

STATE ACTION PLAN ON CLIMATE CHANGE

1. Meghalaya has a fragile eco-system. It has one of the wettest places in the world. The average rainfall at Cherrapunjee during the last 35 years has been 11,952 mm (470 ins) and there were several years when it was substantially more than this. However, in the last few years since 2005-06, it has shown a declining trend. Experts attribute this to the phenomenon of global warming and deforestation. However, short duration heavy rainfall and unprecedented variations in temperature and climate pose a potential destructive effect on the agriculture, the mainstay vocation in the State. Meghalaya's rich natural resources, high potential in horticulture that can have temperate, tropical and sub-tropical fruits and vegetables and its fodder plains including tea bushes are highly sensitive to climate change. Government of Meghalaya has understood the importance of climate change issue and its impact on growth, development and poverty reduction, and has decided to formulate a Climate Change Action Plan (CCAP) for the state.

2. The main objective of Climate Change Action Plan is to strategize adaptation and mitigation initiative towards emission stabilization and enhance the resilience of the ecosystem. This exercise helps serving as a platform to take the climate change agenda of the State forward, which in future could be a combination of advocacy, knowledge deepening, policy analysis, operational work and strengthening participatory governance. However, there is also the need for putting forward actions where public investment would be needed to make the State and community more climate resilient.

3. The preparation of the State CCAP is being spearheaded by the Planning Department. The German Technical Cooperation, GIZ (previously GTZ) have assigned a management consulting firm, CTRAN Consulting Ltd to facilitate the preparation of the State CCAP for Meghalaya. Nine sectoral working groups were formed, namely, **Forests and Biodiversity, Water Resources, Sustainable Agriculture, Sustainable Habitat/ Urban, Energy, Mining, Crosscutting areas and Climate Change Adaptation Project, Knowledge Management and Skill Development, Improving Governance** in context of Climate Change Adaptation. The working groups have held intensive deliberations over the past two months in

order to formulate key priority action points for adaptation and mitigation. The deliberations have been completed and the Government expects to come up with the first draft of the CCAP, that would be webhosted and circulated to invite comments. District level stakeholder consultations would be conducted in early March to involve civil society stakeholders in the process, and the final version of the CCAP is expected to be submitted to the Ministry of Environment and Forests, Government of India, within the month of March 2011.

4. Besides, several adaptation and mitigation activities that have been identified as urgent necessary actions under the preliminary findings from the working group deliberations are being taken into consideration during the preparation of the State Plan for the upcoming financial year.

5. Understanding the importance and urgency of climate change issues and its impact on growth, development and poverty reduction, the State of Meghalaya has established a Climate Cell led by the Planning Department to address issues and activities for combating the effects of climate change. In order to have policy convergence, the State is now in the process of formalizing the **Meghalaya State Council on Climate Change and Sustainable Development (MSCC&SD)** under the Chairmanship of the Chief Minister, as well as a **Steering Committee on Climate Change** chaired by the Chief Secretary that would coordinate the State Action Plan for assessment, adaptation and mitigation of climate change.

6. The Climate Change Action Plan for the State lays special emphasis on research studies and surveys towards generation of data for understanding the local climatic pattern, vulnerabilities, impacts and possible mitigative and adaptive solutions in vulnerable areas. The baseline data generated from these activities, along with capacity building initiatives across the board would pave the way for implementation of solutions to deal with the impending climatic stress on natural ecosystems. Crucial elements of the action plan have been incorporated into the State Annual Plan for 2011-12 to provide an immediate impetus to the cause. Strategies suggested under various sectors of interest can broadly be classified as adaptation, mitigation and/or both.

7. The annual plan includes action measures for protection and conservation of biodiversity through identification and mapping of existing biodiversity hotspots, preparation of micro-plans for conservation, use of Reduce Emission from Deforestation and Degradation (REDD & REDD+) assessment to account for positive contribution of the state forest cover as a carbon sink, improvement of existing forest cover and eco-restoration of degraded wastelands by plantation activities. The plan also includes mapping studies, training and promotion of non-timber based forest based products by building market linkages. Safeguarding elephant corridors and reduction of man-animal conflict also finds a place in the key priorities. Participatory research and community mobilisation form important tools towards achieving these objectives.

8. The State's agrarian population is envisaged as a highly vulnerable group to the changing weather patterns, unpredictable floods and dry spells as well as soil and water contamination from acid mine drainage in mining areas. Intensive research and pilot studies on stress tolerant varieties of crops, promotion of low volume high value crops, optimisation of Jhum through improved measures such as contour bunding, documentation of traditional adaptation practices, soil and water conservation, rainwater harvesting for irrigation, treatment of catchment areas, vaccination programmes for control of vector-borne diseases and widespread capacity building of farmers on sustainable agricultural practices are the key priorities that will be addressed in this context.

9. To ensure judicious use of water in the State in a way that safeguards the natural environment, establishment of a State water use policy has been accorded prime importance. Studies on water budgeting, water scarcity and assessment and maintenance of water quality, etc. would be taken up to enable formulation of an integrated water resource management policy. This policy would ensure efficiency of water use and incorporate polluters pays principle to ensure prevention of water pollution. Integrated river basin management would be taken up under the proposed State River Basin Authority. Traditional water conservation methods would be revisited and propagated, alongside restoration of existing water bodies and monitoring of surface and ground water quality.

10. To provide for unforeseen climatic extremes such as floods and prevent contamination of water streams due to flooding, the plan emphasizes the need to incorporate climate change considerations in design and planning of water supply and sewage infrastructure. Environmental and emission profiling of major cities and towns will be conducted to generate primary data, establish benchmarks and enable monitoring of the environmental health of urban areas on a regular basis. Mitigation measures addressed include improvement of solid and liquid waste management systems to eliminate the impacts of methane emissions from waste streams, promotion of rainwater harvesting, solar water heating, and other energy and water conservation measures in city infrastructure and control of vehicular pollution through policy enforcement.

11. Considering the negative impacts of mining on the environment, sustainable mitigation actions to check unscientific mining, improving mining operations based on environment management plans, protection of water bodies around mining areas, eco-restoration of abandoned mining areas, strengthening of environmental regulations to prevent ecological degradation from mining activities, have been addressed as priority actions.

12. Increasing energy efficiency and promoting renewable energy are the two broad initiatives to be closely followed by the State for mitigation of emissions from the energy sector. Detailed measures planned for promotion of renewable energy include vulnerability assessment studies and life cycle analysis for performance monitoring of existing hydropower projects, plans for establishing micro and mini hydel plants through public private partnerships, promoting solar power and wind power, among other options. On the energy efficiency side, key activities proposed include strengthening of energy efficiency cell, energy audit programmes in major public buildings, introducing demand side management and improvement of transmission and distribution system to reduce losses and widespread technical training of personnel as well as user level awareness creation to ensure the desired impact of these programmes.

13. Prior to embarking on an adaptative or mitigative response, it is important to understand the extent of climate change indicators, vulnerabilities, positive and

negative contributions of the State to global warming through studies and to document past data that would enable modeling for future projections. To facilitate climate related data generation, it has been proposed to set up a State Meteorological Department and establish cluster level automatic weather monitoring stations to record local climatic data. The plan includes an assessment exercise to identify the vulnerable communities, promotion of alternative livelihoods especially for vulnerable agrarian communities to decrease their sole reliance on agriculture for sustenance in adverse conditions. Improved enforcement of existing regulations pertaining to pollution control abatement, creation of new policies and incorporation of climatic considerations in the existing policies, improved governance through restructuring and strengthening of government departments and agencies, ensuring community involvement through a participatory approach and widespread capacity building of all stakeholders have been identified as overall priorities that are quintessential for realizing the objectives of the climate change action plan.

14. The State Climate Change Action Plan document will serve as a strategic perspective plan. This annual plan highlights the broad contours of the content of the State Climate Change Action Plan document. The State Planning Department will map the sectors in consultation with the technical experts and line Departments to prioritize relevant programmes that have a positive impact on the local climate, de-risk livelihood and make the economy more resilient and sustainable. Planning Department will engage with Central Government and external aid agencies to mobilise additional resources to see that proposed actions are implemented, monitored and documented.

15. **A tentative outlay of Rs. 100.00 lakh is proposed during the Annual Plan, 2011-2012 for the Climate Cell,** so that preparatory work could start in different sectors, specific to climatic actions, in mobilising additional resources.