



CLIMATE SMART GRAM PANCHAYAT

SUMMARY OF RECOMMENDATIONS

Bhainsa Gram Panchayat

Department of Environment,
Forest and Climate Change

Government of Uttar Pradesh



Mathura





Sustainable Agriculture

- Micro-irrigation
- Farm ponds
- Transition to natural farming
- Sustainable livestock management

Short Term

Introduction of micro-irrigation on 139 ha (50%) | Construction of bunds on 231.5 ha (50%) of agricultural land | Construction of farm ponds (as required) | Transitioning ~70 ha (15%) of agricultural land to natural farming

Medium Term

Expanding micro-irrigation on 139 ha (100%) of agricultural land | Construction of bunds on 231.5 ha (100%) of agricultural land | Transitioning 115 ha (additional 25%) to natural farming

Long Term

Maintenance of infrastructure | 100% transition to natural farming (~278 ha)

Key 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, Mathura

Estimated Cost

Over ₹14 crores across three phases (Short term: ~₹3 crores | Medium term: ~ ₹4 crores | Long term: ~₹7 crores)

Management and Rejuvenation of Water Bodies

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

Short Term

Installation of RWH structures in all (10) PRI buildings | Rejuvenation of 4 ponds, ~1,000 trees planted around water bodies | Repair of 10 wells | Construction of 2 retention ponds | 5 recharge pits constructed | Construction of 1.8 km drainage network & cleaning of existing drains

Medium Term

Maintenance of ponds, wells and drainage network | Installation of RWH structures in 150 households

Long Term

Continued maintenance of water resources | Installation of RWH structures in 250 households

Departments

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

Estimated Cost

Over ₹2.6 crores over 3 phases (Short Term: ~₹93.2 lakhs | Medium Term: ~₹68 lakhs | Long Term: ~₹1 crore)

Enhancing Green Spaces and Biodiversity

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

Short Term

Plantation of 1,500 tree saplings | Sequestration potential: up to 15,000 tCO₂ (in 15-20 years) | Establishing Arogya Van on 0.1 ha allocated land

Medium Term

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

Long Term

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

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 ₹1.1 crores across three phases (Short term: ~₹44 lakhs | Medium term: ~₹33 lakhs | Long term: ~₹40 lakhs)

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 500 bins | Procurement of 2 electric garbage vans | Setting up of compost pits | Construction of toilets in all new houses constructed | Engagement of 100-120 women for manufacturing plastic-alternative products (SHG alignment)

Medium Term

Installation of additional 50 waste bins and maintenance of existing infrastructure | Scaling up partnerships | Regular awareness, training and capacity-building programs | Installation of plastic shredder unit based on requirement

Long Term

Continued maintenance of water resources | Installation of RWH structures in 250 households

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 ₹48 lakhs across three phases (Short Term: ~₹47 lakhs | Medium Term: ~₹1 lakh)

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 30 diesel pumps 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 100 solar street lights and 5 solar high mast solar lights at key locations in GP | Solar potential: 90 kWp | Mitigation potential: ~131 tCO₂e per year

Medium Term

Solar rooftop installation on 40% of pucca houses (280) | Agro-photovoltaic installed on 2 ha | 45 diesel pumps replaced with solar pumps | Installation of additional 100 solar street lights | Solar potential: 1,340 kWp | Mitigation potential: ~1,519 tCO₂e per year

Long Term

Solar rooftop installation on 100% of pucca houses (420) | Agro-photovoltaic installed on 2 ha | 75 diesel pumps replaced with solar pumps | Replacing all CFL light fixtures with LED tube lights/ bulbs; installation of EE fans across households | Solar potential: 1,760 kWp | Mitigation potential: ~2,011 tCO₂e 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 ₹22 crores across three phases (Short term: ~₹ 2 crores | Medium term: ~₹9 crores | Long term: ~₹11 crores)

Sustainable and Enhanced Mobility

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

Short Term

Repairing and maintenance of road infrastructure | Replacing 5 CNG autos with e-auto-rickshaws in the GP | Promoting adoption of 3 e-tractors and 3 e-goods carriers | Mitigation potential: 1.7 tCO₂e per e-auto-rickshaw

Medium Term and Long Term

Maintenance of existing infrastructure | Addition of 10 more e-auto-rickshaws & 3 e-tractors and 3 e-goods | 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 ₹2.3 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 14 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