



CLIMATE SMART GRAM PANCHAYAT

SUMMARY OF RECOMMENDATIONS

Mainpuri

Audan Padaria Gram Panchayat

Department of Environment,
Forest and Climate Change

Government of Uttar Pradesh





Sustainable Agriculture

- Micro-irrigation
- Bunds
- Farm ponds
- Transition to natural farming
- Adoption of drought tolerant varieties of rice & wheat
- Crop rotation and mixed cropping (millets)
- Sustainable livestock management

Short Term

Introduction of micro-irrigation on 30% suitable agricultural land (84 ha) | Bunds on ~368 ha agricultural land (50%) | Construction of farm ponds as required | Transitioning ~111 ha (15%) of agricultural land to natural farming

Medium Term

Expanding micro-irrigation on ~112 ha (cumulative 40%) suitable agricultural land | Bunds on additional ~368 ha agricultural land (100%) | Additional farm ponds constructed as required | Transitioning ~184 ha (25%) to natural farming

Long Term

Expanding micro-irrigation on 84 ha (100%) suitable agricultural land | Maintenance of infrastructure | 100% transition to natural farming (~442ha)

Departments

Department of Agriculture | Centre for Integrated Pest Management (CIMP) | Department of Horticulture and Food Processing | 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, Mainpuri

Estimated Cost

Over ₹21 crores across three phases (Short term: ~₹3.6 crores | Medium term: ~₹5.7 crores | Long term: ~₹11 crores)

Management and Rejuvenation of Water Bodies

- Rainwater harvesting
- Rejuvenation of ponds
- Repair of wells
- Reboring & repair of handpumps
- Tree plantations
- Recharge pits
- Enhancing drainage infrastructure
- Wastewater management
- Capacity building

Short Term

Installation of RWH structures in all 18 PRI buildings | Rejuvenation of 12 ponds, ~1,000 trees planted around water bodies | Construction of recharge pits as required | 27 handpumps rebores & 90 handpumps repaired | Construction of 3.75 km drainage network | Cleaning of existing drains (8 km) | Village Water Security Plan preparation

Medium Term

Maintenance of ponds, drainage channels and other water related infrastructure | Installation of RWH structures in pucca households (837)

Long Term

Continued maintenance of water resources | Installation of RWH structures in pucca households (1,256)

Key Departments

Rural Development Department | Irrigation and Water Resources Department | Uttar Pradesh Department of Land Resource

Estimated Cost

Over ₹9.3 crores across three phases (Short Term: ~₹1.1 crores | Medium Term: ~₹3.3 crores | Long Term: ~₹4.3 crores)

Enhancing Green Spaces and Biodiversity

- Plantation of trees
- Agroforestry
- Arogya Van
- Establishing a nursery
- People's Biodiversity Register

Short Term

Plantation of 1,000 tree saplings | Sequestration potential (in 15-20 years): 10,000 tCO₂ | Establishing Arogya Van on 0.1 ha allocated land | Establishment of nursery

Medium Term

Plantation of 1,500 to 2,000 tree saplings | Sequestration potential (in 15-20 years): 17,500 tCO₂ | Adoption of agroforestry in ~60ha land | Sequestration potential (in 20 years): up to 60,000 tCO₂

Long Term

Additional 1,500 to 2,000 saplings planted | Sequestration potential (in 15-20 years): 17,500 tCO₂ | Adoption of agroforestry in ~90 ha land | Sequestration potential: 90,000 tCO₂ | Maintenance of nursery

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 ₹1.8 crores across three phases (Short term: ~₹14.7 lakhs | Medium term: ~₹73.4 lakhs | Long term: ~₹97.4 lakhs)

Sustainable Solid Waste Management

- Enhanced waste management infrastructure
- Vermicompost and Nadep pits
- Sanitation management
- Ban on single-use plastics

Short Term

Setting up segregation and storage facility | Installation of 14 bins | Procurement of 2 electric garbage van | Setting up of vermicompost (20) & Nadep pits (40) | Construction of toilets in 50 households | Engagement of 100-120 women for manufacturing plastic-alternative products (SHG alignment)

Medium and Long Term

Installation of additional waste bins | Maintenance of existing infrastructure | Construction of 1 community toilet | Scaling up partnerships | Regular awareness, training and capacity-building programs

Departments

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

Estimated Cost

Approx ₹22.5 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 | Replacing all diesel pumps (65) with solar pumps | 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 15 solar street lights or 10 high mast solar street light at key locations in GP | Solar potential: 180 kWp | Mitigation potential: 282 tCO_{2e} per year

Medium Term

Solar rooftop installation on 40% of pucca houses (837) | Agro-photovoltaic installed on 2 ha | Solarisation grid connected (20) electric pumps & any new pumps installed | Solar potential: ~2,174 kWp | Mitigation potential: ~2,388 tCO_{2e} per year

Long Term

Solar rooftop installation on 100% of pucca houses (1,256) | Agro-photovoltaic installed on 2 ha | Solarisation of any new pumps installed | Replacing all CFL light fixtures with LED tube lights/ bulbs; installation of EE fans across households | Solar potential: ~3,012 kWp | Mitigation potential: ~3,307 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 ₹28.5 crores across three phases (Short Term: ~₹2.9 crores | Medium Term: ~₹11.2 crores | Long Term: ~₹14.3 crores)

Sustainable and Enhanced Mobility

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

Short Term

Road works for 3.35 km (RCC/interlocking) | Introducing 15 e-auto rickshaws in the GP | Promoting adoption of 5 e-tractors and 5 e-goods carriers | Mitigation potential: 1.7 tCO₂e per e-auto-rickshaw

Medium Term and Long Term

More e-auto-rickshaws & e-tractors and e-goods carriers added as required | Maintenance of existing infrastructure | Expanding public transport (as required)

Departments

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

Estimated Cost

Over ₹2.4 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 | Involving 2 SHGs | Establishing partnerships between Panchayat, community members, FPOs for marketing and selling of compost | Training of community members

Medium Term

Expanding capacity building programmes to cover 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