



CLIMATE SMART GRAM PANCHAYAT

SUMMARY OF RECOMMENDATIONS

Agra

**Swami Mustakil
Gram Panchayat**

**Department of Environment,
Forest and Climate Change**

Government of Uttar Pradesh





Enhancing Green Spaces and Biodiversity

- Forest restoration and conservation
- Plantation of trees
- Agroforestry
- *Arogya Van*
- People's Biodiversity Register

Short Term

Restoration and conservation of 51 ha of forest area | Plantation of 1,500 tree saplings | Sequestration potential (in 15-20 years): up to 5,400 tCO₂ | Establishing *Arogya Van* on 0.1 ha allocated land

Medium Term

Plantation of 1,500 to 2,000 tree saplings | Sequestration potential (in 15-20 years): up to 7,200 tCO₂ | Adoption of Agroforestry in 20 ha land | Sequestration potential (in 20 years): 20,000 tCO₂

Long Term

Additional 2,000 to 2,500 saplings planted | Sequestration potential (in 15-20 years): up to 8,900 tCO₂ | Additional 20 ha land for agroforestry | Sequestration potential (in 20 years): 20,000 tCO₂

Key Departments

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

Estimated Cost

Over ₹92 lakhs across three phases (Short term: ~₹19 lakhs | Medium term: ~₹33 lakhs | Long term: ~₹40 lakhs)

Management and Rejuvenation of Water Bodies

- Rainwater harvesting
- Bunds with trees
- Retention ponds
- Repair of wells
- Recharge pits
- Enhancing drainage infrastructure
- Wastewater management

Short Term

Installation of RWH structures in all (5) PRI buildings | Construction of Bunds and retention ponds | Maintain existing 9 wells | Construction of 10 recharge pits | Construction of 1.8 km drainage network | Construct 0.70 MLD DEWATs/Oxidation Pond for wastewater treatment

Medium Term

Installation of RWH structures in 268 pucca houses | Maintenance and add 2 retention ponds | Maintain wells, recharge pits, drainage channels and other water related infrastructure

Long Term

Addition of RWH structures in 243 pucca houses | Continued maintenance of water resources

Departments

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

Estimated Cost

Over ₹3.76 crores across three phases (Short Term: ~₹1.71 crores | Medium Term: ~₹1.14 crores | Long Term: ~₹91 lakhs)

Sustainable Agriculture

- Micro-irrigation
- Construction of bunds
- Drought-tolerant wheat variety
- Transition to natural farming

Short Term

Introduction of micro-irrigation on 24 ha (33%) | Construction of bunds with trees on 61 ha (50%) agriculture land | Transitioning 24 ha (20%) of agricultural land to natural farming

- Sustainable livestock management

Medium Term

Expanding micro-irrigation on 36 ha (82%) | Additional of bunds with trees on 61 ha (100%) agriculture land | Additional 36 ha (50%) of natural farming

Long Term

Micro-irrigation on 13 ha (100%) | Additional 62 ha of natural farming (100%)

Departments

Department of Agriculture | Horticulture Department | Soil Conservation Department | Centre for Integrated Pest Management (CIMP) | Department of Land Resources | Jal Shakti Department | Animal Husbandry Department | Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) | Regional Centres for Organic Farming | Krishi Vigyan Kendra, Agra

Estimated Cost

Over ₹3.8 crores across three phases (Short Term: ~₹85 lakhs | Medium Term: ~₹1.26 crores | Long Term: ~₹1.66 crores)

Sustainable Solid Waste Management

- Enhanced waste management infrastructure
- Compost and vermicompost pits
- Sanitation management
- Ban on single-use plastics

Short Term

100% door to door waste collection system for 638 household | Installation of 25 bins | Procurement of 1 electric garbage van | Provision of 3 *safai karmis* for waste collection and transport | Setting up of compost pits and vermi-compost pits | Engagement of 100 women for manufacturing plastic alternative products (SHG alignment)

Medium and Long Term

GP-level recycling and plastic shredder unit and installation of 10 additional waste bins | Maintenance of existing infrastructure and addition of *safai karmis* for waste collections and transportation | Scaling up partnerships

Departments

Panchayati Raj Department | Public Health Department | Department of Rural Development | Department of Agriculture | Uttar Pradesh Khadi and Village Industries Board

Estimated Cost

Over ₹45.35 lakhs across three phases

Access to Clean, Sustainable, Affordable and Reliable Energy

- Solar rooftops
- Solar-powered pumps
- Agro-photovoltaics
- Clean cooking solutions- Household biogas, Solar induction cookstoves, improved chulhas, LPG
- Energy efficient (EE) fixtures
- Solar street lights

Short Term

Solar rooftop installation on all government buildings | 14 diesel pumps replaced with solar pumps | Solar potential: ~46 kWp | Mitigation potential: ~65.2 tCO₂e per year | Solar rooftop installation for suitable residential buildings | Suitable households to adopt clean cooking interventions like household biogas, solar induction cookstoves and improved chulhas | Replacing existing fixtures in all government buildings with energy efficient fixtures (LED lights, EE fans) | Installation of 10 LED and 5 high-mast LED solar street lights at key locations in GP

Medium Term

Solar rooftop installation on 40% of pucca houses (243) | Agro-photovoltaic installed on 4 ha | 20 diesel pumps replaced with solar pumps | Install additional 20 LED and 5 high-mast solar LED streetlights | Solar potential: ~1,729 kWp | Mitigation potential: ~1,919 tCO₂e per year

Long Term

Solar rooftop installation on 60% of pucca houses (365) | Agro-photovoltaic installed on 6 ha | 34 diesel pumps replaced with solar pumps | Install additional 20 LED and 5 high-mast solar LED streetlights | Replacing all CFL light fixtures with LED tube lights/ bulbs; installation of EE fans across

households | Solar potential: ~2,595 kWp | Mitigation potential: 2,885 tCO_{2e} per year

Departments

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

Estimated Cost

Over ₹33.26 crores across three phases (Short Term: ~₹71 lakhs | Medium Term: ~₹12.9 crores | Long Term ~₹19.66 crores)

Sustainable and Enhanced Mobility

- Road infrastructure
- Enhancing public transport
- E-vehicles and E-tractors

Short Term

Construction of roads and construction of 1.7 km link road | Installation of 50 streetlights | 20 diesel autos replaced with 20 e-autorickshaws | Mitigation potential: ~60.03 tCO_{2e} | Set up e-autorickshaws hiring system and establish 2-3 e-autorickshaws transit stops/pickups. Promoting adoption of 2 to 3 e-tractors and e-goods carriers

Medium and Long Term

Additional 10 e-autorickshaws and 5-6 e-autorickshaws transit stop/pick-up points introduced | Maintenance of existing infrastructure | Adoption of additional 2 to 3 e-tractors and e-goods carriers | Scaling up partnership

Departments

Infrastructure and Industrial Development Department | Transport Department | Panchayati Raj Department

Estimated Cost

Over ₹3.64 crores across three phases

Enhancing Livelihoods and Green Entrepreneurship

- Engaging SHGs to manufacture sustainable products
- Organic fertilizer production
- e-tractor and e-goods carrier rental services
- Solar powered cold storage facility
- Production and sale of natural medicines and supplements
- O&M of RE installations

Short Term

Capacity building, training and support for 100 women and other entrepreneurs to establish enterprises across the GP.

Medium Term

Expanding capacity building programmes to cover 200-300 more women and other groups as per need and enhancing marketing of products and services.

Long Term

Continue scaling entrepreneurship opportunities and strengthening market linkages

Departments

Panchayati Raj Department | Department of Rural Development | Department of Horticulture and Food Processing | Uttar Pradesh Skill Development Mission | UP State Council for Vocational Training

** Expansion of suggested climate smart activities and regular maintenance of any installations and infrastructure throughout the plan implementation and beyond.*

Please refer to action plan for detailed recommendations