

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 2328
TO BE ANSWERED ON 18.12.2023

Loss due to Climate Change

2328. SHRIMATI DELKAR KALABEN MOHANBHAI:
SHRI MALOOK NAGAR:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) Whether the country is witnessing critical climate change, devastating flood and loss of lives;
- (b) If so, the details thereof;
- (c) the details of loss of life and property during the last three years, State-wise and the year-wise;
- (d) whether the country has faced financial deficit because of the climate change;
- (e) If so, the details thereof; and
- (f) The details of remedial steps taken or proposed to be taken by the Government in this regard?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ASHWINI KUMAR CHOUBEY)

(a) to (e) Observations indicate that incidences of extreme weather conditions have increased across the globe including India in the recent decades. However, there is no established study for India providing a quantified contribution of climate change triggering natural disasters. The changes as observed may rise from a number of causes, including the inherent variability in climatic systems that are common in the biosphere and geosphere. While many studies monitor disasters such as drought, floods and breaking of glaciers, the science of attribution of these changes particularly to climate change is far more complex and currently an evolving subject.

Towards the fulfilment of reporting obligations under the United Nations Framework Convention on Climate Change (UNFCCC), India has submitted its Third National Communication report based on GHG inventory of 2019. The report highlights the national circumstances on climate change and its impacts which interalia mentions that extreme precipitation and flooding events have affected several parts of India in recent years (2020 and 2021). These floods were caused by heavy precipitation, as well as events such as glacier breaks and flash floods, and avalanches. These events caused the loss of lives, massive damage to crops, public infrastructure, and private property across several districts in India.

As per the information received from National Disaster Management Authority (NDMA), no centralized data on loss of life and property due to extreme weather conditions in the states/ union territories is maintained. Each state has its own State Disaster Management Authority to deal with such events.

(f) Flood management control falls within the purview of the States. Flood management projects are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas. Flood management measures are broadly categorized as Structural Measures and Non-Structural Measures. Integrated flood approach aims at adopting judicious mix of structural and non-structural measures to provide a reasonable degree of protection against flood damages at economic cost.

Further, few additional measures undertaken by Government are as follows:

- i. Central Water Commission (CWC) is the nodal Organisation entrusted with the task of flood forecasting & early flood warnings in the country. Presently, CWC issues flood forecasts for 338 forecasting stations (200 river level forecast stations & 138 dam/ barrage inflow forecast stations). These stations cover 20 major river basins in 23 States & 2 Union Territories. In order to provide more lead time to the local authorities to plan evacuation of people & take other remedial measures, Central Water Commission (CWC) has developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 5 days advance flood forecast advisory at its forecasting stations.
- ii. India Meteorological Department, Ministry of Earth Sciences in collaboration with Indian Council of Agriculture Research (ICAR) and other institutions is rendering District/Block level Agrometeorological Advisory Services (AAS) for the benefits of farmers in the country under the scheme “Gramin Krishi Mausam Sewa (GKMS)”. The main emphasis of the existing AAS system is to collect and organize climate/weather, soil and crop information, and to amalgamate them with weather forecast to assist farmers to take decisions on day-to-day farm operations, which can further optimize the application of input resources at farm level during deficient rainfall situation and extreme weather events to reduce monetary loss and to maximize crop yield.
- iii. Rainfed Area Development (RAD) Programme under National Mission for Sustainable Agriculture (NMSA) focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variability. Under this system, crops/cropping system is integrated with activities like horticulture, livestock, fishery, agro-forestry, apiculture etc. to enable farmers not only in maximizing farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events.
- iv. Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and promotional financial assistance for management of floods in critical areas.
- v. Guidelines have been prepared by the National Disaster Management Authority to enable the various implementers and stakeholder agencies to address effectively the critical areas for minimising flood damages.

- vi. National Disaster Management Plan (NDMP) has been formulated to assist all stakeholders including State Governments in disaster risk management of various hazards including hazards related to climate change.
- vii. Indian Council of Agricultural Research (ICAR), Ministry of Agriculture and Farmers Welfare has launched a flagship network project namely National Innovations in Climate Resilient Agriculture (NICRA). The project aims to develop and promote climate resilient agriculture to address vulnerable areas of the country and help the districts and regions to cope up with extreme weather conditions like droughts, floods, frost, heat waves, etc.
- viii. Government of India has implemented Integrated Coastal Zone Management project (ICZMP) that has contributed, inter-alia, mapping of hazard line, Ecosensitive Area, Sediment cell for the entire coastline of India. This line is required to be used by the Coastal State agencies concerned as a tool for Disaster Management for the coastal environment, including planning of adaptive and mitigation measures.
