

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 1950**  
TO BE ANSWERED ON 29.11.2019

**Death of Marine Life due to Climate Change**

1950. SHRI DIBYENDU ADHIKARI:

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

- (a) whether the Intergovernmental Panel on Climate Change (IPCC) has warned of a widespread death of marine life including residents of incidence of coastal areas and a recurring destructive cyclones in the coming years;
- (b) if so, the details thereof;
- (c) whether melting of Himalayan ice and glaciers would affect renewable supplies of fresh water; and
- (d) if so, the details thereof and the action taken and the time bound proposal of the Government to balance the normal ecosystem of the country and adjoining ocean areas?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**  
**(SHRI BABUL SUPRIYO)**

(a) and (b) No, Sir. According to the Special Report on 'The Ocean and Cryosphere in a Changing Climate' released in September 2019 by the Intergovernmental Panel on Climate Change (IPCC), since about 1950 many marine species across various groups have undergone shifts in geographical range and seasonal activities in response to ocean warming, sea ice change and biogeochemical changes, such as oxygen loss, to their habitats. This has resulted in shifts in species composition, abundance and biomass production of ecosystems, from the equator to the poles. However, in some marine ecosystems species are impacted by both the effects of fishing and climate changes.

(c) The Geological Survey of India (GSI) carries out an assessment of glacier mass balance and monitoring of change in glacier length using ground-based glaciological techniques in the parts of Indus Catchment in the Indian Himalayan Region. During 1974-75 to 2018-19 period, the assessment of glacier mass balance on six glaciers, viz. Neh Nar, Rulung (Jammu & Kashmir); Gara, Gor Garang, Shaune Garang and Hamtah (Himachal Pradesh) have been undertaken. The studies have revealed overall negative average annual specific balance ranging from 0.11 to 1.47 metre water equivalent indicative of a considerable mass wastage of

Himalayan glaciers. In addition, monitoring of 68 glaciers during the last hundred years or so, have revealed that the majority of Himalayan glaciers are passing through a phase of recession, which is a worldwide phenomenon. The retreat of the glaciers is continuing but there has not been any alarming change in the rate of retreat of the glaciers during the last couple of decades. Some long-term data, however, do suggest a higher rate of recession after 1950s.

Further, according to GSI the water availability in a glacier fed river basin, is dependent on glacier melting, seasonal snow-melt, the amount of rainfall and the release of ground water. Of these, glacier melting is a major factor only in the upper most reaches of the mountains.

(d) The government is implementing the National Action Plan on Climate Change (NAPCC) with a view to enhancing the ecological sustainability of India's development path and address climate change in all regions of the country. NAPCC comprises, inter alia, of eight National Missions including National Mission for Sustaining the Himalayan Eco-system (NMSHE). NMSHE is aimed at evolving management measures for sustaining and safeguarding the Himalayan glaciers and mountain ecosystem. The mission includes enhanced monitoring of the Himalayan ecosystem through establishment of the monitoring network, promoting community-based management, human resource development and strengthening regional cooperation. The Government has prepared guidelines entitled "Governance for Sustaining Himalayan Ecosystem", (G-SHE), which has been shared with all the State Governments in the Himalayan region. All Himalayan States have also prepared their respective State Action Plan on Climate Change to address the state-specific issues.

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