GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 1230
TO BE ANSWERED ON 11.12.2023

Impact of Climate Change

1230. DR. VISHNU PRASAD M. K.:

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

(a) whether devastating landslides, mud slides and unprecedented floods in various States are the reasons of unplanned infrastructure projects in the country;
(b) if so, the details thereof;
(c) whether the climate change is the main cause of extreme weather conditions in various parts of the country including Tamil Nadu; and
(d) if so, the details thereof?

ANSWER

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

(a) to (d) There are multiple geo-factors for initiation of landslides such as terrain character, slope forming material, geomorphology, land-use/land cover in different terrain etc. The anthropogenic causes such as unprotected slope cuts, blocking of drainages etc. have also been reported in many of the slides. Further, the Ministry has delineated a detailed procedure for comprehensive assessment of environmental and social impacts of the projects in the Environment Impact Assessment (EIA) Notification, 2006, as amended; which inter-alia provides for four stages of consideration process i.e., Screening, Scoping, Public Consultation and Appraisal by the Expert Appraisal Committee (EAC), for assessment of environmental and social impacts taking into account the location of the project and also for monitoring of projects.

Study of the aforesaid and other related factors in the context of specific infrastructure projects forms the basis for preparation of the Environmental Impact Assessment/Environmental Management Plan (EIA/EMP). The EAC comprising of domain area experts, after detailed examination and deliberations on various environmental and social aspects of the project including appraisal of the studies/information related to seismology, geological profile, study of landslide prone areas, risk analysis studies, recommends the project for grant of Environmental Clearance by suggesting suitable mitigative measures to minimize the environmental and social impacts associated with the project. It is only after such detailed study and analysis, Environmental Clearances are issued subject to compliance of necessary environmental safeguards by the Project Proponent during construction and operation of the project.

Geological Survey of India (GSI) has launched a program called National Landslide Susceptibility Mapping (NLSM) to prepare landslide inventory and landslide susceptibility map on a 1:50,000 scale in a seamless manner for 4.34 lakh sq. km area prone to landslides. The landslide susceptibility map categorizes the landmass into three zones – "High", "Moderate", and "Low" based on the degree of likelihood of future landslide initiation in an area under natural conditions. GSI has completed the preparation of the baseline landslide susceptibility map of the above-mentioned area. Besides, GSI has been carrying out 1:10,000 scale landslide susceptibility mapping of critical sectors and detailed site-specific landslide investigations on a 1:1000 scale mostly as per the requests of the concerned State Governments, and other stakeholders.

As per Ministry of Earth Sciences, various parts of the country have witnessed increasing extreme weather events in the backdrop of global warming. Complex interactions between the earth system components amidst the warming environment and regional anthropogenic influences have led to a rise in frequency of localized heavy rainfall events, drought and flood occurrences, increase in the intensity of tropical cyclones etc. Studies have reported significant rising trends in the frequency and the magnitude of extreme rainfall across India including Tamil Nadu. Changing monsoon pattern and occurrences of extremes have affected various parts of the country. Regions which are more prone to such events in the changing climate include Central India, northern Indian regions and Western Himalayas (extreme precipitation), and north, northwest India and neighbouring Central India (moderate droughts and expansion in semiarid regions) and coastal states (cyclones and heatwaves).

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