



Need for a Contemporary Approach To Disaster Management

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Former Member

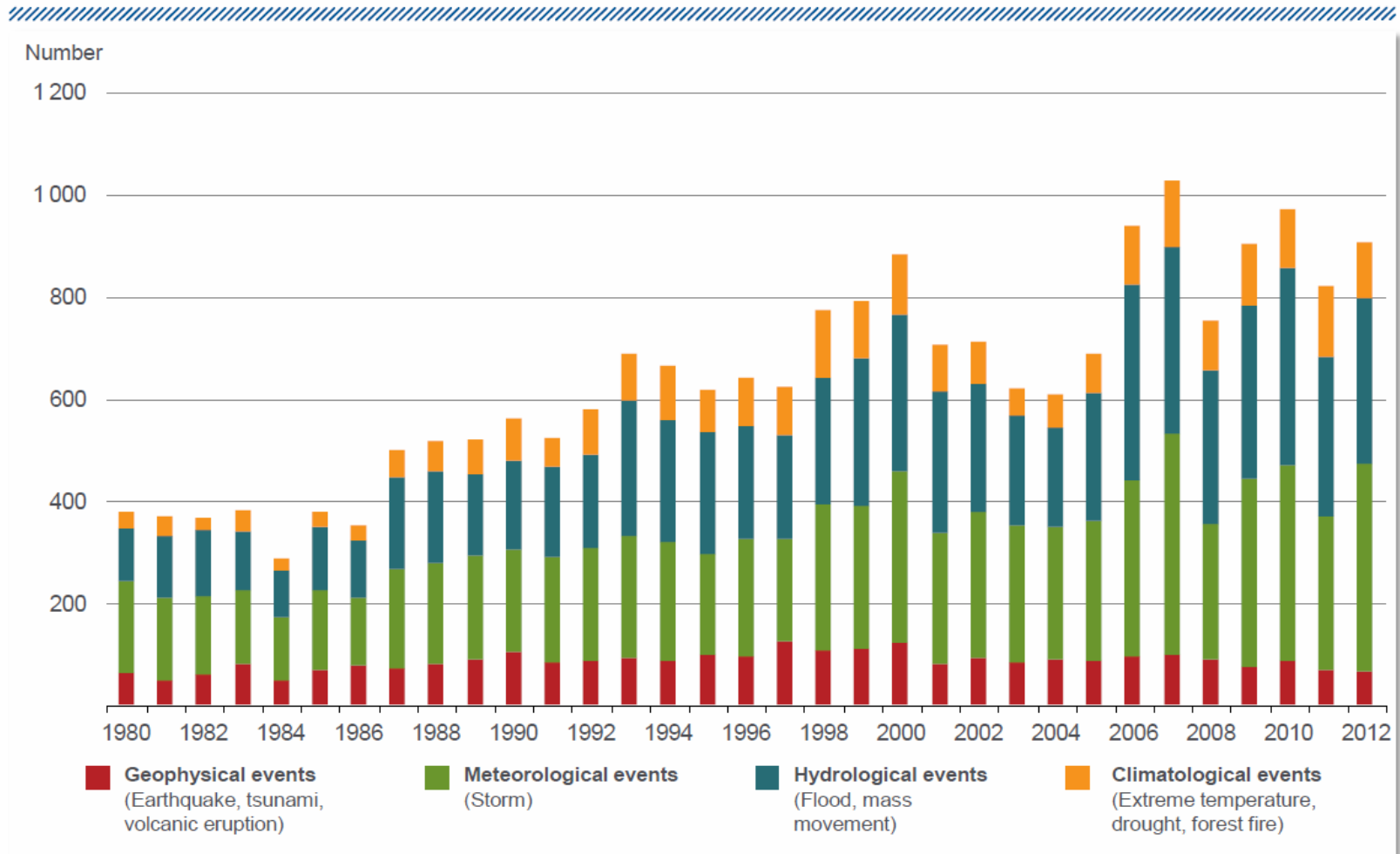
National Disaster Management Authority

CONTENTS

- Trends in Disasters, World wide, India, A.P
- Disaster Management Framework, Post DM Act, 2005 – Paradigm Shift
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 - Cutting Edge Level
 - NDRF
 - Supporting/Enabling Measures
 - Mainstreaming of DM into Governance
 - Sensitization of Functionaries
 - Awareness Generation
- National Policy – Highlights
- Gist of NDMA's Guidelines
 - Flood's, Drought, Landslides, Cyclone, Industrial, Nuclear, Biological, Chemical, Earthquake, Tsunami, Urban Flooding etc.
 - Medical Preparedness and Mass Casualty Management, Communications etc.
- Preparation of plans (National/State) – status and efforts on to operationalise measures thrown up by the plans
- NDMA/SDMA - **responsibilities** and **challenges**

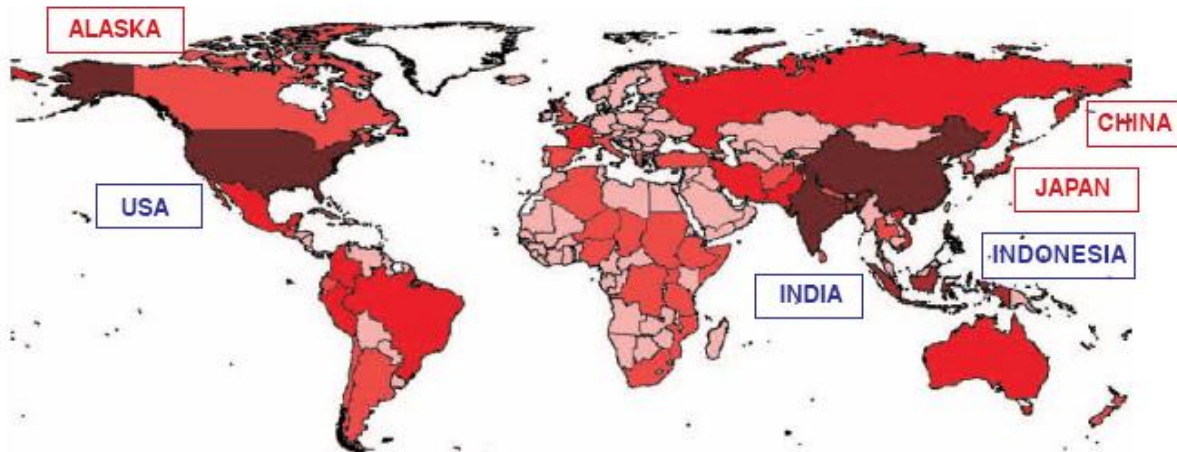
Natural catastrophes worldwide 1980 – 2012

Number of events

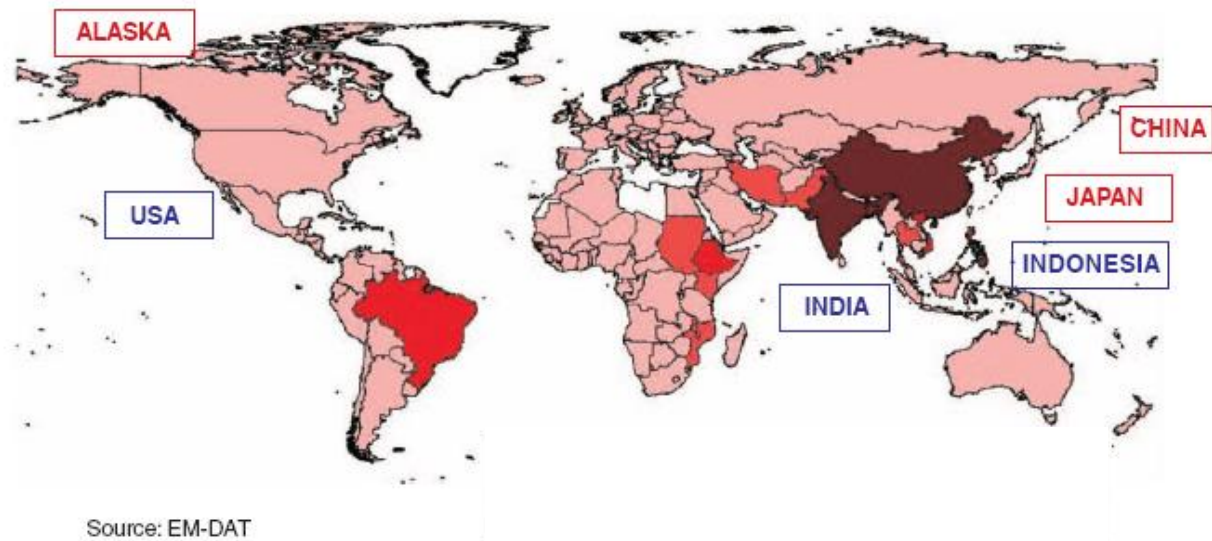


MITIGATION IMPACT

INCIDENCE OF DISASTERS



IMPACT



- Legend
- Severe
 - Moderate
 - Low

Source: EM-DAT

EARTHQUAKES

<u>Magnitude (Richter)</u>	<u>Year</u>	<u>Country</u>	<u>Fatalities</u>
6.4	1993	India (Latur)	7,928
6.7	1994	USA (California)	60
> 6.0	2003-05 (7 Events)	Japan	34
6.7	2003	Iran (Bam)	40,000
6.5	2010	USA (California)	Nil

Impacting 2 to 7% of GDP.

Source – World Bank Report, 2004

**One Dollar invested in Mitigation
saves Seven Dollars.**

Source – BBC Hard Talk, Geneva

Allocation on State Disaster Response Fund (SDRF) – 2010-15 : **Rs. 33,580.93 Cr.**
Rs 25,847.93 – central share
Rs 7733.00 – state share

**Expenditure on National Disaster Response Fund (NDRF)
and Reconstruction (2009-10) : Rs. 2,994 Cr.**

Note:

Does not include estimates of loss of private property.

ECONOMIC LOSSES DUE TO DISASTERS

2009 Floods

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

2010 cyclonic storm 'Laila'

- The "Laila" cyclone, which crossed the Andhra Pradesh coast near Bapatla caused an estimated loss of Rs **1,630 Cr.**

Eye-Opener Statistics

- State GDP for A.P. for the year 2009-10 was Rs **2,65,000 Cr** (constant prices) with a Growth Rate of **5.04%**.
- Total losses due to Floods (2009) and Cyclonic Storm (2010) is Rs **13,630 Cr**, which incidentally is **5.14 %** of the SGDP (**More than the Growth Rate**).

Disaster Management Framework

MANAGEMENT OF DISASTERS

1. Until 2001 – Responsibility with Agriculture Ministry.
2. In the context of increasing magnitude and frequency of disasters committees Set Up by Central Govt on Disaster Management :-
 - High Powered Committee under Chairmanship of Shri J C Pant – August 1999 (Prior to Orissa Super Cyclone).
 - All Party National Committee under the Chairmanship of Prime Minister – Feb 2001 (After Gujarat Earthquake).
1. Responsibility Transferred to MHA in June 2002.
2. DM Act passed in December 2005.

PARADIGM SHIFT

APPROACH

- Paradigm Shift from Response Centric to a Holistic and Integrated Approach.
- Backed by – Policy, authorities at all levels, supported by Institutional Framework and financial arrangements duly enabled by a statutory environment.

NDMA – Work Done

Cutting Edge Level-NDRF

Supporting/Enabling Measures

NDRF – Bns & Teams Locations

Two more Battalions Approved proposed to be located at Silchar and Haridwar.

7th Bn Ludhiyana

- 1. Srinagar
- 2. Kangra

8th Ghaziabad

- 1. Delhi (CBRN)
- 2. Lucknow

6th Bn Vadodara

- 1. Gandhinagar
- 2. Barmer

5th Bn Pune

- 1. Bangalore
- 2. Mumbai (CBRN)

4th Bn Arakkonam

- 1. Chennai
- 2. Portblair
- 3. Kozhikode

9th Bn Patna

- 1. Vanarasi
- 2. Supaul

1st Bn Guwahati

- 1. Aizawl
- 2. Itanagar

2nd Bn Kalyani

- 1. Kolkata (CBRN)
- 2. Siliguri
- 3. Gangtok

3rd Bn Mundali

- 1. Baleshwar

10th Bn Guntur

- 1. Hyderabad
- 2. Vishakhapatnam



NDRF Bns



Team Locations

Composition

- ❖ Each Bn has authorized strength of 1149 personnel
- ❖ Each Bn has 18 specialist teams of 47 members to handle natural disasters & CBRN emergencies
- ❖ Each team of 47 to have 1 Doctor, 2 Engineers, 2 Paramedics, 1 Technician, 1 Electrician & 1 Dog Squad
- ❖ Total no. – 18 teams x 10 Bn = 180 teams
- ❖ Total authorized strength of NDRF – 11,490 personnel

Disaster Response

- Deployed over 190 disaster response operations so far
- Rescued about 2,82,228 disaster victims and retrieved 1231 bodies.

ONGOING ACTIVITIES AND MAJOR INITIATIVES: CAPACITY BUILDING

Mock Exercises (Districts & Schools)

- Conducted so far. : 260 (including 82 Schools/ Colleges).
- Community and First Responders : **Over 16.5 Lakhs.**
Sensitized/ Trained.

Commonwealth Games (All Competition/ Practice Venues, Games Village & Places of Stay)

- Conducted. : 60.

- States/ UTs Covered –35.
- Districts Covered – 94.
- Exercises Conducted on –
all Natural Disasters, Fire,
Man-made Disasters and
School Safety.

Mock Exercises conducted during 2013-2014 : 85



Delhi Metro, 26 March 2010



Flood, Bellary, 14 Sep 2009



Cyclone, Porbander, 19 Jun 09

- The Force reaches in advance
- Is trained and equipped
- Rehearsals already done – so familiar with terrain

NDRF in Action



KOSI FLOODS ↑
AUGUST 08



LANDSLIDE RESCUE, ↑
DARJEELING, JUN 09



AP & KARNATAKA FLOODS ↑
OCT 09

SAR ↑
OPERATION AT
SABJI MANDI,
CHANDIGARH,
JUN 07

Jalandhar Building Collapse, 2012



Assam Floods, 2012



Uttarakhand Flash Floods, 2013



Floods in Andhra Pradesh & Odisha, 2013



Cyclone Nilam, 2012



Cyclone Phailin, 2013



Cyclone Phailin, 2013



School Safety



JVM School, Bellary,
KARNATAKA, 17 Jun 09



Mata Jai Kaur Public School,
NEW DELHI, 05 May 09

MOCK EXERCISES IN SCHOOLS IN DIFFERENT PARTS OF THE COUNTRY



Govt. Inter College, Dhela,
Ramnagar, UTTARAKHAND
09 Apr 09



Convent of Jesus & Mary,
NEW DELHI, 20 Apr 09



Amity International School,
GURGAON, 29 Apr 09

SUPPORTING/ ENABLING MEASURES

DM Act

National Policy

Mainstreaming of DM into Governance

NDMA Guidelines on Disasters/ Themes

Formulation of Plans (Ministries/ States)

Measures

Structural

Non-Structural

Disaster Resilience of Infrastructure Projects : Audit and Corrective Actions

**New Programmes/
Projects**

**Ongoing Programmes/
Projects**

**Revisit Completed Projects
(on selective basis)**

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 12th Five Year Plan period –

1,28,160 Cr.

SUPPORTING/ ENABLING MEASURES

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

Under Active
Progress.

: Already Included.



SUPPORTING/ ENABLING MEASURES

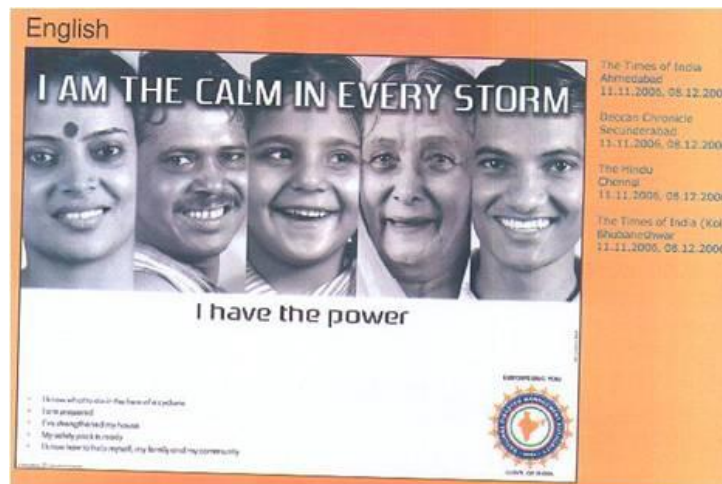
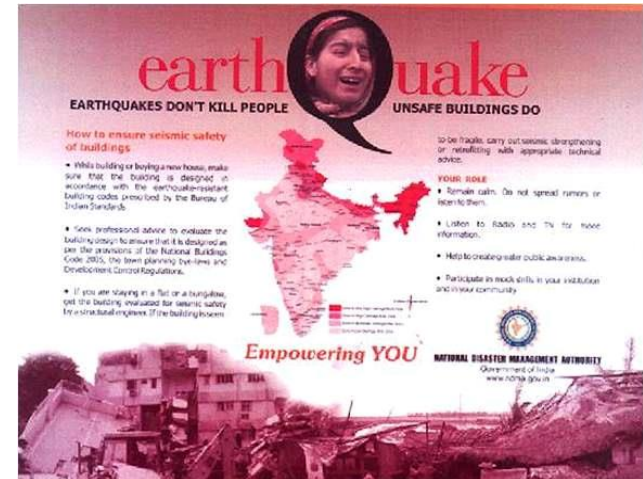
Incident Response Training – till 2014 (February)

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



Awareness Generation

- Earthquakes.
- Cyclones.
- Floods.



TASKS ACCOMPLISHED

TASKS ACCOMPLISHED

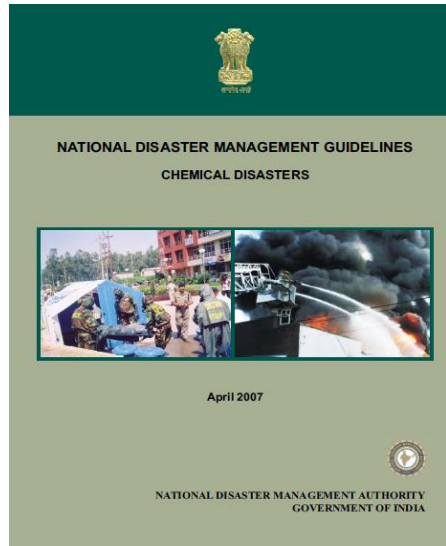
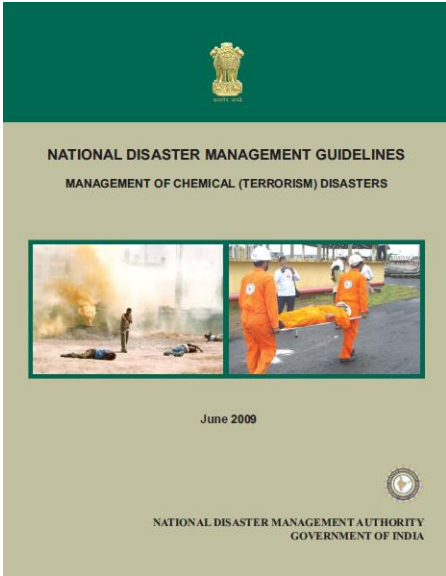
- **National Policy on Disaster Management (DM)**
— **Approved by the Government on 22 Oct 09.**

Guidelines

- **Guidelines for NIDM's Functioning.**
- **Recommendations on Revamping of CD & Fire Services.**
- **Earthquakes.**
- **Chemical (Industrial) Disasters.**
- **Formulation of State DM Plans.**
- **Medical Preparedness and Mass Casualty Management.**
- **Floods.**

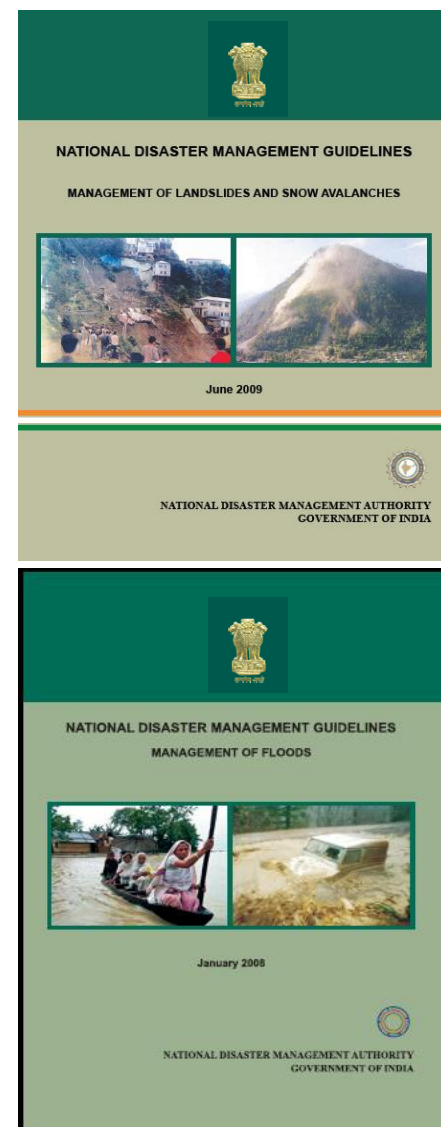
Issued
23

- 13 Apr 06.**
- Dec 06.**
- 16 May 07.**
- 28 May 07.**
- 16 Aug 07.**
- 14 Nov 07.**
- 17 Jan 08.**



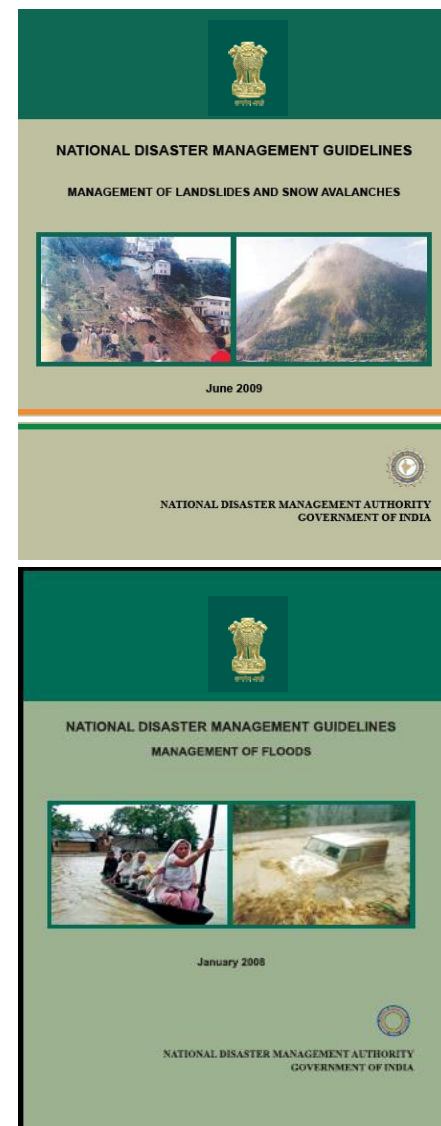
TASKS ACCOMPLISHED

- **Guidelines on Pandemic Preparedness Beyond Health.** 22 Apr 08.
- **Cyclones.** 24 Apr 08.
- **Biological.** 22 Aug 08.
- **Nuclear and Radiological Emergencies (Unclassified, Part – I).** 24 Feb 09.
- **Guidelines for Disaster Response Training at the Centre & States – NDRF & SDRFs.** Mar 09.
- **Landslides & Snow Avalanches.** 23 Jun 09.
- **Chemical Terrorism Disasters.** 04 Aug 09.
- **Psycho Social and Mental Health Care.** 20 Jan 10.
- **Incident Response System.** 21 Jul 10.
- **Strengthening of Safety and Security for Transportation of POL Tankers.** 26 Jul 10.



TASKS ACCOMPLISHED

- **Threats to Municipal Water Supply and Water Reservoirs.** 26 Jul 10.
- **Mechanism to Detect, Prevent and Respond to Radiological Emergencies in India.** 11 Aug 10.
- **Management of the Dead in the Aftermath of Disaster.** 17 Aug 10.
- **Minimum Standards of Relief –**
 - Food in Relief Camps.**
 - Sanitation & Hygiene in Disaster Relief.** 30 Aug 10.
 - Water Supply in Relief Camps.**
 - Medical Cover in Relief Camps.**
- **Tsunami.** 03 Sep 10.
- **Drought.** Being
Handed over
to Secretary
Agriculture
on 24 Sep 10.
- **Urban Flooding** Sep 10



ONGOING ACTIVITIES AND MAJOR INITIATIVES

1. Guidelines – Under Finalization.

- Curriculum for Training of Civil Defence.
- Community Based Disaster Management.
- National Guidelines on Communication & Information Network.
- Nuclear – Radiological – Part II (Classified.)
- Role of NGOs in Disaster Management.
- Post Disaster Reconstruction.
- Protection of Cultural Heritage & Monuments.
- Training Curriculum for Civil Defence.
- Fire Services.

Work in progress when – last
heard of

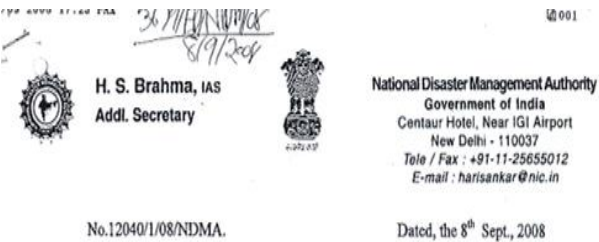
ONGOING ACTIVITIES AND MAJOR INITIATIVES

2. Formulation of DM Plans by Central Ministries and States

- National Level Plans.
 - National Disaster Management Plan

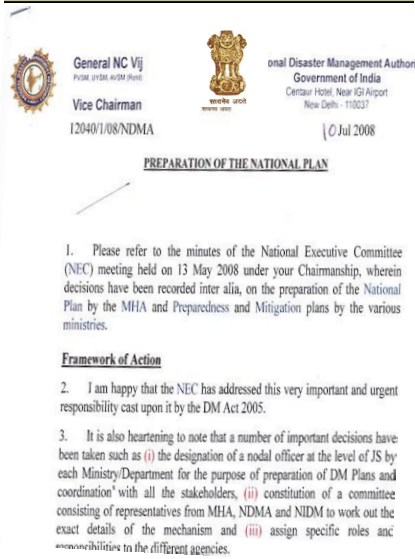
NEC

TO BE APPROVED BY NDMA.



PREPARATION OF PLANS BY THE MINISTRIES

1. I write in continuation of my earlier communication dated July the 10th, 2008, regarding the preparation of "National Response Plan" by the MHA and "National Preparedness and Mitigation Plan" by the various Central Ministries/Departments.



Progress in Preparation of DM Plans

- Central Ministries/ Departments
- States (To be approved by the SDMAs).

Completed

05.
25.

Under Preparation

03.
10.

HOW WELL IS THE COUNTRY PREPARED

Sl. 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>

HOW WELL IS THE COUNTRY PREPARED

Sl. 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
	<u>Total</u>	<u>100%</u>	<u>29%</u>	<u>47%</u>	<u>72%</u>

NDMA/SDMA - responsibilities and challenges

LEAD TAKEN BY STATES ON SDMA'S

- 24 States have made SDM Plans
- Maharashtra 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 has done Vulnerability Assessment and Risk analysis

SDMA – MAIN RESPONSIBILITIES

Planning, coordination and monitoring

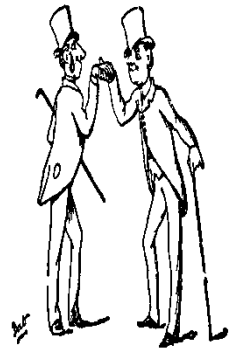
- Lays down the policies
- Approves Disaster Management Plans and coordinates its implementation
- Provides guidelines and reviews measures taken for mitigation, capacity building and preparedness
- Recommend provision of funds for mitigation and preparedness measures.
- Examine the vulnerability of the State and specify prevention or mitigation measures
- Ensure updation of DM plans, working of emergency communication systems and organizing of DM drills periodically
- Examine the construction, in the State and ensure compliance of standards
- Promote general education, awareness
- Develop capacities for compliance of building codes
- Facilitate knowledge sharing
- Human Resource development of DM authorities and institutions.

CHALLENGES FACING THE SDMA

- Need for Informed leadership and administratively feasible programmes
- Preserve and protect developmental gains
- Minimize losses to life and property
- The SDM Plan to address requirements of completed as well as ongoing projects/ programmes
- provide the funds required for operationalizing these DM Plans
- SDRF
- Flood Plane Zoning laws + building by-laws

Positioning of SDMA

- Establishing relationships
- Synergetic, Mutually reinforcing, Productive and Harmonious
- Advantages in A.P.
 - Lessons learnt from NDMA
 - A Compact and well-toned State administration
 - Any amount of interest from EA agencies



On 11th 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.
- Team carried CBRN protective gear & equipments for safety of the team members as regards the radioactive contamination threats.

Contingent consisting of 46 members led by Sh. 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.

10 Lessons learnt from Japan

Disaster'... Contd



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



The Sacrifice :

50 Workers stayed back to pump sea water in nuclear reactors

10 Lessons learnt from Japan

Disaster'... Contd

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 5th 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