



# Need for a contemporary Approach to Disaster Management

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A disaster is an event causing extreme disruption of the functioning of society, resulting in widespread human, material, or environmental losses beyond the ability of the affected people to cope with on their own. Disasters can be natural (floods, cyclones, earthquakes and landslides etc.) or man-made (riots, terrorist, bomb blasts, chemical, biological radiological and nuclear accidents etc.).



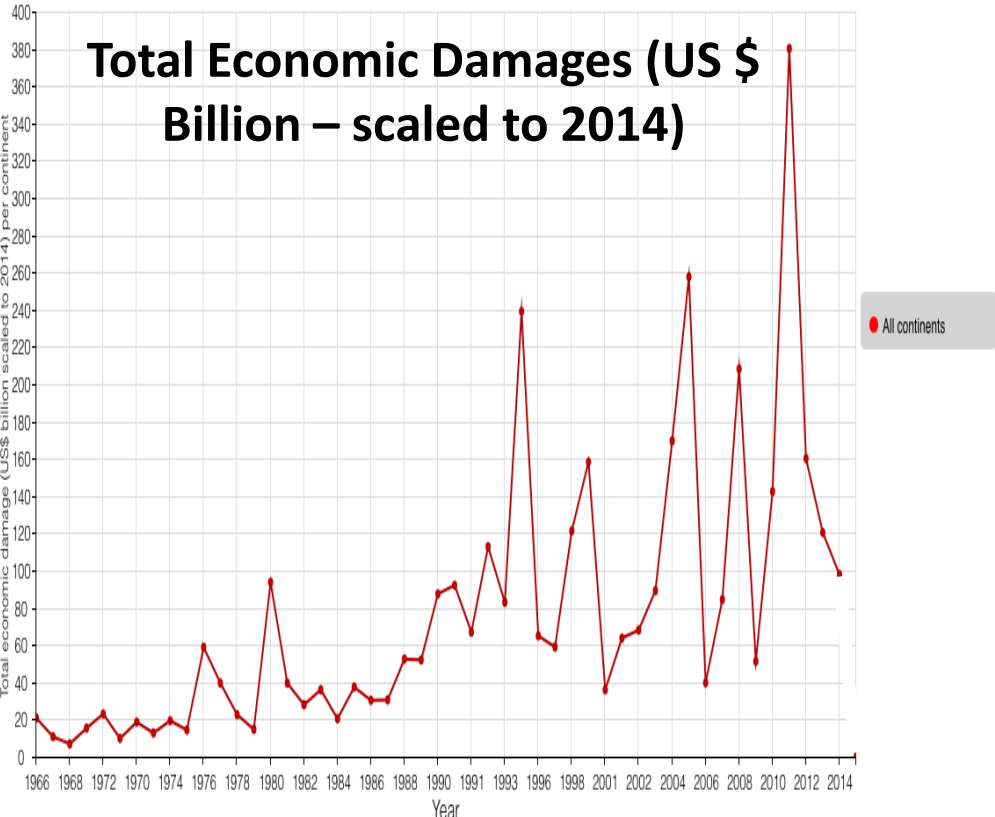
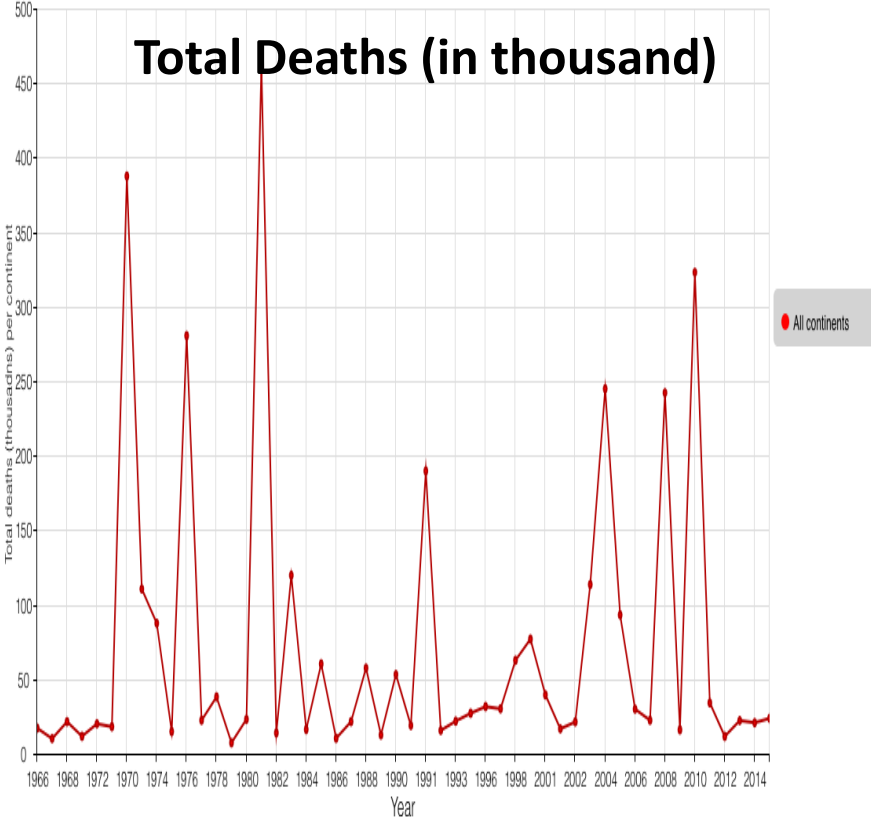
Mitigation of losses to life and property increases with prevention and preparedness. Broadly speaking.

$$\text{Vulnerability} = \frac{\text{risk} \times \text{exposure}}{\text{preparedness}}$$



# Global Disaster Situation

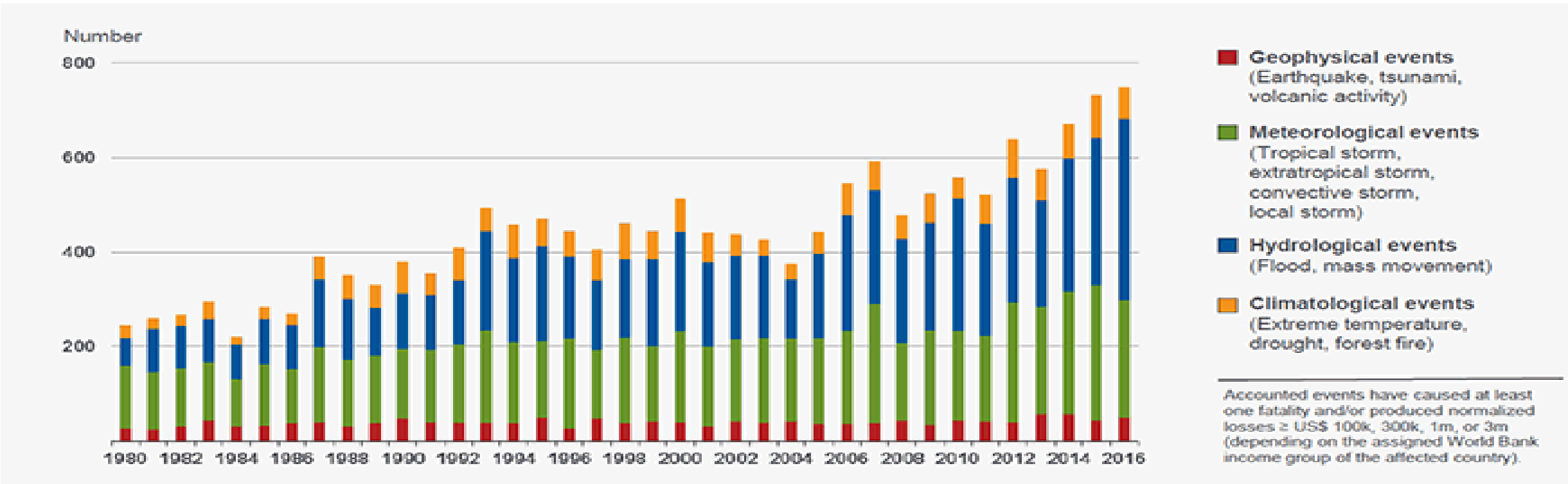
- **Reduced loss of human lives, escalating economic losses.**





# NUMBER OF WORLD NATURAL CATASTROPHES, 1980-2016

## (NUMBER OF RELEVANT EVENTS BY PERIL)



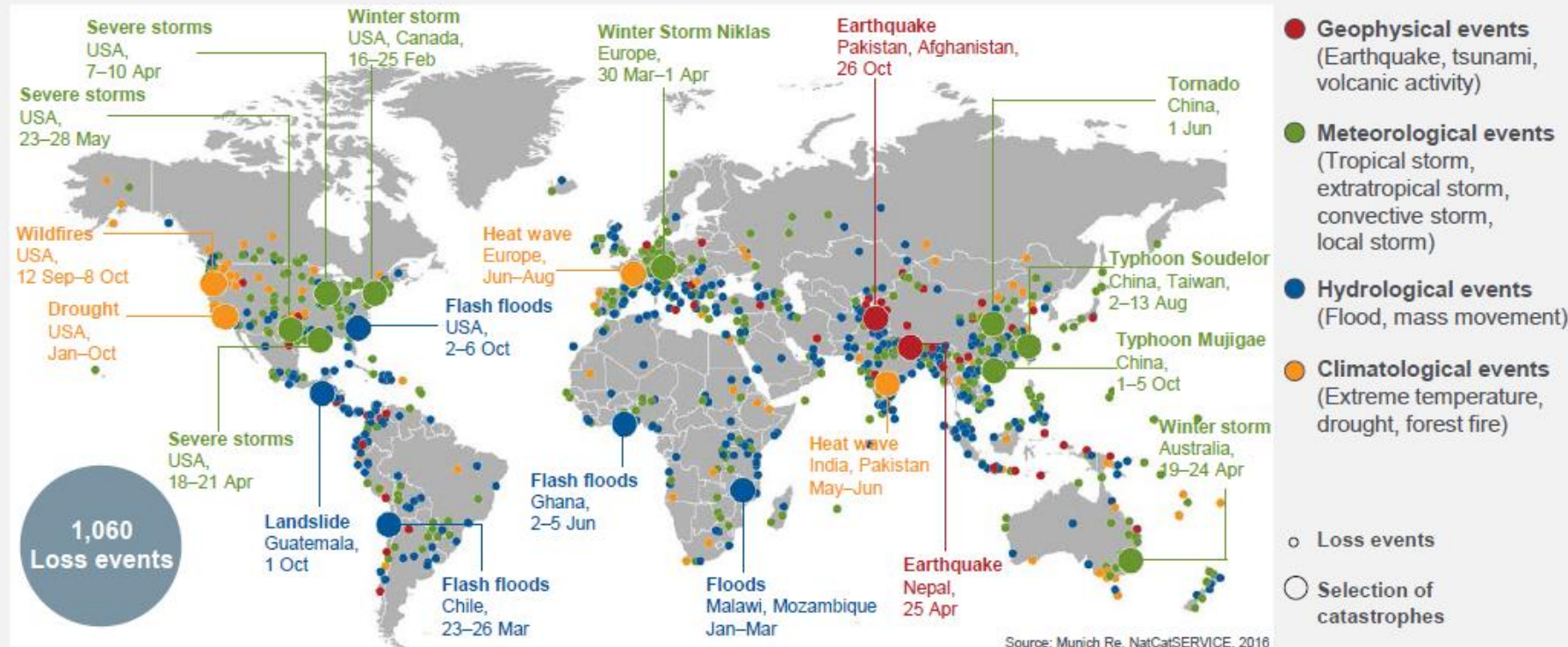
Source: Munich RE



# Loss Events 2015

NatCatSERVICE

## Natural loss events worldwide 2015 Geographical overview



© 2016 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE – As at January 2016

- Total economic losses caused by the disasters in 2015 were USD 92 billion.
- Asia was hardest hit. The earthquake in Nepal was the biggest disaster of the year in economic-loss terms, estimated at USD 6 billion, including damage reported in India, China and Bangladesh. (Swiss Re)



# Global Disaster Situation

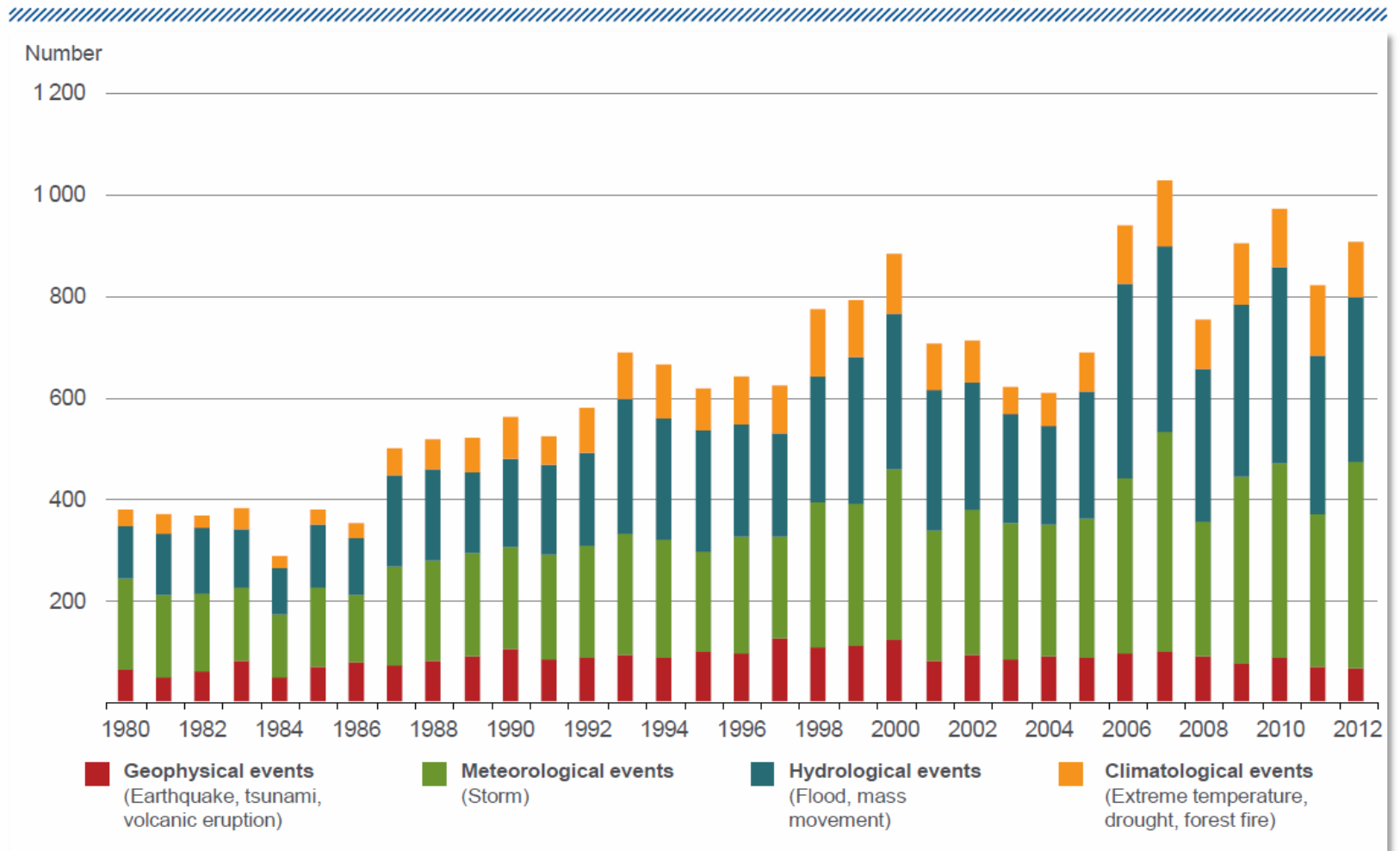
- **Need to:**
  - Reduce creation of new Risks;
  - Mainstream Disaster Risk Reduction into Development Plans and Programmes;
  - Invest in Risk Reduction and Early Warning Systems; and
  - Establish more predictable mechanisms to support recovery.



NatCatSERVICE

# Natural catastrophes worldwide 1980 – 2012

## Number of events



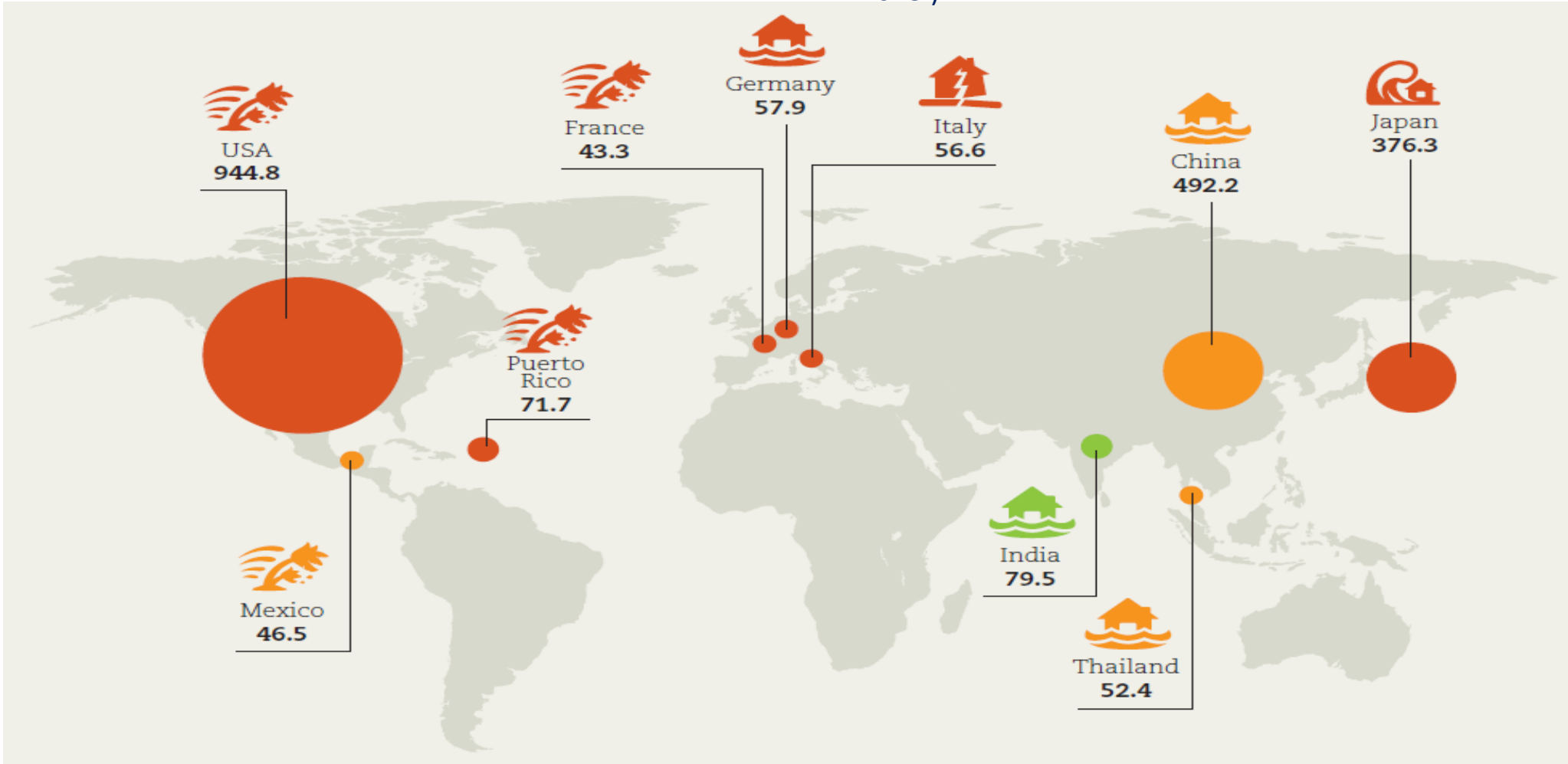
© 2013 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE – As at January 2013





# Top 10 countries/territories in terms of absolute losses (billion US\$) 1998-2017

*Economic Losses, Poverty and Disasters 1998-2017 (CRED, UNISDR, 2018.)*





## Losses due to disasters

British risk assessors Maplecroft conducted a survey “Natural Hazards Risk Atlas 2014”.

India along with China is placed as top five countries (Japan, USA, Taiwan, China, and India) as "high risk" in absolute economic exposure due to natural hazards.

### According to the World Bank:

- i. Direct losses from natural disasters have been estimated to amount up to **2 per cent of India's GDP** and up to 12 per cent of central government revenues. **This amounts to nearly Rs. 25,000 Crore.**



# INDIA AMONG TOP 3 NATIONS WITH MOST NATURAL DISASTERS



Nearly 80,000 lives lost & more than 100 crore affected in India due to natural disasters in 20 years

## NUMBER OF NATURAL DISASTERS (2000-2019)



## DEATHS IN 5 DEADLIEST NATURAL DISASTERS



Source: UN Office for Disaster Risk Reduction, CRED





# DISASTER IMPACT 1980-1999 VS 2000-2019



	1980-1999	2000-2019
Reported disasters	4,212	7,348
Total deaths	1.19 million	1.23 million
Total affected	3.25 billion	4.03 billion
Economic losses	\$1.6 trillion	\$3 trillion

**Source:** UNDRR study report 'Human Cost of Disasters' released on October 13, 2020



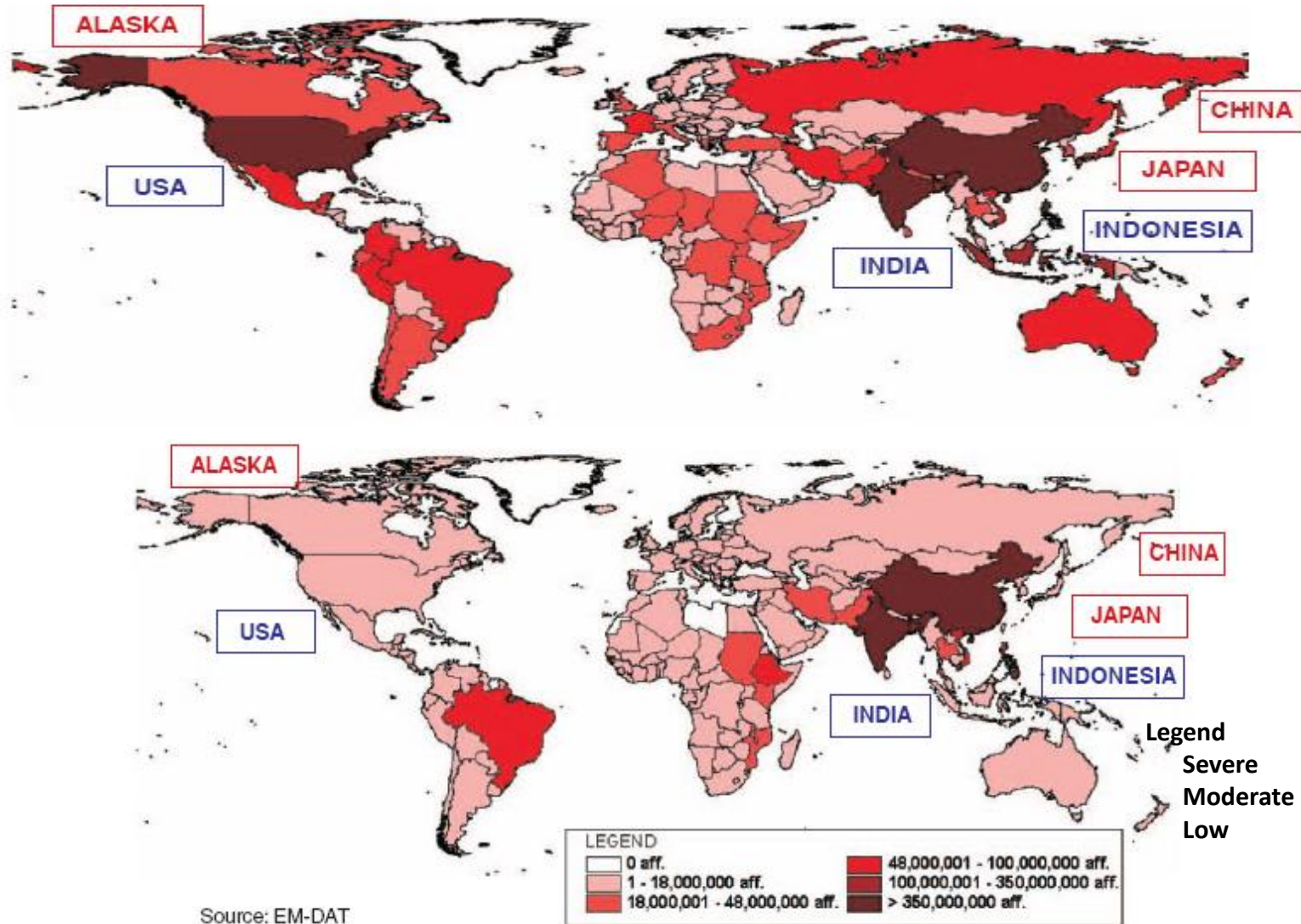
# ASIAN DEVELOPMENT BANK REPORT

Asia alone “*will need to invest \$1.7 trillion per year in infrastructure until 2030...”*”



**MITIGATION IMPACT**

**INCIDENCE OF DISASTERS**



Source: EM-DAT



# India

Direct losses from natural disasters have been estimated to amount up to 2 per cent of India's GDP and up to 12 per cent of central government revenues (Source World Bank)

Probabilistic assessment by the Global Assessment Report (UNISDR) estimates expected direct average annual losses for India at \$10 billion per year

India along with China is placed as top four countries (others include Japan, USA) as "high risk" in absolute economic exposure due to natural hazards (Natural Hazards Risk Atlas 2014 by British Risk Assessors Maplecroft)



# Hazard Profile of India



- India is vulnerable in varying degrees to a large number of natural as well as man-made hazards.
- Over 40 million hectares (12 per cent of land) is prone to floods and river erosion.
- 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity.
- Of the 7,516 km coastline, close to 5,700 km (nearly 76 per cent of coastline) is prone to cyclones and tsunamis.
- 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches (nearly 15 per cent of landmass).
- Further, the vulnerability to Nuclear, Biological and Chemical (NBC) disasters and terrorism has also increased.



# ECONOMIC LOSSES DUE TO DISASTERS



## 2009 Floods

- Five districts of the then A.P., were hit by flash floods and the worst affected by the downpour were the districts of Mahbubnagar and Kurnool.
- The loss reported was of the tune of Rs **12,000 Cr.**

## 2012 Severe Cyclone “Nilam”

- Death toll: 30; crop loss: over 700,000 ha; loss: Rs **1,710 Cr.**

## 2014 Cyclone “Hudhud”

- Four districts of A.P. Srikakulam Visakhapatnam Vizianagram and East Godavari were hit by Cyclone “Hudhud.” and the worst affected was Visakhapatnam.
- The loss reported was of the tune of Rs **21,908 Cr.**

## 2018 cyclonic storm ‘Titli’

- The “Titli” cyclone, caused devastation to two districts of Srikakulam and Vizianagram in the state with an estimated loss of Rs **400 Cr.**

## Eye-Opener Statistics

- State GDP for A.P. for the year 2018-19 was Rs **8,50,000 Cr** (constant prices) with a Growth Rate of **13.14%**.
- Total losses due to Floods (2009) and Cyclonic Storm (2012, 2014, 2018) is Rs **35,618 Cr**, which is **4.19 %** of the SGDP (**Nearly 1/3 the Growth Rate**).



# Disaster Management in India

1. Until 2001 – Responsibility with Agriculture Ministry.
2. Responsibility Transferred to MHA in June 2002.
3. NDMA constituted with Executive Order in May 2005.
4. DM Act passed in December 2005.



# Disaster Management Act, 2005



# Paradigm Shift

## Approach

- Paradigm shift from 'response centric' to a 'holistic and integrated' approach.  
The cascading architecture of the DM log - frame is a seamless continuum between the Act, the National Policy the guidelines of NDMA on various disasters, the plans prepared by the central government/states departments and the structural and non-structural measures arising therefrom. The underlying there is the transition from focusing the 3 Rs (relief, rehabilitation and recovery) to the 2 Ps (prevention and preparedness).
- Backed by - A policy, authorities at all levels, supported by Institutional Framework and financial arrangements duly enabled by a statutory environment.



Engagement with Hudhud in Visakhapatnam demonstrated strikingly the value of an early warning – especially when it is really early and predicts the land fall (where the cyclone crosses the coast) accurately. This time, such a forecast enabled a slew of invaluable measures to be taken including

- large scale evacuation of people to safer for areas,
- preemptive stoppage of potentially hazardous bus, rail, road and water transport and –
- preventive shutdown of power supply and threatened radar equipment
- Advance stoking of food grains, medicines and other essential commodities
- to mention but a few.

The lessons learnt in this process will need to feed into the extant DM plans of major cities of our country including Delhi, Mumbai, Kolkata and Chennai all affected recently by either floods, earthquakes or cyclones.



It is unfortunate fact that prevention, while better than the cure, lacks the political glamour and administrative appeal that post-event activities enjoy in terms of public recognition.



A critical and immediate concern is the establishment, and importantly, the enforcement, of techno-legal regimes. Floods, in India are a state - subject under our constitution. A draft Flood Plain Zoning Regulation, that could substantially improve flood-mitigation efforts, circulated in 1975 by the central government, has so far been converted into law only by Mizoram and Rajasthan!

A poor commentary that on the importance attached to that subject by the other states.



# Disaster Management Act (DM Act) - 2005

## A paradigm shift

- From a response and relief-centric approach to a holistic approach covering prevention, mitigation and preparedness to rehabilitation, reconstruction and recovery.
- **The Act provides for:**
  - Establishment of legal and institutional framework at all three levels i.e. National, State and District.
  - Formulation of policy and plan backed by statutory and financial support.
  - Mainstreaming of multi-sectoral DM concerns into the developmental process and mitigation measures.





# Salient Features – DM Act

## DM Structure

### National Level

- NDMA set up as the Apex Body with the PM as Chairperson.
- National Executive Committee (NEC) under Home Secretary with Secretaries of 14 Ministries and Chief of Integrated Defence Staff Function as Executive Committee of NDMA.

(Agriculture, Atomic Energy, Defence, Drinking Water Supply, Environment and Forests, Finance (Expenditure), Health, Power, Rural Development, Science and Technology, Space, Telecommunication, Urban Development, Water Resources).



# Responsibilities of Central Ministries / Departments

- Take necessary measures for prevention of disasters, mitigation, preparedness and capacity building; (Section 36)
- Integrate the measures for prevention or mitigation of disasters into their development plans and projects; (Section 36)
- Prepare Disaster Management Plan and update annually; (Section 37)
- Allocate funds for undertaking the activities under its DM Plan; (Section 49)



# Institutional Mechanism: nodal ministries / departments

S. No	Disaster	Disaster being handled by	Nodal Ministry
1.	Earthquakes	Ministry of Home Affairs	Ministry of Earth Sciences
2.	Floods	Ministry of Home Affairs	Ministry of Water Resources
3.	Cyclones	Ministry of Home Affairs	India Meteorological Department under Ministry of Earth Sciences
4.	Tsunamis	Ministry of Home Affairs	Ministry of Earth Sciences
5.	Landslides	Ministry of Home Affairs	Ministry of Mines
6.	Avalanches	Ministry of Home Affairs	Ministry of Defence
7.	Droughts, Hailstorms & Pest Attacks	Ministry of Agriculture & Cooperation	Department of Agriculture & Cooperation, Ministry of Agriculture



# Institutional Mechanism: nodal ministries/departments

S. No	Disaster	Disaster being handled by	Nodal Ministry
8.	Forest Fires	Ministry of Environment, Forests & Climate Change	Ministry of Environment, Forests & Climate Change
9.	Nuclear Disasters	Ministry of Home Affairs/ Department of Atomic Energy	Department of Atomic Energy
10.	Industrial and Chemical Disasters	Ministry of Environment, Forests & Climate Change	Ministry of Environment, Forests & Climate Change
11.	Biological Disasters	Ministry of Health & Family Welfare	Ministry of Health & Family Welfare
12.	Rail Accidents	Ministry of Railways	Ministry of Railways
13.	Road Accidents	Ministry of Road Transport & Highways	Ministry of Road Transport & Highways
14.	Aviation Accidents	Ministry of Civil Aviation	Ministry of Civil Aviation



# Institutional Mechanism: Early Warning and Dissemination

S. No	Disaster	Nodal Ministry/ Agency
1.	Floods	Ministry of Water Resources/ Central Water Commission
2.	Cyclones	India Meteorological Department under Ministry of Earth Sciences
3.	Tsunamis	Ministry of Earth Sciences/ INCOIS
4.	Droughts, Hailstorms & Pest Attacks	Department of Agriculture & Cooperation, Ministry of Agriculture



# Salient Features – DM Act

## DM Structure

### State Level

- SDMA at State Level, headed by Chief Minister.
- State Executive Committee (SEC), headed by Chief Secretary,
- SEC to prepare State Plan and coordinate & monitor its implementation.

### District Level

- DDMA headed by District Magistrate.
- Chairperson of Zila Parishad as co-Chairperson.
- Preparation of District Disaster Management Plan (DDMP).



# Salient Features – DM Act

## DM Structure

### Others

- National Disaster Response Force (NDRF).
- National Institute of Disaster Management (NIDM).
- Disaster Response Fund at the National and State level has been constituted by merging NCCF and CRF respectively.
- Disaster Mitigation Fund – 15<sup>th</sup> FC Recommended. NDMF Constituted 2021.
- SDFs Constituted 21 states. Centre has released 3,382.2 crores towards its share



## Emergencies to be Dealt With by Extant Mechanism, i.e., NCCM and not by NDMA

<b>1</b>	Terrorism (counter-insurgency).	<b>7</b>	Mine Disasters.
<b>2</b>	Law and Order.	<b>8</b>	Ports and Harbours Emergencies.
<b>3</b>	Bomb Blasts.	<b>9</b>	Forest Fires.
<b>4</b>	Hijacking.	<b>10</b>	Oil Field Fires.
<b>5</b>	Air accidents, train, water transport and road accidents	<b>11</b>	Oil Spills.
<b>6</b>	Chemical, Biological, Radiological and Nuclear (CBRN) emergencies.		





## Cross-cutting Themes Handled by NDMA

- Medical Preparedness,
- Psycho-Social Support,
- Community Based Disaster Management,
- Incident Response System,
- Minimum Standards of Relief,
- Information and Communication Technology, etc. for natural and manmade disasters



## Financial support

- National Disaster Response Fund generated through the levy of cess on selected items for meeting any threatening disaster situation or disaster.
- State Disaster Response Fund – Size of the corpus for each State determined by Finance Commission (allocation for 2015-20 – Rs. 61,219 crore).
- Norms of expenditure from SDRF and NDRF prescribed.
- Calamities covered under SDRF/NDRF – cyclones, earthquakes, fires, floods, tsunamis, landslides, avalanches, cloud bursts, (being monitored by MHA) droughts, hailstorms, pest attacks, cold waves/heat waves/frost (being monitored by Department of Agriculture and Cooperation).



## Financing for DM contd..

- **Flexi Funds available with Central Ministries/ Departments for the purpose of Disaster Management.**
- **Post disaster reconstruction can be undertaken out of Plan Funds.**
- **Funds under Corporate Social Responsibility and MP Local Area Development Schemes are also available.**
- The XV<sup>th</sup> Finance Commission, after extensive consultation with all stakeholders has recommended comprehensive treatment of the entire gamut of functions of disaster management cycle for the period 2021 to 2026. This entails allocation for NDRMF and SDRMF comprising Mitigation Fund at the National and State level (NDMF/SDMF) as one entity at the tune of 20% and Response Fund as another entity at the National and State level (NDRF/SDRF) providing for sub allocations for Response & Relief Fund; Recovery & Reconstruction Fund and Capacity Building Fund at the tune of 40%, 30% and 10% respectively. Distribution of these three sub allocations under Response Fund are interchangeable with the corollary that reallocation shall not exceed 10% of the earmarked funds.



# National Policy and Guidelines



## Vision

**“To build a safe and disaster resilient India by developing a holistic, proactive, multi-disaster and technology-driven strategy through a culture of prevention, mitigation, preparedness and efficient response”**



## Strategy

- A multi-dimensional strategy, focusing on –
- pre-disaster phase:
  1. Prevention.
  2. Mitigation.
  3. Preparedness.
  4. Capacity Building (NDRF, SDRF, CD, NCC, NYKS etc).
  5. Community based Disaster Management (including Public Awareness).
- post-disaster phase:
  6. Prompt and efficient response – pro-active.
  7. Reconstruction and recovery (building back better).



# National Policy on Disaster Management 2009

## This policy aims at:

- (i) Promoting a culture of prevention, preparedness and resilience at all levels through knowledge, innovation and education;
- (ii) Encouraging mitigation measures based on technology, traditional wisdom and environmental sustainability;
- (iii) Mainstreaming disaster management into the developmental planning process;
- (iv) Establishing institutional and technological frameworks to create an enabling regulatory environment and a compliance regime;
- (v) Ensuring efficient mechanism for identification, assessment and monitoring of disaster risks;
- (vi) Developing contemporary forecasting and early warning systems backed by responsive and fail-safe communication with information technology support;



## National Policy on Disaster Management 2009

Contd..

- (vii) Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society;
- (viii) Undertaking reconstruction as an opportunity to build disaster resilient structures and habitat for ensuring safer living; and
- (ix) Promoting a productive and proactive partnership with the media for disaster management.



## SENDAI FRAMEWORK FOR DRR



- In March 2015, India along with 186 other Countries ratified Sendai Framework for Disaster Risk Reduction (SFDRR), 2015-30, with 7 Global Targets to be accomplished under 4 priorities.
- The Sendai Framework is the first part of the post-2015 development agenda that provides a once-in-a-generation opportunity to implement development that is both resilient and sustainable.



## 4 Priorities for action under SFDRR

1. Understanding disaster risk.
2. Strengthening disaster risk governance to manage disaster risk.
3. Investing in disaster risk reduction for resilience.
4. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.



# National Disaster Management Plan



Prime Minister Hon'ble Shri Narendra Modi released the National Disaster Management Plan (NDMP) on 01.06.2016. This is the first ever national plan prepared in the country.



## Guidelines Issued

- 1. Earthquakes;**
- 2. Tsunami;**
- 3. Cyclones;**
- 4. Floods;**
- 5. Urban Flooding;**
- 6. Drought;**
- 7. Landslides & Snow Avalanches;**
- 8. Nuclear and Radiological Emergencies (Unclassified) - I);**
- 9. Chemical (Industrial) Disasters;**
- 10. Chemical (Terrorism) Disaster;**
- 11. Biological Disasters;**



## Guidelines Issued

- 12. Medical Preparedness and Mass Casualty Management;**
- 13. Psycho-Social and Mental Health Care;**
- 14. Formulation of State Disaster Management Plans;**
- 15. Incident Response System;**
- 16. IT and Communication;**
- 17. Scaling, Type of Equipment and Training of Fire Services;**
- 18. Seismic Retrofitting of Deficient Buildings and Structure;**
- 19. School Safety Policy;**
- 20. Hospital Safety;**
- 21. Minimum Standards for Shelter, Food, Water, Sanitation, Medical Cover in Relief Camps.**



## Guidelines Issued

- 22. Preparation of Action Plan – Prevention and Mitigation of Heat-Wave;**
- 23. Boat Safety;**
- 24. Museum Disaster Management;**
- 25. Management of Cultural Heritage and Precincts;**
- 26. Temporary Shelters;**
- 27. Disability inclusive Disaster Risk Reduction;**
- 28. Thunderstorm, Squall and Lightning;**
- 29. Management of Glacial Lake Outburst Floods (GLOFs)**
- 30. Landslide Risk Management Strategy**



## List of Reports, Manuals Prepared by NDMA

- 1. Guidelines on Ensuring Disaster Resilient construction of Buildings and Infrastructure**
- 2. Pilot Project on Capacity Building for advanced Trauma Life Support in India.**
- 3. Capacity Building in DM for Govt. Officials & Representative of Panchayat Raj Institution & Urban Local Bodies at District Level**
- 4. Revamping of Civil Defence**
- 5. NIDM's Functioning**
- 6. Pandemic Preparedness Beyond Health**
- 7. Strengthening of safety and security for transportation of POL tankers**
- 8. Threats to Municipal Water Supply and Water Reservoirs**



## List of Reports, Manuals Prepared by NDMA

9. Management of Dead in the Aftermath of Disaster
10. Training Regime for Disaster Response
11. Hand Book for Training and Capacity Building of Civil Defence and Sister Organisations(part-I)
12. Hand Book for Training and Capacity Building of Civil Defence and Sister Organisations(part-II)
13. Managing Crowd at Events and Venues of Mass Gathering.
14. Cyclone Hudhud-Strategies and Lessons for Preparing Better & Strengthening Risk Resilience in Coastal Regions of India
15. Training Manual – How to Conduct Emergency Management Exercise (EMEx)





# Log frame for DM in India

## Advocacy with States to Enact/ Amend –

- Flood Plain Zoning Regulations
- Building By-laws and
- Vulnerability Assessment & Risk Analysis

## Education

- Hitherto confined to Schools only.
- Now to encompass entire Higher/ Technical Education.

- All Undergraduate Courses.
- Medical.
- Engineering.
- Architecture.
- Agriculture. :

Under Active Progress.

Already Included.

- A Committee with Addl Secy MoHRD as the Chairperson with representatives of UGC, AICTE, etc has been formed.





# Supporting / Enabling Measures

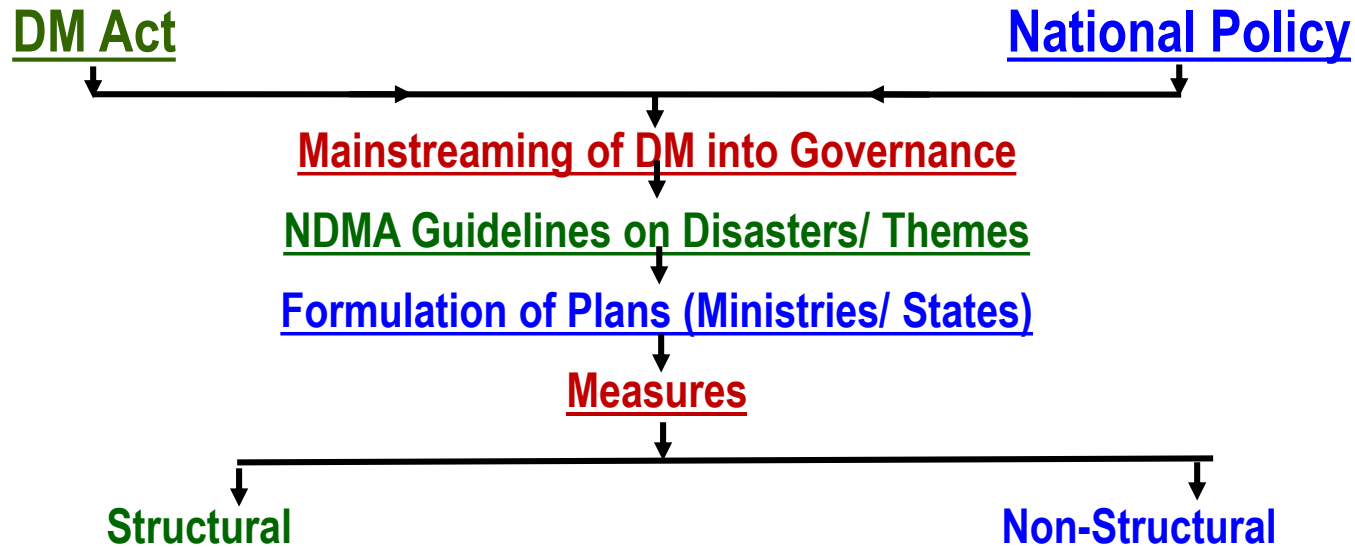
## Incident Response Training – till 2014 (February)

- **IAS and Central Services, – LBSNAA, Mussoorie** : **14**  
**and MCR HRD Institute, Hyderabad.**
- **IPS – NPA, Hyderabad (15 Courses).** : **53**
- Total.** : **67**





# Supporting / Enabling Measures



**Disaster Resilience of Infrastructure Projects : Audit and Corrective Actions**

<b>New Programmes/ Projects</b>	<b>Ongoing Programmes/ Projects</b>	<b>Revisit Completed Projects (on selective basis)</b>
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**Support From –**

- **Planning Commission** – Promises Investment Support.
- **Finance Ministry** – Amends EFC/ CNE check memos

for including Disaster Resilience Audit

(self-certification of all infrastructural Projects).

- **13th Finance Commission –**
  - For Fire Services Rs 200 Cr allotted
  - For Capacity Building and upgradation of SDRF Rs. 525 Cr allotted
  - For National Disaster Response Reserves Rs. 250 Cr allotted

- Reporting Item in NDC Agenda.
- Enabling Regulatory Environment – Laws/ Regulations/ Codes.
- Education.
- Training of Functionaries (Govt./ PRI/ ULB).
- Awareness Generation.
- Capacity Building (Includes Response Forces & Community).

**Estimated Value of Physical Infrastructure proposed during 12<sup>th</sup> Five Year Plan period –**

**1,28,160 Cr.**



# Role of states and districts in DM



## State Disaster Management Authorities (SDMA) and District Disaster Management Authorities (DDMA)

- DM Act, 2005 provides for the constitution of SDMAs and DDMA in all the States and UTs.
- All the states have constituted SDMA and DDMA.



## Lead taken by States on SDMA'S

- 35 States have made SDM Plans. Telangana has initiated the process.
- Maharashtra and Bihar has experts as member of SDMA.
- Bihar has a Retd. Civil Servant as a full time Vice Chairman.
- Rajasthan and Manipur have done Flood plane zoning.
- Orissa and Kerala have an SDM Policy.
- Gujarat, HP and Odisha has done Hazard Risk and Vulnerability Assessment. West Bengal has commissioned the work



## Lead taken by States on SDMA'S

- Based on Sendai Framework for Disaster Risk Reduction 2015-30, Bihar has formulated Disaster Risk Reduction Roadmap.
- AP and Bihar has set up State Disaster Mitigation Fund.
- Uttarakhand and HP are continuing the National School Safety Programme, initially undertaken by NDMA as a pilot in 8600 schools of 22 States.
- Nagaland has raised State Disaster Response Force and has got in collaboration with kfW for insurance against two perils flash floods and earthquake.



# National Institute of Disaster Management





## Role of NIDM

Capacity development along with training, research, documentation and development of a National level information base.

Networking with other knowledge-based institutions.

Organize training of trainers, DM Officials and other stakeholders.



# National Disaster Response Force (NDRF)



## Role of NDRF

To provide specialized response in case of disasters.

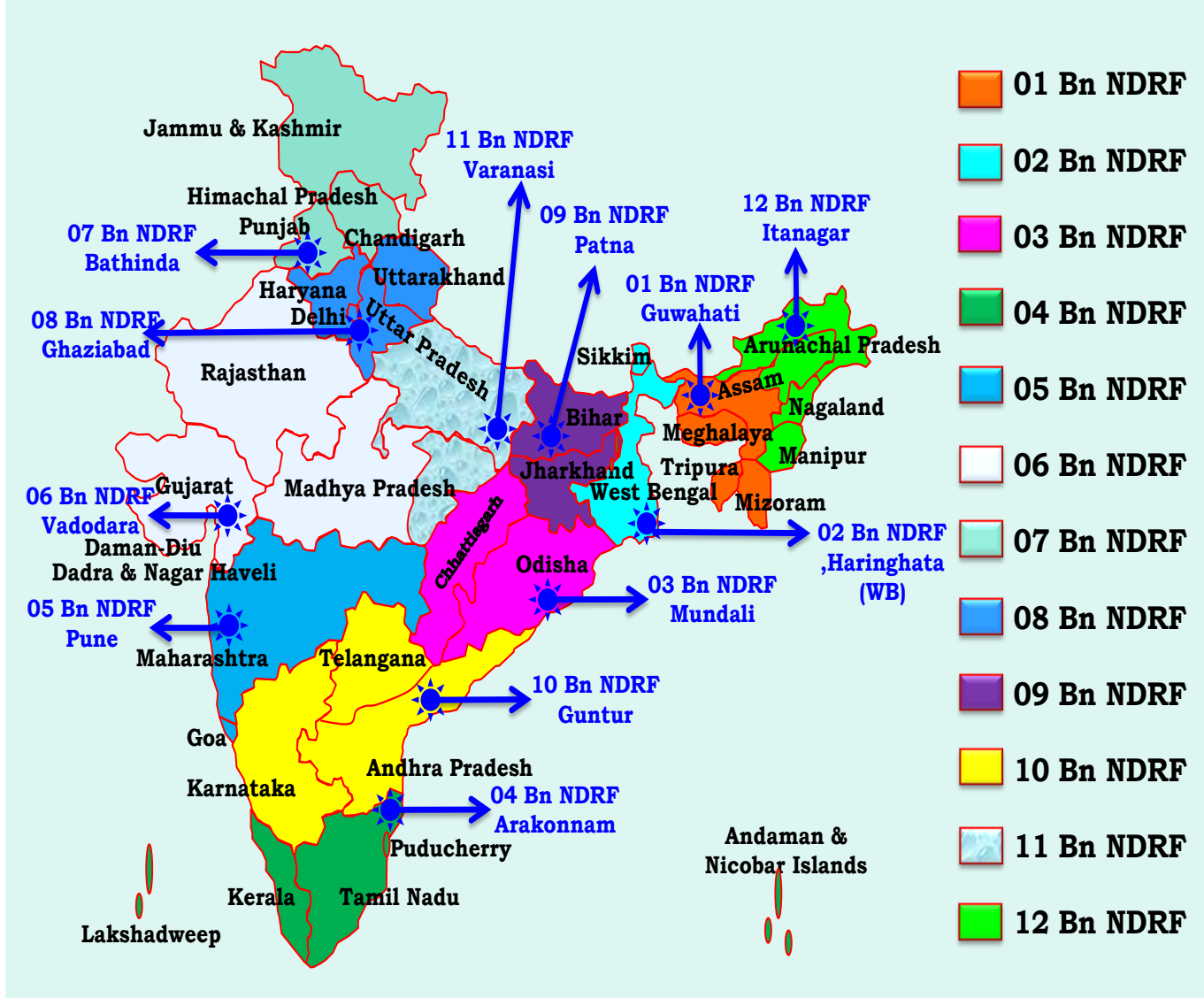
Deployment in case of impending disasters.

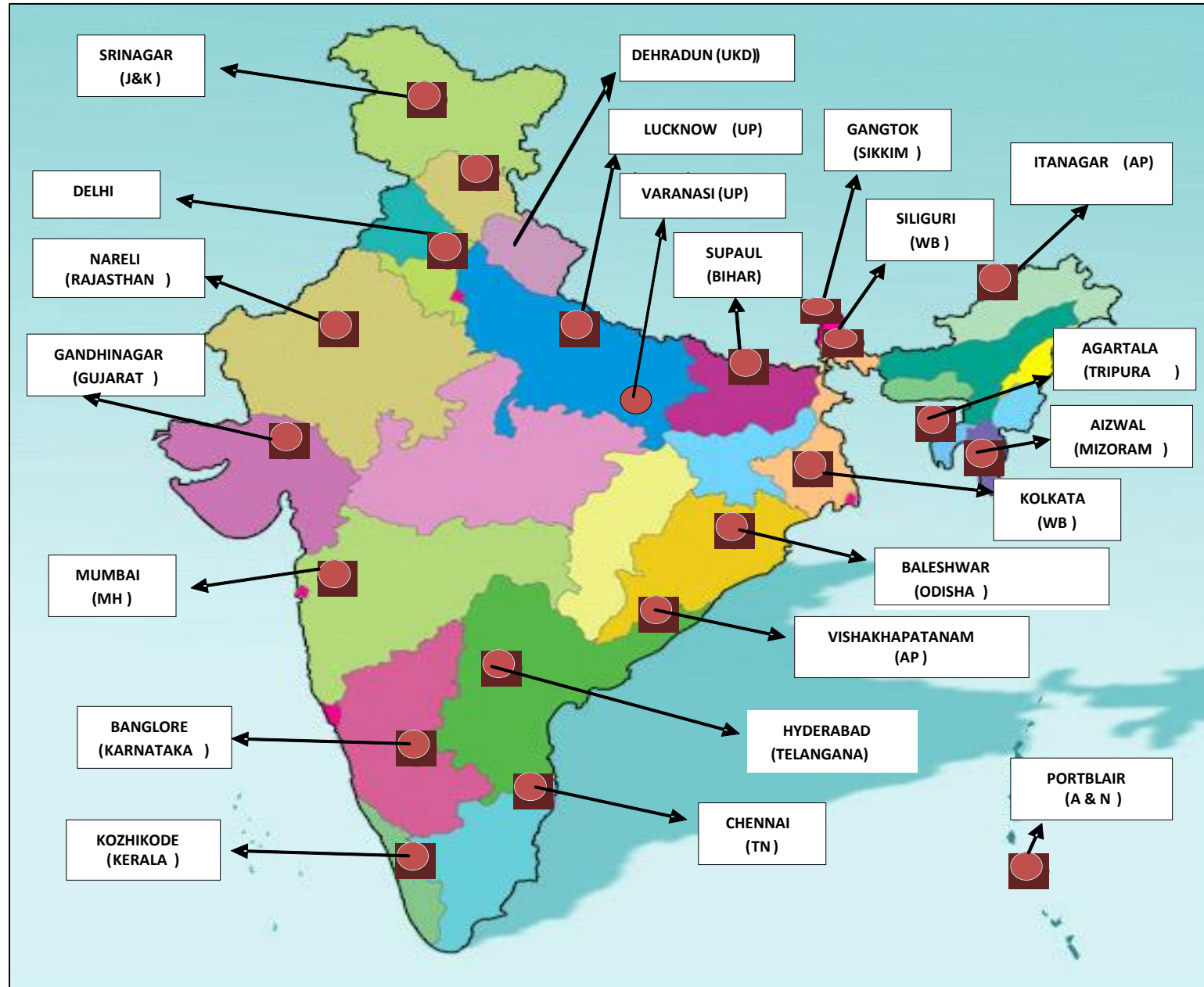
In times of normalcy

- organise community capacity-building.
- acquire and continually upgrades its own training, skills and abilities.
- impart training to State Disaster Response Force (SDRF)s, State Police, Home Guards, and the Civil Defence Organisations.



# NDRF LOCATIONS







## Capabilities and strengths of NDRF

- Collapsed Structure Search & Rescue (CSSR) Operations.
- Medical First Response (MFR).
- Flood, Diving Search & Rescue.
- Mountain Rescue Operations.
- Canine and Technical Search.
- CBRN.



## Response Activities

- During the Kosi Floods in Bihar in 2008, total of 19 teams (780 personnel) from different NDRF Bns. trained in flood rescue & relief operation along with 153 high capacity boats. Saved and evacuated over 1,05,000 people trapped by the swirling waters of river Kosi.
- In Uttarakhand, 14 teams (449 personnel) with 37 boats and other lifesaving equipment were deployed. Rescued 9,465 persons, retrieved 290 bodies, recovered cash & jewellery and provided medical aid.
- Deployed 53 Teams consisting 2,320 personnel, rescued 4,823 persons – **biggest deployment for a single event** during Cyclone Phailin.
- J&K Floods in September 2014.
- Cyclone Hudhud, October 2014.
- Nepal Earthquake in April 2015.
- Chennai Floods in Dec 2015.



## International Deployment

- India soon hopes to be first SAARC Country to be awarded INSARAG IE Certification for international deployment the process is under way.
- It was already been deployed at Onagawa in Japan post the Tsunami-Nuclear Disaster and also in Nepal this year.
- NDRF is preparing one team in each of the NDRF Bns for international deployment on the requisition of Govt. of India under bilateral understanding/cooperation.





# NDMA Initiatives – Projects



# National Cyclone Risk Mitigation Project (NCRMP)



# National Cyclone Risk Mitigation Project (NCRMP)



# **National School Safety Programme** **(Demonstration Project)**



# NDMA – IGNOU Project



## Other Capacity Building Related Projects



## Mock Drills

- The aim of Mock Drills is to generate Public Awareness and identification of gaps in the planning and response.

State wise Mock Exercises : total till today from  
2016-2017 - 97  
2016-2017 – 09  
2017-2018 – 09  
2018-2019 – 10  
2019-2020 – 10  
2020-2021 – 28  
2021-2022 - 21  
2022 – till date - 10

District level Mock Exercises –  
conducted by NDRF wef 2020 to till  
date – 475  
2020 – 2021 – 98  
2021- 2022 – 249  
2022 till date – 128



# Instituting a Disaster Preparedness Index (DPI)

## Need for a Disaster Preparedness Index

Expected to facilitate better monitoring of preparedness, especially amongst communities that are more vulnerable and less prepared





# Instituting a Disaster Preparedness Index (DPI)

Contd.

- A gut-feeling based 'guestimate' prepared by NDMA members in 2007 for the then PM
- Study under consideration of GoI for TS as a pilot  
Will identify indicators and benchmarks for multi-disasters preparedness



# Instituting a Disaster Preparedness Index (DPI)

## How well is the Country Prepared

Contd.

S. No	FACTORS	Weightage in Per cent
1.	Awareness Generation	10
2.	Guidelines Issued and Plans Prepared	10
3.	DM Included into Fabric of the Governance – Mainstreaming DM into Developmental Plans	12
4.	Capacity Building – Response	12
5.	Preparedness, Forecasting & EW	08
6.	Preparedness – Mock Exercises	06
7.	Mitigation Projects	08
8.	Scientific and Technological Interventions	07
9.	Medical Preparedness	07
10.	Introduction of DM Curriculum in Education	08
11.	Fire Services	08
12.	Techno-Legal Regime	04
	<u>Total</u>	<u>100%</u>



# Instituting a Disaster Preparedness Index (DPI)

## How well is the Country Prepared

S. No	FACTORS	Weightage Assigned (in %)	LEVEL OF PREPAREDNESS (SCORE CARD)		
			Two Years Ago	Current Level	Five Years Later
1.	Awareness Generation	10		5	8
2.	Guidelines Issued and Plans Prepared	10		6	8
3.	DM Included into Fabric of the Governance – Mainstreaming DM into Developmental Plans	12		5	9
4.	Capacity Building – Response	12		6	9
5.	Preparedness, Forecasting & EW	08		4	6
6.	Preparedness – Mock Exercises	06		4	5
7.	Mitigation Projects	08		4	6
8.	Scientific and Technological Interventions	07		3.5	5
9.	Medical Preparedness	07		3.5	5
10.	Introduction of DM Curriculum in Education	08		3	5
11.	Fire Services	08		2	4
12.	Techno-Legal Regime	04		1	2
	<b>Total</b>	<b>100%</b>	<b>29%</b>	<b>47%</b>	<b>72%</b>



## **A few issues merit urgent attention in the immediate future include :**

1. Establishment of National Disaster Mitigation Fund and state Disaster Mitigation Fund
2. National Disaster Database
3. Risk Transfer Mechanisms
4. Provision of funds for DMPs of Central Ministries and Departments and States/UTs for activities listed
5. Logistics & Supply Chain Management



On 11<sup>th</sup> March 2011 an Earthquake of unprecedented scale struck TOHOKU region of Japan followed by Tsunami and Fukushima radiological disaster.



## Capabilities of Team

- Team was capable of responding in any natural disaster as well as in CBRN emergencies.
- Capable of round the clock operations
- Self-sufficient in lodging & boarding.
- Carried CBRN protective gear & equipments for safety of the team members as regards the radioactive contamination threats.

Contingent consisting of 46 members led by Shrii Alok Avasthy, Commandant was dispatched to Japan as part of relief & rehabilitation efforts by the Govt. of India in Japan in the wake of massive destruction caused by earthquake and subsequent tsunami in the Tohoku region of the Eastern Japan.





# JAPAN : Classic Example of Great Nation

## 10 LESSONS TO LEARN FROM JAPAN

### ☞ The Calm :

Not a single chest-beating or wild grief scene

### ☞ The Dignity :

Disciplined queues for Water & Groceries. Not a rough word or crude gesture

### ☞ The Ability :

The incredible architects.

### ☞ The Grace :

People bought only what they needed for the present, so everybody could get something

### ☞ The Order :

No looting in shops. No honking / overtaking on roads





Contd..

# 10 Lessons to learn from JAPAN

## ☞ The Sacrifice :

50 Workers stayed back to pump sea water in nuclear reactors

## ☞ The Tenderness :

Restaurants cut prices : The strong cared for the weak

## ☞ The Training :

Elderly people & children, everyone knew exactly what to do. And they did just that

## ☞ The Media :

Showed magnificent restraint in bulletins. No silly reportings. Only calm reportage

## ☞ The Conscience :

When the power went off in a store, people put things back on the shelves & left quietly



## Achievements of the Team

- Team managed to extricate many Bodies from the Rubble, more than Two weeks after the Disaster struck the area.
- Absence of any heavy Equipment at the disposal of the team.
- The team recovered & handed over cash worth Fifty Million Yen to the authorities apart from the valuables.
- Appreciation by the local authorities, media and the public at large.
- Commendation of our work conveyed by the Govt. of Japan to the Embassy of India
- On 5<sup>th</sup> of April 2011 people who lived in Rehab Camp in Ongawa town hall gave vote of thanks to Indian Team & Shared their experience with the contingent CDR.
- The apparent dedication, honesty, cultural sensitivity and emotional quotient of the team was highly appreciated by the Mayor of Onagawa. Media and public.
- The Mayor of Rifu Cho also thanked and expressed his gratitude to the Indian team for help and support provided to the people of the Miyagi in general and Onagawa in particular.



***Thank You !***