

# What are Geo Hazards and how are they managed?

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## In news

The Ministry of Road Transport and Highways (MoRTH) entered into a pact with the Defence Research and Development Organisation (DRDO) to strengthen cooperation in the sustainable geo-hazard management

## Key highlights

- According to the Ministry, It has been agreed that MoRTH and DRDO will cooperate in the areas of mutual benefit, including conceptual planning of integrated avalanche/landslide protection schemes or all-weather connectivity in snow-bound areas of our country including pre-feasibility of tunnels and viaducts
- They will also cooperate in planning and designing of various avalanche and landslide control structures, and association in preparation of proposals and detailed project reports for tunnels.
- This initiative will ensure safety of road users on national highways (NHs) in the country against the adverse effects of landslides and other natural calamities.
- The Defence Geo Informatics Research Establishment (DGRE), a DRDO laboratory, is a leading entity in the development of critical technologies for enhancing combat effectiveness with focus on terrains and avalanches.
- Its role and charter include mapping, forecasting, monitoring, controlling and mitigating landslides and avalanches in the Himalayan terrain.
- It has been agreed by both the organisations to utilise

the expertise of DRDO (through DGRE) in providing sustainable mitigation measures to damages caused by landslides, avalanche and other natural factors on various NHs in the country.

### **What are Geohazards?**

- A geohazard is a geological state that may lead to widespread damage or risk. Geohazards are geological and environmental conditions and involve long-term or short-term geological processes.
- Geohazards include earthquakes, volcanic activity, landslides, tsunamis, etc. and can range from local events such as a rock slide or coastal erosion to events that threaten humankind such as a supervolcano or meteorite impact

### **How Geo-Hazards are they managed?**

The best geologic mitigation strategy is always avoidance. When avoiding a hazard is not possible however, mitigation strategies must be developed to coexist (mitigate) with the hazard.

Earth scientists undertake research to better understand these hazards and contribute to risk management policies related to social and technical issues associated with geohazards as well as disaster mitigation.

### **UNESCO work on Geohazard Risk Reduction**

UNESCO's work on Geohazard Risk Reduction operates in accordance with the four Priorities for Action of the Sendai Framework for Disaster Risk Reduction 2015-2030:

- Priority 1: Understanding disaster risk
- Priority 2: Strengthening disaster risk governance to manage disaster risk
- Priority 3: Investing in disaster risk reduction for

resilience

- Priority 4: Enhancing disaster preparedness for effective response and to Build Back Better in recovery, rehabilitation and reconstruction.