



North East Conference

on

Earthquake and Landslide Mitigation

Building Disaster Resilience in North East India

A presentation by-

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Capacity Building Officer

Disaster Management

Tripura State Disaster Management Authority

About Tripura

- 3rd Smallest State in India & 7th in NE (in size)
- Statehood-1971
- Area – 10492 sqkm
- Sharing 853 kms with Bangladesh, 109 kms with Mizoram and 53 with Assam
- Population-3,671,032 (as per census 2011)
- 8 Districts & 23 Sub Divisions
- Five major hills range – Boromura, Atharamura, Longtharai, Shakhan and Jampui Hills

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- Rivers - Dhalai, Khowai, Feni, Gomati, Howra, Juri, Manu, Muhuri, Longai, Sumri, Sumli, Titas
 - Places to visit - Dambur Lake, Unakoti, Tripureswari Temple, Chabimura, Jampui Hill, Neermahal, Ujjayanta Palace

Vulnerability of Tripura

- Prone to **Earthquake** as situated in seismic zone –V
- As a hilly state prone to **Landslide**
- Low lying areas are prone to **Flood**
- Also prone to **Cyclone and thunderstorm**
- Every year death toll is rising due to **Thunder/lightning –
State Government has declared Thunder/lightning as a
state specific disaster**

Hazard profile of tripura



100%



9%



38%




100%



43%



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- ➡ Direction of Gomati River at Udaipur changed.
 - ➡ Extensive damage occurred at Unakoti Hill-Famous for sculpture
 - ➡ Landslides happened in different places.
 - ➡ But no report of death.

Last Experience EQ

- On 3rd January, 2017 – 5.7 Mg EQ occurred, epicenter was Dhalai District

Damages:

Injury -7 persons

Death – 1 person

House Damage:

Fully – 42

Severely – 1467

Partly – 5218

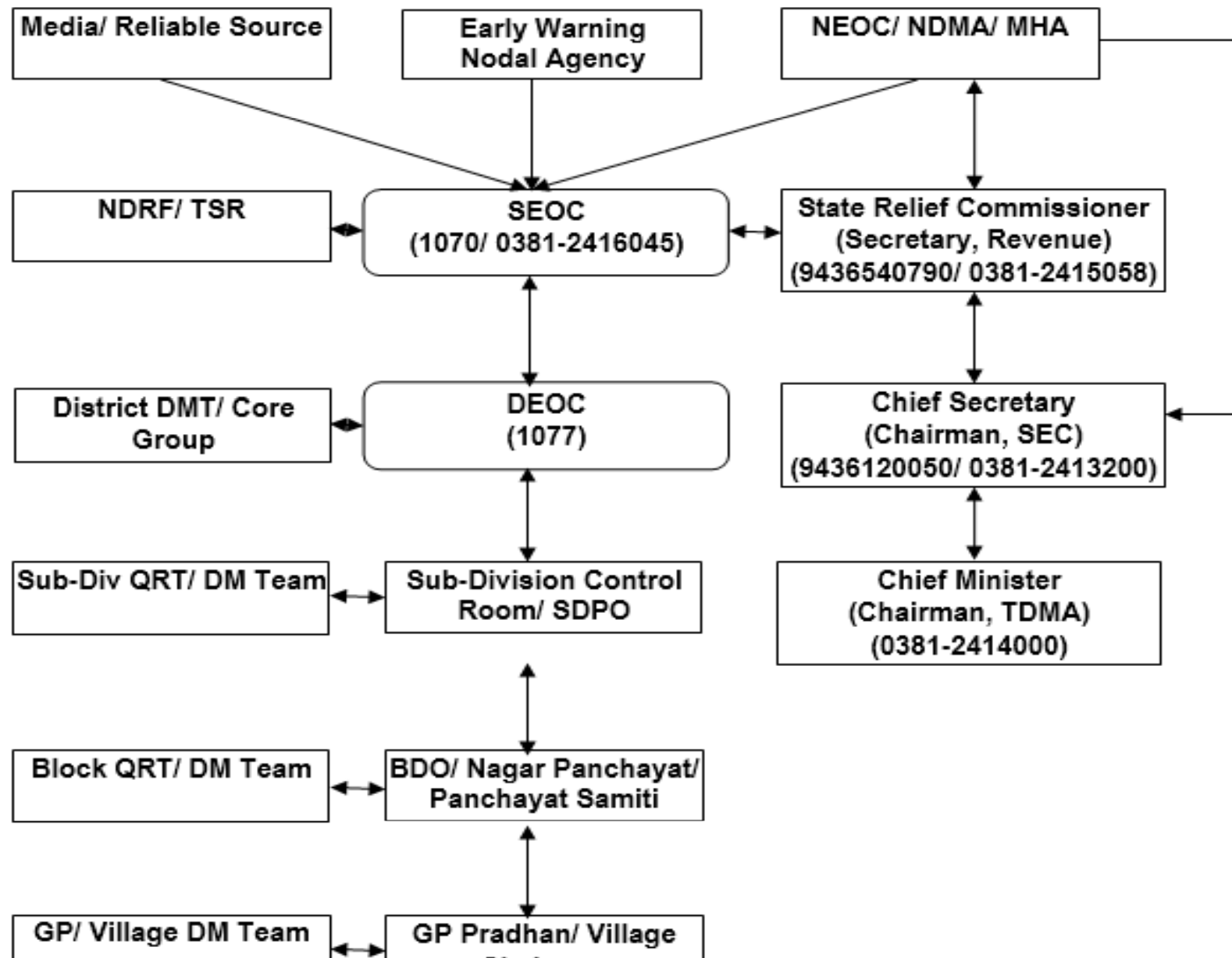
Most damages occurred in Dhalai District & Unakoti District

All the houses were mud wall house

Early Warning System

- Forecast & Now-cast of cyclone, thunder storm etc are being shared by IMD-Agartala Station & NESAC regularly with SEOC.
- Water level of majors rivers in Tripura are shared by CWC & PWD (WR), Govt of Tripura
- SEOC shares EW to DEOCs, SDMA members, SEC members and other stake holders by mass SMS, email, telephone, fax, whatsapp etc.

Information Flow Protocol



STATE EMERGENCY OPERATION CENTRE (SEOC)




Dedicated 24x7 SEOC & DEOCs

- Police Communications
- Satellite Phones – 10 nos (SEOC, CS, all districts) more phones will be procured for SDMs
- Software Defined Radio – 14 nos
- VSAT (Provided in 4 locations SEOC in 4 districts)
- Landline telephone connection
- IP Phone (In all district)
- Mobile (all districts)
- Toll free-1070 (SEOC) & 1077 (DEOC)

Preparedness


- SDMP and DDMPs have been prepared
- Most of the Departments have prepared DM Plans
- GP level plan are being developed
- 400 schools have prepared SDMP under NSSP
- Developed Policy, SOPs and guidelines

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- 38 categories of Disaster Management equipments have been procured and positioned in 36 locations
 - 23 SDMs Office
 - 12 TSR Bns
 - 1 Central Training Institute (CTI)



- Improvised flood rescue materials have been developed & distributed to 60 most prone Panchayats.



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- 53 helipads have been constructed at block levels
 - Relief shelters have been identified-facilities of drinking water, electricity, generator, kitchen available
 - Dynamic Online based Daily Situation Report software has been developed
 - No SDRF in Tripura. There are 100 TSR trained personnel in each TSR Bn
 - 1st NDRF team is stationing in Tripura for disaster response & capacity building

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.

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.

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 |

Slide 20

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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, 15-10-2007




District level Mega School safety programmes are organized in every year in every district.


- Every year District level & Sub-Divisional level mock drills are conducted involving all the line departments
- School safety evacuation drills on earthquake are being conducted in every school on 3rd Saturday every month
- Every year on 4th April Mock drills are organized in every school on anniversary of Kangra EQ.
- Disaster Management subject included in Departmental Exam, school & college curriculum

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- Developed leaflets, posters, booklets, story books etc for awareness generation
 - On 13th October IDDR is observed through out state by organizing different activities like rally, tableau, art competition, street play etc
 - For mass awareness Disaster Management stall is opened in Book Fair, Kharchi Festival, Dewali Festival and in festival of other mass gathering
 - Safety tips are published in news papers and displayed in local news channels

Mitigation Measures

- Tripura Building Rules have been changed, New Building Rules 2017 has come into existence
- 6 heritage & lifeline buildings have retrofitted – Ujjayanta Palace, Neermahal, Umakanta Academy, Town Hall-Auditorium, Part of IGM Hospital and Sukahmoy HS School
- Non Structural Hazard Mitigation measures have been undertaken in 400 schools
- Earthquake resistance new school buildings are being constructed demolishing old building

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- PWD has taken up detail vulnerability assessment of 300 buildings in Dhalai, Unakoti and North Tripura District. 10 engineers have been trained from IIT-Roorkee
 - Vulnerability assessment has been taken up in 5000 buildings (approx) in Agartala City under the Earthquake Disaster Risk Index during 2017
 - Rapid Visual Screening (RVS) of 400 schools completed & report submitted to School Education Department
 - State Govt has developed guidelines for utilizing 25% of CSS fund as flexi fund for mitigation & preparedness activities

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- State Disaster Mitigation Fund have been formed with a ceiling amount of Rs. 1 crore/year
 - Mainstreaming of DRR into development project through CSS.

Scheme / Programme :

- Aapda Mitra
- EDRI
- NLMP





















**The State is committed to fulfill its
vision to make**

**Tripura a Disaster
Resilient State**



Thank you