

Disaster...

- Disrupts the functioning of the community/society.
- Causes losses to human, material, economic, and environment.
- Vanishes the available resources.

Natural and artificial disasters

Natural Disaster

- Earthquake
- Tsunami
- Volcanic eruptions
- Droughts - Famine
- Forest fires
- Floods-Cyclone
- Landslides-Avalanches

Artificial Disaster

- Explosions-War
- Accidents - Nuclear, Radioactive - Chemicals
- Terror attacks - Anthrax
- Cyber attack
- Pollution - Air, Water, Soil, and Noise.

Natural and artificial disasters

Natural Disaster

Biological - Epidemic and
Pandemic : (COVID-19)

Heat wave - Cold wave

Locus attack

Climate change - Global
warming - Ozone depletion -
Sea level rise

Artificial Disaster

- Building fires
- Deforestation

National Disaster Management Authority

- Policy and plans
- Mitigation
- Operations and communications
- Information and technology
- Administration and finance

Source: NDMA

The Disaster Management Act, 2005

- Lays down policies, plans, and guidelines for disaster management.

Expected outcome

- Prevention
- Mitigation
- Preparedness
- Response

Source: NDMA



Hazard

The image features a diagonal line running from the bottom-left to the top-right. The area above and to the left of this line is a yellow gradient, while the area below and to the right is a grey gradient. The word 'Hazard' is positioned in the yellow area, and the word 'Risk' is in the grey area.

Risk

Hazard

- Gas leak
- Accident by train
- Environment
- Damaged footpath



Risk

- Injury - Disability - Death
- Infection

A **hazard** is any source of potential damage, harm or adverse health effects on something or someone

Source: https://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html

Risk is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard.

Source: https://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html

Hazard

- Spirit
- Fire
- Dangerous environment



Risk

- Other related fire accidents
- Injury - disability - death

Vulnerability



F. Luna, in Encyclopedia of the
Anthropocene, 2018

The word “vulnerability” stems from
the Latin *vulnerare*, to wound.
Thus, vulnerability has commonly been
deemed as the possibility of being
wounded.

Source:

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/vulnerability>

Vulnerability

- Physical
- Social
- Economic
- Environmental



DISASTER DIMENSIONS

Disaster Dimensions

- Natural vs Artificial
- Geophysical vs hydrological vs climatological vs meteorological vs biological disasters.

Geographic Scale of Disasters (examples)

Household:	Local:	Regional:	Worldwide: →
Heating or cooling failure	Water pollution	Tsunami	Gamma ray burst
Leaking roof	Power outage	Tornado	Nuclear war
Internet outage	Cell phone outage	Hurricane/cyclone	Asteroid impact
Water pipe break	Terrorist attack	Ice storm	Alien attack
House fire	Mudslide	Flooding	Sun burnout
	Earthquake	Blizzard	Supervolcano
		Volcanic eruption	

Source:

<https://flutrackers.com/forum/forum/personal-family-professional-emergency-preparedness/746715-disaster-preparation-part-i-the-dimensions-of-disasters>

A photograph of a city street during a heavy snowfall. The street is covered in a thick layer of snow. On the left, there is a black street lamp with a yellow light. In the background, there are snow-covered trees and buildings. The sky is white with falling snow. The overall scene is a winter city street.

Disaster - Scope

- Local/Regional
- Temperature - $< -10^{\circ}\text{C}$
- Exposure time - 16 hours
- Effects on agriculture, water supply, transportation, day-to-day needs

Disaster – Scope

- Scope can be thought of as a measure of the breadth of damage caused by a disaster.
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- It describes how extensively the larger community is impacted, including the rescue and support infrastructure, which in turn predicts how much help is available and how quickly recovery can proceed.

Source:

Disaster Characteristics

Self-Study Guide, to be read prior to attending the Fundamentals of Disaster Mental Health training, New York, Office of Mental Health

Disaster – Characteristics

- Was it human-caused or natural, or a combination?
- Was there a warning period?
- Was there a clear endpoint to the disaster, or uncertainty about it recurring or about its long-term health effects?
- How widely was the community infrastructure damaged (scope)?

Source:

Disaster Characteristics

Self-Study Guide, to be read prior to attending the Fundamentals of Disaster Mental Health training, New York, Office of Mental Health

Disaster – Effects

- Individual
- Community
- Environment

Source:

<https://sciencing.com/negative-effects-natural-disasters-8292806.html>

Disaster management – Phases

Disaster
Phase

Response
Phase

Recovery
Phase

Mitigation
Phase

Preparedness
Phase

NDMA

Institutional
Framework

National level

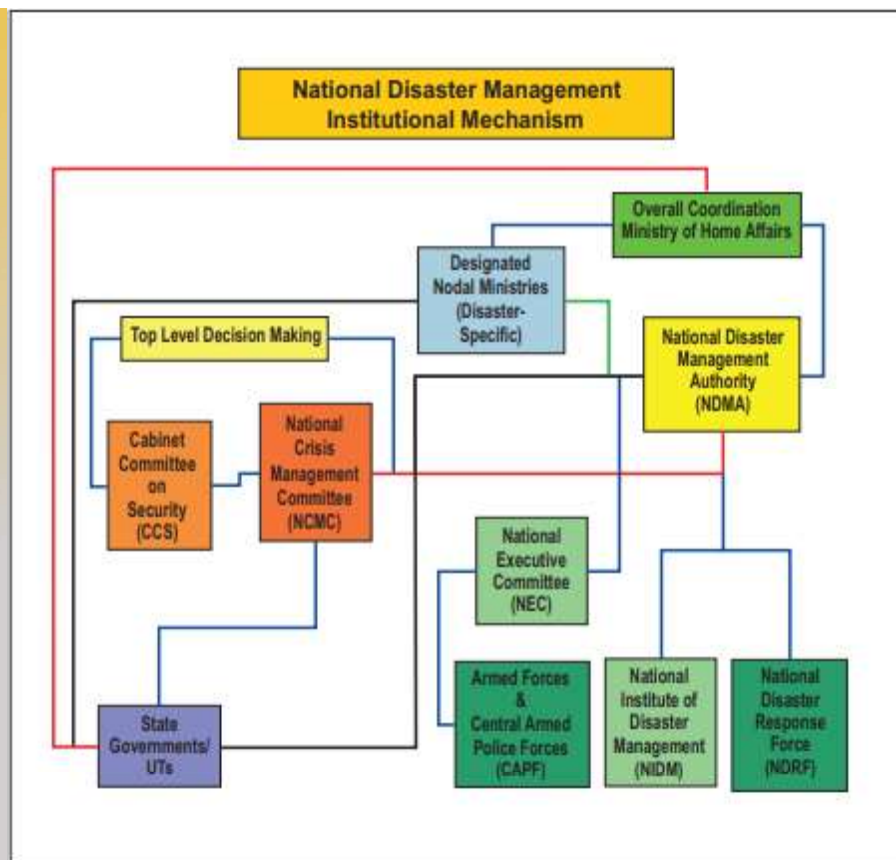


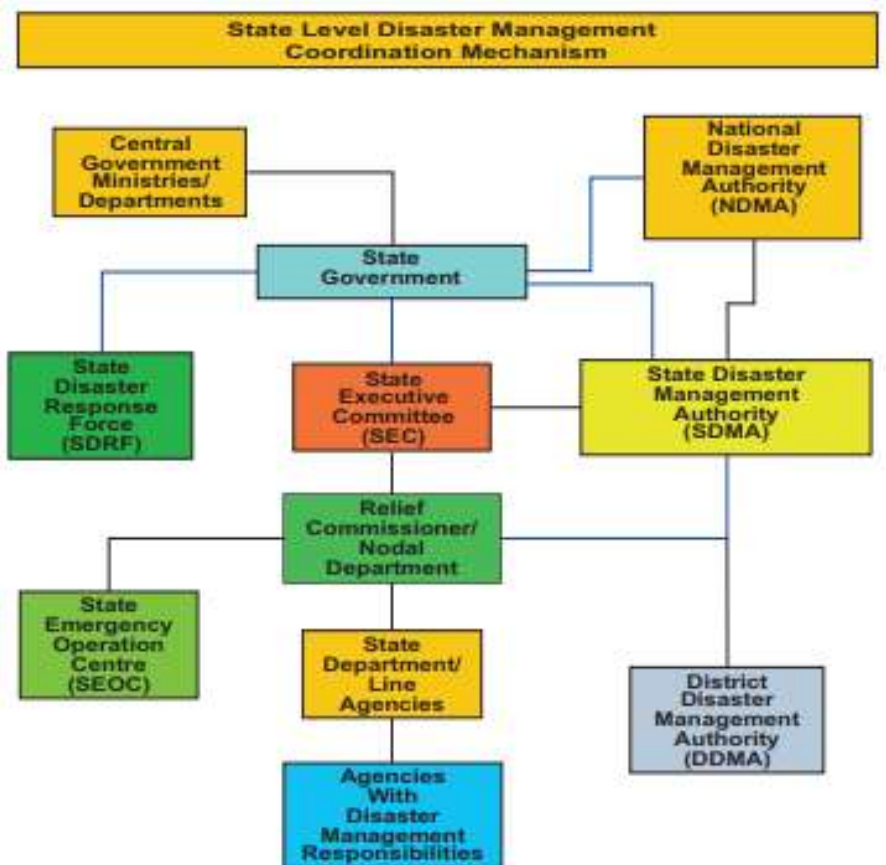
Figure 1-3: National-level disaster management - basic institutional framework

Source: NDMA

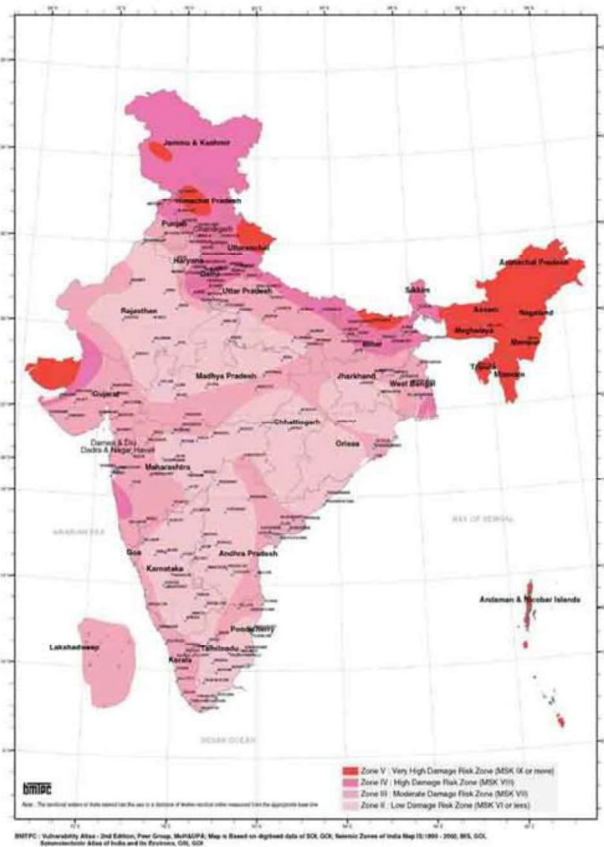
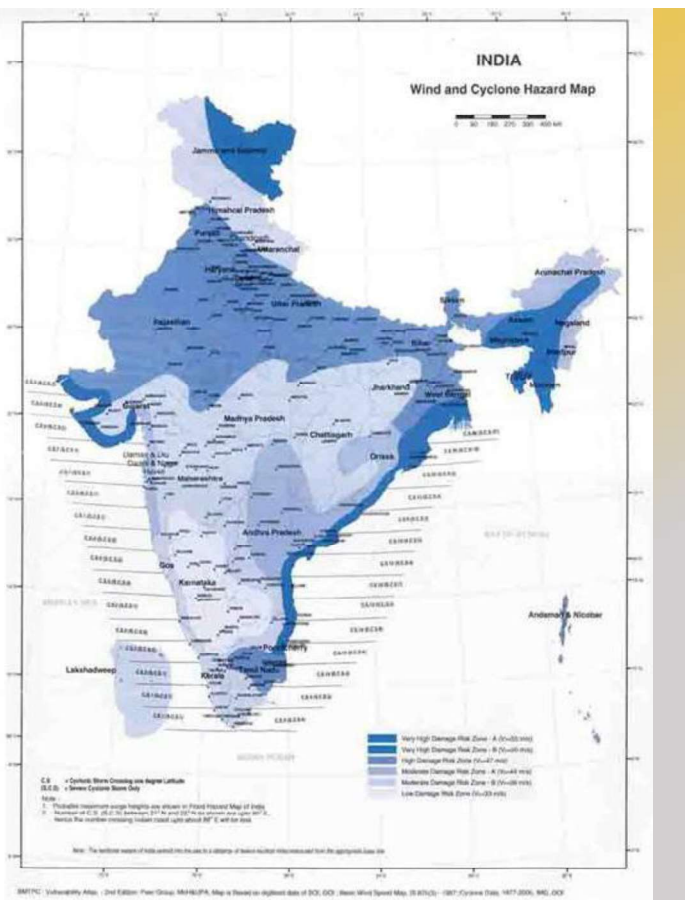
NDMA

Institutional Framework

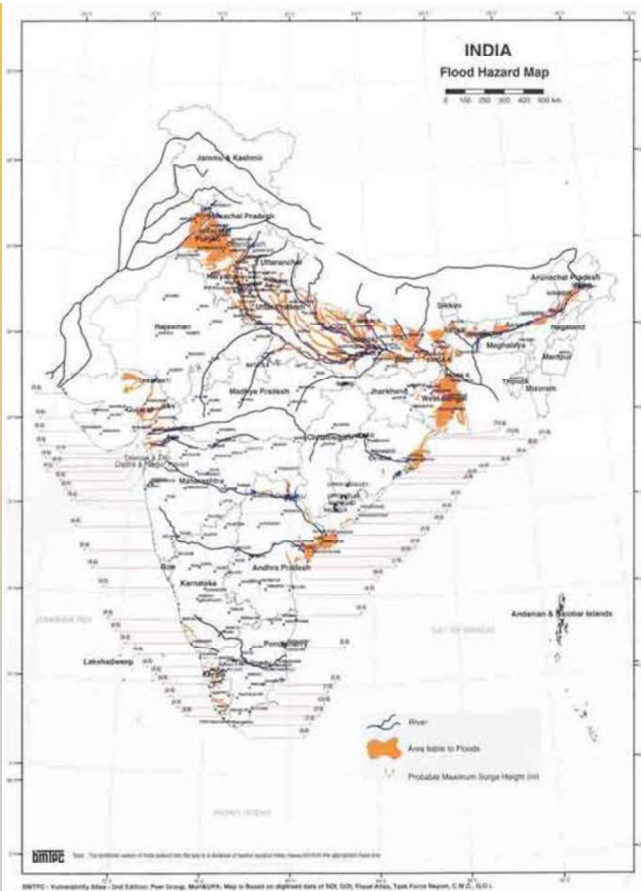
State level



Source: NDMA



Source: NDMA





www.preventionweb.net/go/sfdr
www.unisdr.org
tsdr@un.org

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors.

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030
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Priorities for Action

There is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.

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
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