

Programme Report
Training Programme on School Safety Plan and Safety Audit
(August 19-21, 2019)

In collaboration with Tripura SDMA and State Institute of Public Administration and Rural
Development (SIPARD) at Agartala

Training Programme on School Safety Plan and Safety Audit from August 19-21, 2019 was organized by the Institute in collaboration with Tripura SDMA at Agartala. The aim of the training programme was to facilitate the creation of requisite capacity of the stakeholders involved with schools and to prepare and effectively implement the school disaster management plan.

The programme was organized with the following objectives:

1. To enhance understanding concerning:
 - the nature and extent of the threats to schools due to disasters; and
 - the concept and issues involved in school preparedness to deal with disasters;
2. To describe different activities involved in disasters preparedness of schools;
3. To enhance capability to develop and analyze plans for better disaster risk preparedness and mitigation measures to minimize the impact of disasters on schools;
4. To enhance the skills of the participants to organize similar training programmes in their schools and at state, district and local levels; and
5. To provide a forum for inter-changing of ideas and views pertaining to disaster risk mitigation of schools.

This training programme was primarily designed for senior teachers and people who are involved in disaster risk mitigation activities for schools at different levels. The programme was also useful for administrators and senior teachers involved in school safety.

The broad methodology adopted during the programme was based on presentations and interactive sessions. During the training programme a variety of training methods like power point presentations, group discussions, demonstration, field visit to a school and group work based on the school visit, which was presented by participants were used. There were 40 participants (mostly senior teachers working with the government schools and involved with disaster management at their respective schools) representing all eight districts of the state attended the programme. All the participants were well versed with the needs and requirements for disaster management and safety audit aspects of schools. All of them had shown skills necessary to develop school safety (disaster management) plans. Faculty for the programme included the NIDM faculty and external resource persons.

Training Programme Schedule

Training Programme on School Safety Plan and Safety Audit
From August 19-21, 2019

Organized by: National Institute of Disaster Management (Ministry of Home Affairs, Govt. of India) In collaboration with Tripura State Disaster Management and SIPARD, Agartala

Time	Topic	Resource Person/s
Day 1 19.08.2019		
09:30 – 10:15	Registration Inauguration	
10:15- 11:30	Expectations, Experience Sharing & Ground Rules)	Dr. Amir Ali Khan NIDM
130 – 11:45	Tea and Group Photo	
11:45- 13:00	Basic concepts of DRR with reference to school safety and education	Dr. Amir Ali Khan
13:00 – 13:30	Lunch	
13:30 – 14:45	Local Hazard, vulnerability, capacity and risks of schools with case studies from past disasters	Dr. Sarat Kumar Das State Project Officer, Revenue Deptt.
14:45- 16:30	Vulnerability assessment and structural / Non-structural audit of schools buildings	Dr. Amir Ali Khan
16:30- 16:45	Tea	
16:45 – 17:00	Summary of 1st day's program	Dr. Amir Ali Khan
Day 2 20.08.2019		
10:00 – 10:15	Recapitulation – 1st day	
10:15 – 11:30	Hazard, vulnerability, capacity and risks (HVCR) Assessment of Schools -tools and techniques	Shri Arabinda Chaudhury Ex. PO,UNDP and Master Trainer in Disaster Management, School Education Deptt.
11:30 – 11:45	Tea	
11:45 – 13:00	Concepts of School Disaster Management Plan (SDMP) with an Exercise on Evaluation of SDM	Dr. Amir Ali Khan and Shri Arabinda Chaudhury
13:00 – 13:00	Lunch	
14:00 – 15:15	Filed visit to a City School for a structural and non -structural audit Preparation of School DM Plan – Group Exercise	Dr. Amir Ali Khan and Shri Arabinda Chaudhury
15:15 – 15:30	Tea	
15:30 – 16:45	Vulnerability assessment and structural / Non-structural audit of schools buildings	Dr. Amir Ali Khan
16:45 – 17:00	Summary of 2nd day's program	Dr. Amir Ali Khan
Day 3 21.08.2019		
10:00 – 10:15	Recapitulation – 2nd day	
10:15- 13:00	Field Visit based group work / Discussion and Preparation of School DM Plan – Group Exercise	Dr. Amir Ali Khan
13:00 – 14:00	Lunch	
14:00 – 16:00	Fire safety/ search and rescue techniques/first aid followed by a demonstration	NDRF/ <i>fire</i>
16:00 – 16:15	Tea	
16:15 – 16:45	Summary of 3rd day's program and the whole programme	Dr. Amir Ali Khan
16:45 – 17:00	Feedback and Valediction	

List of Participants

School Safety Plan and Safety Audit

Date : 19th – 21st , 2019

Sponsored: NIDM

Course Co-ordinator : Dr.(Smt.) Elizabeth L. Sangliana, Asst. Prof. SIPARD

Sl. No.	Name	Designation	Office Address	Contact Number	Email- ID
1	Sabitri Acharya	STGT	Kulai Colony H/S, Ambassa, Dhalai	8794936481	sabitriacharya@gmail.com
2	Pinky Daniel	Vice – Principal	Holy Spirit School, Belonia, South Tripura	8119097881	sabinassps@gmail.com
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25	Swarna Debbarma	PGT	Pramode Nagar H/S School, Sepahijala	7005068411	
26	Susmita Bhattacharya	GT	O/o the HOD & DDO, Joynagar H/S Sanichara, North Tripura	9436902785	
27	Shyamalima Misra	GT	Netaji Vidyapath Eng. Med. H/S School, Kailashahar, Unakoti Tripura	9402146061	
28	Mitu Malakar	A/T (G/T)	R.K.S.P Kailashahar, Unakoti Tripura	9436534371	mitumalakarmm@gmail.com
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31	Jharna Rani Das	PGT	Jalabasa H.S (+2stage) School	7005726245	
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Group Photograph



Disaster Management in Tripura

Sarat Kumar Das
SPO, Tripura SDMA

Then...

ALTERNATIVE COMMUNICATION MODES

- ▶ INFRASTRUCTURE INDEPENDENT
 - ▶ 1.SHORT WAVE RADIO
 - ▶ 2. TWO WAY RADIO
 - ▶ 3. WEATHER RADIO
 - ▶ 4. SATELLITE COMMUNICATION

- ▶ INFRASTRUCTURE DEPENDENT
 - ▶ 1.AUDIO PUBLIC ADDRESS SYSTEM
 - ▶ 2.LED ELECTRONIC SIGNS
 - ▶ 3.DIGITAL SIGNAGE
 - ▶ 4.GIANT VOICE SYSTEMS



Communications become first casualty during disasters

WHEN ALL ELSE FAILS...



Is there any mandate/ guiding principles for communications/ alternate communications in DM?



How to communicate when the world goes

SILENT

GraywolfSurvival.com

- ### Legal Mandate (DM Act-2005)
- **Sec. 22(2)(p) & 30(2)(xxviii)**– Functions of SEC & DDMA - ensure that communication systems are in order
 - **Sec. 31(3)(d)(iv)**-The District Plan shall include-establishment of communication links
 - **Sec. 34(f)**-For the purpose of assisting, protecting or providing relief to the community, in response to any threatening disaster situation or disaster, the District Authority may- establish emergency communication systems in the affected area

Legal Mandate (DM Act-2005)

- **Sec. 36(g)(i)**– Responsibilities of Ministries or Departments of Government of India - make available its resources for providing emergency communication in a vulnerable or affected area
- **Sec. 39(h)(i)**– Responsibilities of departments of the State Government – same as above
- **Sec. 67**- Direction to medial for communication of warnings, etc

National DM Plan-2016

- **P-35, 42 & 87**- Monitoring, dissemination of forecasts, warnings, data, and information - MoIB, MoES, DST, DeitY, DoT, MoCIT, MHA, NDMA, CWC, IMD, NRSC, State – Deployment of comm. Eqptts, provision of comm technologies, issue of warnings and updates, last mile connectivity
- **P-97** – Role of EOCs (National, State, District and down level) – **communication** and coordination hub - **alternate communication system**

National DM Policy-2009

- **Sec. 2.4.1** - Developing contemporary forecasting and early warning systems backed by responsive and failsafe communication with information technology support.
- **Sec. 3.2.3** - Resources available with the disaster management authorities at all level, which are capable of discharging emergency support functions, will be made available to the nodal Ministries/Agencies dealing with the emergencies at times of impending disasters/disasters.

National DM Plan-2016

- **P-99 & 100** - Major Tasks and the Responsibilities - Centre and State - **Communication**
- **P-102-113** - Preparedness & Response by Centre and State – S&R, Communication, emergency supplies, medical facility, transportation, power, fuel, media communication – **failsafe communication, alternate communication, effective communication, restoration of emergency communication, communication and coordination, plans for communication including HAM**

National DM Policy-2009

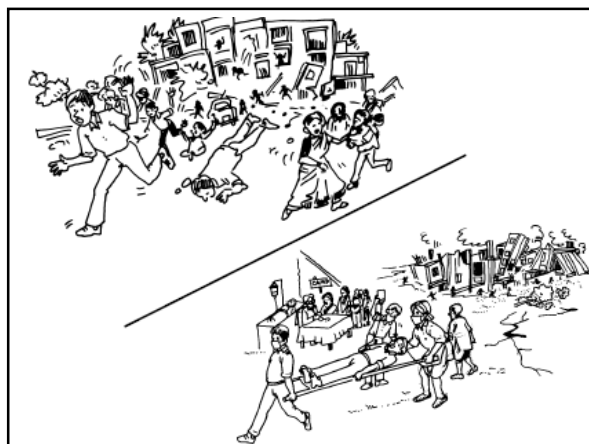
- **Sec. 5.2.7** - Strengthening of the Emergency Operations Centres - The integration of **HAM** radios and such other innovative facilities, into the DM **communication system**, will be advantageous.
- **Sec. 7.1.1** - Prompt and effective response through contemporary forecasting and early warning systems, **fail-safe communication** ...

National DM Plan-2016

- **P-122**-Recovery process- Restoration and even upgrading utilities including **communication networks**
- **P-123**-Prioritising sectors for recovery - .. **Comm..**
- **P-126**- Physical rehabilitation is a very important facet of rehabilitation. It includes: .. **Comm..**
- **P-135**- Capacity development activities - Centre and State – **Comm** - NDMA, MHA, DoT, DST, NIC/ State Govt., SDMA, Revenue Dept.,DDMA - **Developing fail-safe communications** with advance technology

SFDRR-2015

- **Priority 1:** Understanding disaster risk.
 - use and promote the information and **communications technology** innovations
- **Priority 4:** Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.
 - **To invest in, develop, promote, maintain and strengthen** people-centred multi-hazard, multisectoral forecasting and early warning systems, disaster risk and **emergency communications** mechanisms ...



AMCDRR-2016 – PMs 10 point agenda

- All development sectors must imbibe the **principles of disaster risk management**.
- Work towards risk coverage for all.
- Encourage greater involvement and **leadership of women** in disaster risk management.
- **Invest in risk mapping** globally.
- **Leverage technology** to enhance the efficiency of disaster risk management efforts.
- Develop a **network of universities** to work on disaster issues as they have social responsibilities too.
- Utilise the opportunities provided by social media and **mobile technologies** and recognise the potential of social media and **develop applications** for all aspects of disaster risk management.
- Build on **local capacity** and initiative.
- Ensure that the opportunity to **learn from a disaster** must not be wasted.
- Bring about greater cohesion in international response to disasters.



AMCDRR-2018 – Ulaabnaatar Declaration

- **4- Recognize** that science and technology research and its application, including in space and spatial, and information and communication technology, have and will continue to have a significant role in achieving the 2030 Agenda for Sustainable Development.
- **21- Scale up** effective early warning systems and their translation into early action including for hard-to-reach and remote populations.
- **22- Integrate** disaster risk reduction into preparedness, response, post-disaster recovery and “Build Back Better” by improving coordination, ensuring continuity of critical infrastructure and services, and facilitating effective linkages between relief, rehabilitation and development.

The paradigm shift

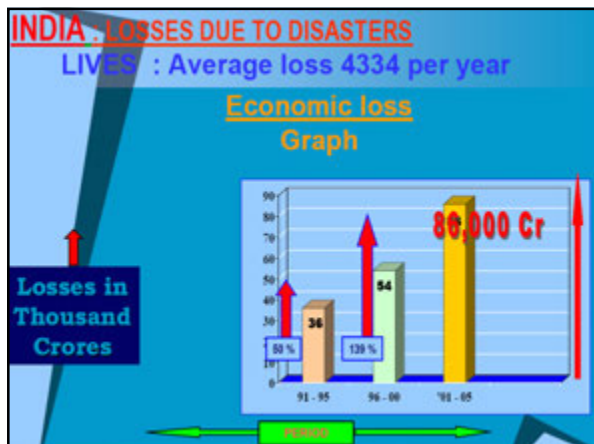
Till recently the focus of disaster management was on :

Relief &
Rehabilitation

Now the focus is shifting on :

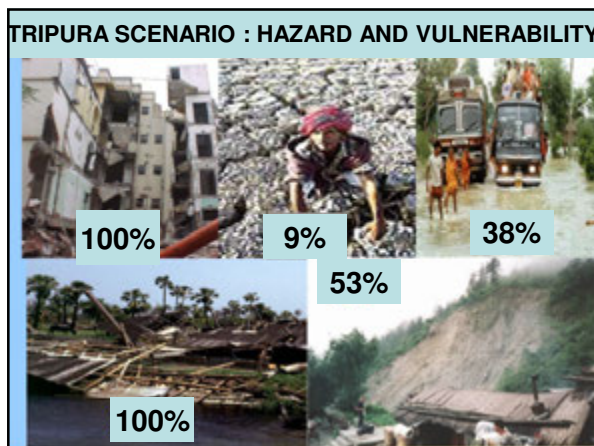
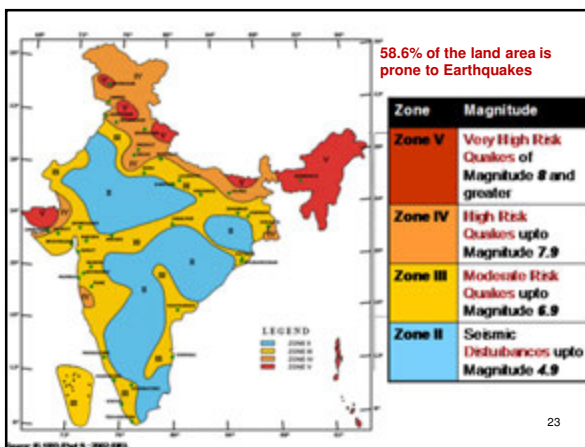
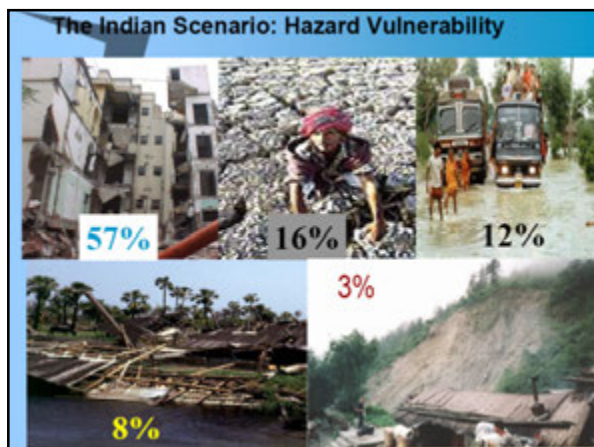
Prevention,
Preparedness,
Response &
Recovery

Through proper planning



Tripura State Profile

- 3rd smallest state in India (10492 sq km)
- Remote location – High cost of construction
- Need for large scale capacity building
- Totally dependent on Central funds under Plan / Non – Plan.
- Located in Zone V of earthquakes



SIGNIFICANT EARTHQUAKES IN THE REGION

- 1897 Shillong earthquake of 8.7 magnitude
- 1923 Meghalaya earthquake of 7.1 magnitude
- 1930 Dhubri earthquake of 7.1 magnitude
- 1943 Jorhat earthquake of 7.3 magnitude
- 1947 Arunachal Pradesh earthquake of 7.7 magnitude
- 1950 Assam earthquake of 8.6 magnitude
- 1954 Manipur-Burma border earthquake of 7.7 magnitude
- 1957 Indo-Burma border earthquake of 7 magnitude
- 1984 Silchar earthquake of 5.9 magnitude
- 1988 Manipur-Burma border earthquake of 7 magnitude
- 2015 Sikkim Earthquakes of 7 magnitude
- 2016 Manipur Earthquake of 6.7 magnitude
- 2017 Tripura Earthquake 5.7 magnitude

EARTHQUAKES OF NORTH EAST INDIA (Flash back)

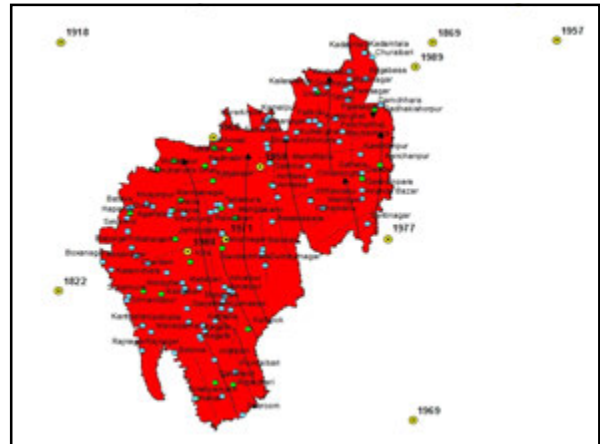
15th August 1950 - The Independence Day Earthquake, Mw 8.6

Cracks in the Assam Trunk Road (Khowang?), N.E. India KVS

North Lakhimpur Bridge over the Ranganadi, N.E. India KVS

Damaged temple (Dibrugarh), N.E. India KVS

Saikoghat, N.E. India, KVS



EARTHQUAKES OF NORTH EAST INDIA

12th June 1897 - The Assam Earthquake, Mw 8.7

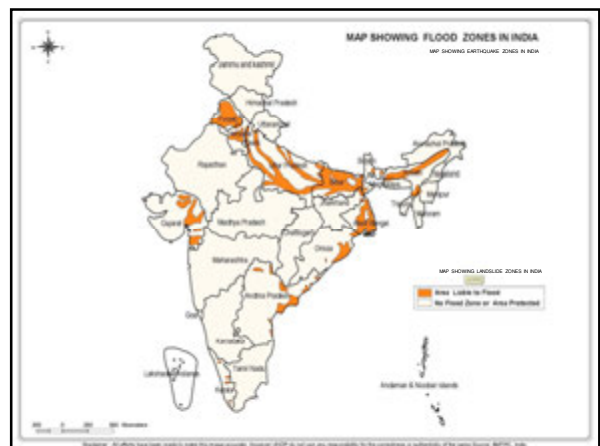
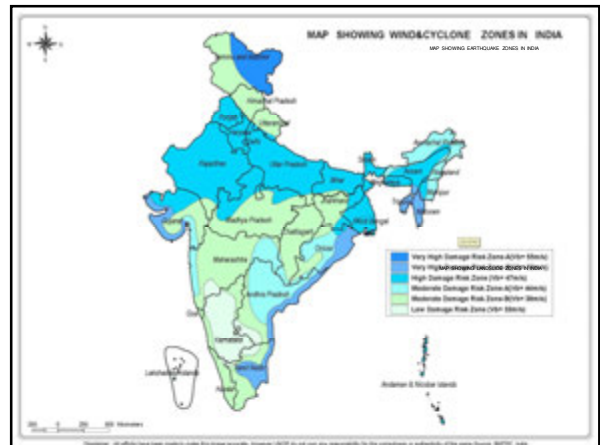
All Saints Church (Shilong), India, KVS

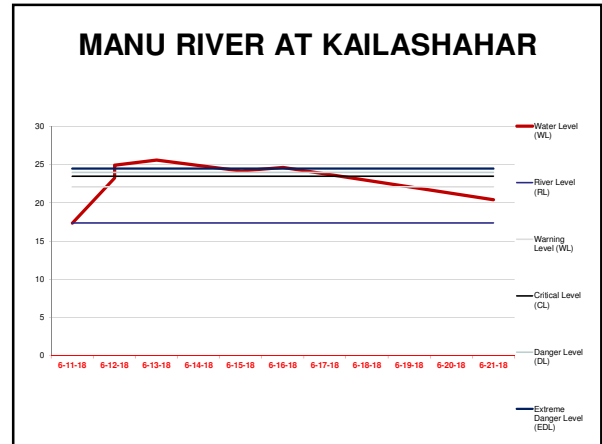
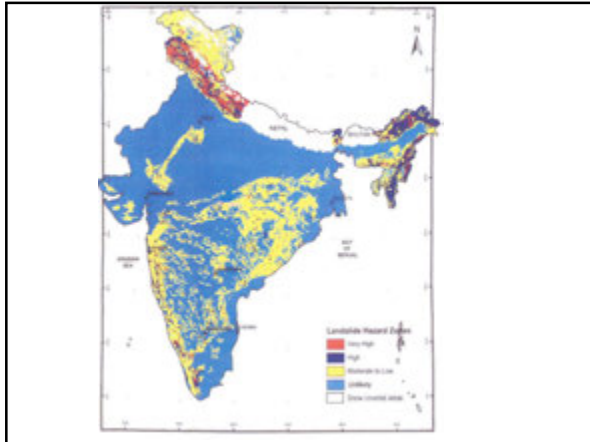
Sandblow at Rowmari, Assam India, KVS

Near Kanchi, Khasi hills India, KVS

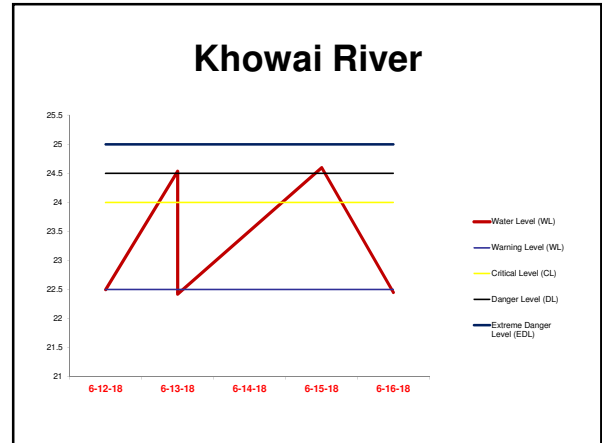
Bant rails on the Tezpur-Balpara Tramway (Rangapara), India, KVS

Fissures at Rowmari, Assam, India, KVS



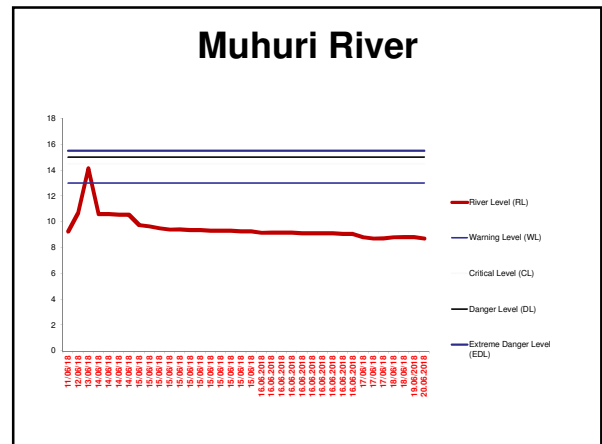


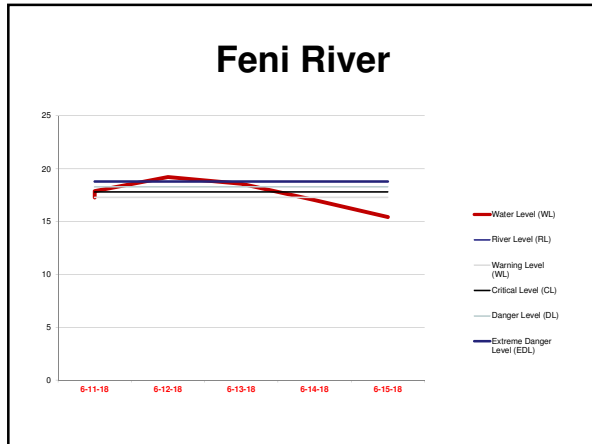
IMPACT FLASH BACK

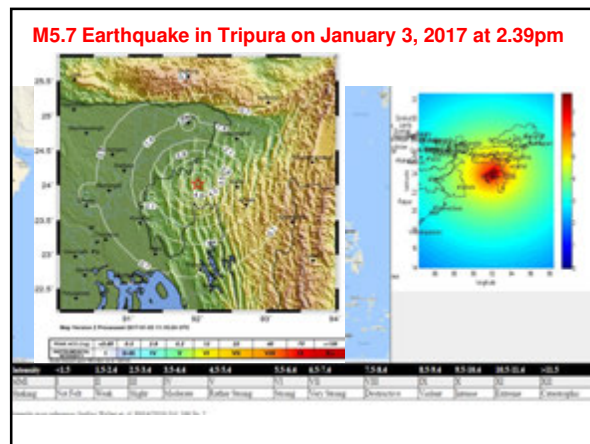


Heavy rainfall during 11-16 June, 2018

State	334mm (456mm)
Kailashahar	351mm
Kanchanpur	486.5mm
Chawmanu	505.2mm
Sabroom	617mm







The sector wise assessed damage

a. Gratuitous Relief	-Rs. 85.80 lakh
b. Search and Rescue Operations	-Rs. 72.70 lakh
c. Relief Measures	-Rs. 4503.54 lakh
d. Agriculture	-Rs.10917.055 lakh
e. Animal husbandry and poultry	-Rs. 84.1915 lakh
f. Fishery	-Rs. 4337.12 lakh
g. Housing	-Rs.11594.47 lakh
h. Infrastructure	-Rs.96528.17 lakh
i. Rubber plantation	-Rs. 312.64 lakh
j. Horticulture	-Rs. 6253.07 lakh
Total	-Rs. 134688.8 lakh



- Major issues**
- Communications
 - Command, control & coordination
 - DM plans were not followed
 - Motor boats
 - Manpower deployments
 - No clarity on roles and responsibilities
 - Relief management
 - Authentic information – suo-motto

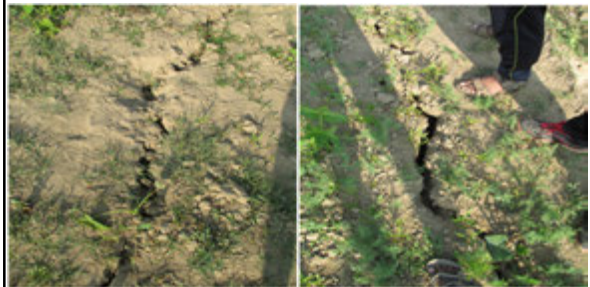




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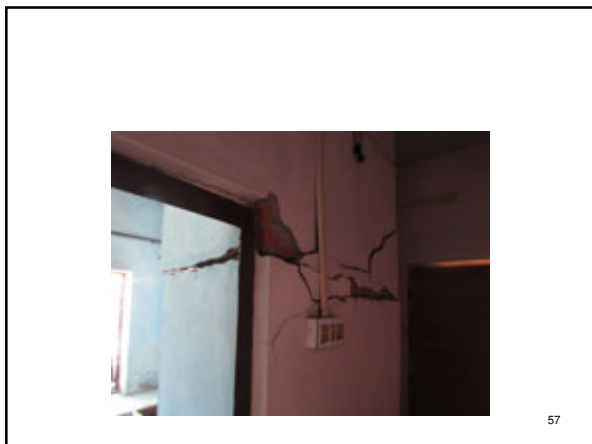
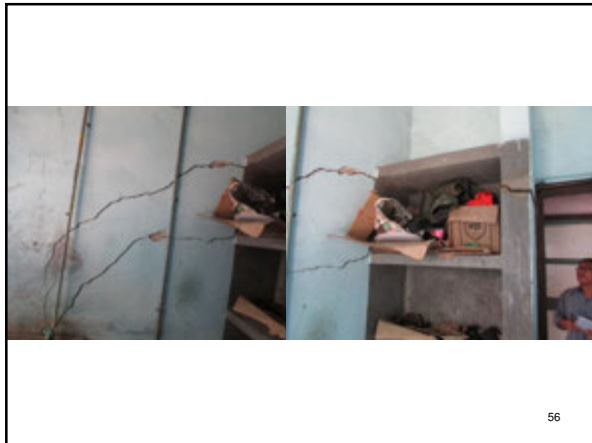
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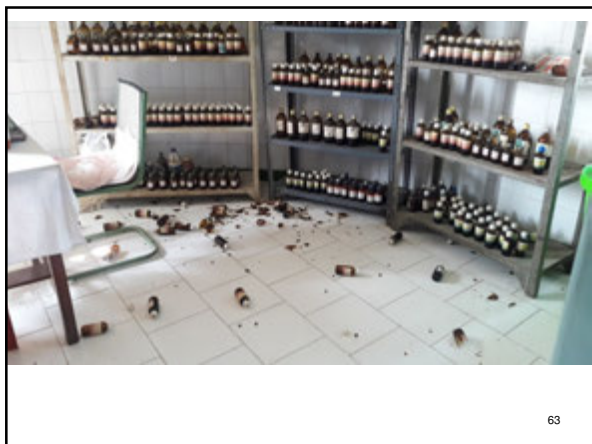


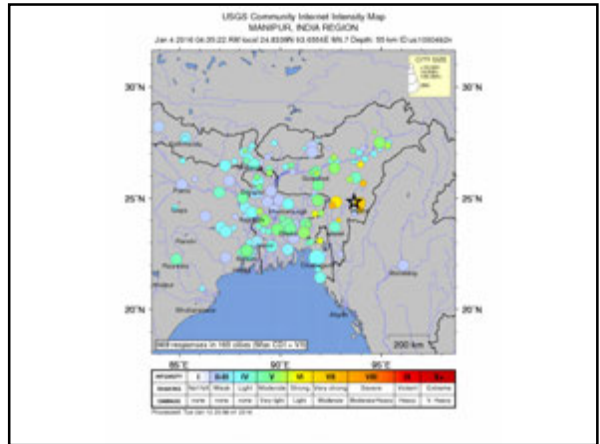
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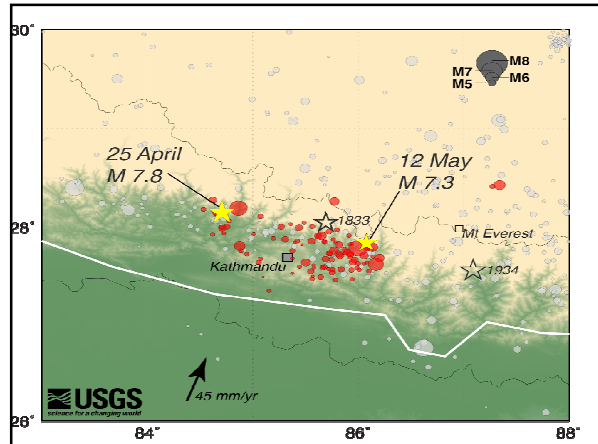
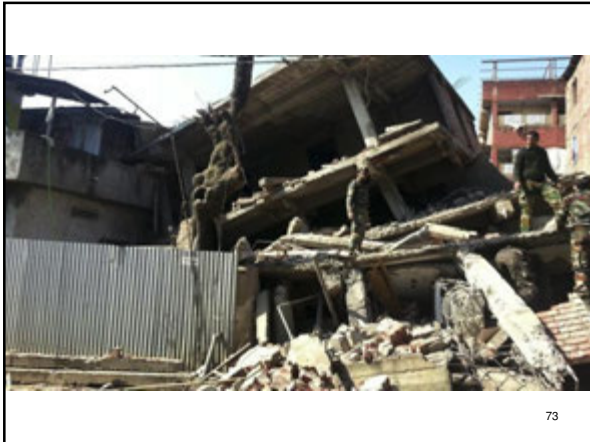


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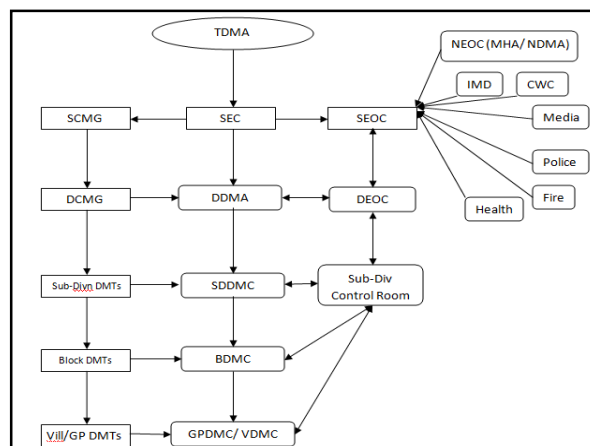
And what about Human Induced Hazards?



HOW TO GO LOCAL GOVT HOLISTIC ?

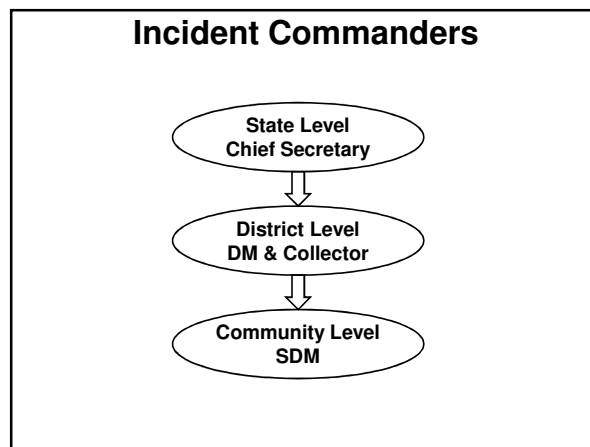
Need to Paradigm shift in

- ◆ Thinking
- ◆ Behavior
- ◆ Planning
- ◆ Mitigation and Prevention
- ◆ Approach – disaster to development based
- ◆ Disaster RESPONSE TO Risk Reduction
- ◆ Governance OF DISASTER-INTERNATIONAL, NATIONAL, PROVINCIAL AND LOCAL LEVEL

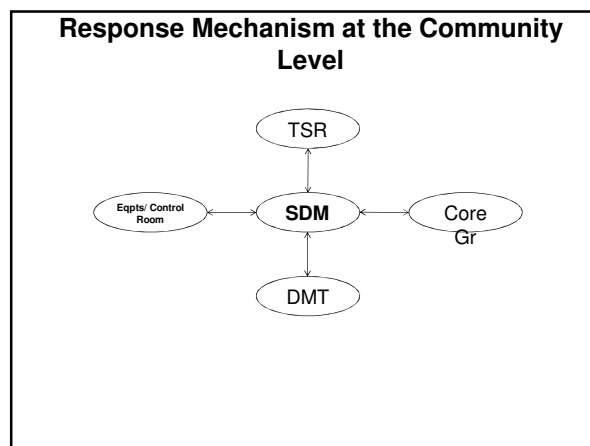


Legal-institutional framework

- Disaster Management ACT, 2005
- National Disaster Management Authority
- State Disaster Management Authority
- District Disaster Management Authority
- ◆ National Disaster Response Force
- ◆ National Calamity Relief Fund
- ◆ National Disaster Mitigation Fund
- ◆ National Institute of Disaster Management



DM Framework in Tripura



Institutional Framework & Techno Legal Regime

- Revenue Department is the nodal deptt for DM in the State
- Directorate of RR & DM has been set up and strengthened
- Identification of nodal officer, Addl Nodal Officer in each departments and constitution of QRTs in vital deptts
- Sections which are applicable to the State under Disaster Management Act 2005 adopted in Tripura
- State Disaster Management Rules are finalized
- State Disaster Management Policy is drafted
- Tripura Building Rules has been incorporated with BIS norms

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Institutionalization

(Training and Capacity Building)

- 5% of SDRF (about Rs.1.5 Crore) is being used annually for training, capacity building, EOCs, HR supports to SDMA and DDMA and awareness generation purposes.
- Annual training plan – as per TNA document
- Identified persons for training – annually
- Database of trained personnel

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Institutional Framework & Techno Legal Regime

- SOPs prepared for Earthquakes, Floods, Cyclones, Fires, EOC and major line deptts
- Crisis Management Plan and Crisis Management Groups have been formed
- Adoption of National Guidelines for Floods, Cyclones, Earthquake, CBRN and Manmade disasters
- State Disaster Response Fund
- State Disaster Management Team

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51 Status of Training Conducted

Institution/Agency	Target Gr	No. of person trained
SIPARD	Govt. officials, PRIs, SHGs, NGOs	4371
CTI	TSR, Police, HG, CD, Fire personnel and DMTs	2446
PRTI	PRI Members	1230
NIT-A	Engineers	213
DIET & Schools	Teachers	2225
Health Deptt	Doctors and Paramedics	134 and 307
PWD, RD & IE-Tripura	Masons & Helpers	3000+
Dist & Sub-div admn.	Volunteers	10000+
ICA	Journalists	137

Institutionalization

(Training and Capacity Building)

- SIPARD has been identified as nodal training institution for imparting theoretical training on Disaster Mngt.
- Central Training Institute as the Nodal Institute for imparting practical training on First Aid & Search and Rescue.
- NIT-Agartala has been identified as the nodal training institution for Engineers Training.
- CWTIT is meant for training and CB for Masons and artisans
- NDRF Team stationed at Agartala has been identified for carrying out on-campus and off campus trainings.
- Master Trainers for specialised trainings have been identified.

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G1 These percentages are making me nervous. can we find out where and then get the DPOs or PO to immediately take it up for covering these remaining units?

Guest, 15-Oct-07



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क्र.सं.	वस्तु का नाम	चित्र	विवरण
1	हस्तियंत्र		एक हस्तियंत्र एक बार और एक बार और एक बार और एक बार
2	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
3	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
4	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
5	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
6	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
7	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
8	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
9	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
10	कटिंग मशीन (10 सेट)		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार

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Positioning of Equipments

A set of **38 types** of critical equipments on Search & Rescue, Medical First Aid, Fire Fighting, Imp Tools, Shelter have been supplied to **36 locations** including all **23 Sub-Divisions**, all **12 TSR Bns** and **CTI-Gokulnagar**.

Besides the above, a skeleton of equipments already placed at State EOC, old four DEOCs

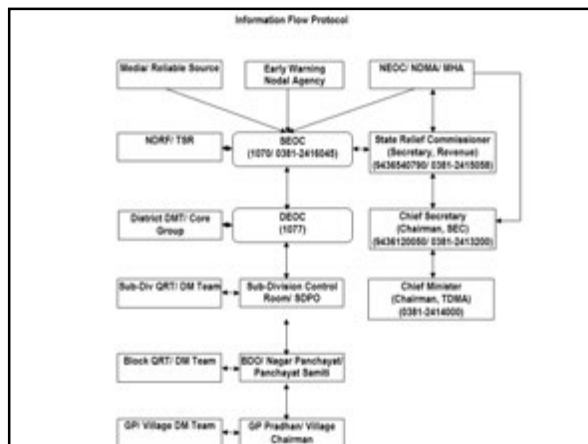
Financial assistance are provided in phases to strengthen the capacity of police, fire service, civil defence and other line depts out of 10% SDRF.

11	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
12	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
13	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
14	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
15	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
16	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
17	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
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19	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार
20	कटिंग मशीन		एक कटिंग मशीन एक बार और एक बार और एक बार और एक बार

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14	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
15	सूचना स्रोत (1) (1)		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
16	सूचना स्रोत (2) (1)		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
17	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
18	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
19	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
20	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
21	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
22	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
23	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
24	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।

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14	सूचना स्रोत		सूचना स्रोत को सूचना देना और उसे प्रसारित करना।
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EOCs (Control Rooms)

TOLL FREE – 1070 (State) & 1077 (District)

- State EOC is functioning round the clock near to Secretariat complex. (Tel No.-1070/ 0381-2416045/ 2416241).
- All the DEOCs are functioning in the premises of DMs Office with requisite communication equipment and manpower.
- SDMs/BDOs are using their office nos. as Control Room nos.
- Training to the EOC personnel are being conducted on annual basis.
- Communication and other critical equipments have been provided to State and District EOCs.
- MASS SMS system is in operation in SEOC for sharing warnings / disaster info to 3500 identified key personnel in the state.

Nodal Departments/ Agencies responsible for providing early warnings and immediate information on hazards	
Type of Hazard	Primary Agency & Contact person
Earthquakes	IMD - Delhi HQ (011-24619943/ 24624088-Duty Officer) IMD Seismological Observatory Centre, Shillong (0364-2560706/ 2560075-Duty Officer) IMD-Agartala (0381-2342295/ 2342253-Duty Officer) (Information on Earthquake after the shock or there is no warning of this)
Floods	CWC (0381-2674188-Guwahati Control Room) IMD-Agartala (0381-2342295/ 2342253-Duty Officer) PWD (Water Resources) (9436453656/ 0381-2355664- Prhansu Ghosh, Asst. Engrg to Chief Engrg. WFO)
Cyclones/Storms	IMD-Agartala (0381-2342295/ 2342253-Duty Officer)
Landslides	GSI-Agartala (0381-2350333/ 9402144883/ 8415829033 -Director, GSI, Agartala)
Thunder	IMD-Agartala (0381-2342295/ 2342253-Duty Officer) Thunder storm observatory centre, North East Space Application Centre, Shillong (0364-2671537- S. S. Kumar)
Drought/ dry spells And Pest Attacks	Ministry of Agriculture, Koshi Bhawan, New Delhi Drought Control Room, Ph No. 011-23363476 Agriculture Department (0381-2323778/ 2323883/ 9436124322-Director)

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Communication Redundancy in EOCs

- Telephones/faxes/Toll Free Nos.
- IP Phone
- Internet
- Software Defined Radio
- VHF
- NDMS – Satphone
- EOC Satphone

IEC materials and Awareness Generation

- 23 nos. of CDs/DVDs
- Story and drawing books for school students
- Booklets, training manuals, handouts, posters
- State level Annual Mega Quiz, Dist & Sub-div level quiz events.
- TV and Radio talks
- News flashes through local dailies.
- Disaster Movies through local TV channels
- IEC materials in Pen Drives to schools

Need of HAM

- Tripura is highly vulnerable to multiple disasters
- It's a hilly State (75%)
- Existing communication may not function
- Easy to handle
- One time investment with low recurring exp.
- Can run through PPP
- Recent withdrawn of GOI prohibition
- Accordingly, initiatives taken

IEC materials and Awareness Generation

- State and District level seminars and awareness programmes
- Observation of different events – IDDR & awareness weeks
- Awareness campaigns through Students, NCC, NSS & Civil Defence Volunteers and NGOs.
- Opening of DM awareness stalls in state and dist level programmes
- Street Plays
- Electronic Advertisements at imp places



Disaster Management Plans

- State Disaster Management Plan
- DM Plans prepared and updated at the district level, Sub-division level, Block level, GP & Villages.
- All districts have updated the Flood Management Plans as per the guidelines and checklists through a series of consultations for South West monsoon.
- Health deptt has updated the State and district emergency health management plans.
- Public Sectors like ONGC, TNGC, NEEPCO, GAIL, AAI have their onsite and off site DM Plans.

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Slide 106

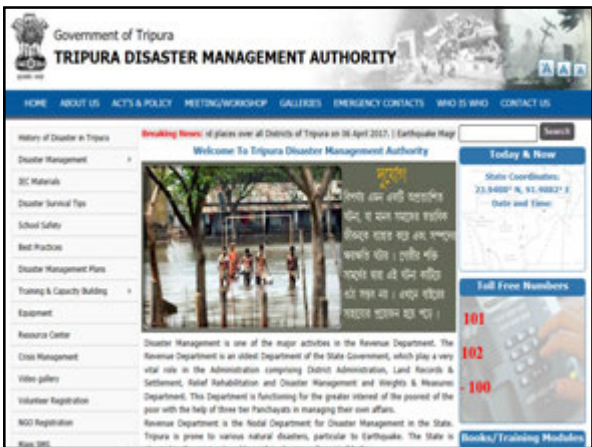
G2 These percentages are making me nervous. can we find out where and then get the DPOs or PO to immediately take it up for covering these remaining units?

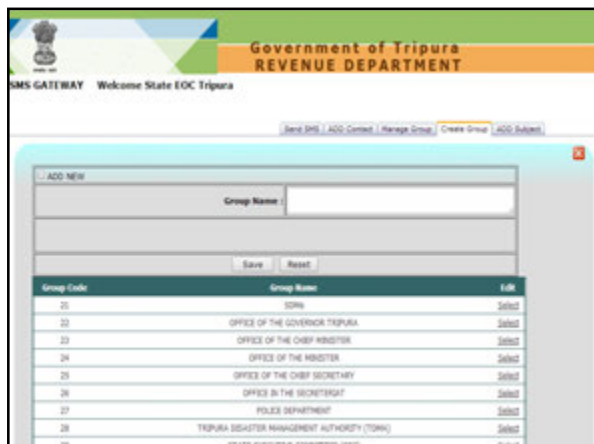
Guest, 15-Oct-07

- 3000+ Schools have prepared School Safety plan
- 23 depts have made the budgetary provision for the disaster management with their deptt disaster management plan.
- SOPs for Earthquakes, Floods, Cyclones, Landslides, EOC, School safety, mock drills have been prepared.
- Further, Police, Health, Industry, S&T depts have been requested to prepare SOPs of specific disasters.



- ### Web & GIS based information
- India Disaster Resource Network (www.idrn.gov.in)
 - State Disaster Management Website for Disaster Management at www.tdma.tripura.gov.in
 - All District websites contain the link pages of disaster management which are being updated regularly.
 - TSAC, LR&S, NESAC & NEIST-Jorhat are the source of GIS based info system
 - NDEM & Bhuban are being used by the deptt nodal officers extensively for incorporating data and use of info.

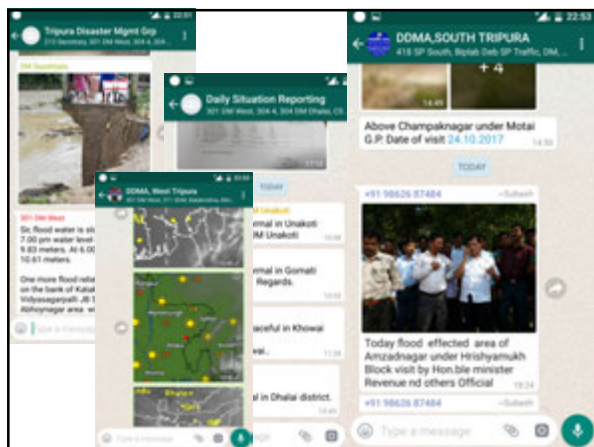




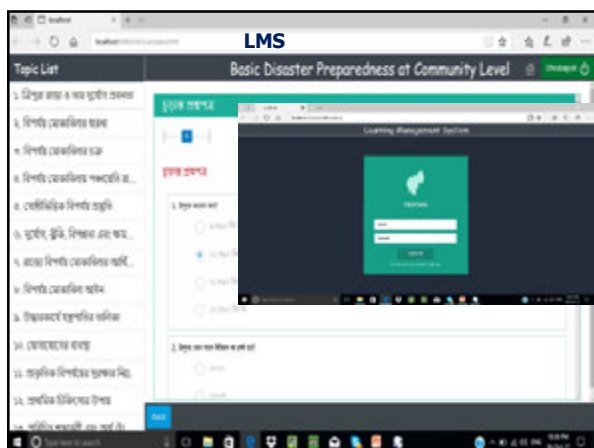
Academic & Trg Curriculum

- **Inclusion of Disaster Management in the School Curriculum from CI-V-XII. Further improvement is being taken up by SCERT & TBSE.**
- **DM included in most of the training courses in SIPARD, PRTI and DIETs.**
- **FTS and PTA have developed spl DM trainings**
- **All the training institutions like CTI, NIT, PRTI, PTC, DIET, SCERT, TIT & Women's Polytechnic have included the DM subject in the regular training courses.**

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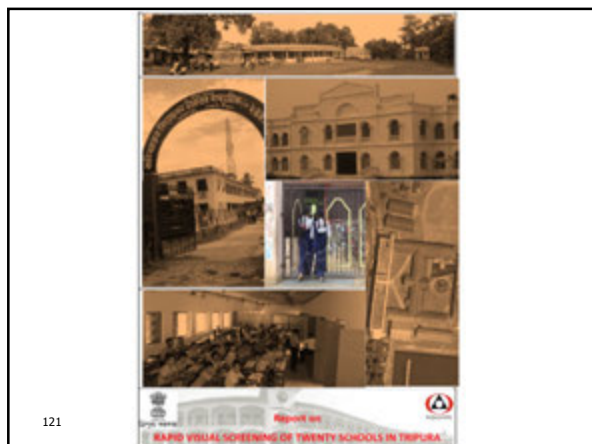


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Retrofitting





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Approved activities under 25% of Flexi-Funds of CSS				
Sr	Deptt	Scheme	Sector	Proposed activities
1	Rural Development	Indira Awas Yojana	Housing	<ul style="list-style-type: none"> Inclusion of such measures like application of hazard resistant design in construction of IAY houses, appropriate siting of IAY housing in guidelines of IAY and ensuring its compliance. Development of model design for IAY houses which could be easily referred to by DRDAs at district level and used for community awareness depending on the geographical location. Capacity Building of Rural masons on safe construction. Capacity Building of PRIs. Community Awareness. Capacity Building Programmes for DRDA officials on Disaster Risk Reduction issues.



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Approved activities under 25% of Flexi-Funds of CSS				
Sr	Deptt	Scheme	Sector	Proposed activities
3	PWD	Pradhan Mantri Gram Sadak Yojana	Infrastructure	<ul style="list-style-type: none"> The Master Plan for rural roads, the district rural road plan and identification of core network under the planning process of this scheme should, which the overall guidelines of its preparation, explicitly address the disaster risk reduction concerns and accord priority to connect the vulnerable habitations. The technical guidelines should explicitly provide for suitable protection and inclusion of disaster risk concerns explicitly - while provision of cross drainage, slope stabilization, protection works are already included, in multi-hazard and especially flood and landslide prone areas fair weather roads need to be upgraded on a priority basis. The maintenance guidelines are modified to ensure that in case of disasters these roads get provision for

- ### Good Practices
- **Retrofitting of five major buildings**
 - **40 helipads for disaster mgmt. purposes**
 - **Micro zonation started of Agartala city**
 - **Integration of MGNREGA with PMAY constructions**
 - **Extended school safety programme**
 - **First aid training to ASHA workers**
 - **Positioning of equipments at all sub-div and TSR Bns**
 - **Regular mock drills**
 - **Identification of 25% of Flexi Funds under CSS for DM**

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- ### Special Initiative
- **Development of practical deptt DM Plans**
 - **Mainstreaming of DM in dev planning**
 - **Procurement of standalone HF, Sat Phones and SDR**
 - **Assessment and procurement special equipments for deptts**
 - **Awareness Needs Assessment**
 - **Use of 25% of Flexi-funds under CSS for DM**
 - **EHM in hospitals**
 - **Earthquake Resilient Model District Project**
 - **Mass awareness on building rules, building codes and their compliance – extension to rural areas**
 - **IRS notified in State and Districts. Trainings organised**

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Special Initiative

- **SPDRR & SFDRR**
- **Green buildings and low cost DR demonstration units**
- **Vision document for SDG – integration of DRR and targets**
- **Mitigation Fund – Rs.1 Crore per year**
- **Minimum Standard of Relief**
- **Verification of identified shelters**
- **Identification of 2 officials per deptt per month for EOC duty**
- **Kamlilata plantation for river bank erosion prevention**
- **Use of Whatsapp groups at community levels for warning / information dissemination**

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7. Conduct Regular Mock Drills

Step I - Ringing of the alarm bell

Step II - Drop Cover hold practice

Step III - School Evacuation Step

Step IV - Assembling at the designated place and teachers taking attendance

Step V - Deploying the Search and Rescue Teams if someone is left trapped

Step VI - Saving the trapped

No. F. 1206 REV/Climate/2013
Government of Tripura
Revenue Department
Agartala
The 21st November, 2014

MEMORANDUM

Guidelines issued by the Ministry of Finance, Government of India vide Memo No.505/PP-II/2011 dated 05/01/2014 for 10% Free-funds within Centrally Sponsored Schemes were circulated to all Departments of the State Government vide Memo No. F. 1206 REV/Climate/2014 dated 05/05/2014.

2. As per guidelines, the 10% free-funds within Centrally Sponsored Schemes (CSS) is to be utilized, inter alia, for disaster mitigation, restoration and reconstruction activities in the event of natural disasters. The guidelines are applicable from the financial year 2014-15. The free-funds of a CSS in a particular sector, however, shall not be directed to activities/shelters in other sector. For example, if a particular CSS relates to elementary education, the free-funds for that scheme can only be used for elementary education and not for any other sector.
3. Proper planning and utilization of the free-funds for disaster mitigation can help to some extent in reducing the risk/vulnerability due to natural disasters.
4. All the Departments implementing Centrally Sponsored Schemes may prepare a plan for utilization of the free-funds as the earliest.

(Sd/-)
Chief Secretary to the Government of Tripura

To
Principal Secretary/Secretaries of all Departments implementing CSS

Challenges

- Tripura is highly vulnerable to hazards but least attention to its priority
- Less resources
- Less motivation
- Not an integral part of development
- It's a work of Revenue Deptt

MEMORANDUM
GOVERNMENT OF TRIPURA
DEPARTMENT OF SCHOOL EDUCATION
AGARTALA
Dated, Agartala, the 12th 11/2014

N.E.O

Subject - Conduct of earthquake evacuation drill in schools - instructions etc.

All concerned may refer to the Directorate Memo of even number dated 22.07.2014 regarding, among other things, conduct of such drill on earthquake/during in all schools on 3rd Saturday of every month. It is observed that most of the schools do not conduct the drill. This is very disappointing.

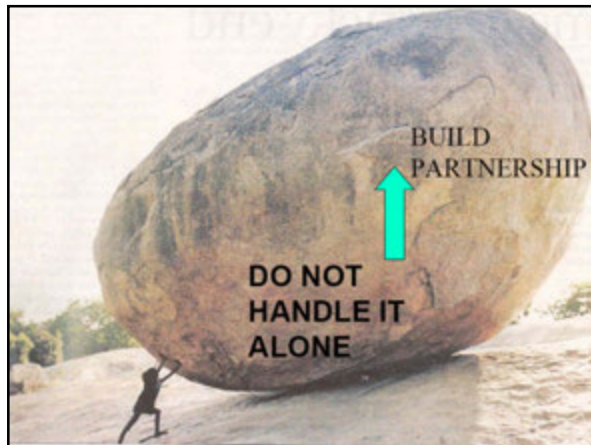
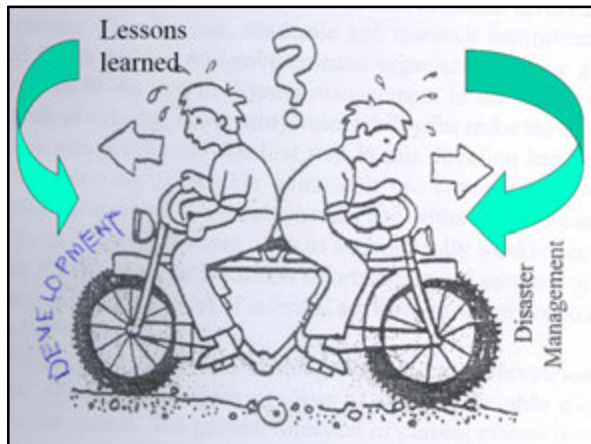
District Education Officers concerned are now again requested to do the needful so as to ensure conduct of the earthquake evacuation drill in each and every school on 3rd Saturday of every month. District Education Officers are also requested to send quarterly status report in this regard with copies to all concerned in due course.

(Sd/-)
[P.K.Chakravarty JAR]
Addl. Secretary & Director,
School Education,
Tripura.

To
The District Education Officer

Government's new initiatives

- Restructuring of TDMA by replacing Ministers with subject specialists and scientists.
- Flood protection and mitigation for Agartala and other urban areas.
- Disaster insurance for affected families.
- Ensuring immediate rescue and providing basic minimum relief and medical needs.
- River bank erosion preventive activities.
- Flood forecasting and early warning mechanism
- Earthquake and landslide protection measures
- HAM and Satphones



Dr. Sarat Kumar Das,
State Project Officer, Disaster Management,
Revenue Department,
Secretariat, Agartala,
Mob-9436461940
sarat.kumar.das@gmail.com
Website- www.tdma.tripura.gov.in

THANK YOU

HRVC analysis

Arabinda Chaudhury,
 Ex. Project Officer, DRR,
 Ph.No-9485156166
 Email: arabinda.chaudhury72@gmail.com

Planning Aspects

- Hazard Analysis
- Vulnerability Analysis
- Resource Analysis
- Risk Analysis

Community-based Disaster Risk Management 2

ARE WE PREPARED?

Ask yourself

- Does the staffs or the children (vulnerable group) know the chain of command in case of an incident?
- Does everyone know who is responsible for what in an emergency?
- Do all teachers know what they would do if any incident strikes the school/ class room?
- Have the entrances and exits been checked to ensure clear access to open spaces?
- Has Safety measures and Risk factors of schools been analyzed?


Aims of the Tool

- To assess the hazard, vulnerability and resources of the community
- To use tools in a way that the students community, teachers, staffs, SMC, PRI Members as well as community can participate in an effective manner
- To ensure that the community perspective prevails in risk reduction process from assessment to risk reduction planning

Hazard, Vulnerability, Capacity and Risk analysis: Tools and Techniques

Common Tools for HVCR Analysis: Mapping

- Visual Representation of important information about the community



3

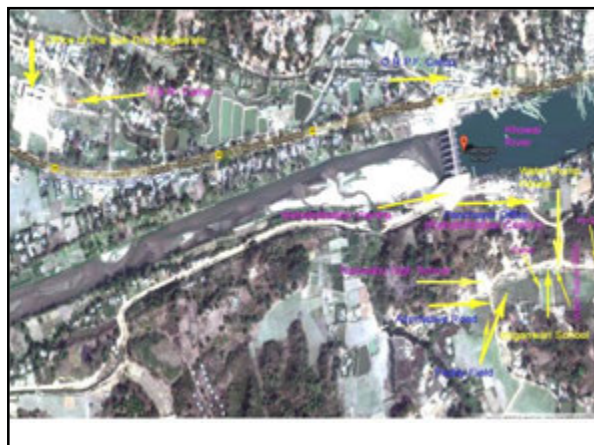
Transect Walk

- Walking in a systematically in the community through the area and discussing on various aspects of that area.
- Select a transect line (more that one)
- Team with 6-10 community members
- Systematically walk with key informants through the community to explore spatial differences, land use zones by observing, asking, listening, informal interviews
- Identify danger zones, vulnerable areas, evacuation sites, local resources used during emergency, human activities contributing to vulnerabilities,



Tools for Hazard Analysis

- Hazard Mapping
- Historical Profile or Timeline
- Seasonal Calendar
- Hazard Matrix



Common Techniques for HRVC analysis

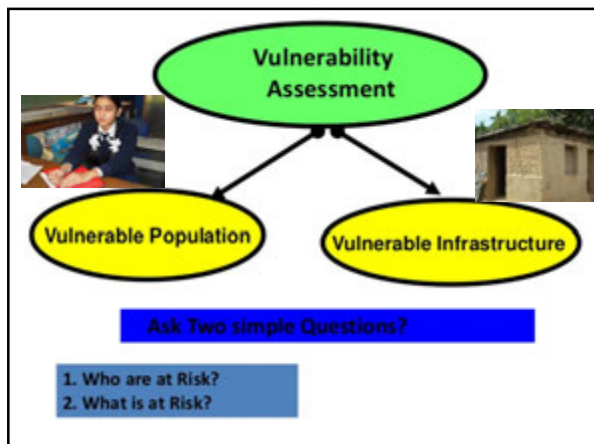
- **Focus Group Discussions**
We will divide ourselves into 5 groups
- **Observation**
We will observe the school (inside/ outside)
- **Interviews**
We will interact with teachers/ students/ staffs during our visit
- **Questionnaires**
Questionnaires will be provided before you leave.
- **Secondary data**
We will verify the data with Secondary data



Tools for Vulnerability Assessment

- Transect Walk
- Problem Tree
- Livelihood Analysis
- Vulnerability Assessment





Capacity/Resources

Capacity refers to the resources and strengths which exist in households and communities, and which help them to cope with, withstand, prepare for, prevent, mitigate, or quickly recover from a disaster.

Helps in reducing vulnerability.

Vulnerable Population

- Women (pregnant, lactating, widows, single)
- Old aged
- Children
- Physically handicapped
- Mentally challenged
- Dependent on life support systems, medicines
- Poor people living at sea coasts, in kutcha houses etc

Animals: Livestock and cattle

- Tools for Resource Assessment**
- Chapatti Diagrams
 - Social and Institutional Analysis
 - India Disaster Resource Network (IDRN)
 - India Disaster Knowledge Network (IDKN)

Vulnerable Infrastructure

- Kutcha houses
- Low lying areas
- Livelihood assets such as boats, nets, etc
- Documents,
- Houses and weak structure
- Crops and horticulture
- Drinking water resources
- Communication lines, road, telephone lines

Chapatti Diagrams

Chapattis are used :

- To carry out institutional analysis that exists in a community
- Bring out the differences in power relations that exist.
- While drawing chapatti/Venn diagrams a chapatti is given to each institution. The size of each chapatti should correspond to the importance of the institution; the more important the bigger the chapatti. Chapattis are placed near or far away from the community, institutions that interact with the community are placed near the community and those that do not closely interact with that community are placed far from the community. The institutions that work together will have their chapattis touching.

Social and Institutional Analysis

- Identify various government, non government and private organizations working in the field of DM
- Understand their role, importance, interest and capabilities.



India Disaster Resource Network (IDRN)

- An online inventory designed as a decision making tool for the Government administrators and crisis managers to coordinate effective emergency response operations in the shortest possible time
- www.idrn.gov.in
- List of manpower and material resources available in a district
- District collector has the password
- Updating is the responsibility of DC once in every four months.
- NIC at district level has the responsibility of updating it. DC monitors and supervises it.
- Punjab has not updated it since 2003.

Disaster Risk Assessment

$$\text{Disaster Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity}}$$

So Disaster Risk assessment requires:

1. Hazard Analysis
2. Vulnerability Assessment
3. Capacity Assessment

India Disaster Knowledge Network (IDKN)

- Web Portal
- A one stop source of information on Disaster Management
- Create a network
- Immediate access to documented and published information
- Swift flow of accurate information in a timely manner, in the appropriate format, with necessary precision and authenticity.

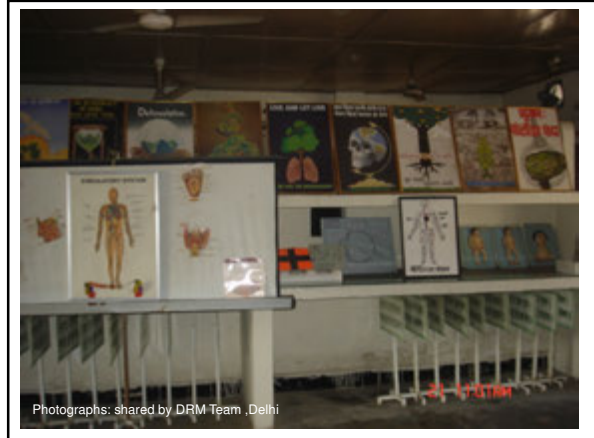
School Disaster Management Plan (Response)

- Step 1:** Sensitisation meeting for awareness amongst Teachers/School Management
- Step 2:** Formation of the School Disaster Management Committee
- Step 3:** Hazard Identification and Safety Assessment
- Step 4:** Preparation of School Disaster Management Plan Document
- Step 5:** Formation and Training of Disaster Management Teams
- Step 6:** Dissemination of the plan to everybody in the school
- Step 7:** Conduct regular mock drills
- Step 8:** Evaluation and Updating of the Plan to improve effectiveness and reporting to coordination group

we will do Vulnerability assessment. These Photos may serve the purpose.



Photographs: shared by DRM Team ,Delhi



Photographs: shared by DRM Team ,Delhi

Cupboards at back !!



Photographs: shared by DRM Team ,Delhi

Hanging hazards



Photographs: shared by DRM Team ,Delhi

Fire extinguisher safely locked inside and nobody knows where the key is!!

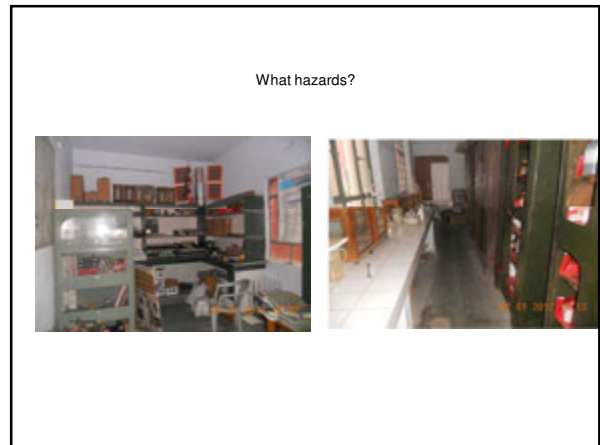
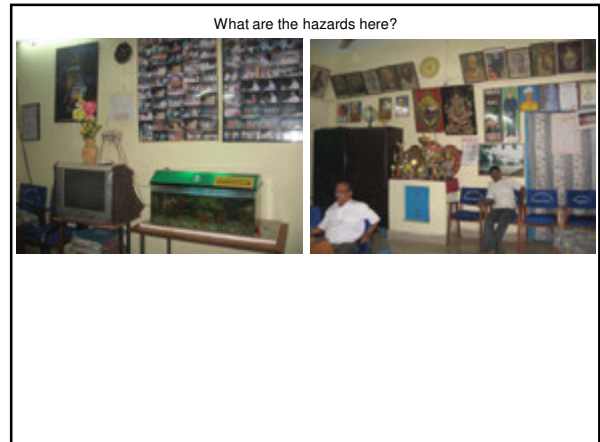


Photographs: shared by DRM Team ,Delhi

Heavy objects kept on the higher shelves inside the cupboards while lower Shelves are empty.



Photographs: shared by DRM Team ,Delhi





May we go for Transect walk?

- Let to divide ourselves into 5 Groups
- We shall come back soon
- We have to share our observation.
- Please collect the **Questionnaires**

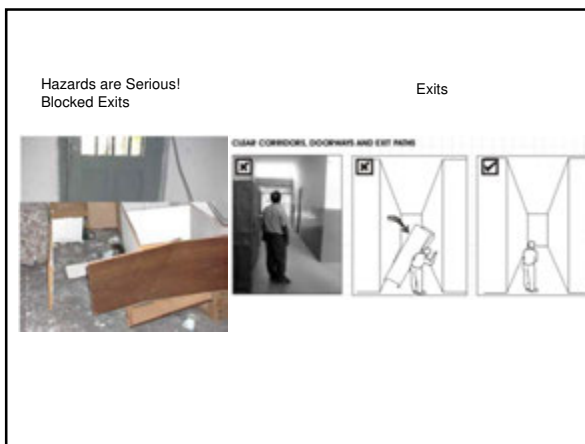


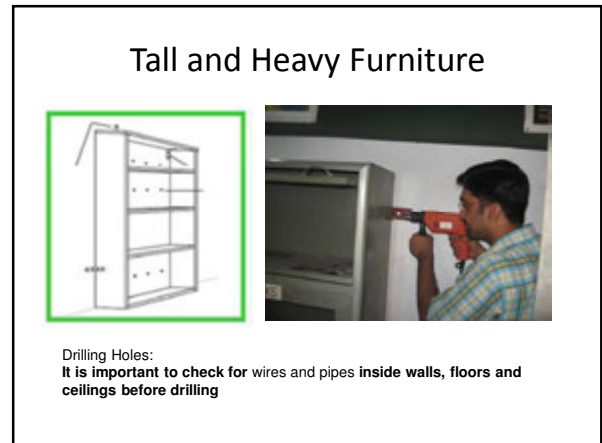
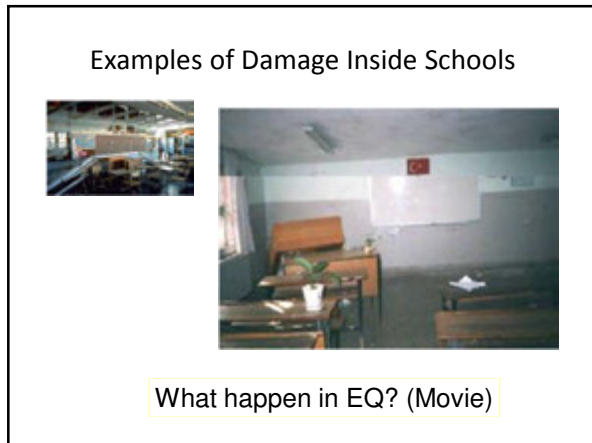
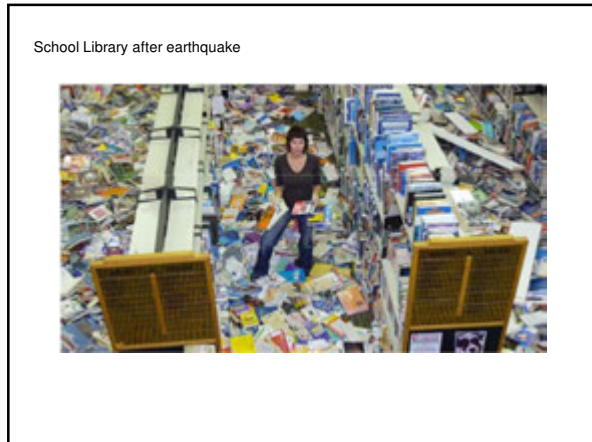
Non Structural Mitigation

What we just did is called a hazard hunt

Here are some tips:

- Look at each room in the school with "Earthquake Eyes".
- What we just did is called a hazard hunt
- Take some time and sit in each room
- Ask yourself "if a major earthquake hit right now, what could injure someone?"





Mitigation



Secured by Metal L Brackets



Book Stand tied with wall



Identifying and fixing falling hazards Electronic Equipment



Fasteners : Rubber Mats



Secured by Metal L Brackets




INNOVATE NEW IDEAS




Prioritize

- As you tackle what needs to be done, think about how to prioritize:

- Secure life threatening items first (eg. thing that can fall on children, or things blocking exit)



- Secure those items that will block an easy exit



(i) Identified Engineers, Govt. of Tripura to impart specialized training to identified team (master trainers/ Engg from Education, PWD) on Non Structural Mitigation measures.

(ii) Expert/ trained team: Expert/ trained team will do assessment of schools.

(iii) Mitigation: As per recommendation of expert/ trained team, mitigation measures to be undertaken by placing fund in each NSSP covered school.)

B. Structural Observations:

- Age of the building
- Construction History (one phase or multiple phase)
- Soft storey
- Column Orientation
- Shape of building
- Cantilevers
- Are there cracks in structural elements
- Are major repair works carried out for the strengthening or the damaged part of the building

Group-2

Conducting the school assessment will:

- promote student safety
- increase awareness about school safety practices
- help the schools to prepare and update response plans
- identify and manage safety and other risks
- assessment will help to prioritize immediate measures and act on it
- foster the confidence of the parents and the community
- assessment will demonstrate the commitment of the school mgmt

(i) Please ensure participation of electrician for electrical safety audit, other technical departments such as- Fire, PWD, RD, Health, DWS, Police, TSECL etc and stakeholders such as SMC, PRI in safety audit activity.

(ii) Report of safety audit to be included in School Disaster Management Plan and a copy to be shared with the DEO and DDMA.

C. Functional/Operational Observations:

- Does the building have a Building Use Certificate
- Condition of the Electrical panels/mains
- Lightning Protection of buildings
- Fixed fire fighting installation
- Regular building maintenance works
- Exit requirements
 - Type of exit (doorway/corridor/passageway)
 - Condition of the exit route eg: obstructions if any
- Is adequate water/toilet facility available at each floor
- Are staircase functional at all time or some exits are kept locked
- Distance of Emergency Service from the school
- Special Provisions for physically handicapped

Group-3

What is included in the Assessment of School Building Vulnerability & Preparedness?

A. Architectural Observations:

- Area of the School
- Space in each class rooms
 - Height
 - Area per person
- Location of the staircase
 - Distance of the staircase from the farthest room
- Staircase details
 - Width of the staircase
 - Tread
 - Riser
 - No of risers per flight
 - Minimum headroom in a passage under landing of a staircase
 - Railing ht
- Passage/Corridor
 - Width of corridor
 - Length of the corridor
- No of exits

Group-1

D. External Observation:

- Any hazardous unit near the vicinity?
- Means of access
- Traffic conditions on the road
- Speed Breakers
- Caution sign boards
- Encroachment near the entrance of the building
- Chances of water logging
- Drains
- Access of fire engine
- Threat against falling of adjoining buildings/ compound walls/ parapet walls/ chimneys/talls structures/ electricity poles etc.
- Open space
 - All round open space
- Main entrance to the plot
- Distance between two blocks or Separation between accessory and main building
- Footpath width/Pathway

Group-4

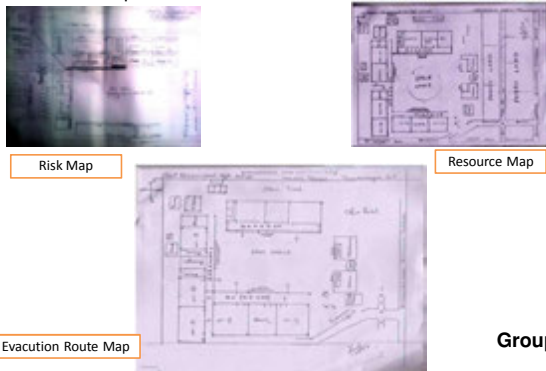
E. Preparedness Observations:

1. Are awareness programmes organized for the students and the staff
2. Are teachers and students aware of the vulnerability or vulnerable areas in the school
3. Are mock-drills performed regularly in the schools
4. Safe place/shelters identified in the school
5. Assignment of duties and responsibilities to the staff
6. Are staff trained for the first-aid
7. Provision for firefighting systems
8. Public addressal system in working condition

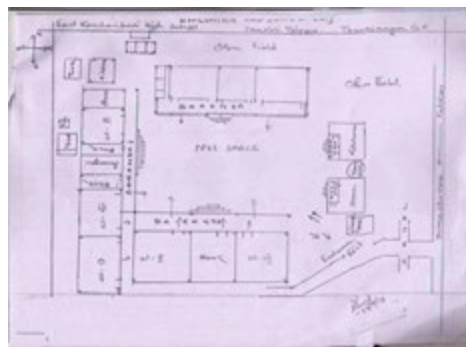
N.C Jindal School DM Plan - Delhi



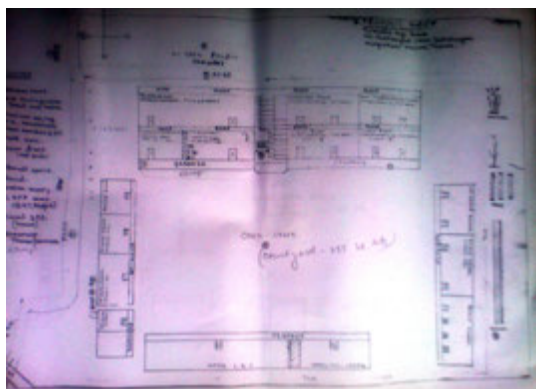
(i) Risk and Vulnerability Map (ii) **Evacuation Route Map** (iii) Resource Map



Evacuation Route Map



Resource Map



Khowai Govt. Boys HS School



Thanks

Basic Concepts and Processes of DRM



Amir Ali Khan, Ph.D.
NIDM, MHA
New Delhi











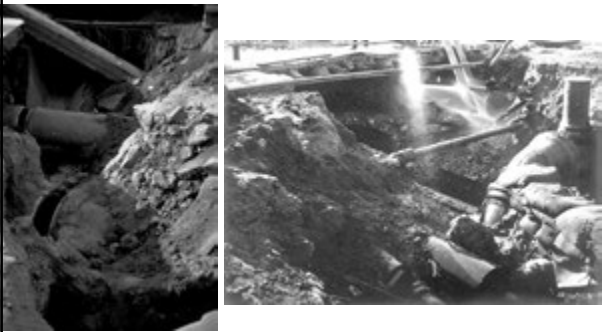






What could happen in a disaster?

To Pipe works



To Housing



Basic Concepts of Disaster Management

Reasons for Large Number of Disasters

- Population Growth
- Unplanned /ill - planned (Urban) Development
- Higher rate of urbanization and urban density
- Development of exposed areas
- Deteriorating Environmental conditions

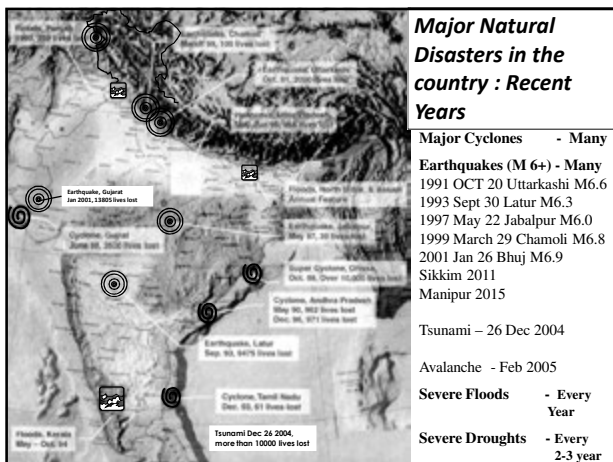
Impacts of Climate Change

- Glacial melts shall increase intensity of floods and flash floods in the short run
- In the long run surface and sub-surface run off shall deplete affecting food and water security
- Sea level rise shall inundate coastal areas
- Cyclones shall be more frequent and intense
- Extreme and erratic weather events shall increase, creating more disasters

Hazard and Vulnerability Profile of India

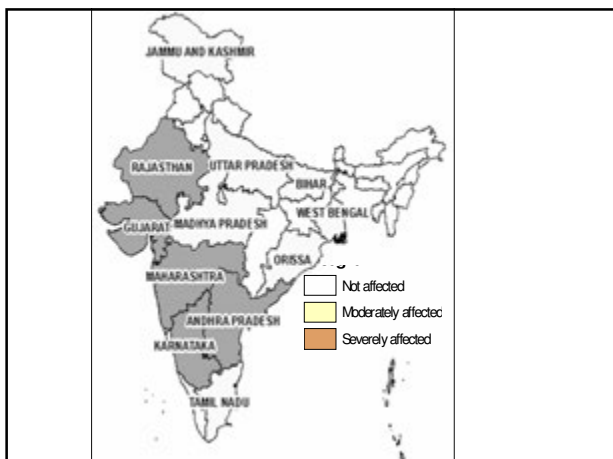
Hazard Profile of India

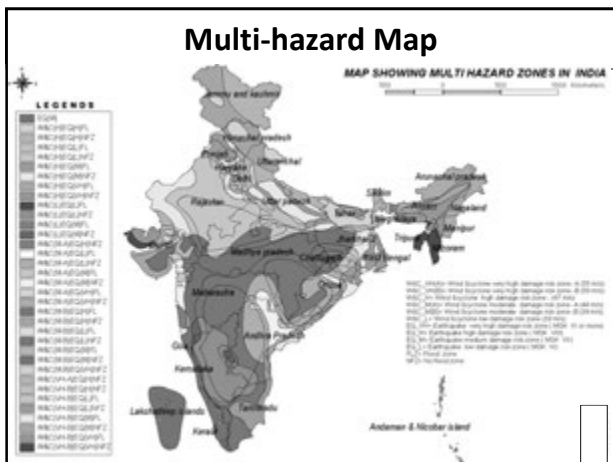
- 59% of land mass prone to earthquakes
- 40 million hectares of landmass prone to floods
- 8000 Km long coastline with two cyclone seasons
- Drought – low and medium rainfall region which constitute 68% of the total area vulnerable to drought
- Hilly regions vulnerable to avalanches/ landslides/ Hailstorms/ cloudbursts
- Tsunami Threat along the coast line



Average Annual Loss

- Loss of human life: 4350
- Crop area affected: 1.42 million hec.
- Houses damaged: 2.36 million
- Direct loss: 2.25% of GDP* (US\$ 20 billion)
- Indirect psycho-social loss that can not be quantified
- Revenue loss due to less industrial production: 12%*
- Expenses on relief & rehab: Rs. 6000 Crores
- Expenses on reconstruction: Rs. 3200 Crores





Disaster Definitions!!!!

Disaster Definition

An event, natural or man - made, sudden or progressive, which impacts with such severity that the affected community has to respond by taking exceptional measures!



Disaster Management Act 2005

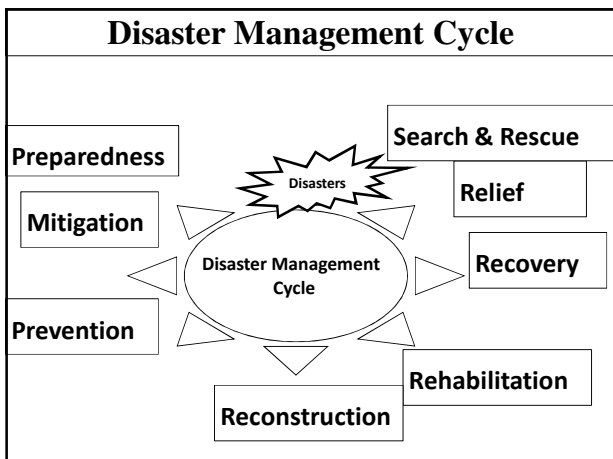
Disaster means a catastrophe, mishap, calamity or a grave occurrence in any area arising out of natural or man made causes, or by accident or negligence, which results in substantial loss of life and human suffering or damage to, or destruction of, or degradation of environment, and is of such a nature, or magnitude as to be beyond, the coping capacity of the affected community of the affected area.

Impact of Disasters

- Loss of lives
- Damage/Loss to Property and infrastructure
- Damage to livelihood
- Economic Loss
- Environmental Damage- Flora & Fauna
- Sociological & Psychological after effects

Types of Disaster
<p>1. Water and Climate Related Disasters</p> <p>Floods, Droughts, Cyclones, Tornadoes, Hurricanes, Cloud burst, Snow Avalanches, Heat & Cold Waves</p>
<p>2. Geological Disasters</p> <p>Earthquakes, Landslides, Mudflows, Sea Erosion, Dam Bursts & Dam Failures.</p>
<p>3. Biological Disasters</p> <p>Biological Disasters, Epidemics, Cattle Epidemics</p>

Relationship - HRVC
<p>hazard x vulnerability= disaster</p> <p>HAZARD x vulnerability= disaster</p> <p>hazard x VULNERABILITY= disaster</p> <p>HAZARD x VULNERABILITY= DISASTER</p>





Role of Governments

- **Primary responsibility of the State Government**
- **Central Government supplements the efforts of State Government by providing financial and logistic support in case of a major calamity.**
- **Supplementary support by the Centre**
Deployment of aircrafts and boats, Specialist response teams of Armed Forces and CPMFs, Arrangements for relief materials, Restoration of critical infrastructure facilities including communication network and such other assistance as may be required by the State Government.

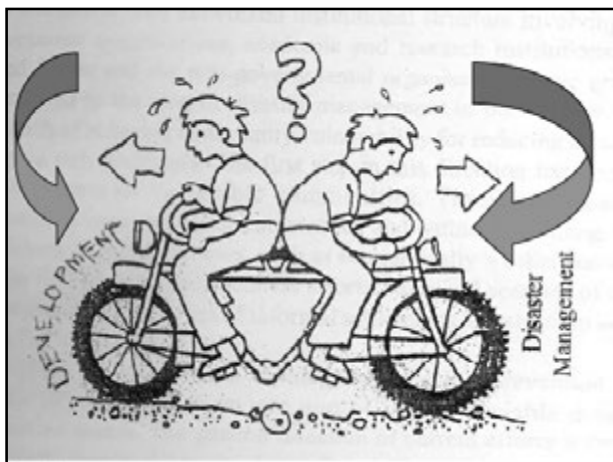
Commitment of Resources

- **Calamity Relief Funds:** Corpus of US\$5 billion during 2005-10 allocated to States as per norms of Finance Commission to meet regular expenses on disaster relief and rehabilitation
- 75% contributed by the centre and 25% by the states
- **National Calamity Contingency Funds:** US\$ 1 billion annually by Centre if CRF not adequate to meet expenses
- **Special Reconstruction Assistance:** Central government provides special assistance for reconstruction of infrastructure damaged by disasters in specific circumstances

**CHALLENGE OF EARTHQUAKE
DISASTER IN INDIA**

- Loss of 100,000 lives due to earthquakes in 100 years.
- Loss of 20,000 lives in Kangra earthquake of 1905
- Loss of 14,000 lives in Bhuj earthquake of 2001
- Many more earthquakes ... list is endless!

• But why so much damage ?



Paradigm Shift in Disaster Management

Paradigm shift all sectors of DM
<ul style="list-style-type: none"> • Focus in the past Relief Rehabilitation • Current Focus Prevention, Preparedness, Response & Recovery

<p>Sendai Framework for Disaster Risk Reduction 2015 - 2030</p> <p>Third UN World Conference on Disaster Risk Reduction The Sendai Framework was adopted by UN Member States on 18 March 2015 at the Third UN World Conference on Disaster Risk Reduction in Sendai City, Miyagi Prefecture, Japan.</p> <p>The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.</p>	<p style="text-align: center;">GOAL</p> <p>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</p>
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<p>Priorities For Action Focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.</p> <p>Priority 1 ↓ Priority 2 ↓ Priority 3 ↓ Priority 4</p>	<p>The Seven Global Targets</p> <ul style="list-style-type: none"> • Substantially reduce global disaster mortality by 2030 • Substantially reduce the number of affected people globally by 2030 • 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 the people by 2030.
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**Questions
&
Discussion**

Thank you

