



## Early Warning System in Himalayan Region

**For Prelims:** Earthquakes, Sendai Framework (2015-2030), Floods, Rockslides, Avalanches, Tsunami, Drought, Disaster Management.

**For Mains:** Early Warning Systems and its Significance.

### Why in News?

Recently, the National Geophysical Research Institute (NGRI) of the Council of Scientific and Industrial Research (CSIR) has begun field studies to put in place an [Early-Warning System](#) in **the Himalayan states against major and sudden floods, rockslides, landslips, glacier lake bursts and avalanches.**

### What are the Early Warning Systems?

- **Early Warning System is an integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment,** communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.
- It helps **reducing harm to people and damage to assets ahead of impending hazards,** including [storms](#), [tsunamis](#), [droughts](#), and heatwaves, to name a few.
- Multi-hazard early warning systems **address several hazards that may occur alone or simultaneously.**
  - Increasing the availability of multi-hazard early warning systems and disaster risk information is one of seven global targets set by the [Sendai Framework for Disaster Risk Reduction 2015-2030](#).

### What are India's Efforts in Managing Disaster?

- **Establishment of NDRF:**
  - India has increasingly mitigated and responded to all types of disasters, including with the establishment of its [National Disaster Reaction Force \(NDRF\)](#), the world's largest rapid reaction force dedicated to disaster response.
- **Establishment of NDMA:**
  - The [National Disaster Management Authority \(NDMA\)](#), headed by the Prime Minister of India, is the apex body for Disaster Management in India. Setting up of NDMA and the creation of an enabling environment for institutional mechanisms at the State and District levels is mandated by the **Disaster Management Act, 2005**.
  - It lays down policies on disaster management
- **India's Role as a Foreign Disaster Relief:**
  - India's foreign humanitarian assistance has increasingly included its military assets, primarily deploying naval ships or aircraft to deliver relief.
  - In line with its diplomatic policy of **"Neighbourhood First,"** many of the recipient countries have been in the region of South and Southeast Asia.

- **Contribution to Regional Disaster Preparedness:**
  - Within the context of the [Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation \(BIMSTEC\)](#), India has hosted DM Exercises that allow NDRF to demonstrate for counterparts from partner states the techniques developed to respond to various disasters.
  - Other NDRF and Indian Armed Forces exercises have brought India's first responders into contact with those from states in the [South Asian Association for Regional Cooperation \(SAARC\)](#) and the [Shanghai Cooperation Organisation \(SCO\)](#).
- **Managing Climate Change related Disaster:**
  - India has adopted the **Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (2015-2030)**, and the [Paris Agreement](#) on Climate Change, all of which make clear the connections among DRR, Climate Change Adaptation (CCA), and sustainable development.

### UPSC Civil Services Examination, Previous Year Question

**Q.** Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing 'Sendai Framework for DRR (2015-30)'. How is this framework different from 'Hyogo Framework for Action, 2005'? **(2018)**

**Source:** [TH](#)

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