

**GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
LOK SABHA  
UNSTARRED QUESTION NO.5602  
TO BE ANSWERED ON 26/7/2019**

**IMPACT OF CLIMATE CHANGE ON GLACIERS**

**5602. SHRI JAMYANG TSERING NAMGYAL:**

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री be pleased to state:

- (a) whether the Himalayas are witnessing the impact of the climate change and global warming at a rapid pace and if so, the details thereof;
- (b) whether the Government is aware that crop fields in the Himalayan region are glacier fed and that the receding snow fall and glaciers causes scarcity of water in such areas especially Ladakh and if so, the details thereof;
- (c) whether various Glaciologists working on Himalayas are reporting a pattern of receding glaciers and if so, the details thereof; and
- (d) whether the receding Glaciers will impact the livelihood of people and if so, the details thereof and the efforts taken by the Government to save these glaciers?

**ANSWER**

**MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES  
(DR. HARSH VARDHAN)**

**स्वास्थ्य और परिवार कल्याण मंत्री, विज्ञान और प्रौद्योगिकी मंत्री, और पृथ्वी विज्ञान मंत्री**

**डॉ. हर्ष वर्धन**

- (a) Yes Sir, the Himalayas are witnessing the impact of the climate change and Global Warming in terms of increase in surface temperatures, decrease in the frequency of cold spells, increase in the intensity and frequency of extreme events, etc. in recent years.
- (b) Yes Sir, Government is aware that some of the crop fields in the Indian Himalyan Region are snow and glacier fed. However, as of now, water availability, especially in the Indus basin, of which Ladakh is a part, may be adequate to fulfill the current water requirement for crops and has so far not adversely impacted the crops fields.
- (c) The mass balance studies conducted for some Himalayan glaciers revealed that majority of Himalayan glaciers are receding or retreating at varying rates because of various reasons including climate change. However, no abnormal trend in recession of glaciers has been observed. The studies have also shown that large glaciers with an area of more than 10 km<sup>2</sup> are less likely to get affected appreciably in near future. However, small glaciers of area less than 2 km<sup>2</sup> may undergo rapid changes.
- (d) The Recession of glaciers is likely to affect the livelihood of the people dependent on water from glaciers in the Himalaya. Government is aware of the emerging scenario and has been taking necessary steps in terms of climate change mitigation and adaptation measures to minimize the adverse impact of climate change.

\*\*\*\*\*