



# CLIMATE SMART GRAM PANCHAYAT

## Summary of Recommendations

Unnao

Panapur Kala Gram Panchayat

Department of Environment,  
Forest and Climate Change  
Government of Uttar Pradesh





## Management and Rejuvenation of Water Bodies

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

### Short Term

Installation of RWH structures in all (4) PRI buildings | Construction of 15 recharge pits | Cleaning of 4 ponds | Cleaning and repairing of 10 wells | Reboring of 10 handpumps | Construction of new drains and the repair of existing ones | Installing siphons at strategic locations| Wastewater treatment through 1 DEWAT (300 KLD capacity) | Village Water Security Plan preparation

### Medium Term

Installation of RWH structures in 69 households | Construction of 15 additional recharge pits | Regular maintenance of ponds, wells, drainage channels, and other water-related infrastructure

### Long Term

Installation of RWH structures in 105 households | Continued maintenance of water resources

### Key Departments

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

### Estimated Cost

Over ₹3.7 crores over three phases (Short Term: ~₹2.5 crores | Medium Term: ~₹55 lakhs | Long Term: ~₹63 lakhs)

## Sustainable Agriculture

- Micro-irrigation
- Bunds
- Farm ponds
- Transition to natural farming
- Integrated pest management
- Adoption of drought tolerant variety of rice
- Need-based nutrient management in crops
- Sustainable livestock management

### Short Term

Introduction of micro-irrigation on ~34 ha | Bund construction with trees around ~90.4 ha | Construction of 5 farm ponds | Transitioning 27 ha (15%) of agricultural land to natural farming

### Medium Term

Bund construction with trees around ~90.4 ha (100%) | Additional farm ponds | Transitioning 45 ha (additional 25%) to natural farming

### Long Term

Maintenance of infrastructure| 100% transition to natural farming (109 ha)

### 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, Unnao

### Estimated Cost

Over ₹4.9 crore across three phases (Short term: ~₹1 crore | Medium term: ~₹1.1 crore| Long term: ~₹2.6 crores)

## Sustainable Solid Waste Management

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

### Short Term

Setting up segregation and storage facility | Installation of 20 bins | Procurement of 1 electric garbage van |Setting up of 30 NADEP compost pits and 15 vermicompost pits | Construction of twin-pit toilets in 14 households | Engagement of 100-120 women for manufacturing plastic-alternative products (SHG alignment)

### Medium and Long Term

Installation of additional waste bins | Construction of toilets in all new houses | Maintenance of existing infrastructure | 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

~₹16 lakhs over three phases

## Enhancing Green Spaces and Biodiversity

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

### Short Term

Plantation of 2,000 tree saplings | Sequestration potential (in 15-20 years): up to 20,000 tCO<sub>2</sub> | Establishing Arogya Van on 0.1 ha of allocated land

### Medium Term

Plantation of 2,000 to 2,500 tree saplings | Adoption of agroforestry in ~70.5 ha land (7,050 trees planted) | Sequestration potential (in 15-20 years): up to 95,500 tCO<sub>2</sub>

### Long Term

Additional 2,500 to 3,000 saplings planted | Adoption of agroforestry in ~105.8 ha land (10,580 trees planted) | Sequestration potential (in 15-20 years): up to 1,35,800 tCO<sub>2</sub>

### 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 ₹1.6 crores across three phases (Short term: ~₹25 lakhs | Medium term: ~₹59 lakhs | Long term: ~₹80 lakhs)

## 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 | 25 diesel pumps replaced with solar pumps | 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 50 solar street lights and 5 high-mast solar LED streetlights at key locations in GP | Solar potential: ~188 kWp | Mitigation potential: ~80 tCO<sub>2e</sub> per year

### Medium Term

Solar rooftop installation on 40% of pucca houses (220) | Agro-photovoltaic installed on 2 ha | Purchase of all new pumps to be solar-powered | Installation of 50 solar street lights and 5 high-mast solar LED streetlights at key locations in GP | Solar potential: ~1,160 kWp | Mitigation potential: ~1,274 tCO<sub>2e</sub> per year

### Long Term

Solar rooftop installation on 100% of pucca houses (329) | Agro-photovoltaic installed on 2 ha | Replacing all CFL light fixtures with LED tube lights/ bulbs; installation of EE fans across households | Solar potential: ~1,487 kWp | Mitigation potential: ~1,632 tCO<sub>2e</sub> per year

## Departments

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

## Estimated Cost

Over ₹17 crores across three phases (Short Term: ~₹1.1 crores | Medium Term: ~₹7.4 crores | Long Term: ~₹8.5 crores)

## Sustainable and Enhanced Mobility

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

### Short Term

Road elevation work (~800 m) | Replacing 2 autorickshaws with e-autorickshaws | Promoting the adoption of 5 e-tractors and 5 e-goods carriers

### Medium Term and Long Term

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 ₹2.2 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 12 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 200 more women and other groups as per need and enhancing marketing of products and services | Setting up of cold storage (5-10 MT capacity)

### 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**