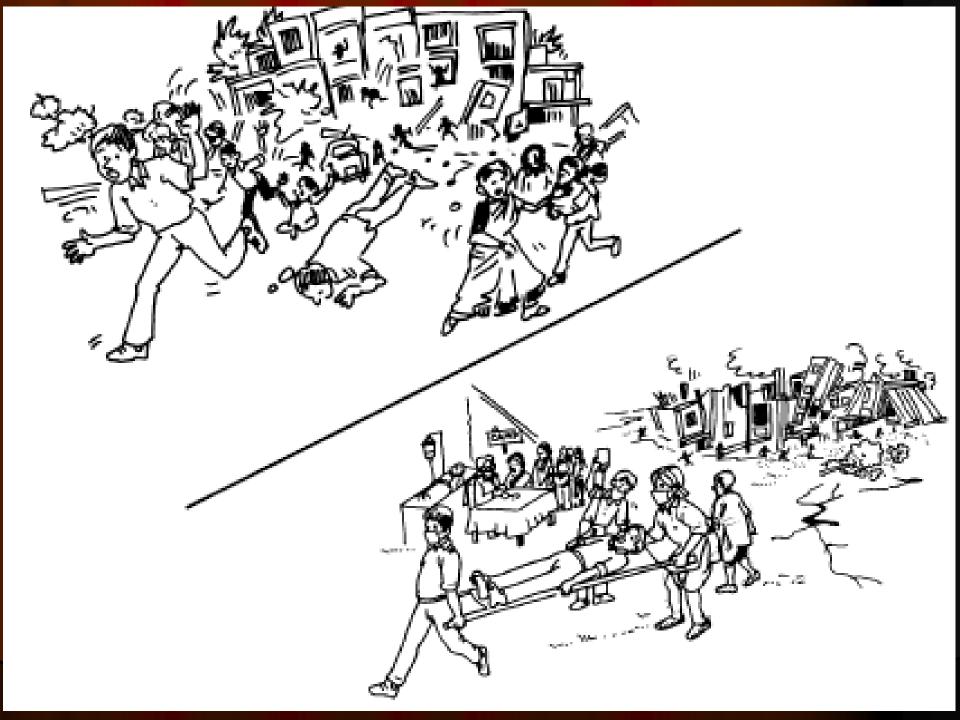
Disaster Preparedness in Tripura

Dr. Sarat Kumar Das
State Project Officer-UNDP
Revenue Department
Disaster Mgmt Unit
Govt. of Tripura

USGS Community Internet Intensity Map MANIPUR, INDIA REGION

Jan 4 2016 04:35:22 AM local 24.8339N 93.6556E M6.7 Depth: 55 km ID:us10004b2n CITY SIZE <10,000 10,000+ 100,000+ 30°N 2M+ 30°N Kathmandu Guwahati Patna Dinajpur 25°N 25°N Gaya Maimansingh Rajshahi Dhaka Ranchi Kolkata Haldia Chattagam Raurkela Mandalay mbalpur 20°N 20°N Bhubaneswar 969 responses in 165 cities (Max CDI = VII) 200 km 95'E 85°E 90°E INTENSITY II-III IV V VI VII VIII IX X+ Light Strong Not felt Weak Moderate Very strong Violent Extreme SHAKING Severe Very light Light Moderate/Heavy none none Moderate Heavy V. Heavy DAMAGE none

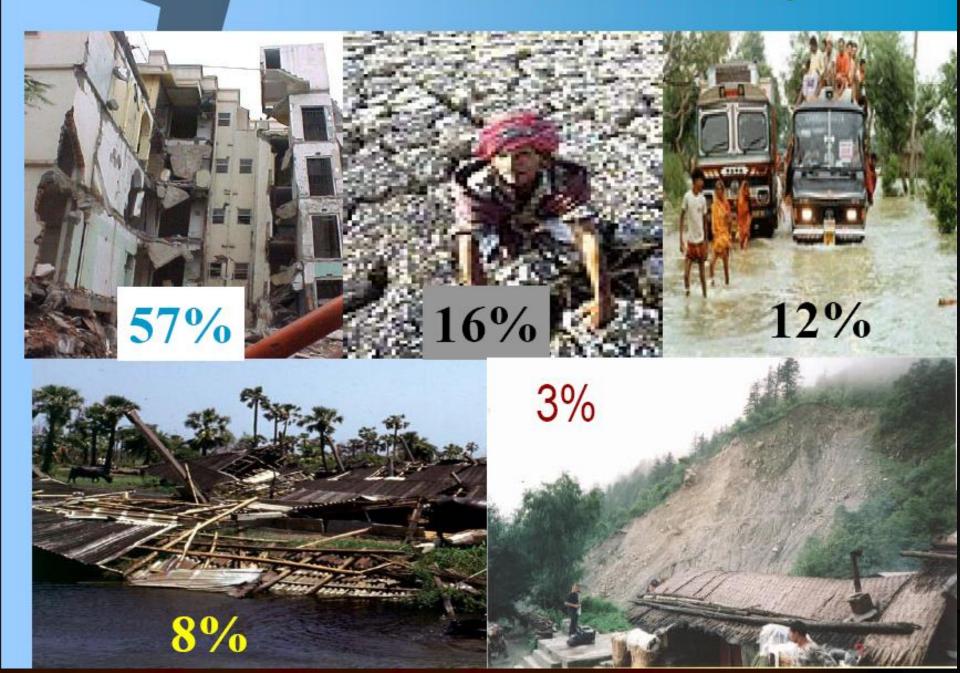
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The Indian Scenario: Hazard Vulnerability



Disaster: average annual loss in India

- Loss of human life: 4350
- Crop area affected: 1.42 million hec.
- Houses damaged: 2.36 million
- Direct loss: 2 % of the GDP = Rs. 25000 Cr
- Expenses on emergency response and relief
- Diversion of developmental fund
- Revenue loss due to less industrial production
- Indirect socio-psychological losses that can not be quantified

Turning point in Policies and practices on Disaster Management

Disasters made policy changes

Event	Year	Dead	Affected
Earthquake	1993	9475	1 million
Cyclone	1999	10086	15 million
Earthquake	2001	13805	1.8 million
Tsunami	2004	12405	3.5 million

Policy initiatives in India

- Before 1999 there was only GR.
- 1999 High Powered committee set up Recommendation of legislation for DM into Dev approaches.
- DM Act 2005 Holistic Approach for DM
- Second Admn Reforms Commission 2006 Vision of DM Policy
- National DM Policy 2009
- Guidelines for Floods, Cyclones, CBRN, Landslides, SDMP, DDMP, Industrial Disasters
- Funding to States for DM Programmes/ Projects

Paradigm shift of DM

रिवस्ट्री संग् डी॰ एल॰--(एन)04/0007/2003---05

REGISTERED NO. DL—(N)04/0007/2003—05



असाधारण

EXTRAORDINARY

भाग II — खण्ड 1

PART II - Section 1

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं॰ 64] No. 64] नई दिल्ली, सोमवार, दिसम्बर 26, 2005 / पौष 5, 1927

NEW DELHI, MONDAY, DECEMBER 26, 2005 / PAUSA 5, 1927

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके। Separate paging is given to this Part in order that it may be filed as a separate compilation.

MINISTRY OF LAW AND JUSTICE (Legislative Department)

New Delhi, the 26th December, 2005/Pausa 5, 1927 (Saka)

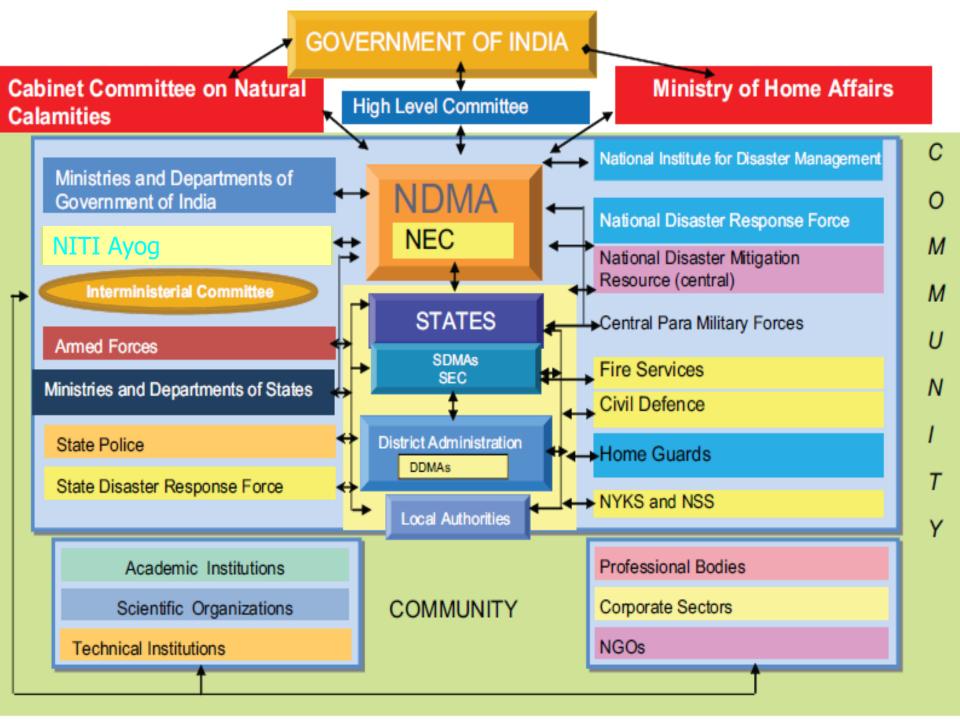
The following Act of Parliament received the assent of the President on the 23rd December, 2005 and is hereby published for general information:—

THE DISASTER MANAGEMENT ACT, 2005

No. 53 of 2005

SALIENT FEATURES OF DISASTER MANAGEMENT ACT, 2005

- 1. Institutional Arrangements at Central, State, District & Local Levels.
- 2.
- National Disaster Management Authority.
- State Disaster Management Authority.
- District Disaster Management Authority.
- Local Authorities.
- 3. National Institute of Disaster Management.
- 4. National Disaster Response Force.
- 5. Financial Arrangement.
 - National Disaster Response Fund.
 - National Disaster Mitigation Fund
- 6. Offences and Penalties.



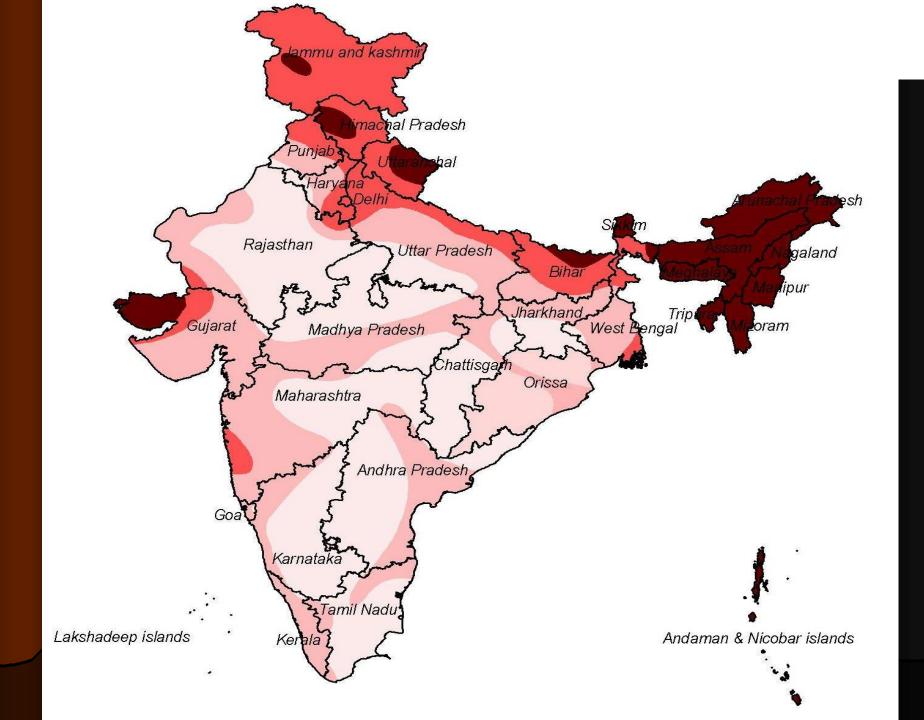


Introduction

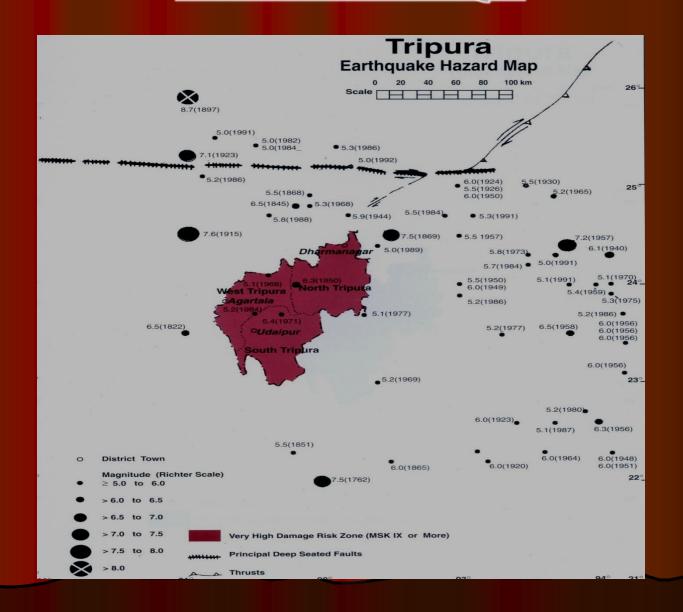
- Small State 3rd smallest state in India (10492 sq km)
- Remote location High cost of construction
- Surrounded with international boundary
- Need for large scale capacity building
- Maximum dependent on Central funds under Plan / Non – Plan.
- Located in Zone V of earthquakes and prone to other hazards like Floods,
 Cyclones, Landslides

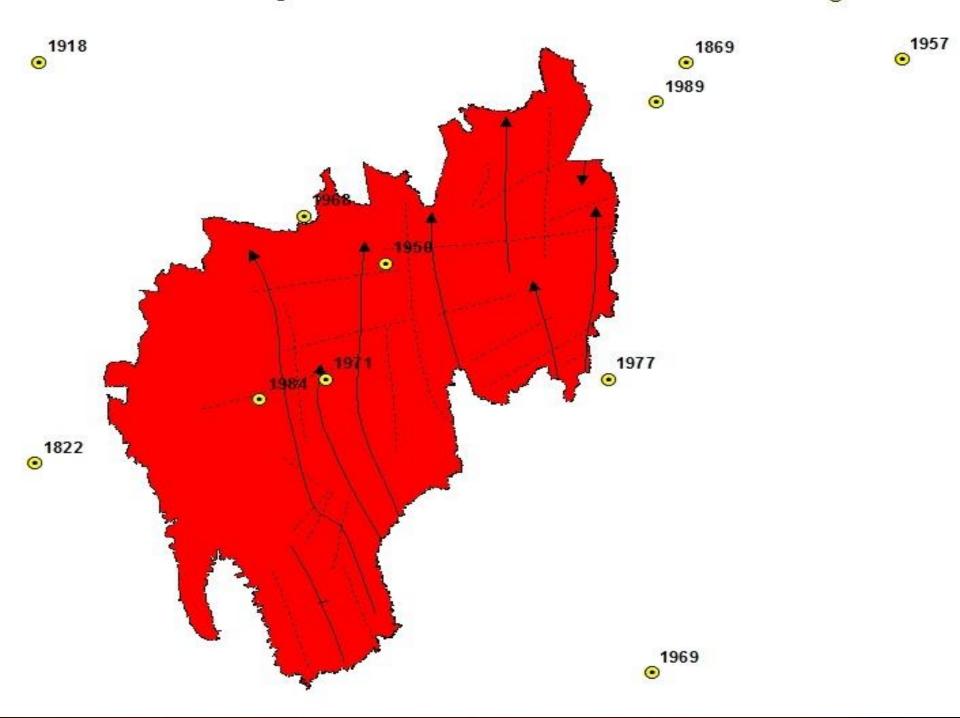
TRIPURA SCENARIO: HAZARD AND VULNERABILITY

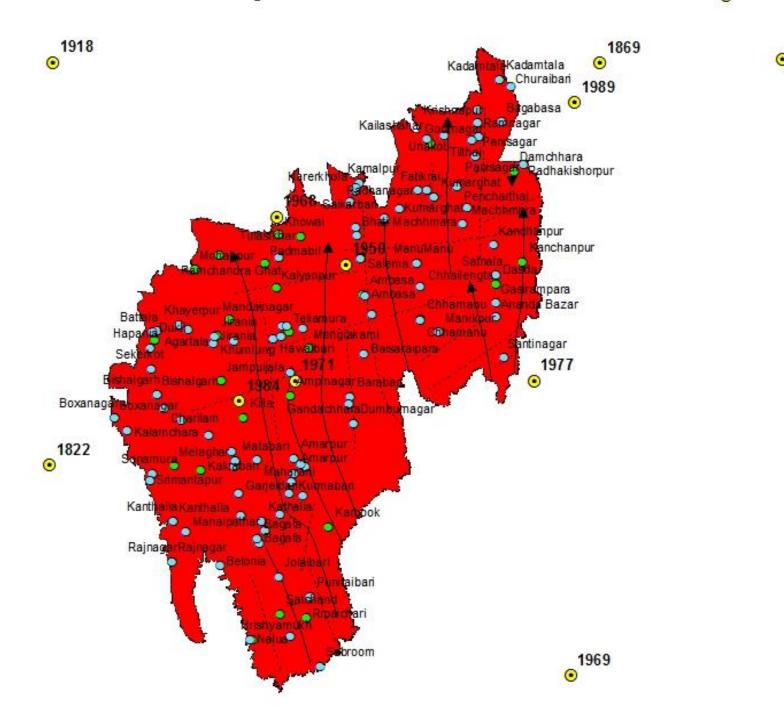


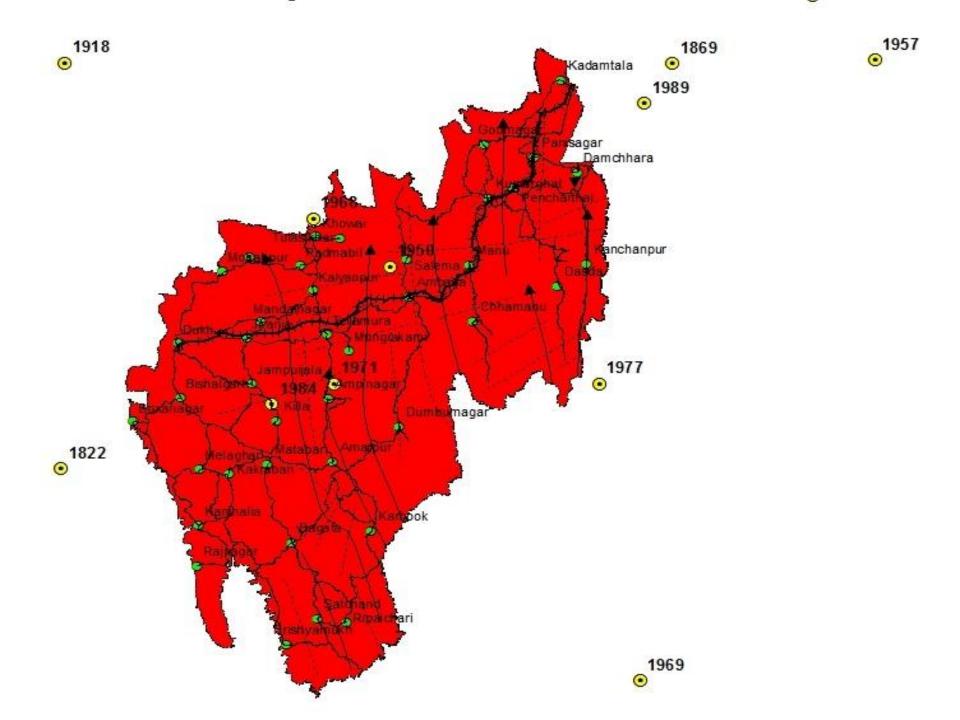


TRIPURA EO's









LIST OF EARTHQUAKES IN AND AROUND TRIPURA BY DATE OF OCCURRENCE

Sl. No.	Year	Month	Date	Time (GMT)	Latitude	Longitude	Depth	Magnitude on Ritcher Scale
1	1762	4	2	07:30:00.0	22.0	92.0	-	7.5
2	1822	4	3	-	23.5	91.0	-	6.5
3	1845	8	6	-	24.8	91.8	-	6.5
4	1851	1	8	-	22.3	91.8	-	5.5
5	1865	1	19	-	22.2	92.5	-	6.0
6	1868	5	30	-	24.9	91.9	-	5.5
7	1869	1	10	-	24.9	92.5	-	7.5
8	1897	6	12	11:06:00.0	25.9	91.0	-	8.7
9	1918	7	8	10:22:07.0	24.5	91.0	-	7.6
10	1923	9	9	22:03:42.0	25.3	91.0	-	7.1
11	1924	1	30	00:05:24.0	25.0	93.0	-	6.0
12	1926	10	12	14:30:18.0	25.0	93.0	-	5.5
13	1944	12	24	14:46:40.0	24.7	92.2	-	5.9
14	1949	7	15	11:00:03.0	24.0	93.0	-	6.0
15	1950	8	15	21:42:14.0	25.0	93.0	-	8.6
16	1950	9	25	12:25:28.0	24.0	93.0	-	5.5
17	1950	12	29	22:35:20.0	24.0	91.8	-	6.3
18	1957	12	12		24.5	93.0	-	5.5
19	1968	6	12	04:29:21.7	24.8	91.9	39.0	5.3
20	1968	12	27	14:38:12.0	24.1	91.6	27.0	5.1
21	1969	1	25	23:34:28.4	23.0	92.4	49.0	5.2
22	1971	2	2	07:59:55.8	23.7	91.7	37.0	5.4
23	1973	5	31	23:39:52.4	24.3	93.5	1.0	5.8
24	1977	10	13	11:32:09.1	23.5	93.3	-	5.2
25	1977	12	23	21:00:27.1	23.7	92.3	33.0	5.1
26	1982	8	31	10:42:45.4	25.4	91.5	32.0	5.0

LIST OF EARTHQUAKES IN AND AROUND TRIPURA BY DATE OF OCCURRENCE

SI' No'	Year	Month	Date	Time (GMT)	Latitude	Longitude	Depth	Magnitude on Ritcher Scale
27	1984	5	6	15:19:11.3	24.2	93.5	31.0	5.7
28	1984	5	21	09:59:05.0	23.7	91.5	12.0	5.2
29	1984	9	30	21:35:25.3	25.4	91.5	34.0	5.0
30	1984	12	30	23:33:35.0	24.7	92.9	3.0	5.5
31	1986	2	8	00:28:54.0	23.9	93.0	30.0	5.2
32	1986	2	19	17:34:23.0	25.1	91.1	7.0	5.2
33	1986	9	10	07:50:26.4	25.4	92.1	47.0	5.3
34	1988	2	6	14:50:45.4	24.7	91.6	33.0	5.8
35	1989	4	13	07:25:33.0	24.4	92.4	10.0	5.0
36	1992	2	25	01:57:25.8	25.2	92.2	33.0	5.0

Source: Vulnerability Atlas of India, 1997

LIST OF EARTHQUAKE TREMORS OCCURRED / FELT IN AND AROUND TRIPURA IN LAST TWO YEARS (2009-2012) DATE TIME (UTC) LATITUDE LONGITUDE DEPTH (KM) MAGNITUDE SL. NO. REGION 13:48:43 27.3°N 1 14/02/2012 88.2°E 5 3.6 SIKKIM - NEPAL BORDER REGION ASSAM - NAGALAND BORDER 2 26.6°N 10/2/2012 15:45:16 93.7°E 10 4.4 REGION 5 3 18/01/2012 27.3°N 88.5°E 3.4 14:12:52 SIKKIM, INDIA MANIPUR (INDIA) MYANMAR 4 11/1/2012 22:23:19 25.3°N 94.7°E 10 4 BORDER REGION 4.2 5 1/1/2012 2:35:19 23.5°N 91.8°E 12 SOUTHERN TRIPURA 6 30/12/2011 15:14:01 26.5°N 92.8°E 10 3.6 ASSAM, INDIA INDIA (SIKKIM)- NEPAL BORDER 7 18/12/2011 21:35:25 28.0°N 88.2°E 35 3.7 REGION 8 94.3°E 70 3.5 18/12/2011 19:05:35 24.1°N INDIA-MYANMAR BORDER REGION INDIA (ASSAM) - NAGALAND BORDER 9 15/12/2011 13:26:44 25.7°N 94.1°E 10 3.4 REGION INDIA(SIKKIM) - NEPAL BORDER 10 20:20:55 27.7°N 88.0°E 4.5 14/12/2011 50 REGION INDIA(MEGHALAYA)-BANGLADESH 11 25.2°N 13/12/2011 15:09:12 91.5°E 20 3.5 BORDER REGION 12 21/11/2011 3:15:33 25.1°N 95.3°E 80 5.8 MYANMAR-INDIA BORDER, REGION 8/11/2011 24.7°N 94.2°E 60 3.7 13 13:37:29 UKHRUL, MANIPUR 8/11/2011 12:41:33 26.3°N 90.6°E 15 3.7 BARPETA, ASSAM 14 ASSAM-ARUNACHAL PRADESH 15 30/10/2011 13:38:55 26.9°N 92.3°E 5 3.6 BORDER REGION 16 29/10/2011 0:43:41 27.4°N 88.4°E 5 3.5 SIKKIM, INDIA 21/10/2011 24.8°N 36 4.5 17 14:40:32 94.0°E IMPHAL, MANIPUR 17/10/2011 13:04:50 27.3°N 88.4°E 5 3.5 SIKKIM 18 INDIA(TRIPURA)- BANGLADESH 19 13/10/2011 19:32:54 24.0°N 91.5°E 3.7 10 **BORDER REGION** 23/09/2011 13:23:21 24.4°N 93.8°E 33 4.5 20 **IMPHAL** 21 22/09/2011 16:44:43 27.6°N 88.4°E 30 3.9 SIKKIM

22	18/09/2011	12:40:47	27.7°N	88.2°E	10	6.8	SIKKIM NEPAL BORDER REGION
23							INDIA(SIKKIM)NEPAL BORDER
25	18/09/2011	13:11:59	27.6°N	88.5°E	16	5	REGION
24							INDIA(SIKKIM)NEPAL BORDER
24	18/09/2011	13:54:17	27.5°N	88.4°E	9	4.5	REGION
25							INDIA(SIKKIM)NEPAL BORDER
25	18/09/2011	21:51:52	27.6°N	88.4°E	28	4.2	REGION
26							INDIA (W.DINAJPUR)-BANGLADESH
20	28/07/2011	17:53:40	25.3°N	88.6°E	18	4.5	BORDER REGION
27	24/05/2011	3:14:21	25.2°N	92.4°E	20	3.4	MEGHALAYA, INDIA
28	29/04/2011	2:39:16	25.9°N	94.7°E	10	4.3	NAGALAND
29							MEGHALAYA-ASSAM BORDER
29	26/04/2011	17:00:40	25.5°N	92.5°E	70	4.3	REGION
30	24/03/2011	13:55:14	20.9°N	99.9°E	33	6.7	MYANMAR
31							MYANMAR-INDIA(MANIPUR) BORDER
51	22/02/2011	22:57:27	24.4°N	94.4°E	83	4.1	REGION
32							BANGLADESH-
32	12/2/2011	10:22:40	23.5°N	91.0°E	10	4	INDIA(TRIPURA)BORDER REGION
33	4/2/2011	13:53:47	24.616N	94.739E	88	6.4	MAYANMAR-INDIA BORDER REGION
34	1/2/2011	8:52:44	23.7°N	91.8°E	10	3.8	TRIPURA
35	27/01/2011	22:40:04	24.3°N	94.4°E	75	4.6	MAYANMAR-INDIA (MANIPUR)
33	27/01/2011	22.40.04	24.3 N	34.4 L	/3	4.0	BORDER REGION
36	12/12/2010	1:40:04	25.0°N	93.3°E	15	4.8	MANIPUR (TAMENGLONG)-ASSAM
30	12/12/2010	1.40.04	23.0 N	93.3 L	15	4.0	BORDER
37	29/12/2010	14:04:00	26.0°N	92.1°E	15	3.5	MEGHALAYA
38	11/9/2010	7:02:09	25.9°N	90.2°E	20	5	MEGHALAYA - ASSAM BORDER
36	11/3/2010	7.02.03	23.3 N	90.2 L	20	3	REGION, INDIA
39	30/8/2010	0.20.25	2E 2ºN	94.9°E	93	4.6	MYANMAR-INDIA(MANIPUR) BORDER
33	30/6/2010	9:39:25	25.2°N	34.3 E	33	4.0	REGION
40	27/04/2010	14:20:37	24.2°N	93.8°E	45	4.3	SOUTHERN MANIPUR
41	28/04/2010	18:54:37	24.3°N	94.1°E	11	4.1	SOUTHERN MANIPUR
42	12/3/2010	23:19:54	23.0°N	94.5°E	96	5.6	MYANMAR

43	20/02/2010	21:07:18	23.2°N	94.5°E	85	4.7	MYANMAR	
44	23/02/2010	6:55:44	25.8°N	93.2°E	30	4	NAGAON, ASSAM	
45	13/12/2009	14:41:55	22.0°N	91.8°E	10	5.1	BANGLADESH	
46	29/12/2009	9:01:42	24.5°N	94.8°E	80	5.5	MYANMAR - INDIA (MANIPUR)	
47	11/10/2009	18:26:03	23.5°N	94.5°E	10	4.9	MYANMAR - INDIA BORDER REGION	
48	3/9/2009	19:51:09	24.3 N	94.6 E	100	5.9	MYANMAR - INDIA BORDER REGION	
49	21/9/2009	19:38:42	20.4 N	94.8 E	87	5.7	MYANMAR	
50	E /0 /2000	2.50.41	22.3°N	93.4°E	20	4.0	MYANMAR-INDIA(MIZORAM)	
50	5/8/2009	2:58:41	22.5 IV	93.4 E	29 4.8	29	4.8	BORDER REGION
E4	11/9/2000	21.42.20	24 4°N	04.00	22	F.6	MYANMAR - INDIA (MANIPUR)	
51	11/8/2009	21:43:39	24.4°N	94.8°E	22	5.6	BORDER REGION	
52	19/08/2009	10:45:14	26.6°N	92.5°E	20	4.9	SONITPUR, ASSAM	
53	30/08/2009	19:27:49	25.2°N	94.8°E	66	5.3	MYANMAR-INDIA BORDER REGION	
E 4	4 F /OF /2000	06-20-0	24 7ºN	04.5%5	4.5	4.5	MYANMARINDIA(MANIPUR)	
54	15/05/2009	06:28.0	24.7°N	94.5°E	15	4.5	BORD.REG	
	24/2/2000	17.46.12	2E 0°N	04.205	10	4.0	INDIA(NAGALAND) MYANMAR	
55	24/2/2009	17:46:13	25.9°N	94.3°E	10	4.8	BORD. REG.	

EARTHQUAKES OCCURRED IN TRIPURA DURING 2012 onwards

DATE	TIME (IST)	LAT (deg. N)	LONG (deg. E)	Depth (km)	Magnitude	Region
01/01/2012	8:05:19	23.5°N	91.8°E	12	4.2	Jatanbari, Near Dumbur Dam
29/06/2012	8:59:59	24.2°N	91.9°E	15	3.7	Kamalpur
05/08/2012	12:06:49	24.8°N	91.8°E	19	4.3	Indo-Bangla Border
25/11/2012	11:31:44	23.7°N	91.5°E	15	4.2	Jampuijala
14/05/2013	20:40:49	24.1°N	92.3°E	10	3.8	North Tripura
03/06/2013	6:40:45	24.2°N	91.4°E	10	3.4	Indo-Bangla Border
18/06/2013	0:57:54	24.1°N	91.2°E	15	3.5	Indo-Bangla Border
07/12/2013	4:41:50	24.2°N	91.4°E	10	3.8	Indo-Bangla Border
17/12/2013	08:56:28	24.1°N	91.1°E	20	3.8	Indo-Bangla Border

EARTHQUAKES OF NORTH EAST INDIA (Flash back)

(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

Saikoaghat, N.E. India, KVS

EARTHQUAKES OF NORTH EAST INDIA

12th June 1897 - The Assam Earthquake, Mw 8.7





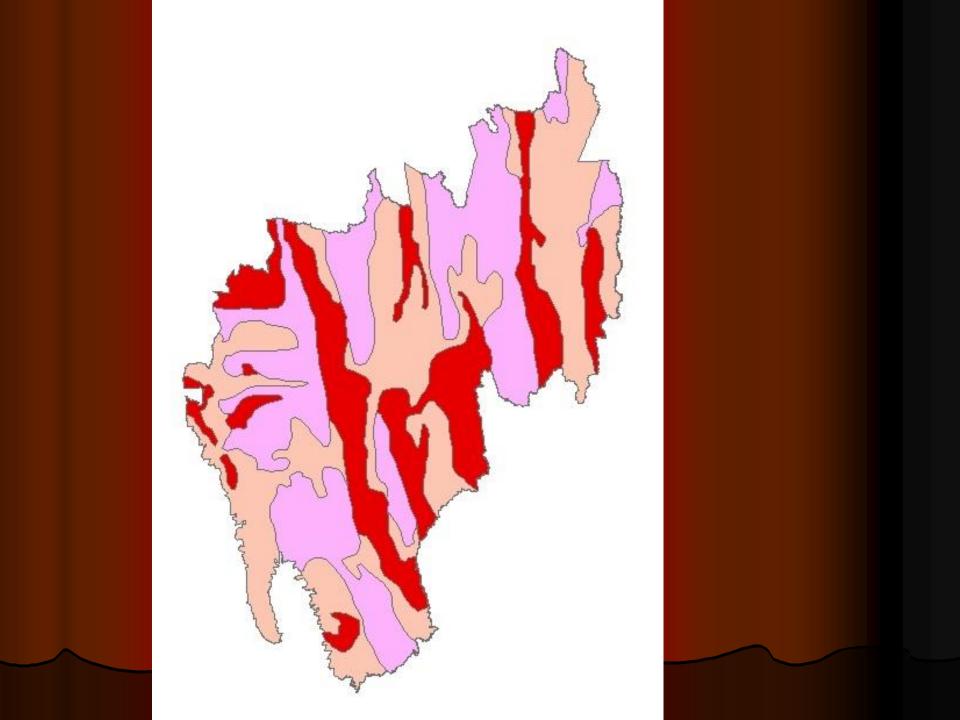


Seismic Regions in India

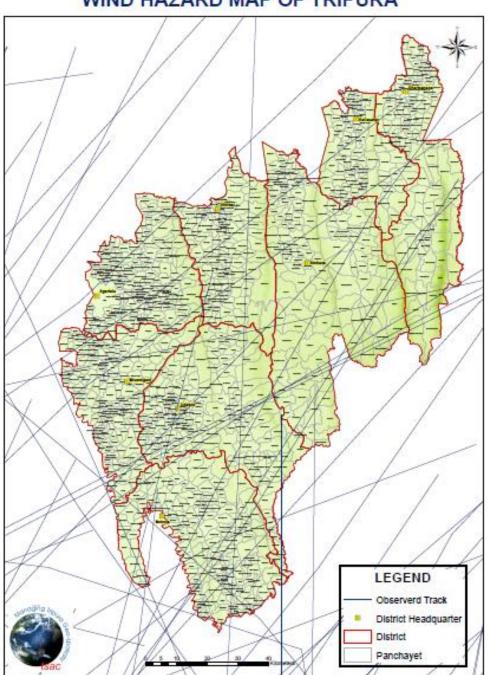
S.	Seismic Region	No. of	f Earthqu	iakes hav	ing M=	Max	Average
No		5-5.9*	6-6.9	7-7.9	8.0 or more	MM Inten- sity	Return Period Observed For M≥5.0
1	Kashmir and Western Himalayas (J&K, Himachal Pradesh, Sub-mountain parts of Punjab)	25	7	2	1	Х	2.5-3 Yrs.
2	Central-Himalayas (U.P. & Nepal Himalayas, North Bihar)	68	27	4	1	ΧI	1 Yr.
3	North East India	200	128	15	4	>X	<4 months
4	Indo-Gangetic basin & Rajasthan (Rajasthan, Punjab, Haryana, Delhi, Plains of U.P., Bihar & Bengal)	14	6	1	1	VIII	5 Yrs.
5	Cambay and Rann of Cutch	4	4	1	1	IX-X	20 Yrs.
6	Peninsular India	31	9	-	-	VIII	2.5-3 Yrs.
7	Andaman & Nicobar	80	68	1	1	>IX	<8 months
	Whole in India	422	249	23	8		<2 months

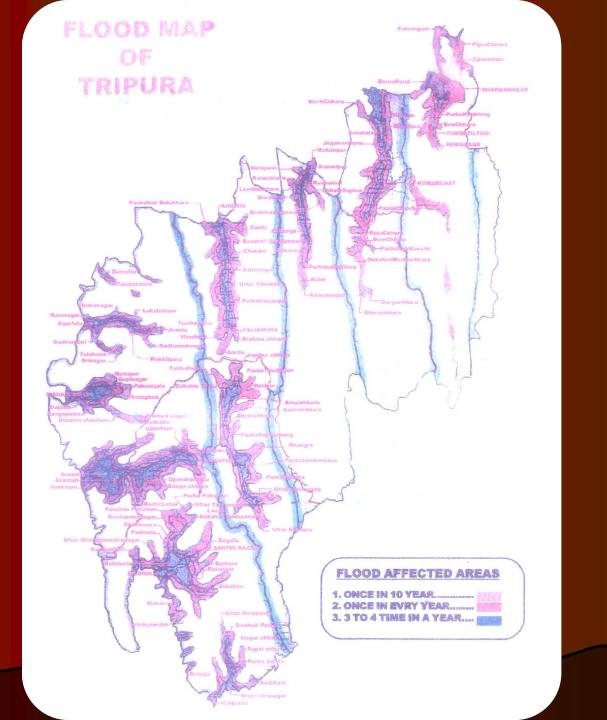
Table 1 Earthquake occurrence in India, M>5.0 (Richter Scale).

^{*} Numbers approximate (Table Complied by A.S. Arya) Progress Towards Earthquake Risk Reduction In India - WWSI Bangkok Workshop on Seismic Risk Management 11 January 1999, Dr. A. S. Arya, Professor Emeritus, University of Roorkee, India



WIND HAZARD MAP OF TRIPURA





Type of Hazar d	District	Sub- Division affected	Year of Occurrence	Area affected	Impact on life	Livelihood	Livestock	Remarks
	North	Kailashaha	2004, 2005	Pani Chowkir		Maximum		
	Tripura	r & Kanchanp ur		Bazar in Kailashahar, Kanchanpur Bazar Stand adjacent to Motor Stand		shops in the area were fully burnt into ashes		
	South Tripura							
Fire	West Tripura	Entire District	2001-2009	Entire District		Property lost - Rs.32,56,950/ - approx		Major fire - 42, Medium fire - 47, Small fire - 509, Serious fire - 1, Market fire - 40
	Dhalai		2001, 2002	,Chawmnu market, Manu, Chailengta and Masli		Houses and shops gutted	No loss of livestock	

Other accidents/ disasters

- Agartala Bomb Blast 1st October, 2008 4 deaths 76 injured
- Naisinghpara Fire Accident 19th March, 2011 17 deaths, 9 severely injured.
- AMRI Fire 9th December, 2011- 7 deaths from Tripura (out of total 93 deaths)
- Aamtilla LPG Tanker leakage 19th May, 2012 500+ affected.
- Tripura Bus Accidents in Meghalaya 8th August, 2012 31 deaths, 26 injured
- Mohanpur Landslide- 8th May, 2013- 2 deaths
- Sonamura Cyclone- 9th May, 2013- No Casualty, 6 injured
- Agartala (Bankumari, Jogendra Nagar) Building Collapse-7th August,
 2013- 3 deaths & 4 injured
- Massive Fire at Bhutoria Gas Agency & Warehouse 7th Sept 2013, No Casualty, Huge property loss.

Disaster Risk Reduction Initiatives

Implementation of GOI-UNDP DRM Programme (2003-2009)

Strategy: Community Based Disaster
Preparedness - Recognizing the Community as
FIRST RESPONDER

CBDP

GROUP OF PEOPLE

HAVING A SENSE OF BELONGING



LIVING TOGETHER

SHARING COMMON INTEREST

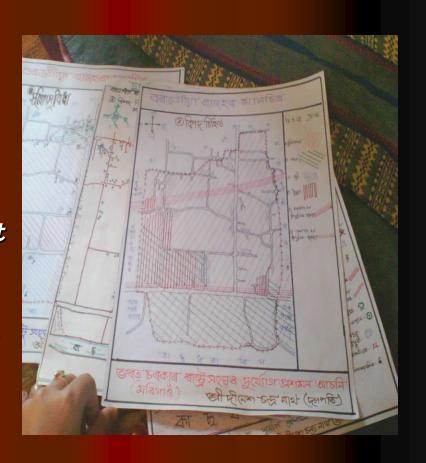
IN A COMMON GEOGRAPHICAL AREA

The approach:

Preparation of Multi hazard Disaster Management Plans at all levels: these plans are made by the community, and include:

Review and analysis of past disasters. This is an important activity as it forms the basis of preparedness and mitigation plans

Mapping Exercises (done through PRA techniques)



Constitution of DM teams & developing their capacities:

Early warning Team

Rescue and Evacuation Team

Shelter Team

Water & Sanitation Team

Medical & First Aid Team

Relief and Coordination Team

Carcasses Disposal

Counseling

Damage Assessment



Identification of Hazard Specific Mitigation Activities:

These are intended to eventually form part of the overall development plans

Formation of Community Contingency Fund:

To meet any contingency, and to reinforce community cohesiveness and action

Conduct of Mock Drills:

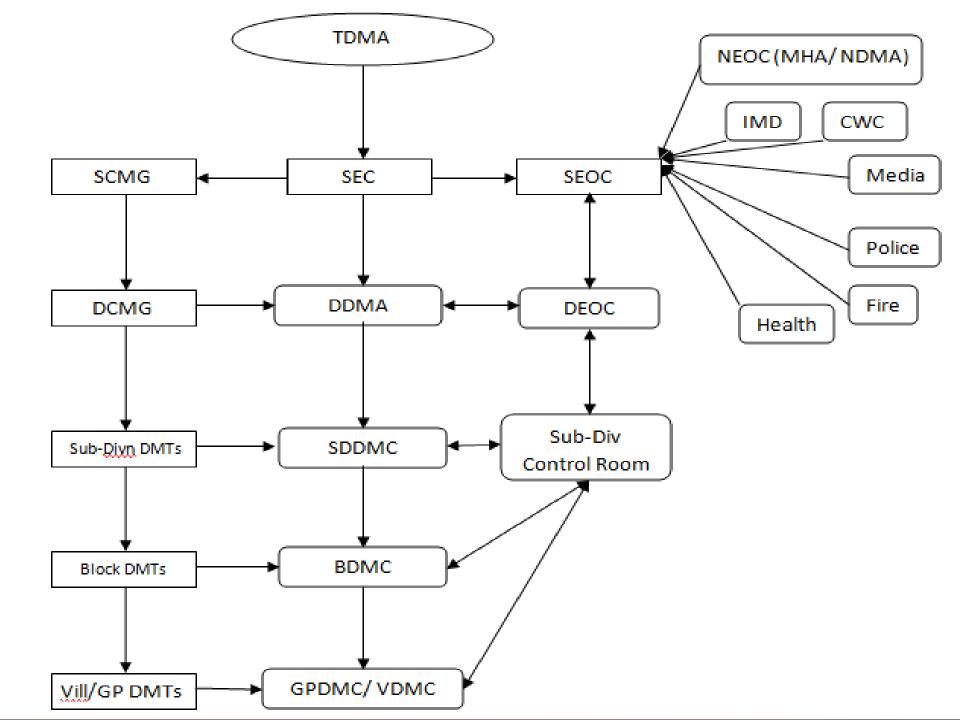
This preparedness drill is a simulation exercise which if practiced will help in improving the cohesiveness of the community during an emergency



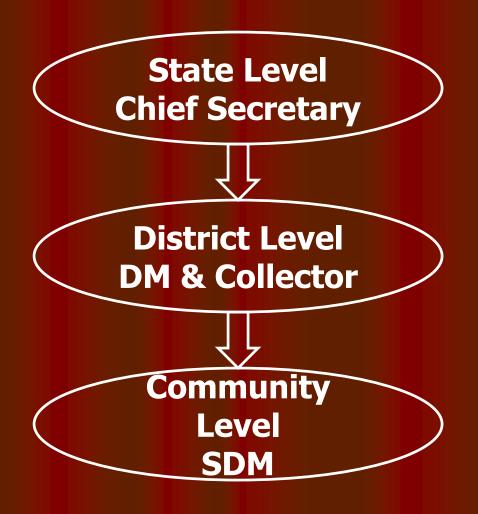
GOI-UNDP DRR Programme GOI-UNDP URR Programme (2009-2012)

Focused on preparedness and mainstreaming of DM activities

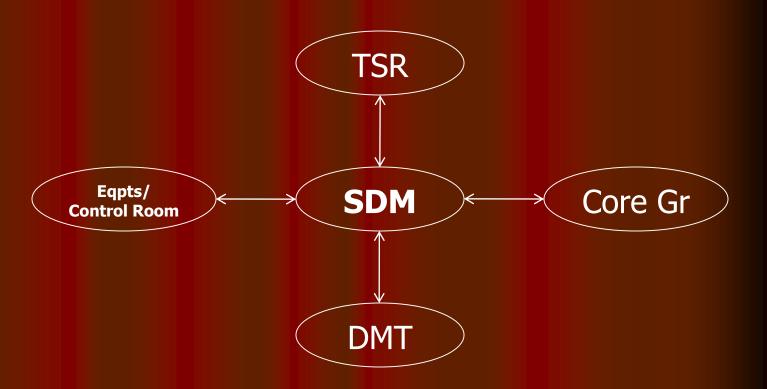
DM Framework in Tripura



Incident Commanders



Response Mechanism at the Community Level



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

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

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.

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	2143
PRTI	PRI Members	1165
NIT-A	Engineers	213
DIET & Schools	Teachers	2225
Health Deptt	Doctors and Paramedics	134 and 307
PWD, RD & IE-	Masons & Helpers	3000+

10000+

137

Volunteers

Journalists

Tripura

admn.

ICA

Dist & Sub-div

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



ৰাধিক বং	ৰক্ষে নাম	हिब	ব্যবহার
٤	ৰুলেট চেইন স		এই যন্ত্রটি কাঁচা একং শুক্নো কাঠ কাট্তে ব্যবহার করা হয়
W	বোপ্ট কটিন (১৪ ইঞ্চি)		এটি চেইন, তালা, বন্টু এবং তারের ভাল কটিতে ব্যবহার করা হয়।
9	ৰোপ্ট কাটার (৩০ ইঞ্চি)		এটি চেইন, তালা, কটু এবং তারের ভাল কটিতে ব্যবহার করা হয়।
8	যোটারি হেমার ভিল		এটি ইট, পাথর একং কংক্রিটে ছিদ্র করতে কাজে লাগে।
œ	ফো ফোন	0	যোৰনা করতে বা সাঁইরেন বাজানোর কাজে ব্যবহার করা হয়।
9	ফারার এভ রেস্কিউ হেলমেট		আগুন খেকে উন্ধায় করতে গেলে এই হেলনেট ব্যবহার করা হয়৷
q	রেনিপ্রেকেটিং স		উপযুক্ত হেভ ব্যবহার করে কাঠ. প্লাপ্টিক, ধাতু একং বিভিং-এর সামধী করাতের মত কাটতে সাহাব্য করে। তা পিয়ে সোলাসুধি বা বীকা ভাবে কাটা বায়।
۲	শাভল	A.	আবৰ্জনা খুড়তে কালে লাগে।
à	কোলাল	4	আবৰ্জনা খুড়তে কাজে লাগে।

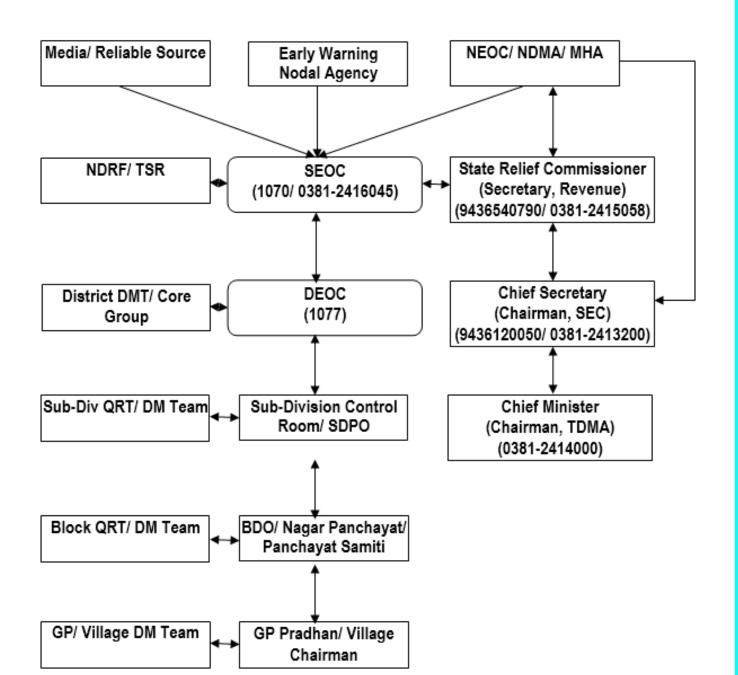
70	ক্মাভো দার্চ লাইট	€ A	এটি শক্তিশালী লাইটে এর আলো অনেক দূর পর্যন্ত যায়। এটি জরুরী অবস্থায় খোলার কালে ব্যবহার করা হয়।
22	ভি দি পি কারার এক্সটিংগুরশার		গ্যাদোলিন, তেল, রঙ, অন্যান্য দাহ্য তরল বন্ধু বৈদ্যুতিক কারনে এবং গ্যাদ (এল পি জি, দি এন জি) থেকে আগুন লাগলে নেডানোর কাজে ব্যবহার করা হয়়।
38	কোৰার ৫ বুট		ভারি বিশিষ উঠাতে কাবে লাগে।
50	কোৰার ৩ কুট	/	ভারি বিশিষ উঠাতে কাবে লাগে।
78	ট্রফিক কোণ		কোন এলাকা বেষ্টন করতে কাজে লাগে।
26	জনারেট্য		জরনী অবস্থার বিভিন্ন যন্ত্রপাতি চালানোর জন্য বিদূহ উৎপাদন করা হয়।
56	যোটারি রেসকিউ স		এই যন্ত্ৰটি কংকিটি কঠি এবং ধাতৰ জিনিৰ কটিতে কাজে লাগে। তবে এয়জন্য ব্লেড পরিবর্তন কয়তে হয়।
39	আংগল কাঁদ্ৰর (ইলেক ্রি ক)		এই যন্ত্রটি কংক্রিট, কাঠ এবং ধাতব জিনিব কাটতে কাজে লাগানো হয়। তবে এরজন্য ব্লেড পরিবর্তন করতে হয়।
>	কারার এক্সীই গুইশ্বর (কার্বন-ভাই-অক্সাইড)		দাহ্য বন্ধু যেমন-পেট্রেল, তেল, রঙ এক কারখানার গাসে থেকে আঙন লাগলে নেডানোর কাজে লাগে। দামী যরপাতির ক্ষেত্রেও উপযুক্ত।

79	ক্-ক্রিট কটিয়	%	এই যন্ত্রটি কংক্রিট, কাঠ একং ধাতৰ জিনিব কাট্তে কাজে লাগানো হয়। তবে এরজন্য রেড পরিবর্তন করতে হয়।
২০	নহিজনের স্কি (১০০ মিটার জম্বা)		নানাবিধ উদ্ধার কাজে কাজে ব্যবহার করা হয়৷
25	দিন টেপ (১০০ মিটার জয়া)	ENTER O	কোন এলাকা বেইন করতে কাজে লাগে।
44	শাচল রাউড		আবৰ্জনা ও মাটি খুড়তে কাজে লাগে।
20	কুরেল কর্নেটনার		যক্তপাতি চালানোর তেল বা জ্বালানি রাখতে ব্যবহার করা হয়।
₹8	হেন্ডি ভিউটি ওয়ার্ক প্লাড		এই প্লাডগুলি খুবই মজবুত। এগুলি পরিধান করে শক্ত কাজ করলে সুরক্ষিত থাকে।
২৫	দিকেল পুলি	?	দক্তি লাগিয়ে টানতে খুব সহজ হয়।
26	ভাবল পূলি	100	এতে সৃটি দড়ি পাশাপাশি লাগিয়ে টানতে খুব সহজ হয়।
ર્વ	নেকটি গগলন্	-	ধুলাবালি থেকে চোথকে রক্ষা করতে ব্যবহার করা হয়।
*	কারার প্রস্তিমিটি ইউনিট	Ŷ	এটি অতি উচ্চ তাপমানা সম্পয় আগুন থেকে অধি-নির্বাপনকারীকে রক্ষা করে।
২৯	শ্রিক্তি অ্যাপারেটান	*	এটি দুবিত এলাকার উদ্ধার কার্যের সময় বা রাসায়নিক কারখানায় মেরামাতি কাবে বা যেখানে

			ব্যবহার করা হয়।
90	ইনফ্লেটেৰল ৱাৰাৱ বেটি		বিশেষত বন্যার সময় উজার কান্তের জন্য ব্যবহার করা হয়।
ćo	নোদ মাজ		অতিরিক্ত ধুলাবালিতে কাল করার সময় নাকে ব্যবহার করা হয়।
<u>02</u>	ইলেকট্ৰিক ভূিল		কাঠ, ধাতু, চীনামাটি এবং প্লাপ্টিকের জিনিবে ছিদ্র করতে ব্যবহার করা হয়।
ಌ೦	ফারার বুট	y	আগুন থেকে উদ্ধার কাবে সময় ব্যবহার করা হয়।
9 8	ফোভিং শ্রেচার		আহতদের বহন করার জন্য ব্যবহার করা হয়৷
90	ওয়াটার মিশ্ট একং দি এ এক কারার এস্থাটিং গুইশ্র		কাঠের আগুন, সাধারন আগুন এবং পেট্রেলিয়াম জাতীয় আগুন নেডাতে ব্যবহার করা হয়।
96	গোটেৰত ইন্তেটেৰত ইনাৰেশি লাইট নিশ্টেম		জরনী অবস্থার যেখানে বিদুহ ব্যবস্থা থাকে না নেখানে আলোর ব্যবস্থা করার জন্য ব্যবহার করা হয়।
90	গ্মাশ্টিক কিশাল (৩০বুট ৩০ বুট)		তাবু বানানো বা অন্যান্য কাজে ব্যবহার করা হয়।
ರ್ತ	টেট (১৬ বুট ১৬ বুট)		পা্কৃতিক বিপর্যরের সমর বা জরুরী সমরে আখ্রের জন্য ব্যবহার করা হয়৷

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/ 24624588-Duty Officer)
	IMD-Seismological Observatory Centre, Shillong
	(0364-2560106/ 2560075-Duty Officer)
	IMD-Agartala
	(0381-2342295/ 2342253-Duty Officer)
	(Information on Earthquake after the tremor as there is no warning of this)
Floods	CWC
	(0361-2674186-Guwahati Control Room)
	IMD-Agartala
	(0381-2342295/ 2342253-Duty Officer)
	PWD (Water Resources)
	(9436453655/ 0381-2355664- Premansu Ghosh, Asst. Enggr to Chief Enggr-WR)
Cyclones/Storms	IMD-Agartala
•	(0381-2342295/ 2342253-Duty Officer)
Landslides	GSI-Agartala
	(0381-2350033/ 9402144683/ 8415929033 -Director, GSI, Agartala)
Thunder	IMD-Agartala
	(0381-2342295/ 2342253-Duty Officer)
	Thunder storm observatory centre, North East Space Application Centre,
	Shillong
	(0364-2570137-S.S. Kundu)
Drought/ dry spells	Ministry of Agriculture, Krishi Bhawan, New Delhi
And Pest Attacks	Drought Control Room, Ph No011-23383476
	Agriculture Department
	(0381-2323778/ 2323883/ 9436124922-Director)



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.



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 & Subdiv level quiz events.
- TV and Radio talks
- News flashes through local dailies.
- Disaster Movies through local TV channels

IEC materials and Awareness Generation

- State and District level seminars and awareness programmes
- Observation of different events
- 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 Advertisement at City Centre and Big Bazar, hoardings

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.

- -3000+ Schools have prepared School Safety plan
- -23 deptts 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 deptts 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 <u>www.tdma.nic.in</u> / <u>www.tdma.in</u>
- All District websites contain the link pages of disaster management which are being updated regularly.
- Knowledge Portal http://tdma.in/tdmaQ/Default.aspx
- TSAC, NESAC & NEIST-Jorhat are the source of GIS based info system
- Two activities are under development i.e. 1. Online inventory of Trainings, Master Trainers, Training programmes and 2. Android Based Resource Tracking system



TRIPURA DISASTER MANAGEMENT AUTHORITY

TRIPURA, INDIA

ABOUT US HOME CONTACT US

ACTS & POLICY |

SEMINAR/WORKSHOP

EMERGENCY CONTACTS

PHOTO GALLERY

VIDEO GALLERY

History of Disaster in Tripura

Disaster Management

Disaster Survival Tips

School Safety

Best Practices

Disaster Management

Feel a Quake!!!

Training & Capacity Building

Equipments

Resource Center

Crisis Managements

Weather Forecast

Daily Situation Report



Agartala & Ambassa 10 Locations. March 13, 2014

Last tremors felt in Tripura i.e. 4.8 and 5.4 Recruitment notice for the various posts NEW

International Day for Disaster Reduction (IDDR)



বিপর্যয় এমন একটি অপ্রত্যাশিত ঘটনা, যা মানব সমাজের সভাবিক <u>জীবনকে ব্যাহত করে এবং সম্পদের</u> ক্ষয়ক্ষতি ঘটায়। গোষ্ঠীর শক্তি। সামর্থের দ্বারা এই ঘটনা কাটিয়ে ওঠা সন্তব নয় । এখানে বাইরের সাহায্যের প্রয়োজন হয়ে পড়ে।

Disaster Management is one of the major activities in the Revenue Department. The Revenue Department is an oldest Department of the State Government, which play a very vital role in the Administration comprising District Administration, Land Records & Settlement, Relief Rehabilitation and Disaster Management and Weights & Measures Department, This Department is functioning for the greater interest of the poorest of the poor with the help of three tier Panchayats in managing their own affairs.

Revenue Department is the Nodal Department for Disaster Management in the State, Tripura is prone to various natural disasters, particular to Earthquake. The State is situated in the most vulnerable earthquake prone Zone-V of India.

ব্রক স্তরে বিপর্যয় মোকাবিলা প্রশিক্ষণ নির্দেশিকা

সহজ পাঠ/নিদেশিকা





Ministry of Home Affairs Government of India

Change User's Password Menu Page Indian Disaster Resource Network www.idrn.gov.in Log Out **Notifications from Ministry of Home Affairs Download User Manual VENDOR MANAGEMENT - REPORT Download Data Collection Format** NEW Download district data updating format National Inventory of Resources for Disaster Management (MODIFY CONTACT DETAILS OF DC/DM/AUTHORITY) ADD / MODIFY RECORD VIEW ITEMS DETAILS Show Item Details Add Records to Inventory Show Item code/ Name Modify / Delete Records **QUERY DATABASE** DATABASE STATUS ■ District Status Country wide inventory Quantity wise Inventory State Status Department wise report Common Query

VIEW DISTRICT MAP

Welcome to District User of West Tripura

District Database

Date Wise report

CONTACT PAGE

Addition of new Item

Report a Technical problem

MODIFY INVENTORY QUERY INVENTORY VIEW ITEMS CONTACT LOGOUT MENU

Country wide Report Select Activity >> Category >> Item and State >> District from the list box below for the listing of inventory for the selected items. You may choose multiple nos of Activity, Category, Item or State, District by holding 'CTRL' key when selecting the fields. SELECT ITEMS SELECT LOCATION **ACTIVITY** STATE Search and Rescue Meghalaya Shelters Mizoram Tele Communication Nagaland Orissa Transportation Pondicherry **CATEGORY** Punjab Video system Rajasthan Wireless system Sikkim Heavy vehicle Tamil Nadu Light vehicles Tripura Medium vehicle Uttar Pradesh Special vehicles Uttarakhand **ITEM** DISTRICT Dhalai Breathing Apparatus - Compressor Breathing apparatus - Self Contained Gomati Dry Chemical Powder Khowai Fire Fighting Foam North Tripura Halons Sepahijala ABC Type South Tripura CO2 Type Unakoti DCP Type West Tripura Foam Type Halons Type Fire Droof Shoot

India Disaster Resource Network



TRIPURA DISASTER MANAGEMENT AUTHORITY TRIPURA, INDIA

Daily Situation Report

Choose Option

REVENUE DEPARTMENT

Telephone No. 211-6045

Internet Phone No. 6045

Toll Free No. 1070

Email scrtripura@gmail.com, seoctripura@gmail.com

Select District —SELECT— ▼ [

Select Sub-Division ▼

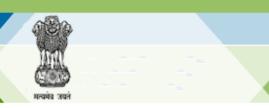
Select Block ▼ □

Date From 21-May-2014 Pick Date

Date 21-May-2014 Pick Date

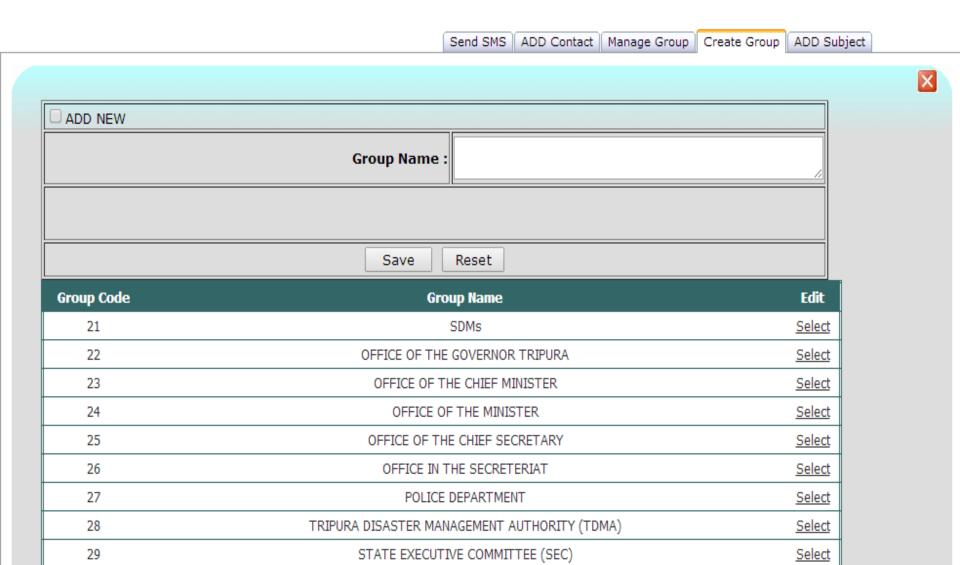
Show Create Report Daily Report Logout Update Login Info Calamity

Block/Subdivision/District | Cumulative Report



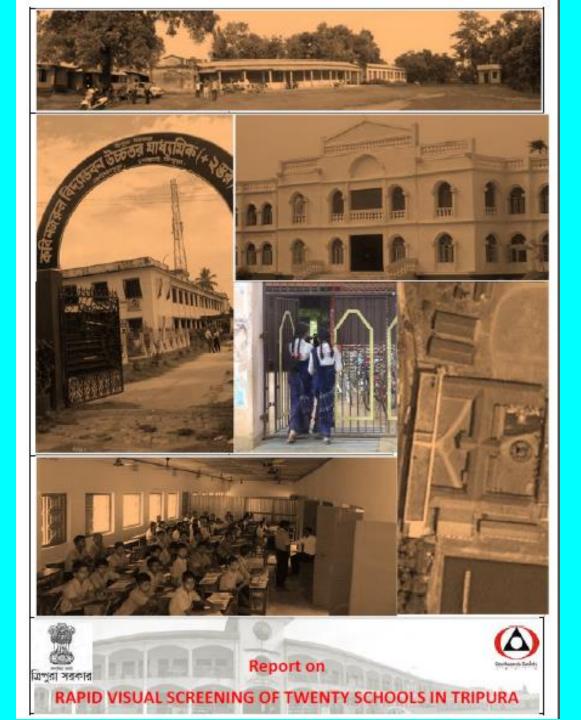
Government of Tripura REVENUE DEPARTMENT

SMS GATEWAY Welcome State EOC Tripura



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.



TRAINING NEEDS ASSESSMENT OF TRIPURA STATE



Under the GOI-UNDP project on "Enhancing Institutional and Community Resilience to Disasters and Climate Change (2013-2017)"

Good Practices

- Retrofitting of five major buildings
- 40 helipads for disaster mgmt. purposes
- Micro zonation of Agartala city
- Integration of MGNREGA with IAY 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 10% of Flexi Funds under CSS for DM

Approved activities under 10% of Flexi-Funds of CSS

	Deptt	Schem	Secto	Proposed activities
		е	r	
Rural Develo	Rural Develo			 Inclusion of such measures like application of hazard resistant design in construction of IAY houses, appropriate sitting 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.

Approved activities under 10% of Flexi-Funds of CSS

Deptt	Schem	Secto	Proposed activities
	е	r	
Rural	MGNR	Liveli	 Utilisation of MGNREGS funds to reduce the
Develo	EGS	hood	vulnerability of Panchayat vis a vis natural hazards such
pment		securi	as landslide, drought, forest fire, cloud burst, flash
		ty	floods, earthquake etc.
		and	Giving priority to those works which reduce the
		rural	vulnerability of area over the works which enhances the
		devel	vulnerability of the area to natural hazards.
		opme	 Identified works are available which take into account
		nt	the hazard profile and offer continuous employment
			opportunities in the event of disasters to ensure
			livelihood security in the event of disasters.
			 Works which reduce disaster risk are given priority in
			plans-such as local mitigation works etc.
			 Any other implement able suggestion within the ambit
			of the scheme.

Approved activities under 10% of Flexi-Funds of CSS

Deptt	Schem	Secto	Proposed activities		
	е	r			
PWD	Pradh an Mantri Gram Sadak Yojana	Infra- struct ure	 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 		

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 10% 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



No.F.12(6)-REV/Climate/2013

Government of Tripura Revenue Department

The 21st November, 2014

MEMORANDUM

Guidelines issued by the Ministry of Finance, Government of India vide Memo No.55(5)/PF-II/2011 dated 06/01/2014 for 10% flexi-funds within Centrally Sponsored Schemes were circulated to all Departments of the State Government vide Memo No.F.12(6)-REV/Climate/2014 dated 05/05/2014.

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

(G. K. Rao)

Chief Secretary to the Government of Tripura

To

Principal Secretaries/Secretaries of all Departments implementing CSS

Revenue



NO.F.13 (2-18) SE/GL 1, 2013 (Vol. 1) GOVERNMENT OF TRIPURA DIRECTORATE OF SCHOOL EDUCATION (GENERAL SECTION - I)

Dated, Agartala, the. 12/11/2014.

MEMO

Subject: Conduct of earthquake evacuation drill in schools - instruction reg.

All concerned may refer to this Directorate Memo. of even number dated 22.07.2014 mandating, among other things, conduct of mock drill on earthquake/disaster 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 once 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.

(P.K.Chakravarty,IAS)

Addl. Secretary & Director, School Education, Tripura.

To

The District Education Officer,

Conduct Regular Mock Drills



Step I – Ringing of the alarm bell





Step III – School Evacuation 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



Monitoring & Evaluation

- TDMA once in a year
- SEC on quarterly basis
- Monthly review with DM & Collectors
- Monthly nodal officers coordination meeting
- Fortnightly subject specific core meeting
- Besides, other reviews and follow ups

For ensuring earthquake safety

- Modification of building byelaw and extension
- Peer review
- Vulnerability analysis and prioritization for next course of action
- Hazard Safety Cell
- Skill building of Engineers, Architects and Artisans
- Better coordination with the Engg Associations
- Special projects NSSP, ERMP, ERMDP, NLRMP
- R&D with IITs, NITs, EERC, CBRI, BMTPC

Challenges

- Lack of resource institutions and technical experts.
- Dedicated manpower for DM.
- Poor motivation to the policy makers.
- Isolation from mainland.
- Inadequate resources (funding provision)









BE AWARE. BE PREPARED. BE ORGANIZED.



8 States. 16 Cities. 80+ Locations. MARCH 10 & MARCH 13, 2014

Agartala & Ambassa, 10 Locations March 13,2014

NATIONAL DISASTER MANAGEMENT AUTHORITY TRIPURA DISASTER MANAGEMENT AUTHORITY

DISTRICT DISASTER MANAGEMENT AUTHORITY AGARTALA (W) & DHALAI DISTRICT



































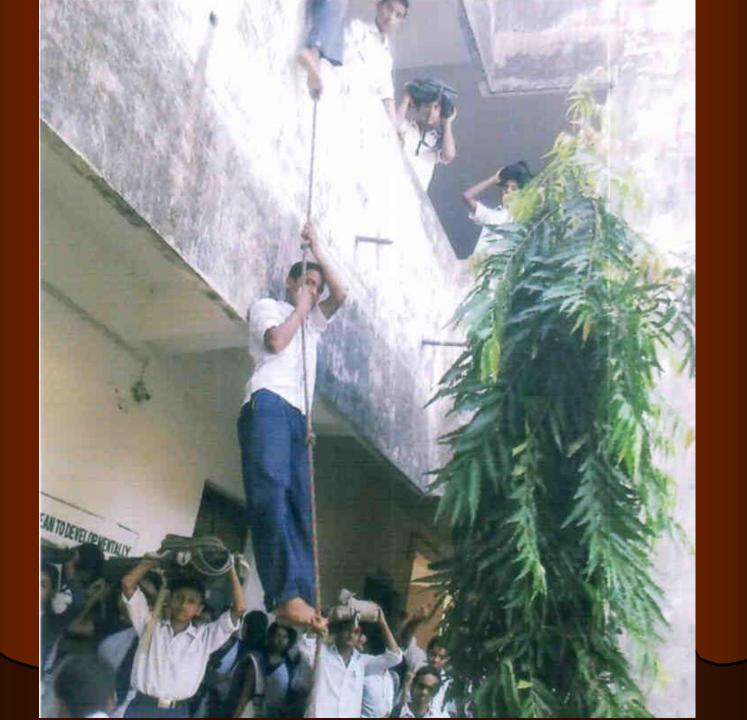














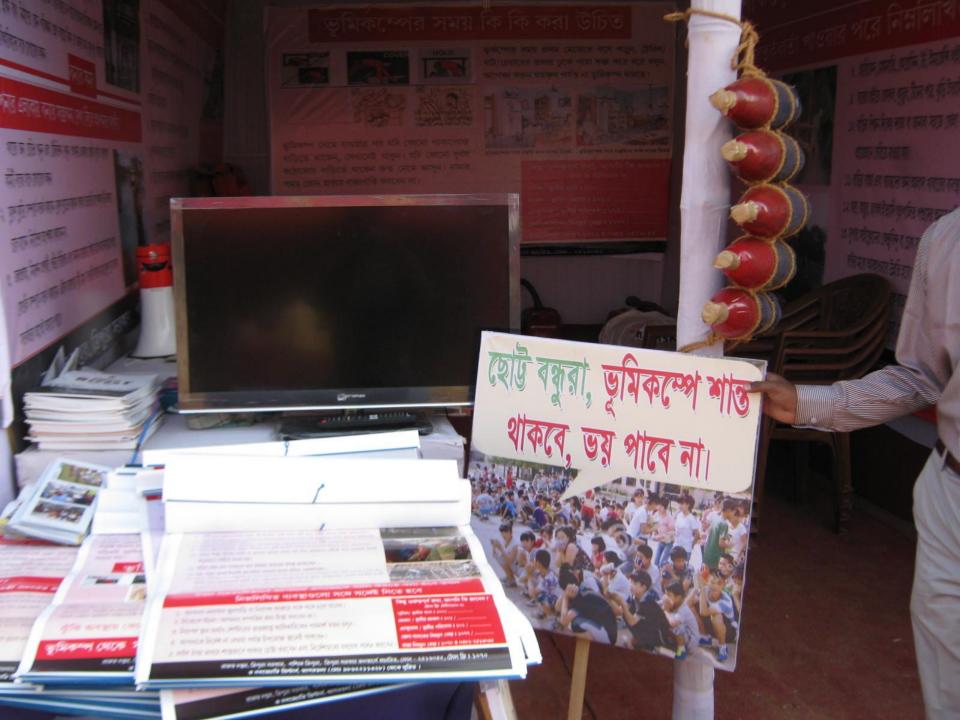






do everything that is in my power reedless loss to life and properly in f calamities and disaster of any kind. all to the best of my ability to assist nent and Civil Society Organizations refrorts to prepare individual and nunities to face the fury of nature. Po nitigate the damage cost in its wate and extending rescue, relief and rehabilitation to victims. at I shall dedicate myself in the task of creating Wareness amongst people. Of the need to be alert to the potential threats in the en b a sense of responsibility wat large in dealing

















































বি পথ্য (भावगविलोव भाश प्रभुवा





তারিখ ঃ ২৯ ও ৩০শে মে স্থান ঃ সুকান্ত একাডেমী ত্রিপুরা সরকার রাজস্ব দপ্তর







































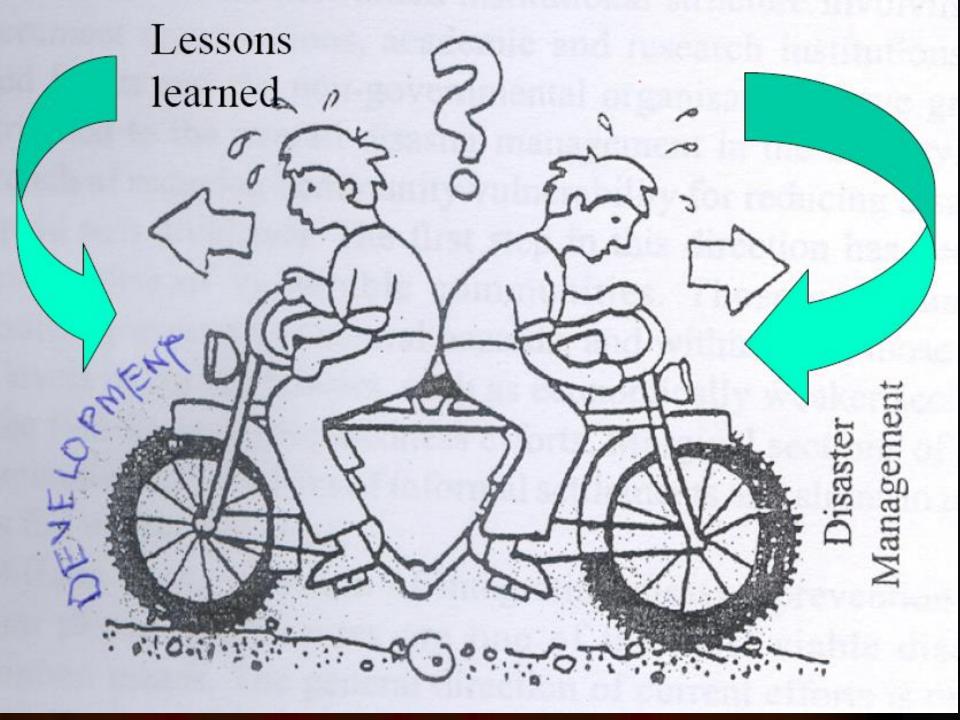




Engineer fraternity can help for a SAFER BUILT ENVIRONMENT which can reduce the **MAXIMUM VULNERABILITY** in Tripura

The State is committed to fulfill its vision to make

Tripura a Disaster Resilient State







Thank you all

Special Thanks to Nepal Engineers Association

Er. Dhruba Thapa, President, NEA

Er. Kishore Jha, Secretary, NEA