

Overview



- Under the visionary and inspirational leadership of the Hon'ble Chief Minister, Shri Yogi Adityanath, the state of Uttar Pradesh (UP) is making rapid strides towards climate action initiating a wide-range of climate actions across different levels of governance.
- One such initiative to enhance local level action is- developing action plans for 'Climate Smart Gram Panchayats'
- Department of Environment, Forest, and Climate Change, GoUP conducted a rapid multi-criteria assessment to identify climate friendly Gram Panchayats in the highly vulnerable districts of UP. The selected GPs were announced during the 'Conference of Panchayats' (COP) held on 5th June, 2022 in Lucknow.
- The development of Climate Smart Gram Panchayat Action Plans was initiated in the identified gram panchayats from highly vulnerable and vulnerable districts, as well as the iconic districts of Uttar Pradesh by Vasudha Foundation with field support from Gorakhpur Environmental Action Group (GEAG).



Aim



- To build resilience, enhance adaptive capacity, reduce vulnerabilities, mitigate greenhouse gas emissions, enhance carbon sequestration potential.
- Achieve co-benefits: Revenue generation, overall socio-economic development, improved health, and natural resources management



43

Gram Panchayats Covered



~2.5 Lakhs
Lives Impacted



50+

Villages Covered



1.09 Lakhs
Female Population



135+

Hamlets



1.25 Lakhs
Male Population



26,750

Households



9,689 ha
Agricultural Land

Key Features of the Climate Smart Gram Panchayat Action Plans



Climate Smart Gram Panchayat Action Plans

Establishing Gram Panchayat Baseline

- Detailed Gram Panchayat profile (Demography, Panchayat Infrastructure, Natural resources, socio-economic aspects) and Land Use map
- Carbon footprint profile

Identification of key climate related issues

- Gram panchayat specific issues identified from a climate lens - region specific adaptation and mitigation concerns identified
- Recommendations to address context specific issues:
 - » Phase-wise targets
 - » Cost estimates and financing avenues
 - » Cross-sectoral benefits
 - » GHG mitigation and adaptation co-benefits highlighted
 - » Alignment with Sustainable Development Goals identified

Financing Avenues

Suggested interventions have the potential to be full scale projects by

Tapping into existing Central and State Schemes/Missions/ Programmes

Mobilising private finance through the innovative approach of 'Panchayat-Private-Partnership' to engage CSRs and mobilize funds



Methodology & Approach



The CSGPAP followed a participatory approach, engaging both communities and other participants through multi-stakeholder consultations (Gram Pradhan, rural administration, key community members & local NGOs) to formulate the plans. There was continuous engagement with the GP to resolve gaps.

Steps undertaken to prepare Climate Smart Gram Panchayat Action Plans:

1

Survey Questionnaire

- Prepared to understand ground situation & develop baseline scenario

2

Stakeholder Consultation & Capacity Building

- Conducted for local NGO partners, Gram Pradhans, Panchayat Secretaries to brief participants on objectives, components and process of plan development

3

Field Survey

- Transect walk to develop social resource map
- Hazard, Risk, Vulnerability and Capacity Assessment (HRVCA)
- Focus Group Discussions: to identify key climate issues and developmental priorities of GP

4

Plan Finalisation

- Draft Plan presented to the Gram Panchayat & District Administration
- Inputs of community, rural & district administration incorporated
- Finalised action plan presented to Gram Panchayat, CDO and DM

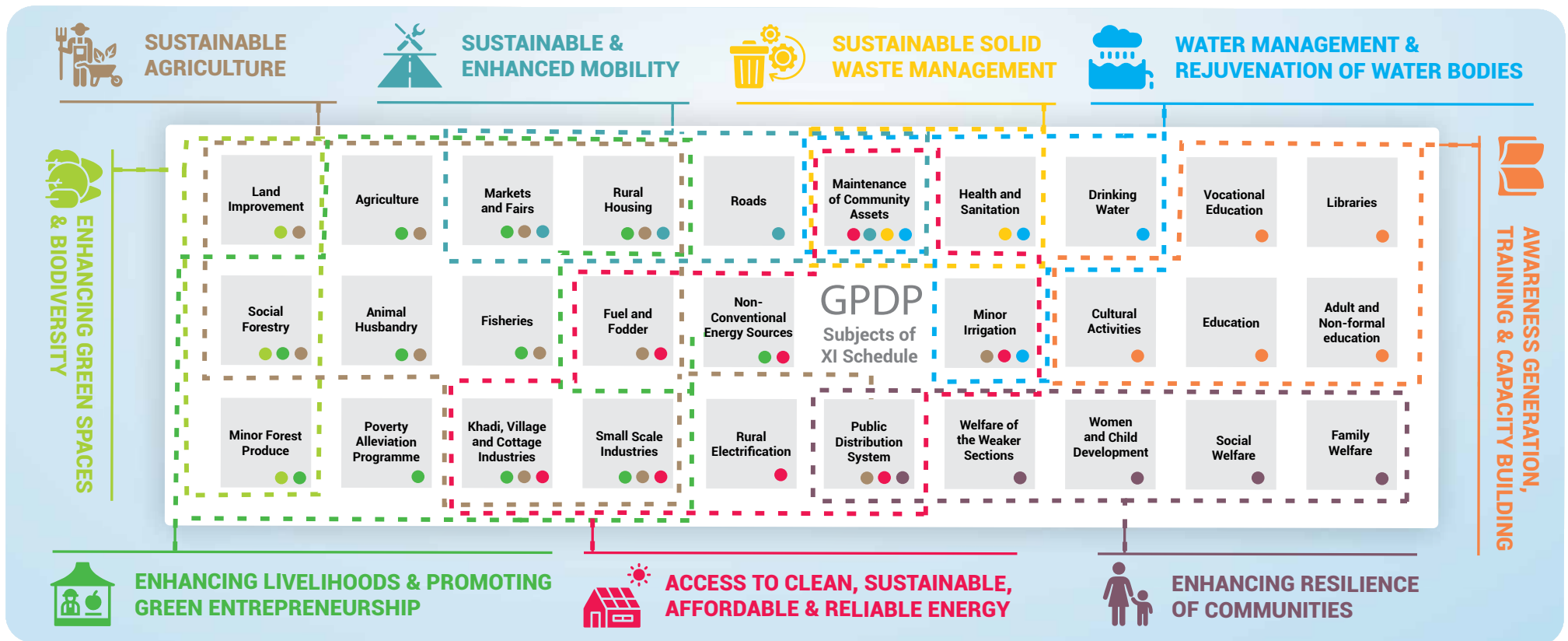
Linkages between CSGPAP and GPDP



The CSGPAP supplements the GPDP by

- Broad-basing existing development initiatives and activities with a climate perspective
- Mainstreaming Climate in Local Governance by adding a climate focus to development activities, helping GPs prioritise sustainable projects like water conservation and renewable energy.
- Resource Optimization: Dovetailing ongoing National and State Programmes on climate change with the proposed development activities in the GPDP to optimize resources for climate-smart initiatives
- Co-benefits: Climate-smart interventions such as agroforestry, production of plastic alternative products etc. improve livelihoods, aligning with GPDP development goals.

Climate Smart Interventions



Climate Smart Gram Panchayats



Mid Western Plains

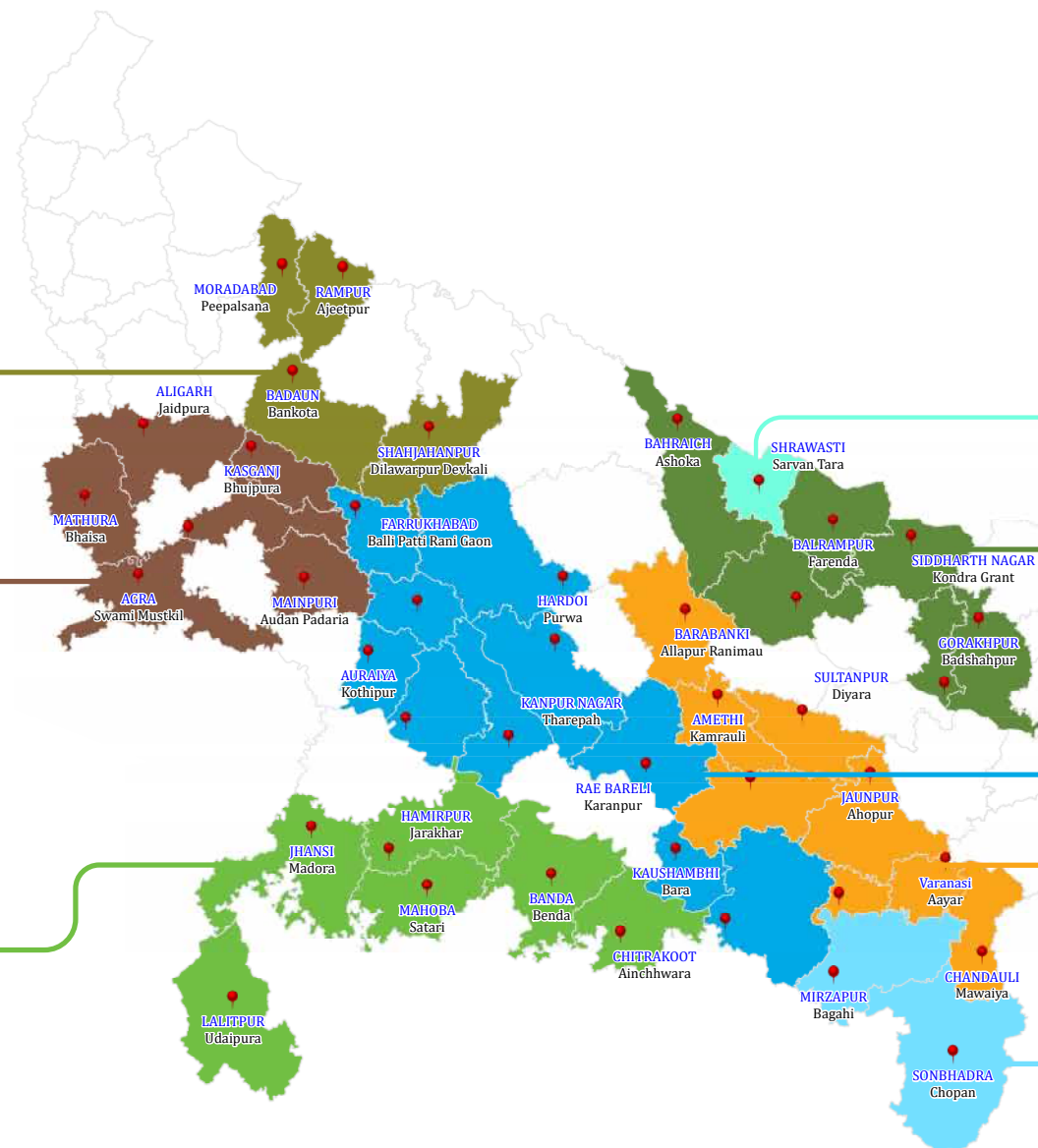
- **Frequent waterlogging** during monsoon months
- **Soil Degradation:** Soil erosion and nutrient depletion due to changing climate conditions impact long-term agricultural sustainability.

South Western Semi Arid

- **Insufficient management of water resources:** leading water shortage for drinking and irrigation needs

Bundelkhand

- **Frequent Droughts:** Erratic rainfall leading to water scarcity and poor agricultural productivity.
- **Livelihood Vulnerability:** Changing climate patterns heighten vulnerability, reducing incomes.



Bhabhar & Terai and North Eastern Plains

- **Water logging:** Frequent instances of flooding and waterlogging
- Rising instances of **heat wave**

Central Plains and Eastern Plains

- **Flooding:** Intense and erratic monsoon rains lead to frequent flooding, crop loss, and affecting productivity
- **Water Scarcity:** Despite being a major agricultural zone, dependence on groundwater and inconsistent rainfall contribute to growing water shortages.

Vindhyan

- **Water logging:** Frequent incidences during monsoon months
- **Increased water demand for irrigation** needs and limited management of water resources

Common and Broad Issues Emerging Across Gram Panchayats (GPs)



- 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
- Limited sanitation and waste management practices
- Poor maintenance of natural resources including water bodies
- Use traditional fuels for cooking, agricultural 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.

Specific issues like waterlogging, flooding, drought like conditions, uncultivable land and salinity have been observed in GPs depending on the agro-climatic zones. For example, frequent occurrences of drought-like conditions in the water-stressed Bundelkhand region, and flood-like conditions and land inundation in the Central and Eastern Plains.



KEY RECOMMENDATIONS



Agriculture

- Adoption of climate resilient farming practices such as micro-irrigation, agroforestry
- Adoption of natural farming (use of natural fertilisers and pesticides, promotion and adoption of practices such as mixed cropping, crop rotation, mulching, zero tillage **(Natural farming to be adopted on ~17,300 ha)**)
- Sustainable livestock management



Renewable Energy

- Adoption of RE (Rooftop Solar for public buildings & HHs)
 - » **Total identified potential ~83 MW**
- Agro Photovoltaics installation
 - » Total potential identified **~50 MW**
- Use of solar pumps or energy efficient pumps for irrigation
- Adopting clean cooking solutions like solar cookstoves, improved chulhas, etc.
- Solarisation of diesel and grid-connected pumps, clean cooking solutions.
 - » **Total GHG emissions potentially avoided ~1,56,500 tCO₂e**



Water and Wastewater Management

- Rejuvenation, restoration of water bodies in the gram panchayat **(Waterbodies identified for rejuvenation : 683)**
- Repair and installation of proper drainage system in the GP
- Enhancing groundwater recharge through recharge pits.
- Wastewater treatment through installation of DEWATS or soak pits where feasible
- Capacity building of existing Village Water and Sanitation Committee (VWSC) and Construction Work Committee (CWC) to ensure optimum use of water

Enhanced Livelihood Opportunities and Green Entrepreneurship

- Manufacturing of plastic alternative products by SHGs
- Promoting agro-based entrepreneurship agri-waste based products, natural fertilizer production, agro-processing, vertical farming
- Developing facilities to hire e-tractors and e-goods vehicles



Green Spaces and Biodiversity

- Improving green cover in the GP through plantation activities like:
 - » **Agroforestry (Adopted on ~5,700 ha)**
 - » Plantation around water bodies
 - » *Bal Van*
 - » *Arogya Van*
 - » Green Stewardship Programme
- Establishing a nursery to ensure availability of saplings and seeds
- Updating People's Biodiversity Register
- **Total sequestration potential identified: ~75,16,000 tCO₂**



Sustainable Management of Solid Waste

- Implementing a structured waste management system including door-to-door waste collection of segregated waste, operational RRC centers
- Sustainable organic waste management through setting up NADEP pits and compost pits
- Production of plastic alternative products within the GPs
- Ban on use of Single Use Plastics in adherence with State mandate



Sustainable and Enhanced Mobility

- Enhancing existing road infrastructure to improve connectivity
- Enhancing intermediate public transport (e-rickshaws and e-autorickshaw) access to improve last mile connectivity and reduce need for private transport
- Increasing awareness and adoption of EVs such as electric cars, e-tractors, e-goods carriers, e-waste collection vehicles etc.



Other Innovative Approaches

- Adoption of solar passive design and passive cooling building designs
- Installation of solar powered RO stations and water ATMs
- Solar powered cattle sheds to protect livestock from extreme weather
- Supplementing cattle feed to reduce methane emissions
- Conduction Panchayat level water budgeting
- Setting up local seed banks and bioresource centres to promote natural farming



- Solar powered cold storage enterprises managed by SHGs or FPOs
- Manufacturing of natural supplements and natural medicines
- Operation and maintenance of renewable energy installations in the GP

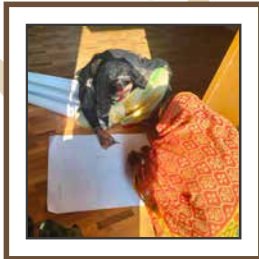
Glimpses from the Field



TRANSECT WALK



FOCUS GROUP DISCUSSIONS



**SOCIAL
RESOURCE
MAPPING**



ABOUT **VASUDHA FOUNDATION**

Vasudha Foundation is a non-profit organisation set up in 2010. Our mission is to promote environment friendly, socially just, and sustainable models of energy by focusing on renewable energy and energy-efficient technologies as well as sustainable lifestyle solutions.

