

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 4130
TO BE ANSWERED ON 18.08.2025

Effects of Cutting of Forests on the Environment

4130. SHRI SANATAN PANDEY:

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

- (a) whether several researches have shown that due to continuous cutting and destruction of forests, carbon dioxide is being emitted in large quantities in the environment resulting in the depletion of ozone layer;
- (b) the action-plan of the Government in view of the threat to various cities of the country due to global warming resulting in melting of glaciers and continuous rise in sea level;
- (c) the details of the reduction in the size of glaciers in the Himalayan region during the last five years; and
- (d) whether a number of animals are becoming extinct due to continuous cutting and destruction of forests?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) No, the Government is not aware of any research studies which indicate impact of Carbon dioxide on depletion of the Ozone layer. Carbon dioxide is not an Ozone Depleting Substance (ODS) and its emissions have no proven impact on the stratospheric ozone layer depletion.

(b) The Government is implementing the National Action Plan on Climate Change (NAPCC), which is the overarching policy framework and comprises of national missions in specific areas of solar energy, enhanced energy efficiency, water, agriculture, Himalayan ecosystem, sustainable habitat, green India, human health and strategic knowledge on climate change. Further, 34 States/Union Territories have prepared State Action Plan on Climate Change (SAPCCs) consistent with the objectives of NAPCC.

The institutional and regulatory framework in the context of planning, preparedness, relief, recovery and rehabilitation due to disasters including weather related disasters have been put in place under the relevant provisions of Disaster Management Act, 2005. The National Disaster

Management Authority (NDMA) has issued several disaster specific guidelines for managing extreme weather-related disasters including cyclones, floods and heat waves.

Government of India has implemented Integrated Coastal Zone Management project (ICZMP) that has contributed to, inter-alia, mapping of hazard line, Eco-Sensitive Areas, Sediment cells for the entire coastline of India. This hazard line is used by the Coastal State agencies concerned as a tool for Disaster Management for the coastal environment, including planning of adaptation and mitigation measures.

Further, as per information received from the Department of Science and Technology (DST), it is implementing two national missions- National Mission for Sustaining the Himalayan Ecosystem (NMSHE) and National Mission on Strategic knowledge for Climate Change (NMSKCC), and financial support for climate research is provided under these Missions to various academic and research institutions across the country. The Wadia Institute of Himalayan Geology (WIHG), Dehradun, under the Department of Science and Technology (DST), is undertaking systematic and long-term monitoring of 13 representative glaciers across different climatic and geographic zones of the Indian Himalaya. This monitoring integrates satellite-based remote sensing data with in-situ field measurements to assess glacier mass balance, snout retreat, surface velocity, and associated hydrological parameters.

(c) Several Indian institutes/universities/organizations funded by the Government of India through Ministry of Earth Sciences (MoES), Department of Science & Technology (DST), Ministry of Environment Forest and Climate Change (MoEFCC), Ministry of Mines (MoM) and Ministry of Jal Shakti (MoJS) monitor Himalayan glaciers for various scientific studies including glacier melting and have reported accelerated heterogeneous mass loss in Himalayan glaciers. As per Ministry of Earth Sciences, the mean retreat rate of Hindu Kush Himalayan glaciers is 14.9 ± 15.1 meter/annum (m/a); which varies from 12.7 ± 13.2 m/a in Indus, 15.5 ± 14.4 m/a in Ganga and 20.2 ± 19.7 m/a in Brahmaputra River basins. However, glaciers in the Karakoram region have shown comparatively minor length change (-1.37 ± 22.8 m/a). Based on field measurement of glaciers from 1975 to 2023, the cumulative mass loss of Indian Himalayan glaciers is estimated at -26 metres water equivalent.

MoES through its autonomous institute, the National Centre for Polar and Ocean Research (NCPOR) has been monitoring six glaciers in the Chandra basin (2437 km² area) in western Himalaya since 2013. A state-of-the-art field research station 'Himansh' established in Chandra basin and operational since 2016 for conducting field experiment and expeditions to glaciers. The glacier inventory prepared by NCPOR for the Chandra basin shows that it has lost about 6% of its glacial area during last 20 years. Annual rate of retreat of Chandra basin glaciers varies from 13 to 33 meter/year during last decade. Based on the energy balance model, the estimated mean annual mass balance of the upper Chandra Basin glaciers is -0.51 ± 0.28 metres water equivalent per annum, with a cumulative mass balance of -3.54 metres water equivalent from 2015 to 2022.

(d) Cutting and destruction of forests affects many wild animals including habitat destruction, increased risk of predation and reduced food availability.
