(5), अन्य (6) (उल्लेखित करें)	वर्तमानमेंउपयोगकिए गए पानी की मात्रा (रुपया/एकड़)	पूर्वमे सिंचाईपद्धति का उपयोगफव्वारासंचाई(1), टपक विधि (2), नहर(3), वर्षाआधारित(4), पारम्परिक(5), अन्य (6) (उल्लेखित करें)	पूर्वमेंउपयोगकिए गए पानी की मात्रा (रुपया/एकड़)
		गेंहू	बोरिंग 6	4 हजार एकड़	बोरिंग 6	2 हजार एकड़

		धान	6 बोरिंग	4 हजार / एकड़	बोरिंग 6	2 हजार एकड़	
		गन्ना	6 बोरिंग	5 हजार / एकड़	बोरिंग 6	3 हजार / एकड़	
	b	ग्रामपंचायतमेंसिंचाईहेतु पम्पों की संख्या	डीजलआधारित	विद्युतआधारित	सौरपम्प	पारम्परिकसिंचाईविधियां	
			610		6	वर्षा	
	c	अन्य सूचनाएं / जानकारीअगरकोईहै	Nil				
41		**पशुपालन / पशुधन**					
	a	ग्रामपंचायतमेंप्रचलितपशुधनऔरपशुपालनसम्बन्धितगतिविधियां श्रेणी : डेयरी (1) मुर्गीपालन (2) मत्स्य पालन (3) सूअरपालन (4) मधुमक्खीपालन (5) अन्य–स्पष्टकरें (6)		1			
	b	डेयरीपरप्रभाव	पशुहानि गाय (1) भैंस (2) अन्य (3)	पशुहानि की संख्या (प्रत्येकपशुकोउल्लेख करें)	हानि के कारण (रोग, आयु, दुर्घटना आदि)	हानि का मौसम	उत्पादकतामेंकोईपरिवर्तनदेखा गया? वृद्वि (1) कमी (2) परिवर्तननहीं (3)
		प्रथमवर्ष(2022)	1, 2	20, 15	लम्पी, गुड़का	ठंडमें	2
		द्वितीय वर्ष(2021)	1, 2	10, 12	खुरपका, गुड़का	वर्षा	2
		तृतीय वर्ष(2020)	1, 2	6, 4	खुरपका, गुड़का	वर्षा	2
		चतुर्थवर्ष(2019)	1, 2	6, 6	लम्पी, गुड़का	ठंड, वर्षा	2
		पंचमवर्ष(2018))	1, 2	8, 7	लम्पी, गुड़का		2
		अन्य जानकारी / सूचनाएं	Nil				
	c	मुर्गीपालनपरप्रभाव निल	पक्षीहानि मुर्गी (1) बत्तख (2) अन्य (3)	पक्षीहानि की संख्या (प्रत्येकपक्षी का उल्लेख करें)	हानि के कारण	हानि के मौसम / ऋतु	उत्पादकतामेंकोईपरिवर्तनपायागयाहै? वृद्धि (1) कमी (2)

							परिवर्तननहीं (3)
		प्रथमवर्ष(2022)	Nil				
		द्वितीय वर्ष(2021)	Nil				
		तृतीय वर्ष(2020)	Nil				
		चतुर्थवर्ष(2019)	Nil				
		पंचमवर्ष(2018))	Nil				
		अन्य जानकारी / सूचनाएं					
	d	अन्य पशुओंपरप्रभाव निल	पशुहानि (कृपयानिर्दिष्टकरेंकि कौन से है)	पशुहानि की संख्या (प्रत्येक पशु का उल्लेख करें)	हानि के कारण	हानि की ऋतु	उत्पादकतामेंकोईपरिवर्तनपायागयाहै? वृद्धि (1) कमी (2) परिवर्तननहीं (3)
		प्रथमवर्ष(2022)	Nill				
		द्वितीय वर्ष(2021)	Nill				
		तृतीय वर्ष(2020)	Nill				
		चतुर्थवर्ष(2019)	Nill				
		पंचमवर्ष(2018)	Nill				
		अन्य जानकारी / सूचनाए	Nill				

V. कृषि व पशुपालन

42	a	प्रमुख उगाईजानेवालेफसलें व सम्बन्धितसूचनाएं/जानकारी											
					उर्वरकउपयोग			कीटनाशकउपयोग			खरपतवारनाशी		
		फसल (अनाज, तिलहन, दलहन, उद्यान एवंफूल आदि)	ऋतु/ मौसम	उपज (कु0)	उर्वरक के प्रकार	औसतप्रयुक्त मात्रा (किग्रा0/ एकड़)	क्याविगतपांचवर्षोंमेंउपयोगकियेगयेउर्वरकों की मात्रा में वृद्धि (1) कमी (2) परिवर्तन नहीहै (3)	कीटनाशकों के प्रकार	औसतप्रयुक्त मात्रा (किग्रा/ एकड़)	क्याविगतपांचवर्षोंमेंउपयोगकियेगये कीटनाशकों की मात्रा में वृद्धि (1) कमी (2) परिवर्तननहींहै (3)	खरपतवारनाशीं के प्रकार	औसतप्रयुक्त मात्रा (किग्रा/एकड़)	क्याविगतपांचवर्षोंमेंउपयोगकियेगये खरपतवारकी मात्रा में वृद्धि (1) कमी (2) परिवर्तननहींहै (3)
		धान	वर्षा	15 QTL/acr.	Urea, DAP,	100 Kg/Acr. 50 Kg/Acr.	1	2 -4 D	1 L/acr.	1	Fatechak	1 L/Acr.	1
		गेंहू	सर्दी	15 Qtl/Acr.	Urea, DAP,	100 Kg/Acr. 50 Kg/Acr.	1	Furidien	200ml /acr.	1	2 4D	250ml /Acr.	1
	b	क्याग्रामपंचायतमें फसलअवशेषजलायेंजातेहैं	हां ☐	नहीं ☑	जलायेगयेखेतो का कुल क्षेत्रफल (एकड़)	क्या यह फसलअवशेषपूर्वमेंजलायेजातेथे	अगर नही तो, कब से जलानाआरम्भकिया		क्याफसलअवशेषप्रबन्धन की योजनाओंकोजानते/जागरूकहै?				
					----	हां			हां				

43	जैविक खेतीसम्बन्धितगतिविधियां				
	फसल	क्षेत्रफल	प्रतिफसलआय (रू0 / कुन्तल)	बिकीहेतुबाजार	तृतीय पक्ष द्वाराप्रमाणित / सत्यापित
	Nil				

44	अन्य स्थाई खेतीसम्बन्धीगतिविधियां (जैसे शून्य / जीरोबजटप्राकृतिक खेती)			
	फसल	स्थाईगतिविधियां (शून्य जुताई, मल्चिंग, फसलचक्र, अर्न्तःफसलें, वर्मीकम्पोस्ट, कम्पोस्ट, मिश्रितफसले, प्राकृतिककीटप्रबन्धन, जैवपदार्थमेंवृद्धि आदि)	क्षेत्रफल(एकड़)	प्रतिफसलप्राप्तआय (रूपया)
	Nil			

45	कृषिवानिकी, सामाजिकवानिकी, परतीभूमिविकासऔरअन्य वृक्षारोपणगतिविधियां										
	पौध रोपणगतिविधियों के प्रकार	आच्छादित क्षेत्रफल	स्थान	योजनाअन्तर्गतराष्ट्रीय कृषिवानिकीमिशन (1), समन्वितवाटरशेडप्रबन्धनकार्यक्रम (2), वर्षाआधारित क्षेत्र कार्यक्रम (3), मनरेगा (4), वृक्षारोपणजनआन्दोलन (5), अन्य (6)–उल्लेख करें	मोनोक्लचर (1), मिश्रितप्रजाति (2)	रोपितप्रजातियां	आरम्भदिनांक	सफलता (प्रतिशत)	कृषिवानिकीगतिविधियों के लाभतकलोगोंकी पहुंच/अवसर	पिछले 10 वर्षोंमेंपहुंच/अवसरमेंपरिवर्तन, वृद्धि (1), कमी (2), कोईपरिवर्तननहीं (3)	परिवर्तन के कारण–लाभमेंवृद्धि (1), प्रजातिसम्बन्धित (2), वनउन्मूलन (3) अन्य (4)–उल्लेख करें
	वृक्षारोपण	20 एकड़	ग्राम पंचायत	4	2	पीपल, बरगद, पकड़िया	जुलाई 2022	10		2	खुलेजानवरों के कारण वृक्षारोपणनष्टहोजातेहैं

46	अपनायेगयेस्थायीपशुधनप्रबन्धनतकनीक			
	पशुधन के प्रकार	**ग्रामपंचायतमेंकुलसंख्या (लगभग)**	**अपनाईगईगतिविधियां (चारा मेंपरिवर्तन, पोषणपूरकअर्थात् पशुआहार, खुलेमेंचराई आदि)**	**प्राप्त/उत्पादितआय प्रतिपशुधन**
	गाय (देशी नस्ल)	180	पशुआहार, हराचारा	3 से 4 हजार रूपयेमासिक
	गाय (संकर नस्ल)	70	पशुआहार	6 हजार रूपयेमासिक
	भैंस (देशी नस्ल)	200	पशुआहार	5 हजार रूपयेमासिक
	भैंस (संकर नस्ल)	100	पशुआहार	6 हजार रूपयेमासिक
	बकरी	400	खुलेमेंचराई	2 हजार रूपयेमासिक
	सुअर	0		
	मुर्गी	0		
	मत्स्य	0		
	अन्यभेड़	400	खुलेमेंचराई	2 हजार रूपयेमासिक

VI. स्वच्छता एवंस्वास्थ्य

47		जल की गुणवत्ता (पेयजल या नल जल से आपूर्ति परिवार)						
	a	आपूर्तिकियेजानेवाले पानी की गुणवत्ताकैसीहै?	उपयुक्त	अनुपयुक्त				
			☑	□				
	b	जल का स्वादकैसालगताहै?	तीक्ष्ण	नमकीन	सामान्य			
			□	□	☑			
	c	आपूर्तिहोनेवाले जल मेंसामान्यतः दूषितपदार्थक्याहै?	नमकीन	गन्दा	मटमैला	बालू/कीचड़	गन्ध	जल रखनेपरपीलाहोजाताहै
			□	□	□	□	□	☑
	d	जल को शुद्व करने के लिए आपकिसविधि का प्रयोगकरतेहैं?	उबालकर	जल शोधक	आयोडीन/फिटकरीमिलाकर	सौर शुद्धीकरण	क्लेवेसलफिल्ट्रेशन	अन्य, (कृपयाउल्लेख करें)
			□	☑	□	□	□	आरओ का प्रयोग अधिकांश घरों में किया जाता है।

48		ठोसअपशिष्टउत्पादन/अपशिष्टप्रबन्धन						
	a	अपने घरमेंप्रतिदिनउत्पन्नहोनेवालाअपशिष्ट पदार्थ/कचरा	सब्ज़ी का छिलका, मिट्टी एवं कबाड़ प्लास्टिक	1 से 2 किलो				
	b	आपकेग्रामपंचायतमेंअपशिष्टपदार्थ/कचराकैसेइकट्ठाकियाजाताहै?	प्रस्तावित					
	c	कचरासंग्रहकितनीबारहोताहै?	□प्रतिदिन	✓□साप्ताहिक	□वैकल्पिकदिन			
			ळां	नहीं				
	d	क्याआपके क्षेत्र मेंकोईस्थानहै, जहांकचराइकट्ठाडालाजासकताहै? यदिहांतोकृपयाआपकीग्रामपंचायत से कितनीदूरीपरहै या किसस्थानपरहै?	□	☑	ग्रामपंचायत से दूरी/ग्रामपंचायतमेंअवस्थिति			
	e	क्याआपकेग्रामपंचायत क्षेत्र मेंसामान्य कूड़ेदान रखेगयेहैं?	□	☑				
	f	क्याआपकचरेकोसूखेऔरगीलेकचरे की श्रेणी मेंबांटतेहैं?	□	☑				
	g	आपगृहस्तरपरकचरे का उपचारकैसेकरतेहैं?	पुनःचक्रमण	कम्पोटिंग	वर्मीकम्पोस्ट	अपशिष्ट	जलाना	अन्य (उल्लेखित करें)
			□	□	□		□	कूड़ा सड़क के किनारे एवं इधर–उधर गलियों में पड़ा रहता है।

49		खुलेमें शौचमुक्तस्थिति			
	a	क्याआपकागांव खुलेमें शौचमुक्त घोषितहै?	☑हां	□नहीं	
	b	स्वयं के शौचालय वालेपरिवारों की संख्या	15	□	
	c	सामुदायिक शौचालय/इज्जत घर की संख्या	1	□	प्रमुख स्थान बलीपटटी रानीगांव
	d	क्या शौचालय का उपयोगकियाजारहाहै?	हां		

	e	अगर शौचालय का उपयोगनहींकियाजारहाहैतोक्यों? (साफ–सफाई का अभाव, रख–रखाव का अभाव, बहुतदूर आदि)	

50	अपशिष्ट जल	घरेलू	व्यवसायिक	औद्योगिक	कृषिगतिविधियां	गंदानाला
a	अपशिष्ट जल का क्यास्रोतहै?	☑	□	□	□	□
b	उत्पन्नअपशिष्ट जल की मात्रा (अनुमानित लीटर प्रतिदिन)	200				
c	गांवमेंकियागयाअपशिष्ट जल उपचार, यदिकोईहैतो–	Nill				
d	अपशिष्ट जल पुनःचक्रण या पुनः उपयोग की गतिविधि, यदिकोईहैंतो–	Nill				

51	स्वास्थ्य देखभाल की सुविधा			
	स्वास्थ्य केन्द्र की उपलब्धता	हां	नहीं	उपलब्ध छत का क्षेत्रफल (वर्गमीटर)
a	प्राथमिकस्वास्थ्य केन्द्र	□	☑	
b	सामुदायिकस्वास्थ्य केन्द्र	□	☑	
c	उपस्वास्थ्य केन्द्र	□	☑	
d	आंगनवाड़ी	☑	□	63.51 M^2
e	आशा	☑	□	
f	स्वाथ्य कैम्प/मेला	□	☑	
g	डिजीटलस्वास्थ्य देखभाल	□	☑	

52	रोग/बीमारी								
	विगतवर्षनिम्नवत् बीमारी/रोग से कितनेलोगप्रभावितहुंए हैं?	प्रभावितकुलव्यक्तियों की संख्या	प्रभावितआयुसमूह			सामान्य उपचार का विकल्प			
			प्रभावितबच्चों की संख्या	प्रभावितवयस्कों की संख्या	प्रभावितवरिष्ठनागरिकों की संख्या	स्थानीय स्वास्थ्य देखभालसुविधाएं (उल्लेख करें)	घरेलू देखभाल	घर–घर जानेवाला	अन्य (उल्लेख करें)
a	वेक्टर–जनितरोग (मलेरिया, डेंगू, चिकेनगुनिया आदि)	10	2	8	0	PHCAmratpur	☑	□	

	b	जल–जनितरोग (हैजा / डायरिया / टाईफाई ड / हैपेटाइटिस आदि)	22	6	14	2	PHC Amratpur	□	□	
	c	श्वाससम्बन्धीरोगजोवायुप्रदूष ण से होतेहैं (इनडोर एण्ड आउटडोर)	15	0	2	13	PHC Amratpur	□	□	
	d	कुपोषण	2	2	0	0	PHC Amratpur	□	□	

VII. उर्जा

53			
	a	आपकेग्रामपंचायतमेंकुलकितने घरविद्युतकृतहैं	610
	b	ग्रामपंचायतमेंनिम्नलिखितअनुमानितविद्युतउपकरणों की संख्या	
		ए0सी0	10
		एयर कुलर	200
		रेफ्रिजेटर / फ्रीज	210

54		विद्युतकटौती की आवृत्ति	
	a	दिनमेंकुछबार	☑
		दिनमें एकबार	□
		विद्युतकटौती नही	□
	b	प्रतिदिनकितने घण्टेगुलरहतीहै?	10 – 12 H
		यदिप्रतिदिन नही तो सप्ताहमेंकितने घण्टेबिजलीगुलहोतीहै?	Nill

55	वोल्टेजअस्थिरता / उतार–चढ़ाव की आवृत्तिक्याहै?	
	दिनमेंकुछबार	☑
	दिनमें एकबार	□
	अस्थिरता / उतार–चढ़ाव नहीं	□

56	पावरबैकअप का मतलबविद्युतकटौती के दौरानउपयोग	संख्या

	डीजलचलितजेनरेटर	10
	सौरउर्जा	22
	इमरजेंसीलाईट	150
	इन्टवटर्स	80
	अन्य साधन (उल्लेख करें)	

57		नवीकरणीय/अक्षयऊर्जा के स्रोत		
	a	क्यागांवमेंनिम्नलिखितमें से कोईस्थापनाहै?	इंस्टालेशन (स्थापना) की संख्या	कुलस्थापित क्षमता (किलोवाट)
		घर की छतोंपरसौरउर्जास्थापना	10	2 से 3 किलोवाट
		विद्यालय की छत परसौरउर्जास्थापना	0	
		चिकित्सालय की छत परसौरउर्जास्थापना	0	
		ग्रामपंचायतभवनपरसौरउर्जास्थापना	1	3 किलोवाट
		अन्य सौरउर्जास्थापना	0	
		सौरस्ट्रीटलाईट	6	1/2 किलोवाट
		बायोगैस	1	अभी कार्य चल रहा है।
		विकेन्द्रितनवीनीकरणउर्जा/मिनीग्रीड	0	
	b	क्याआपसौरउर्जास्थापना के लिए उपलब्ध अनुदान के बारेमेंजानतेहैं (कुछ योजनाओं/कार्यक्रमों का उल्लेख करें)	0	

58	भोजनबनानेहेतुप्रयुक्तईधन	परिवारों की संख्या	प्रतिपरिवारप्रयुक्तऔसत मात्रा (किग्रा/महीना)
	पारम्परिकजलौनी (उपले/जलौनी लकड़ी)	220	80 से 100 किलो
	बायोगैस	1	10 घनमीटर
	एलपीजीगैस	400	14.2 किग्राप्रतिपरिवार
	विद्युत	0	
	सौरउर्जा	0	

	अन्य (कोयला, मिट्टी का तेल, चारकोल आदि)	0	

59	वाहन की संख्या			
		वाहन के प्रकार	**ग्रामपंचायतमेंवाहन संख्या (अनुमानित)**	**प्रयुक्तईधन के प्रकार**	**तय की गईऔसतदूरी (किमी प्रतिदिन)**
	a	जीप	0		
	b	कार	26	डीजल/पेट्रोल	20–50 किमीप्रतिदिन आवश्यकतानुसार चलती है।
	c	दोपहियावाहन	520	पेट्रोल	30 किमीप्रतिदिन
	d	विद्युतचालितवाहन	0		
	e	आटो	0	सीएनजी	60 किमीप्रतिदिन आवश्यकतानुसार चलती है।
	f	ई–रिक्शा	2	बैटरी	60 किमीप्रतिदिन
	g	अन्यट्रेक्टर	18	डीजल	15 किमीप्रतिदिन

60	**कृषि यंत्र**	**ग्रामपंचायतमेंकृषि यंत्रों/मशीनों की सख्या**	**प्रयुक्तईधन के प्रकार**	**तय की गईऔसतदूरी**(किमी प्रतिदिन)
a	टैक्ट्रर	18	डीजल	15 किमीप्रतिदिन
b	कम्बाईनहारवेस्टर	0		
c	अन्य (कृपयाउल्लेख करें)	0		

61	**ग्रामपंचायतमेंअवस्थितपेट्रोलपम्प (अगर कोई है)**

		ईधन के प्रकार	प्रतिदिन की बिक्री	पम्प से आपूर्तिवाले गांव की संख्या	कितनेप्रकार के वाहनएकदिन/महीनामेंपेट्रोलपम्प से ईधनलेतेहैं? (समय/ अवधि का उल्लेख करें)							
					टैक्ट्रर	कृषि यंत्र	जीप	कार	दोपहिया वाहन	आटो	ई–रिक्शा	अन्य
	a	निल										
	b											

62	औद्योगिकइकाई			
	उद्योग के प्रकार	संख्या	उर्जा के स्रोतः ग्रिडविद्युत (1), डीजलजेनरेटर (2), नवीनीकरण/अक्षय उर्जा (3)	उर्जा की खपत प्रतिमाहविद्युत का उपयोग (किलोवाट) ईधनउपयोग (लीटर प्रतिदिन)
	Nil			

Annexure III: HRVCA Report

जनपद–फर्रूखाबाद

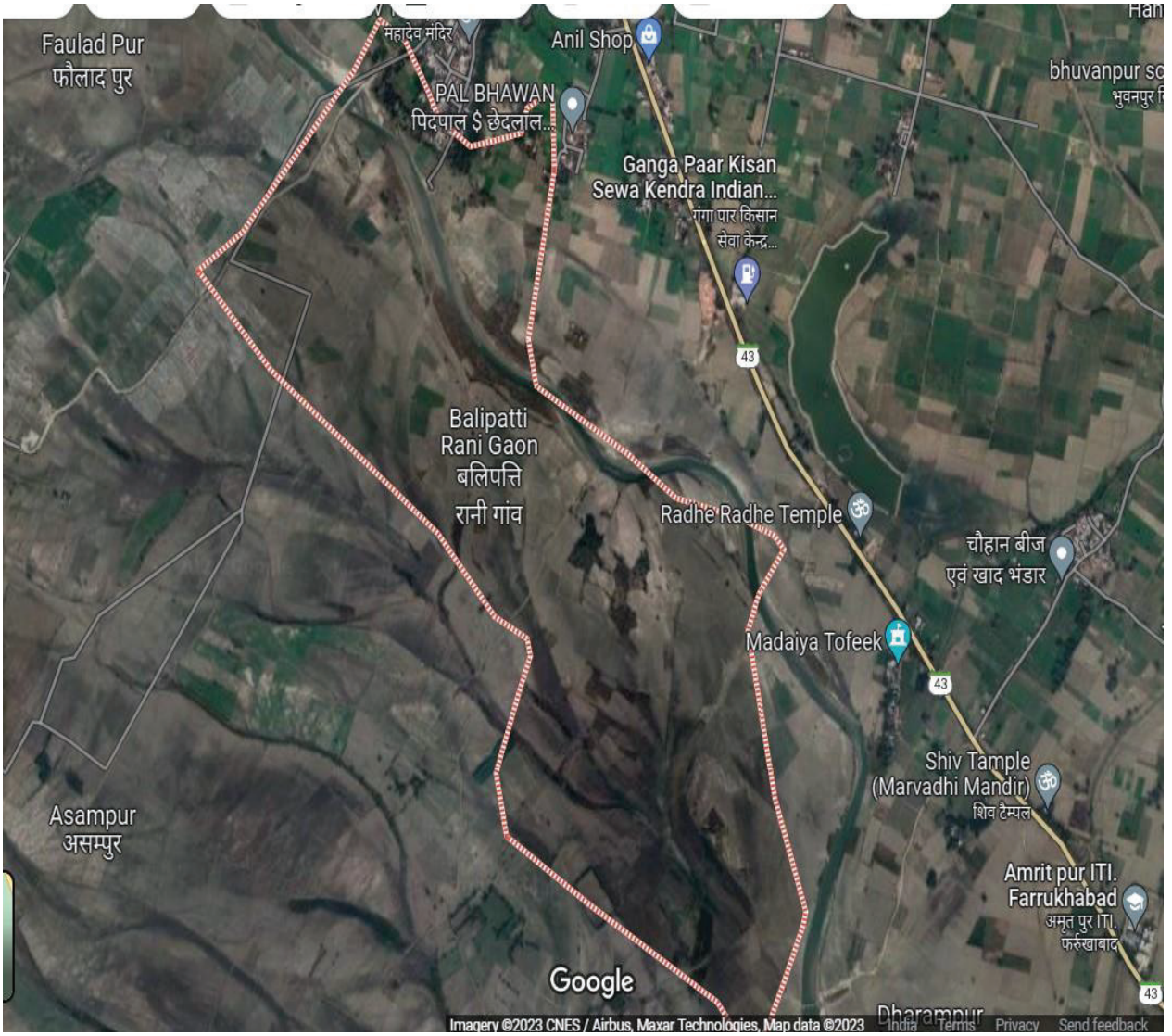
स्मार्ट ग्राम पंचायत विकास योजना

ग्राम पंचायत– बलीपटटी रानीगांव
विकासखण्ड– राजेपुर
जनपद– फर्रूखाबाद

विषय सूची

ग्राम पंचायत की प्रोफाइल

बलीपटटी रानीगांव ग्राम पंचायत उत्तर प्रदेश के फर्रूखाबाद जिले के राजेपुर ब्लाक में है। यह ग्राम पंचायत ब्लाक मुख्यालय राजेपुर से 10 किमी, जिला मुख्यालय फर्रूखाबद से 22 किमी एवं तहसील मुख्यालय अमृतपुर से 500 मीटर की दूरी पर स्थित है। बलीपटटी रानीगांव ग्राम पंचायत में 5 गांव है जिसमें 2 गांव बलीपटटी, रानीगांव, रतनपुर रम्होआ आबाद है एवं 3 गावं मछुआपुर, पहाड़पुर, चकबिजलिया हार गैर आबाद है। गावं से 3 किमी की दूरी पर गंगा नदी स्थित है। उसी की बाढ़ से लगभग 50 वर्ष पूर्व गंगा के कटान से यह तीनों गांव पूर्ण रूप कटान में बह गये थे। इन ग्रामों के कुछ ग्रामवासी बलीपटटी रानीगांव में कुछ रतनपुर रम्होआ में तथा कुछ अन्य ग्रामों में बस गये है।



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

वातावरण निर्माण–

ग्राम पंचायत बलीपटटी रानीगांव क्लाइमेट स्मार्ट ग्राम पंचायत के समग्र जन की सहभागिता से ग्राम प्रधान श्रीमती शषि प्रभा द्वारा दिनांक 16.02.2023 को पूरे ग्राम में बैठक की सूचना की गयी। 16 फरवरी 2023 को पंचायत भवन बलीपटटी रानीगावं पर खुली बैठक का आयोजन किया गया।

ग्राम पंचायत की खुली बैठक –

ग्राम पंचायत बलीपटटी रानीगांव में क्लाइमेट स्मार्ट ग्राम पंचायत कार्ययोजना निरूपण हेतु हितभागियों की ग्राम सभा की बैठक दिनांक 16.02.2023 को पंचायत भवन में आयोजित की गयी। इस बैठक में ग्राम प्रधान, ग्राम विकास अधिकारी, सहायक विकास अधिकारी पंचायत, आगनबाड़ी, आशा, एवं ग्रामवासी ने भाग लिया। इसमें कुल 51 प्रतिभागियों ने भाग लिया। इस बैठक की अध्यक्षता ग्राम प्रधान ने की। सभी का स्वागत एवं परिचय ग्राम विकास अधिकारी के द्वारा किया गया है।

बैठक में श्री अजीत पाठक सहायक विकास अधिकारी पंचायत ने बैठक के उददेष्य पर प्रकाष डाला बताया जलवायु परिवर्तन का असर पूरे विश्व पर पड़ रहा हैं। इसका प्रभाव हमारी ग्राम पंचायत एवं ग्रामवासियों पर भी पड़ रहा है। यह बैठक इसी उददेश्य पर कार्य करने हेतु आयोजित की गयी है। उत्तर प्रदेश में 39 जनपद, जो कि जलवायु परिवर्तन के अत्यधिक प्रभाव को झेल रहे हैं। उनमें फर्रूखाबाद जनपद भी शामिल है। फर्रूखाबाद जनपद की बलीपटटी रानीगावं ग्राम पंचायत को इस कार्य योजना हेतु चयनित किया गया है। पहले भी हमारे ग्राम पंचायत की विकास योजना बनी है। परन्तु जलवायु परिवर्तन एवं आपदा जोखिम से सम्बन्धित समाधान हेतु विकास के सभी मुददों के साथ जलवायु स्मार्ट ग्राम पंचायत योजना के निर्माण की प्रक्रिया पूर्ण करनी है। जिसमें हम सभी की सहभागिता होनी आवश्यक है। संजीव जी ने बताया कि क्लाइमेट स्मार्ट ग्राम बनाने के लिए ग्राम वासियों का एवं सरकार का सहयोग होना चाहिए। क्लाइमेट स्मार्ट ग्राम बनाने के लिए ग्राम में जल जमीन एवं बायु को शुद्व बनाने के लिए ग्राम में अधिक से अधिक वृक्षारोपण एवं जलनिकास नालियों द्वारा एक तालाब या नाले में होना चाहिए। कूड़े के अपशिष्ट प्रबन्धन के लिए ग्राम में कूड़ा

प्रत्येक घर से लाकर कूड़ा संग्रह केन्द्र पर एकत्रित करना चाहिए। जिससे ग्राम में स्वच्छता एवं साफ सफाई होने से हमारा पर्यावरण प्रदूषित नहीं होगा। ग्राम पंचायत में जहां जहां गोबर के ढेर लगे हुए हैं। उनके पास ग्राम पंचायत द्वारा संरचना बनवाकर ग्रामवासियों को गोबर से उपयोगी खाद एवं कम्पोस्ट बनवाने के लिए उत्प्रेरित करना चाहिए। पेट्रोल डीजल वाहनों के प्रयोग अधितर होने के कारण हमारी वायु भी प्रदूषित हो रही है। वायु प्रदूषण को रोकने के लिए हमें बैट्री चलित वाहन का उपयोग करना चाहिए साथ ही साथ ग्राम वासियों से हमारा निवेदन है कि विद्युत का उपयोग कम करें उसकी जगह पर सोलर पैनल लगवायें जिससे हमारा जलवायु को प्रदूषित होने से बचाया जा सके। खेतों में कीट नाशक एवं रासायनिक खाद का प्रयोग कम करके जैविक खाद का प्रयोग किया जाये जिससे हमारी जमीन की उर्वरा शक्ति बनी रहे। जब हमारी जलवायु एवं जमीन शुद्व होंगी तो हमारी जलवायु भी प्रदूषित नहीं होगी और हमारा ग्राम क्लाइमेट स्मार्ट ग्राम बन जायेगा। इसमें आपका हमारा सभी का सहयोग जरूरी है। श्री जेडी अग्निहोत्री ने समुदाय को बताया कि सरकार के साथ हमारी सहभागिता भी बहुत जरूरी है हमें भी स्वच्छता की दृष्टि से कूड़े को एक जगह एकट्ठा करना चाहिए और अपने घर के पशुओं के गोबर से वर्मी कम्पोस्ट एवं खाद बनाना चाहिए। जिससे हमारी ग्राम पंचायत में स्वच्छता का वातावरण बने, और हमारी जलवायु प्रदूषित न हो।

ग्राम पंचायत में सात तालाब हैं। जिनका साफ सफाई एवं जीर्णोद्धार होना चाहिए जिससे उसके जल का उपयोग अन्य कार्यों में किया जा सके, जल संरक्षण हो। यहां अधिकतर बाढ़ की समस्या है। बाढ़ के निदान के लिए वृक्षारोपण एवं बंधों के सुदृढी करने की व्यवस्था होनी चाहिए जिसके लिए बलीपटटी बाले बंधे को ऊंचा एंव सुदृढ़ करना चाहिए। रतनपुर रम्होआ में एक बंधा और बनना चाहिए, जिससे फसल की हानि रोक सके। वातावरण निर्माण के लिए पर्यावरण की दृष्टि से गांव में सोलर पैनल लगाये जाने चाहिए।

विवरण	संख्या	विवरण
ग्राम पंचायत की चौहददी का क्षेत्रफल	540.9594 हे.	
कुल ग्राम	5	2 आबाद 3 गैर आबाद
टोलों की संख्या	2	कछियाना, भटटा मजरा
कुल जनसंख्या	2445	
कुल पुरूषों की संख्या	1287	
कुल महिलाओं की संख्या	1158	
विकलांग जनों की संख्या	16	
कुल बच्चों की संख्या	416	
कुल परिवार संख्या	610	
गरीबी रेखा से नीचे जीवन यावन करने वाले	73	
पक्के घरों की संख्या	538	
कच्चे घरों की संख्या	72	
महिला मुख्या परिवारों की संख्या	60	
इण्डिया मार्का हैण्डपम्प	29	
सरकारी सेवा में महिलाएं	2	

ग्राम पंचायत समितियों का विवरण

प्रशासनिक समिति	शिक्षा समिति	नियोजन एवं विकास समिति
शषिप्रभा शुक्ला (प्रधान) खुषीराम–सदस्य माया देवी–सदस्य नर सिंह–सदस्य मीरा देवी–सदस्य श्रीमती विमला–सदस्य ज्ञान प्रकाष–सदस्य श्री मुकेष–सदस्य	शषिप्रभा शुक्ला – प्रधान श्री नरसिंह श्रीमती रामरती–सदस्य श्रीमती माया देवी–सदस्य श्रीमती मीरा देवी–सदस्य श्री नारायण शुक्ला–सदस्य नीलम अग्निहोत्री–सदस्य श्री रामवीर–सदस्य	शषि प्रभा शुक्ला – अध्यक्ष श्री विवेक–सदस्य कु0 सरसवती–सदस्य श्री नारायण शुक्ला–सदस्य श्री खुषीराम–सदस्य श्रीमती विमला–सदस्य श्री कल्लू दीक्षित–सदस्य श्री मुकेष–सदस्य
निर्माण कार्य समिति	**जल प्रबन्धन समिति**	**स्वास्थ्य एवं परिवार कल्याण समिति**
श्रीमती मीरा देवी कु0 सरस्वती श्री खुषीराम श्रीमती विमला देवी श्री विवेक कुमार श्री मुनील–सदस्य श्री मुकेष श्री अजीत तिवारी	श्रीमती विमला देवी श्री विवेक श्री मुनील श्री नारायण शुक्लर श्रीमती रामरती श्री ज्ञान प्रकाष श्रीमती माया देवी श्री खुषीराम	श्री नारायण शुक्लर श्री ज्ञान प्रकाष श्री मुनील श्रीमती माया देवी श्री नरसिंह श्री खुषीराम श्रीमती रामरती श्री अजीत तिवारी

ग्राम पंचायत सदस्यों की सूची

क.सं.	ग्राम पंचायत सदस्य का नाम
1	श्री विवेक
2	श्री ज्ञान प्रकाष
3	कु0 सरस्वती
4	श्री नारायण शुक्ला
5	श्री मुनील
6	श्री खुषीराम
7	श्रीमती विमला
8	श्री नरसिंह
9	श्रीमती माया देवी
10	श्रीमती मीरा
11	श्रीमती रामरती
12	श्री विवेक

ग्राम भ्रमण – (ट्रांजेक्ट वाक)

पंचायत भवन से ग्राम भ्रमण शुरू होकर बलीपटटी रानीगावं में पूरा गांव घूमते हुए आंगनबाड़ी केन्द्र उसके बाद कोटेदार के यहां भ्रमण करते बलीपटटी रानीगांव के जलापूर्ति के लिए पानी की टंकी तक ग्राम वासियों के साथ लोगों भ्रमण किया गया। हम लोगों ने वहां की जलापूर्ति व्यवस्था देखी जो पाइप लाइन द्वारा बली पटटी रानीगांव एवं मजरा कछियाना, रतनपुर, रम्होआ ग्राम तक जलापूर्ति है। जिसमें सार्वजनिक टोंटियां भी कई जगह पानी के लिए लगी हुई हैं। उसके बाद हम तालाब पर गये उसमें साफ सफाई नहीं थी। अतः हमने प्रधान जी से कहा कि तालाब की साफ सफाई एंव जीणोद्धार किया जाये जिससे जल संरक्षण हो सके एवं तालाब के जल का उपयोग पशुओं के पीने के लिए एवं मत्सय पालन में किया जा सके। उसके बाद हम ग्राम में घूमते हुए मन्दिर पर गये। दूसरे दिन ग्राम पंचायत से हम लोग रतनपुर रम्होआ ग्राम में गृह भ्रमण हेतु गये। प्राइमरी विद्यालय गये, यहां पर बच्चों की संख्या एवं स्टाफ के बारे में जाना–समझा, उसके बाद विद्यालय के पास में ही दो तालाबों का अवलोकन किया। उन तालाबों की साफ सफाई नहीं थी। प्रधान जी से कहा कि तालाबों की साफ सफाई करायें जिससे तालाब के जल का उपयोग पशु के पीने के लिए हो।

सबसे बड़ी समस्या बाढ़ की है जिससे हर वर्ष पानी भरने से 20 प्रतिशत हानि हो जाती है। इसके लिए गंगा नदी का बंधा देखने गये थे। बंधे को और ऊंचा किया जाये और सुदृढ़ बनाया जाये तथा इसके आलावा एक बंधा रतनपुर रम्होआ ग्राम के पास भी बनवाना चाहिए जिससे बाढ़ का जल गांव मे न आ सके जिससे फसलों का नुकसान से बचाया जा सके। भटटा मजरा, एवं चार तालाब आंगनबाड़ी केन्द्र निर्माणधीन एवं पानी की टंकी को देखते हुए अगले ग्राम रतनपुर रम्होआ में तालाब, स्कूल का भ्रमण करते हुए ट्राजेक्ट वॉक पंचायत भवन पर समाप्त हुआ।

ट्रांजेक्ट वाक के दौरान अवलोकन की गई स्थितियां :–

बसाहट	वलीपट्टी रानीगॉव– मजरा कछियाना, भट्टा मजरा – वलीपट्टीरानी गॉव में मकान पक्के बने हुए हैं, मजरा कछियाना एवं भट्टा मजरा में कुछ मकान कच्चे हैं। वलीपट्टीरानी गॉव में पानी पीने के लिए पानी की टंकी है जिसके पानी की सप्लाई पाईप द्वारा रतनपुर रम्होआ एवं कछियाना मजरा पर है। जिसमें सर्वजनिक टोटिंया भी कई जगहे पर लगी हुई है।
ताल–तलैया	ग्राम सभा मं सात तालाब स्थित हैजिसमे बलीपटटीरानी गावं के दक्षिणमें 0.125 हेक्टेयर क्षेत्रफल का है। दूसरा दक्षिण में 0.35 हे. क्षेत्रफल का तालाब स्थित है। तीसरा 0.12 हे. चौथा 1.71 हे. क्षेत्रफल का तालाब पूर्व में स्थित है। 5वां रतनपुर रम्होआ में 0.129 हे. क्षेत्रफल का है। छठा तालाब 0.113 हे. कारतनपुर रम्होआ मे है। सातवां 0.052 हे. क्षेत्रफल का तालाब है। गांव का कचरा भी जल निकासी में मिल जाने से तालाब को प्रदूषित करता है। परिणाम स्वरूप तालाब के जल का उपयोग नहीं होता है
गंगा की धार का सोता	गंगा की धार का सोता का क्षेत्रफल 13.058 हे. बाढ़ के समय जल गांव में आ जाता है। बलीपटटी रानीगांव में बंधा को और उंचा सृदृढ़ बनाना चाहिए जिससे गंगा का जल गांव में न आ सके। जिससे फसल में हानि कम हो। इसके अलावा एक बंधा रतनपुर रम्होआ गांव में भी बने ताकि गंगा का पानी से फसल का नुकसान रोका जा सके। तथा फसल की हानि में कमी हो।
हरित क्षेत्र बाग–बगीचा	गंगा के कटान को रेकने के लिए बृक्षारोपण होना चाहिए। ग्राम सभा मे बाग बगीचा न के बराबर है मन्दिर के आसपास लगभग 20–25 पेड़ है। जिसमे आम, पीपल, बरगद, यूकेलिप्टस के पेड़ हैं। बृक्षारोपण पर अत्यधिक ध्यान देना चाहिए। वृक्षारोपण के लिए ग्राम सभा में काफी भूमि है।
भौतिक संसाधन	बलीपटटी रानीगावं ग्राम पंचायत फर्रूखाबाद मुरादाबाद रोड से 500 मीटर दूरी परिस्थित है। इस ग्राम पंचायत में ग्रामीणों की सुविधा के लिए एक सामुदायक शौचालय है। दो प्राथमिक विद्यालय एक बलीपटटी रानी गांव एवं रतनपुर रम्होआ में स्थित हैं। पूरे गांव में इण्टरलाकिंग मार्ग हैं 90 प्रतिषत घर पक्के हैं। सुरक्षित पेयजल हेतु पंचायत बलीपटटी में पानी की टंकी है। जिससे पूरे गांव एवं रतनपुर रम्होआ एवं दोनों टोलों पर पानी की सप्लाई है। सामुदायिक जल हेतु 10 टोटी लगी हैं। घरों मे भी पानी की सप्लाई है। इसके अलावा ग्राम पंचायत में छोटे बड़े 7 तालाब भी हैं। पंचायत भवन भी बना है। गॉव में अंगनवाडी भवन बन रहा है। ग्राम पंचायत में कुल 610 हैण्डपंम्प तथा 29 इंडिया मार्का नल हैं

समाजिक मानचित्रणः–

बलीपटटी रानीगांव का भ्रमण किया गया भ्रमण करने के बाद स्कूल में ही सामाजिक मानचित्रण, ग्राम वासियों की मदद से किया गया इस प्रक्रिया में संस्था की टीम द्वारा उपस्थित जनों को शोसल मैपिगं के बारें में पर्याप्त जानकारी दी गयी। गांव का नक्शा अच्छे ढंग से बने इसलिए सभी लोगों को पूर्व पष्चिम उत्तर दक्षिण दिषाओ का ज्ञान कराया गया उसके बाद गांव बसाहट, सड़के, बस्ती, मकान, तालाब, कुआं, सभी कुछ दर्षाने के लिए बताया गया। गांव मे क्या क्या संसाधन है इसकी भी जानकारी ली गयी।

जाति वर्ग अनुसार परिवारों की संख्या

जानकारी का श्रोत्र स्थानीय समुदाय/पंचायत

सामान्य जाति के घरों की संख्या	496
पिछड़ी जाति के घरों की संख्या	88
अनुसूचित जाति के घरों की संख्या	26
योग	610

नाजुकता विषलेषण :–

आपदाओं का (बाढ़) का सामना करने से प्रभावित समुदाय सामाजिक, आर्थिक रूप से कमजोर हो जाता है। इसे जानने के लिए समुदाय, आषा, आगंनबाड़ी कार्यकत्री से चर्चा की, जिससे निम्न जानकारी प्राप्त हुई।

1. जल भराव– बलीपटटी रानीगावं ग्राम पंचायत में जल भराव की समस्या दो जगह है। भटटा मजरा, रतनपुर रम्होआ में जलनिकास ठीक नहीं है। पानी निकास के लिए नाली–नाला ग्राम पंचायत प्रधान से हुई वार्ता से पता चला कि जलनिकास हेतु गांव में नाला प्रस्तावित है।
2. गांव की मुख्य सड़क – फर्रूखाबाद मुरादाबाद रोड एसएच 43 मार्ग से बलीपटटी रानीगांव का सम्पर्क मार्ग जगह जगह टूटा है जिससे आवागमन में परेषनी होती है जो लगभग 500 मीटर है।
3. शिक्षा के लिए केबल प्राइमरी विद्यालय बली पटटी रानीगांव एवं रतनपुर रमौआ में है उच्च षिक्षा के लिए उच्च प्राथमिक विद्यालय न होने से ग्राम की किषोरियों की षिक्षा कम है। अतः ग्राम सभा में उच्च प्राथमिक विद्यालय की आवष्यकता है।
4. ग्राम सभा में सात तालाब स्थित है जिसमें बलीपटटी रानीगावं के दक्षिण में 0.125 हेक्टेयर क्षेत्रफल का है। दूसरा दक्षिण में 0.35 हे. क्षेत्रफल का तालाब स्थित है। तीसरा 0.12 हे. चौथा 1.71 हे. क्षेत्रफल का तालाब पूर्व में स्थित है। 5वां रतनपुर रम्होआ में 0.129 हे. क्षेत्रफल का है। छठा तालाब 0.113 हे. का रतनपुर रम्होआ मे है। सातवां 0.052 हे. क्षेत्रफल का तालाब है। गांव का कचरा भी जल निकासी में मिल जाने से तालाब को प्रदूषित करता है। परिणामस्वरूप तालाब के जल का उपयोग नहीं होता है अतः तालाबों की साफ सफाई होनी चहिए, जीर्णोद्धार होना चाहिए परिणामस्वरूप तालाब का जल मत्स्यपालन, पशुओं के पीने के लिए प्रयोग किया जा सके। तथा जल संरक्षण भी हो सके।
5. गंगा की धार का सोता का क्षेत्रफल 13.058 हे. बाढ़ के समय जल गांव में आ जाता है। बलीपटटी रानीगांव में बंधा को और उंचा सृदृढ़ बनाना चाहिए जिससे गंगा का जल गांव में न आ सके। जिससे फसल में हानि कम हो इसके अलावा एक बंदा रतनपुर रम्होआ गांव में भी बने ताकि गंगा का पानी से फसल का नुकसान रोका जा सके। ताकि फसल की हानि में कमी हो।
6. गंगा के कटान को रोकने के लिए बृक्षारोपण होना चाहिए। ग्राम सभा में बाग बगीचा न के बराबर हैं मन्दिर के आसपास लगभग 20–25 पेड़ है। जिसमें आम, पीपल, बरगद लिप्टिस के पेड़ हैं। बृक्षारोपण पर अत्यधिक ध्यान देना चाहिए। बृक्षों की देखभाल के लिए मनरेगा से ध्यान रखना चाहिए। बृक्षारोपण के लिए ग्राम सभा में काफी भूमि है। भूमि में नर्सरी की व्यवस्था होनी चाहिए। जिससे बृक्षारोपण के लिए पेड़ आसानी से मिल सके। जिससे बृक्ष बढ़ने से हमे शुद्व हवा मिल सके।
7. ग्रामपंचायत में गंगा का क्षेत्रफल 11.34 हे. है।
8. ग्राम सभा में कुल 610 निजी हैण्डपम्प है तथा 29 इण्डिया मार्का नल है। पानी रखने पर पीला पड़ जाता है अतः जल के शुद्वीकरण के लिए धनीवर्ग आर.ओ का प्रयोग करते हैं। अन्य व्यक्ति यही जल पीते हैं। जिससे पेट सम्बन्धी बीमारी होने का भय रहता है।

9. तापमान बढ़ने से पशुओ को विभिन्न प्रकार की बीमारियां हो जाती है जिससे दुग्ध का उत्पादन कम हो जाता है।

समुदाय पर जल जमाव का प्रभाव :–

वलीपट्टी रानी गावॅ ग्रामपंचायत में जल भराव की सम्स्या दो जगह है 1. भट्टा मजरा 2. रतनपुर रम्होआ, वहां पानी का निकास ठीक नहीं है पूरी आबादी का पूरा कचरा निचले क्षेत्र में इकट्ठा होता है जो जल भराव के दौरान पूरे क्षेत्र में फैल जाता है जिससे स्वच्छता एवं स्वास्थ्य सम्बान्धित कारणों से समुदाय प्रभावित रहता है जैसे फोडा फुन्सी, सर्दी, जुकाम, बुखार आदि। बरसात में गंगा से पानी आ जाने के कारण खरीफ की फसल में काफी नुकसान हो जाता है। बरसात में जल भराव के कारण आवागमन वाधित हो जाता है। कई स्थानों पर सड़कें टूट जाती हैं जिससे छोटे बच्चो एवं जानवरों के गिर कर फंस जाने का खतरा रहता है गॉव का कचरा भी जल निकासी वाले क्षेत्र में मिलकर गॉव के तालाबों के पानी को प्रदुषित करता है प्ररिणाम स्वारूप तालावों में मत्स्यपालन भी नहीं हो पाता है एवं तालाबो का जल पषुओं के पीने के उपयुक्त भी नहीं रहता है।

समुदाय पर बाढ़ का प्रभाव :–

2010 एवं 2011 में गंगा नदी में अत्याधिक बाढ़ आई। गंगा जी का जल फर्रूखाबाद बदांयूॅ तक एवं पूरे गॉव में लगभग 3 फिट पानी भर गया था। और सभी फसलें पानी में डूब गयीं थी पानी की वजह से सभी फसलें नष्ट हो गयी थी। इस से लगभग 50 बर्ष पहले गंगाजी के कटान से 3 गॉव 1 मछुआपुर, 2 पहाड़पुर, 3 चक बिजलियां हार में गंगा की बाढ़ से ये तीनों गॉव पूर्ण से कटान होकर तीनों ग्राम गैर आबाद हो गये और काफी हानि भी हुई थी। बाढ़ के समय में खरीफ की फसल में काफी नुकसान हो जाता है और कभी कभी पूरी फसल नष्ट हो जाती है एवं स्वाथ्य पर ही बुरा प्रभाव पड़ता है साथ ही अजीविका में जोखिम बढ जाते है जिससे रोजगार के लिए कुछ लोगों को बडे महानगरों में रोजगार के लिए जाना पड़ता है।

समुदाय पर लू का प्रभाव :–

ग्रमियों के दिनों में 15 मई से 15 जून तक तापमान अत्यधिक बढ़ जाता है व र्गम हवायें चलनें लगती है जिससे समुदाय के स्वाथ्य पर बुरा प्रभाव पड़ता है मानव एवं पषुओं को लू लगने से उनका स्वास्थ्य खराब हो जाता है। विषेषकर बच्चों एवं बुजुर्गों पर इसका प्रभाव अधिक पड़ता है बच्चों की षिक्षा एवं स्वाथ्य सेवायें प्रभावित होती है। विषेषकर छोटे बच्चों के टीकाकरण आदि में परेशानियों का सामना करना पड़ता है। पशुओं को चारा एवं पेय जल हेतू पानी की समस्या हो जाती है

समुदाय पर षीतलहर का प्रभाव :–

सर्दी के मौसम में 15 दिसम्बर से 15 जनवरी तक शीतलहर का प्रभाव रहता है। शीतलहर मानव एवं पशुओं के स्वास्थ्य के साथ साथ फसलों को भी प्रभावित करती है। शीतलहर के प्रभाव से प्रत्येक बर्ष पशुपालन पर भी नकारात्मक प्रभाव पड़ रहा है। शीतलहर में ठंडी से प्रत्येक बर्ष कुछ पषुओं को मृत्यू हो जाती है। गाय भैंसों के दूध उत्पादन में कमी आ जाती है। शीतलहर के कारण कृषि कार्य, मजदूरी, आदि से आजीविका प्रभावित होती है। बच्चों में निमोनिया, खांसी एवं दस्त की समस्या हो जाती है फसलों में मुख्यतः दलहन एवं तिलहन पर

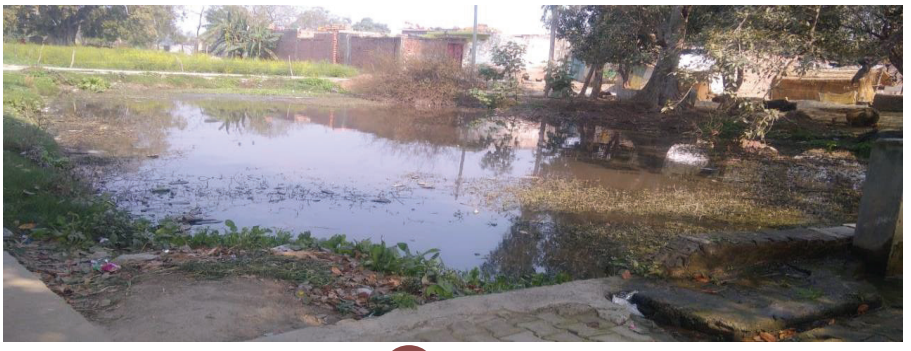
पाले का प्रभाव पड़ता है। परिणामस्वरूप पौधों की बढवार थम जाती है व फसलों के उत्पादन में कमी हो जाती है।

समुदाय पर ओलावृष्टि का प्रभाव :–

ओलावृष्टि – प्रतिबर्ष फरवरी–मार्च में ओलावृष्टि होने से फसलों के उत्पादन में प्रतिवर्ष लगभग 20 % - 40% तक की हानि हो जाती है एवं मानव स्वास्थ्य पर बुरा प्रभाव पड़ता है। कच्चे घर क्षति ग्रस्त हो जाते है। फसलों के उत्पादन में कमी , एवं मानवों के स्वास्थ्य पर बुरा प्रभाव पडता है ओलों की वजह से महिलाएं एवं बच्चों के चोटिल होने का भय रहता है।

समुदाय की व्यवहारगत एवं ढांचागत संरचना में कमियां

1. लोगों में जानकारी एवं जागरूकता का अभाव है। लोगों में कल्याणकारी योजना की जानकारी का अभाव है। पशु पालन तो करते हैं किन्तु नस्ल सुधार, पशुओं का बीमा आदि की जानकारी कम है।
2. गांव में कृषि केन्द्र, बीज केन्द्र, किसान संगठन, अनाज केन्द्र आदि सामाजिक संगठनों की कमी है। इस कारण आपदा के समय समुदाय को सरकारी एवं वाह्य सहायता पर निर्भर रहना पड़ता है।
3. केवल 6 सोलर पैनल है। यहां 90 प्रतिशत से अधिक पक्की छते हैं जहां सौर उर्जा का प्रयोग किया जा सकता है। ग्राम में रोशनी आदि हेतु सौर उर्जा पैनलों को छतों पर लगाया जा सकता है।
4. मानसून के दिनों में जलजलित बीमारियों व मच्छर मखियों की भरमार हो जाती हैं। यहां टाईफाईड, मलेरिया सांस सम्बन्धित बीमारियां हो जाती हैं।
5. गांव में सूखा एवं गीला कचरा एक साथ बहकर गलियों में पड़ा रहता है। लोगों में कचरा प्रबन्धन की जागरूकता का अभाव है। अतः ग्राम सभा में कचरा संग्रह केन्द्र बनना चाहिए तथा घर–घर से गीला–सूखा कचरा, अलग अलग एकत्र करना चाहिए। इस गांव की मुख्य फसलें गेंहू सरसों, धान हैं। जिनमें उर्वरक, कीटनाशक, खरपतवारनाषक का अत्यधिक प्रयोग किया जाता है।
6. गावं में गाय, भैंस आदि पशुपालन होने के बावजूद भी गोबर का प्रयोग जैविक खाद एवं कम्पोस्ट खाद बनाने में नहीं होता है। बल्कि सड़कों किनारे ढेर लगाकर रखते हैं और कण्डे बनाते हैं।
7. गांव में जैविक खाद एवं कम्पोस्ट खाद बनाने के लिए प्रषिक्षण दिया जाये।
8. गांव में आंगनबाड़ी भवन बन रहा है। 7 माह से तीन वर्ष के 38 बच्चे 3 तीन वर्ष से उपर 49 बच्चे अर्थात कुल 87 बच्चे।



समुदाय की क्षमता विष्लेषण–

आपदाओं के सन्दर्भ में गांव को क्लाइमेट स्मार्ट बनाने की दृष्टि से स्वंय में कितना सक्षम है। इसकी जानकारी हेतु समुदाय के साथ मिलकर जलवायु परिवर्तन से उत्पन्न होने वाली आपदाओं एवं खतरों के बारे में जानकारी उपलब्ध हुई जो निम्न है।

बलीपटटी रानीगावं ग्राम पंचायत फर्रूखाबाद मुरादाबाद रोड से 500 मीटर दूरी पर स्थित है। इस ग्रामपंचायत में ग्रामीणों की सुविधा के लिए एक सामुदायक षौचालय है। दो प्राथमिक विद्यालय एक बली पटटी रानीगांव एवं रतनपुर रम्होआ में स्थित हैं। पूरे गांव में इण्टरलाकिंग हैं 90 प्रतिषत घर पक्के हैं। सुरक्षित पेयजल हेतु पंचायत बलीपटटी में पानी की टंकी है। जिससे पूरे गांव रतनपुर रम्होआ एवं दोनों टोलों पर पानी की आपूर्ति है। सामुदायिक जल हेतु 10 टोटी लगी हैं। घरों में भी पानी की सप्लाई है। इसके अलावा 29 इण्डियामार्का नल भी है। इसके अलावा ग्राम पंचायत में छोटे बड़े 7 तालाब भी हैं।

जलवायु परिर्वतन शीलता :–

प्रवृत्ति/परिवर्तन, मुख्य चुनौतियां/झटके एवं तनाव

ग्राम पंचायत बलीपटटी रानीगांव में सभी मौसम, सर्दी, गर्मी, बरसात का प्रभाव रहता है। 25 वर्ष पूर्व सर्दी नवम्बर माह से फरवरी माह तक रहती थी। किन्तु अब सर्दी दिसम्बर जनवरी तक ही रहती है। पहले बरसात जून से सितम्बर तक रहती थी। मगर अब बरसात जुलाई के अन्त से सितम्बर के शुरू तक ही रहती है। वर्षा के समय गंगा में बाढ़ आ जाने से धान की

फसल को काफी नुकसान हो जाता है। पहले गर्मी अप्रैल से लेकर अक्टूबर तक रहती थी किन्तु अब गर्मी मार्च से 15 नवम्बर तक रहती है।

आपदा जोखिम प्रोफाइल के अन्तर्गत से निम्न सूचनाओं का संकलन किया है जो निम्न है

गावं को प्रभावित करने वाली आपदाओं की पहचान करना। समुदाय के साथ उन आपदाओं के बारे में विस्तृत रूप में चर्चा एवं विचार विमर्ष किया, जिससे उनकी दैनिक दिनचर्या, रोजगार, षिक्षा, पेयजल, समुदाय में साफ सफाई आदि पर एक सूची प्राप्त की गई इस गांव की प्रमुख आपदा जल भराव एवं गगां नदी की बाढ़ है। जिससे गांव की खरीफ की फसल में काफी नुकसान हो जाता है एवं स्वास्थ्य पर ही बुरा प्रभाव पड़ता है साथ ही आजीविका में जोखिम बढ़ जाते हैं। जिससे रोजगार एवं आजीविका हेतु कुछ लोगों को बड़े महानगरों में जाना पड़ता है।

जलवायु परिवर्तन जनित आपदा के जोखिम/खतरों का मानचित्रण

आपदाओं के आधार पर होने वाले नुकसान तथा प्रभावित समुदाय से विस्तृत जानकारी प्राप्त आपदाओं का ग्राम पंचायत वलीपटटी रानीगांव के पर्यावरण के साथ ही मानव जीवन एवं स्वास्थ्य पर प्रभाव पड़ रहा है, जल भराव, बाढ़, शीत लहर से प्रतिवर्ष नुकसान सहना पड़ रहा है। जो निम्न है।

क्रम	आपदा	जोखिम क्षेत्र	जोखिम	आवादी	घर	संसाधन
1	जल भराव	पेयजल	पेयजल रखने से पीला हो जाता है और दूषित हो जाता है।	भटटा मजरा, रतनपुर रम्होआ	25 50	हैण्डापम्प इण्डिया मार्का पम्प
		स्वच्छता	कूड़ा एकत्र नही होता है	भटटा मजरा, रतनपुर रम्होआ		कूड़ा एकत्र स्थान नही है
		स्वास्थ्य	जलजनित बीमारियों का होना	22 लोग प्रभावित		22 लोग प्रभावित
		शिक्षा	जल भराव के समय आवागमन बाधित होने से विद्यालय में बच्चों की उपस्थिति कम होना	भटटा मजरा, रतनपुर रम्होआ		पानी भरने के कारण विद्यालय आवगमन की समस्या
		कृषि	जल भराव आने	भटटा		20 प्रतिषत

			के कारण खरीफ की फसल में हानि	मजरा, रतनपुर रम्होआ		फसल में हानि
		पशु पालन	जल के कारण पशुओं को हरा चारा	भटटा मजरा, रतनपुर रम्होआ		दुग्ध की उत्पादकता में कमी।
		टाजीविका	स्थानीय स्तर पर मजदूरी न मिलना	भटटा मजरा, रतनपुर रम्होआ		शेष लोग बाढ़ के समय अन्य शहरों में मजदूरी करने चले जाते हैं।
2	बाढ़	पेयजल	पेयजल रखने से पीला हो जाता है। और दूषित हो जाता है।	सम्पूर्ण ग्रामपंचायत	610	610 उथले निजी हैण्डपम्प का जल पीला हो जाता है।
		स्वच्छता	कूड़ा एकत्र नही होता है	सम्पूर्ण ग्राम पंचायत	610	कूड़ा एकत्र स्थान नही है
		स्वास्थ्य	जलजनित बीमारियों का होना	22 लोग प्रभावित		22 लोग प्रभावित
		शिक्षा	जल भराव के समय आवागमन बाधित होने से विद्यालय में बच्चों की उपस्थिति कम होना	सम्पूर्ण ग्राम पंचायत		पानी भरने के कारण
		कृषि	जल भराव आने के कारण खरीफ की फसल में हानि	सम्पूर्ण ग्राम पंचायत		20 प्रतिषत फसल में हानि
		पशु पालन	जल के कारण पशुओं को हरा चारा	सम्पूर्ण ग्रामपंचायत		दुग्ध की उत्पादकता में कमी।
		आजीविका	स्थानीय स्तर पर मजदूरी न मिलना	मनरेगा जॉब कार्ड 824	लाभार्थी 298	शेष लोग बाढ़ के समय अन्य शहरों में

						मजदूरी करने चले जाते हैं।
3	लू लगना	स्वास्थ्य	मानव एवं पशुओं को लू लगने से उनके स्वास्थ्य पर बुरा प्रभाव पड़ता	सम्पूर्ण ग्रामपंचायत	610	सरकारी स्वास्थ्य सेवा ग्राम स्तर पर उपलब्ध नहीं है। उपकेन्द्र भी नहीं है। केवल टीकाकरण होता है।
4	शीतलहर	स्वास्थ्य एवं कृषि पशु पालन	मानव एवं पशुओ को ठंड लगना, फसल नुकसान,	सम्पूर्ण ग्रामपंचायत	610	ठंड लगने के कारण पषुओं की मृत्यु
5	ओलावृष्टि	फसल एवं मानव स्वास्थ्य	फसल का नुकसान, मानव स्वास्थ्य पर बुरा प्रभाव	सम्पूर्ण पंचायत	610	कच्चे घर छतगृस्त, ओलों की बजह से महिलाओं एंव पुरूषों को चोट लगने का भय

आजीविका के साधन

बलीपटटी रानीगांव ग्रामपंचायत का प्रमुख आजीविका का साधन कृषि, मजूदरी, पशु पालन है, बाढ़ के समय फसले नष्ट हो जाती है या उनका उत्पादन कम हो जाता है। तब आजीविका हेतु ग्रामवासी मजदूरी के लिए बड़े नगरों व उपनगरों में जाते हैं।

आपदाओं का ऐतिहासिक समय एवं घटनाक्रम :–

ग्राम पंचायत वलीपटटी रानी गॉव का ऐतिहासिक समय रेखा आपदाओं एवं उसके प्रभाव को जानने के बाद समुदाय के साथ यह जानने का प्रयास किया गया कि कौन सी आपदाऐं इस ग्राम पंचायत को कब कब प्रभावित कर रहीं है। इन आपदाओं का ऐतिहासिक समय रेखा जानने का प्रयास किया, जिसमें समुदाय ने माना कि बाढ़ एक ऐसी आपदा है जो लगातार

समुदाय को प्रभावित कर रही है । हाल के बर्षो में ग्राम पंचायत को जल भराव , बाढ़, लू लगना, ओलावृष्टि का प्रकोप भी ग्राम पंचायत को झेलना पड रहा रहा है विगत दो वर्षो से कोराना नामक बीमारी भी आपदा ही हो गयी है। इस बीमारी से बचाव के लिए पूरे देष मे लोकडाउन लग जाने के कारण लोग अपने घरों में बंद हो गये थे इसका सबसे अधिक प्रभाव कृषि में तैयार उत्पाद के लिया बाजार न मिलने के कारण सबकुछ बन्द हो जाने के कारण बडे पैमाने पर लोगो की आजीविका प्रभावित हुई ।

1. 2010 एवं 2011 में गंगा नदी में अत्याधिक बाढ़ आयी। गंगा जी का जल फर्रूखाबाद बदॉयू मार्ग तक एवं पूरे ग्राम में लगभग 3 फीट पानी भर गया था। और सभी फसलें पानी में डूब गयीं थी । पानी की बजह से सभी फसलें नष्ट हो गयी थी लगभग 50 बर्ष पहले गंगा जी के कटान से ग्राम पंचायत के तीन गावॅ मछुआपुर , पहाडपुर , चक बिजलियाहार गंगा की बाढ से ये तीन गावॅ पूर्ण रूप से कटान होकर तीनों ग्राम गैर आबाद हो गये। काफी हानि हुई थी सम्बान्धित ग्रामवासी बलीपटटी रानी गावॅ , रतनपुर रमहौआ तथा अन्य ग्रामों में बस गये थे । इस ग्राम पंचायत में कुल पांच गावॅ है। जिसमें दो आवाद तीन गैर आवाद है। तथा बलीपटटी रानीगावॅ दो मजरा कछियाना एंव भटटा मजरा है।
   2023 मार्च में ओलावृष्टि में फसलों के उत्पादन में लगभग 20 प्रतिषत हानि होने की सम्भावना है ओलों से प्रति बर्ष फसल के उत्पादन में लगभग 20 से 40 प्रतिषत हानि हो जाती है।

आजीविका के साधनों पर आपदाओं का प्रभाव :–

1. कृषि में 418 परिवार अपनी आजीविका चला रहे हैं। बाढ़ के समय प्रत्येक वर्ष फसल की 20–30 प्रतिशत हानि और आवागमन में परेशानी होती है। जिससे उनकी आर्थिक स्थिति प्रभावित होती है।
2. शीतलहर से फसले झुलस जाती है आलू में पाला की समस्या होती है। सरसों में माहू का प्रकोप बढ़ जाता है। फसलों की बढ़वार प्रभावित होती है। जिससे फसलों में लगभग 15 प्रतिषत उत्पादन में कमी होती है। पशु पालन में ठंड की बजह से 20 गाय 15 भैंसों की पशुओं की मृत्यु हो गयी है।
3. मजदूरी हेतु 298 परिवार ग्राम सभा में कार्य करते है जब ग्राम सभा में कार्य नहीं मिलता है तो उन्हे स्थनीय स्तर पर मजदूरी न मिलने के कारण अन्य शहरों में चले जाते हैं।
4. वर्ष 2022 में 20 गाय 15 भैंस बीमारी से मृत्यु हो गयी। जिसमें लम्पी, पाला, मुंहपका, खुरपका, नामक बीमारी पशुओं में अधिकतर देखी गयी। जिससे दुग्ध उत्पादन में 10 प्रतिषत की हानि हो जाती है।
5. स्वयं का व्यवसाय 25 परिवार अपना रोजगार करते हैं। जिसमें प्रमुख अधिकतर दुकाने ही है। व्यवसाय बाढ़ के समय कम हो जाता है। और आर्थिक समस्या हो जाती है।

आपदाओं का मौसमी कलैण्डर

आपदा	जनवरी	फरवरी	मार्च	अप्रैल	मई	जून	जुलाई	अगस्त	सितम्बर	अक्टूबर	नव म्बर	दिस म्बर
जल भराव												
बाढ़												
टाग												
ओलावृष्टि												
शीतलहर												
लू												

आपदामान चित्रण मौसमी कलैण्डर बनाने से पूर्व समुदाय से चर्चा हुई जिससे स्पष्ट हुआ कि कम दिनों में अधिक वर्षा तथा सर्दी कम दिनों तक पड़ती है एवं गर्मी के दिनों में बृद्वि तथा तापमान बढ़ता ही चला जा रहा है। अनिल सिंह के घर से मैन सड़क तक एवं दूसरा बलीपटटी रानीगांव जखोलिया मार्ग तक जल भराव है।

भौतिक संसाधनों की उपलब्धता एवं गावं की दूरी

विवरण	संख्या	सम्पर्क व्यक्ति	गांव से दूरी
प्राथमिक विद्यालय ग्रामपंचायत बलीपटटी रानीगांव	2	श्रीमती नीलम अग्निहोत्री 8009832480	0किमी 1किमी
पंचायत भवन	1	श्रीमती शषि प्रभा शुक्ला 9450202549	0किमी
सरकारी राषनकार्ड की दुकान	1	रामकान्ती 9453805030	0किमी
पीएचसी	1	प्राथमिक स्वास्थ्य केन्द्र अमृतपुर श्रीमती प्रिया गौड़ एएनएम 8545925162	1.5 किमी
त्हसील	1	अमृतपुर	500 मीटर
विकास खण्ड	1	श्राजेपुर	10 किमी
पोस्ट आफिस	1	अमृतपुर	2.5 किमी

प्राकृतिक संसाधन उपलब्धता संख्या एंव दूरी

क्रमांक	संसाधन	दूरी	संख्या	विवरण / नाम / सम्पर्क संख्या	मोबाईल नं.
1	तालाब	0,1 किमी	7	जागेश्वर सिंह	9795638687
2	कुआं	1 किमी	1	ब्रम्हदत्त शुक्ला	9450202549
3	सोता / नाला	100 मी	1	ब्रम्हदत्त शुक्ला	9450202549
4	गंगा नदी	3 किमी	1	आशुतोष दुवे	8858999340
5	बाग	0 किमी	2	सुरेश और सुनील दत्त	
6	भौगोलिक क्षेत्रफल		540.9594 हे.		

मानव संसाधन

1	ग्रामप्रधान	शाषि प्रभा शुक्ला 9450202549	
2	शिक्षक	नीलम अग्निहोत्री 800832480	
3	आंगनबाड़ी	प्रबीना देवी 8707028842 आषा देवी 6387249810	
4	आशा	शोभा शुक्ला 8467930291	
5	एएनएम	प्रिया गौड़ 8545925162	
6	ग्राम विकास अधिकारी	आषुतोष दुवे 8858999340	

वित्तीय संसाधन 2022–23

क्रम	कार्य विवरण	अनुमानित लागत		योग
		लेबर	मटैरियल	
1	रास्ते से धर्मेन्द्र कुषवाहा के घर तक इण्टरलाकिंग नाली कार्य	17290	84583	101873
2	अरविन्द के घर से रामनिवास के घर तक नाली निर्माण	11010	35553	46563
3	रास्ता से दुरवेष के घर तक नाली मरम्मत	5660	21235	26895
4	ग्राम पंचायत में फगिंग कार्य	9590	0	9590
5	स्ट्रीट लाईट			91440
6	हैण्डपम्प मरम्मत कार्य			18744
7	गंगा मेला महिला चेंजिंग रूम	26299	95483	121782
8	हैण्डपम्प मरम्मत कार्य			19121
9	रास्ते से देषराज के घर तक इण्टरलाकिंग	13620	56218	69838
10	ग्राम पंचायत कास निर्माण कार्य	25130	136675	161805

मनरेगा

क्रम	योजना	कार्य	खर्च	समय
1	मनरेगा	आंगनबाड़ी केन्द्र का निर्माण	794000	तीन माह
2		तालाब का साफ सफाई		
3		मिटटी इण्टरलाकिंग नाली कार्य	180000	1 माह

क्लाइमेट स्मार्ट ग्राम पंचायत विकास कार्य योजना वर्ष 2023–24 :–

क्लाइमेट स्मार्ट ग्राम पंचायत विकास योजना बनाने हेतू समुह चर्चा की गई ग्राम पंचायत में वर्तमान स्थिति उससे सम्बन्धित समस्याएं उन समस्याओं के निराकरण हेतू जानकारी प्राप्त की गई। क्लाइमेट स्मार्ट ग्राम पंचायत बलीपटटी रानीगॉव की कार्य योजना तालिका–

क्रम	कार्य का क्षेत्र	कार्य का नाम	कार्य का विवरण	परिसम्पत्ति का स्थान	अनुमानित धनराशि रू.	अवधि	योजना का परिव्यय
1.	मानव विकास एवं सामाजिक सुरक्षा साफ सफाई एवं स्वच्छता	जल भराव वाले स्थानों का उच्चीकरण	सागर के घर से आसमपुर सम्पर्क मार्ग तक नाला निर्माण कार्य एवं उच्चीकरण कार्य 300मी0	बलीपटटी रानीगावॅ	500000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
2		गावॅ मुख्य रास्ता से मनीराम के घर तक नाली निर्माण कार्य	जल भराव क्षेत्र में लम्बाई 50मी0	बलीपटटी रानीगावॅ	70000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
3.		गावॅ की मुख्य रास्ता से छोटे दुबे के घर तक नाली कार्य	नाली कार्य लम्बाई 60 मीटर	बलीपटटी रानीगावॅ	50000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
4.		बदॉयूं मार्ग से मन्दिर तक इन्टरलॉकिं कार्य	70 मीटर इन्टरलॉकिं कार्य	बलीपटटी रानीगावॅ	200000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
5.	बुनियादी / आधारभूत संरचना एवं पर्यावरण	गावॅ की मुख्य रास्ता से बीरपाल के घर तक नाली निर्माण कार्य	नाली कार्य लम्बाई 50 मीटर	बलीपटटी रानीगावॅ	100000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
6.		ग्राम पंचायत में खाद के गडडों का निर्माण	खाद के 50 गडडों का निर्माण	बलीपटटी रानीगावॅ पचास स्थानों पर	112500	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
7.		ग्राम पंचायत में 10 स्थानों पर फिल्टर, चैम्बर निर्माण	10 स्थानों पर फिल्टर, चैम्बर निर्माण	बलीपटटी रानीगावॅ	30000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
8.		विमल के घर से दीनबन्धू के घर	नाली निर्माण 100 मी0	बलीपटटी रानीगावॅ	150000	मई से जुलाई	मनरेगा / 15 वॉ वित्त

		तक नाली निर्माण				2023	आयोग / SBM
9.		गावॅ की मुख्य रास्ता से प्रदीप के घर तक नाली निर्माण 70 मी0	नाली निर्माण 70 मी0	बलीपटटी रानीगावॅ	100000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
10		गावॅ की मुख्य रास्ता से प्रेम नरायन के घर तक नाली कार्य	नाली निर्माण कार्य 50 मीटर	बलीपटटी रानीगावॅ	80000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
11		गावॅ की मुख्य रास्ता से लालूपाल के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 40 मीटर	बलीपटटी रानीगावॅ	60000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
12		रामविलास के घर से राजेश के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 60 मीटर	बलीपटटी रानीगावॅ	25000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
13		गावॅ की मुख्य रास्ता से मुकेश के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 40 मीटर	बलीपटटी रानीगावॅ	28000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
14		गावॅ की मुख्य रास्ता से घनश्याम के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 50 मीटर	बलीपटटी रानीगावॅ	55000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
15		गावॅ में डामर से खुशीराम के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 60 मीटर	बलीपटटी रानीगावॅ	35000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
16		गावॅ की मुख्य रास्ता से श्याम पाल के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 60 मीटर	बलीपटटी रानीगावॅ	30000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
17		गावॅ की मुख्य रास्ता से अनिल के घर तक नाली निर्माण कार्य	नाली निर्माण कार्य 60 मीटर	बलीपटटी रानीगावॅ	60000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM
18		गावॅ की मुख्य रास्ता से तालाब तक नाली निर्माण कार्य	नाली निर्माण कार्य 35 मीटर	बलीपटटी रानीगावॅ	25000	मई से जुलाई 2023	मनरेगा / 15 वॉ वित्त आयोग / SBM

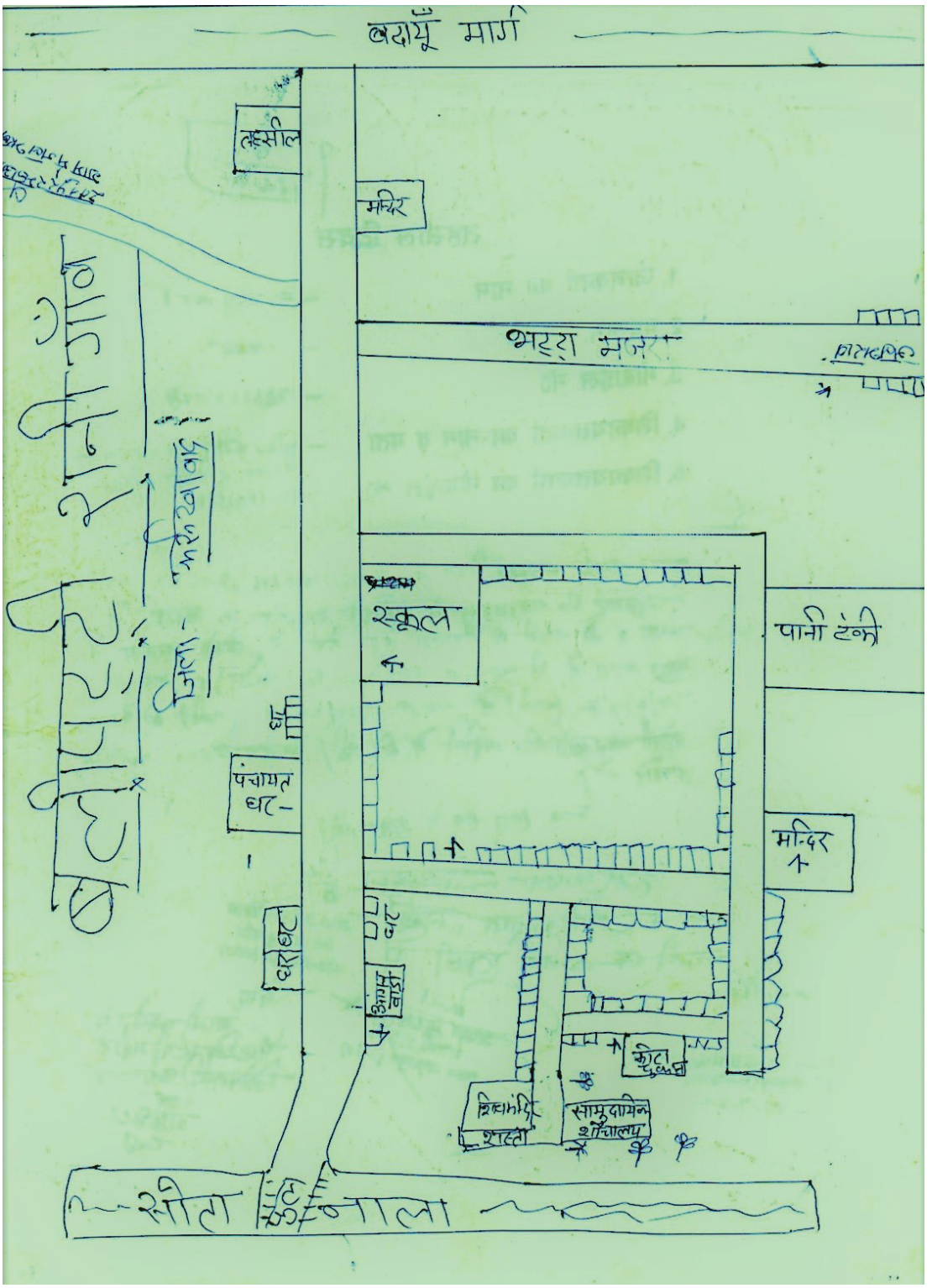
19		सौर ऊर्जा द्वारा प्रकाश की व्यवस्था	100 घरों की छतों पर पैनल प्रकाश व्यवस्था	100 घर	20 लाख	2023–24	15वां वित्त आयोग / मनरेगा
20		नर्सरी का निर्माण	पॉली / नेट हाउस बनाकर नर्सरी तैयार करना	बलीपटटी रानीगांव में 20 डिस्मिल ग्राम पंचायत की जमीन पर	3 लाख	2023–24	15वां वित्त आयोग / मनरेगा
21		स्थाई पशु आश्रय स्थल	30 पशु की क्षमता वाले 2 गौशाला	बली पटटी रानीगांव एवं रतनपुर रम्होआ	50 लाख	2023–24	15वां वित्त आयोग / मनरेगा
22		वृक्षारोपण	1500 छायादार फलदार वृक्षों का रोपण जाली के साथ	तालाबों के किनारे	25 लाख	2023–24	15वां वित्त आयोग / मनरेगा
23		वर्मी कम्पोस्ट प्रशिक्षण एवं पर्यावरण जागरूकता बैठकें	वर्मी कम्पोस्ट प्रशिक्षण एवं पर्यावरण जागरूकता बैठकें	बलीपटटी रानीगांव रतनपुर रम्होआ,	10 लाख	2023–24	15वां वित्त आयोग / मनरेगा
24		तलाब जीर्णोउध्दार	सात तलाबों का जीर्णोउध्दार कार्य (सफाई चबूतरा,	बलीपटटी , रानीगॉव, 5 तालाब, रतनपुर रम्होआ 2 तालाब।	35 लाख	2023–24	15वां वित्त आयोग / मनरेगा

उपरोक्त तथ्यों के आधार पर जलवायु परिवर्तन का प्रभाव ग्रामपंचायत बलीपटटी रानीगावं में सर्दी गर्मी एवं बरसात में रहता है। सबसे अधिक प्रभाव जुलाई से सितम्बर तक वर्षा से गंगा नदी का जल स्तर बढ़ने से फसलें नष्ट हो जाती है। जलवायु परिवर्तन की दृष्टि से ग्राम में अधिक से अधिक बृक्षारोपण किया जाये जिससे ग्राम में नर्सरी की व्यवस्था होनी चाहि। ग्राम में विद्युत चालक फ्रीज कूलर इनका उपयोग अधिक है। इसकी जगह पर सोलर पैनल लगाने चाहिए। इसके अलावा ग्राम में कूड़ा स्थान बनाना चाहिए जिससे कूड़ा वहां इकठठा हो सके। जिसके लिए हर घर पर गीला कचरा सूखा कचरा रखने के लिए पात्र रखने चाहिए। उन पात्रों से कूड़ा सफाई कर्मचारी द्वारा प्रतिदिन कूड़ा संग्रह केन्द्र पर एकत्र करना चाहिए जिससे हमारी ग्राम सभा स्वच्छ हो जायेगी। पशुओं के गोवर से वर्मी कम्पोस्ट खाद बनाने का प्रषिक्षण ग्राम वासियों को देना चाहिए। इस प्रकार हमारी ग्राम पंचायत बलीपटटी रानीगांव क्लाइमेट स्मार्ट ग्राम पंचायत बन जायेगी।

संस्था का नाम :– विनोबा सेवा आश्रम बरतारा (शाहजहाँपुर) उ.प्र.

सर्वे टीम सदस्य के नाम

1. मुदित कुमार
2. संजीव प्रकाश
3. जे. डी. अग्निहोत्री
4. अमर सिंह



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.)[86] = **Rs. 70 per tree** (saplings are also available at no cost from DoEFCC, GoUP) Tree Guards (metal)[87] = **Rs. 1,200 per unit** Maintenance of plantations: **1.5 lakh/ha**	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
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		
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[88] = **Rs 40,000/ hectare**[89]	

86 Cost as per plantation guidelines and inputs from GPs
87 Cost as per market rates
88 Cost as per Sub-mission on Agroforestry Guidelines, National Mission for Sustainable Agriculture
89 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[90]= 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[91]= **Rs 90,000**	

90 Cost as per inputs received from GPs in HRVCA
91 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[92]: Area (ha) * E -> 2.471 * 1,00,000 = **Rs 2,47,100**	

92 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[93]= **Rs 35,000** Cost of 1 recharge pit= **Rs 35,000**	

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

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	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[94]: 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**	
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	

94 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
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[95]: **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	

95 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[96] = 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.)	

96 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 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.)	
		Phase 3: a. Maintenance works b. Scaling up partnership	COST[97]: 1. 1 Electric Garbage Van = Rs. 95,000 to 1,00,000 2. 1 waste bin/ container[98] = Rs. 15,000	

97 Cost as per market rates

98 Cost as per SBM guidelines and inputs in HRVCA reports

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	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[99] = xxx kg/day of organic waste / 2 Periodic composting of __ kg per year of agricultural waste (as per primary data)	

99 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[100]: 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[101] 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	

100 Cost as per inputs received from GPs in HRVCA
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
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	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

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[102] No. of units of clean electricity generated per day= Annual Electricity generated/ 365	

102 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**[103] No. of units of clean electricity generated per day= Annual Electricity generated/ 365	

103 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[104]	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**[105]	

104 Cost as per market rates and PMKSY guidelines
105 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**[106]	
6	Solar streetlight	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**[107]	
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**[108]	

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

107 Costs as per market rates

108 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

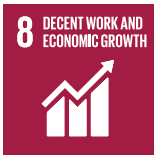
Target 7.2: Increase share of renewable energy in energy mix

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

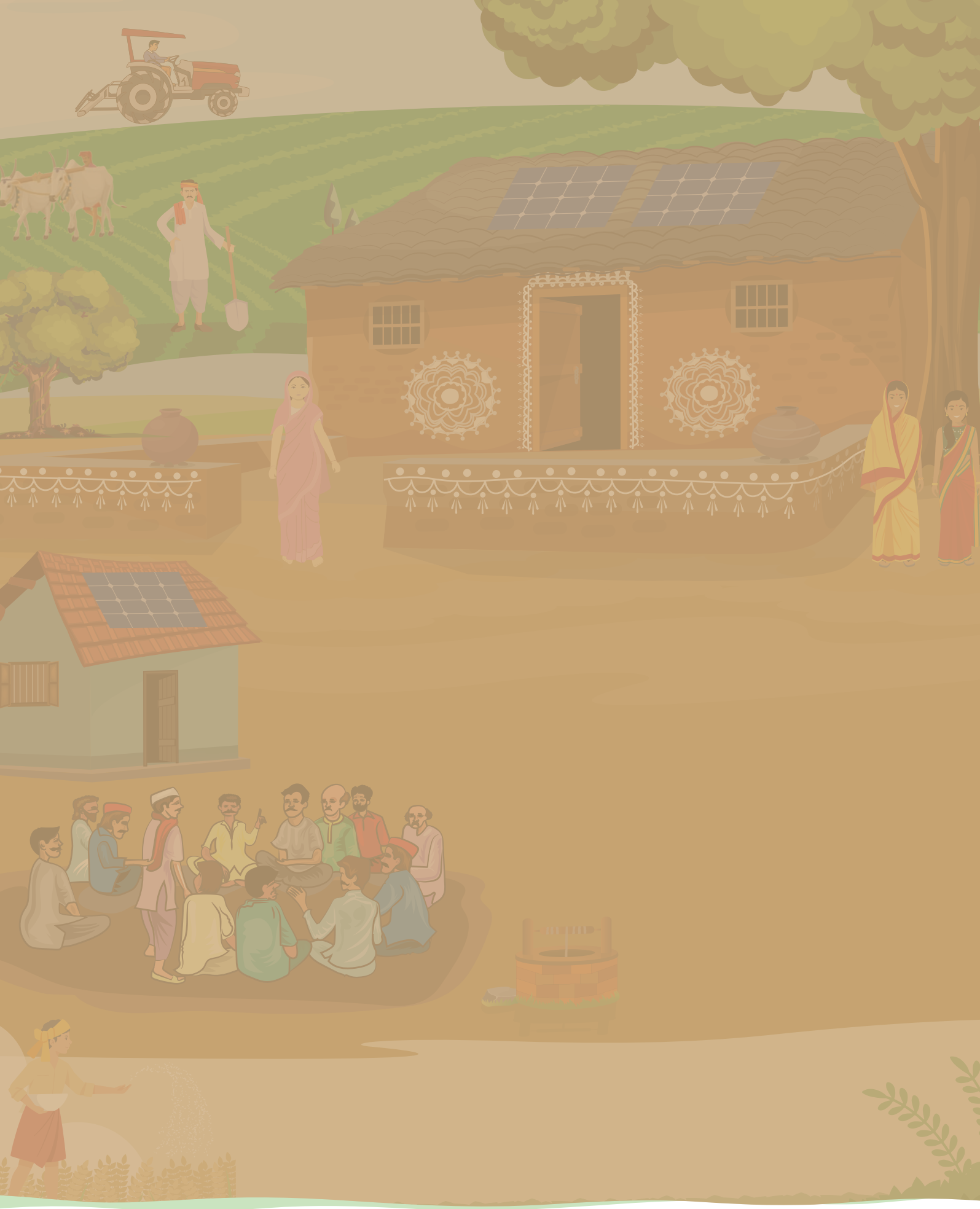
Name of plants	Family	Local names	Uses/ Medicinal properties
Timber Trees			
Acacia nilotica	Fabaceae	Babul	It is used for such products as bodies and wheels of carts, instruments and tools
Ficus religiosa	Moraceae	Peepal	Has medicinal properties and religious value
Azadirachta indica A. Juss.	Meliaceae	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

NOTES


पंचायतघर ग्रा.पं.बलीपट्टी रानीगाँव


पट्टी रानीगाँव, विकास क्षेत्र राजेपुर, जनपदु
विद्यालय एक मन्दिर है.
TEACHER



GORAKHPUR ENVIRONMENTAL ACTION GROUP

VASUDHA FOUNDATION
Green ways for a good earth!