

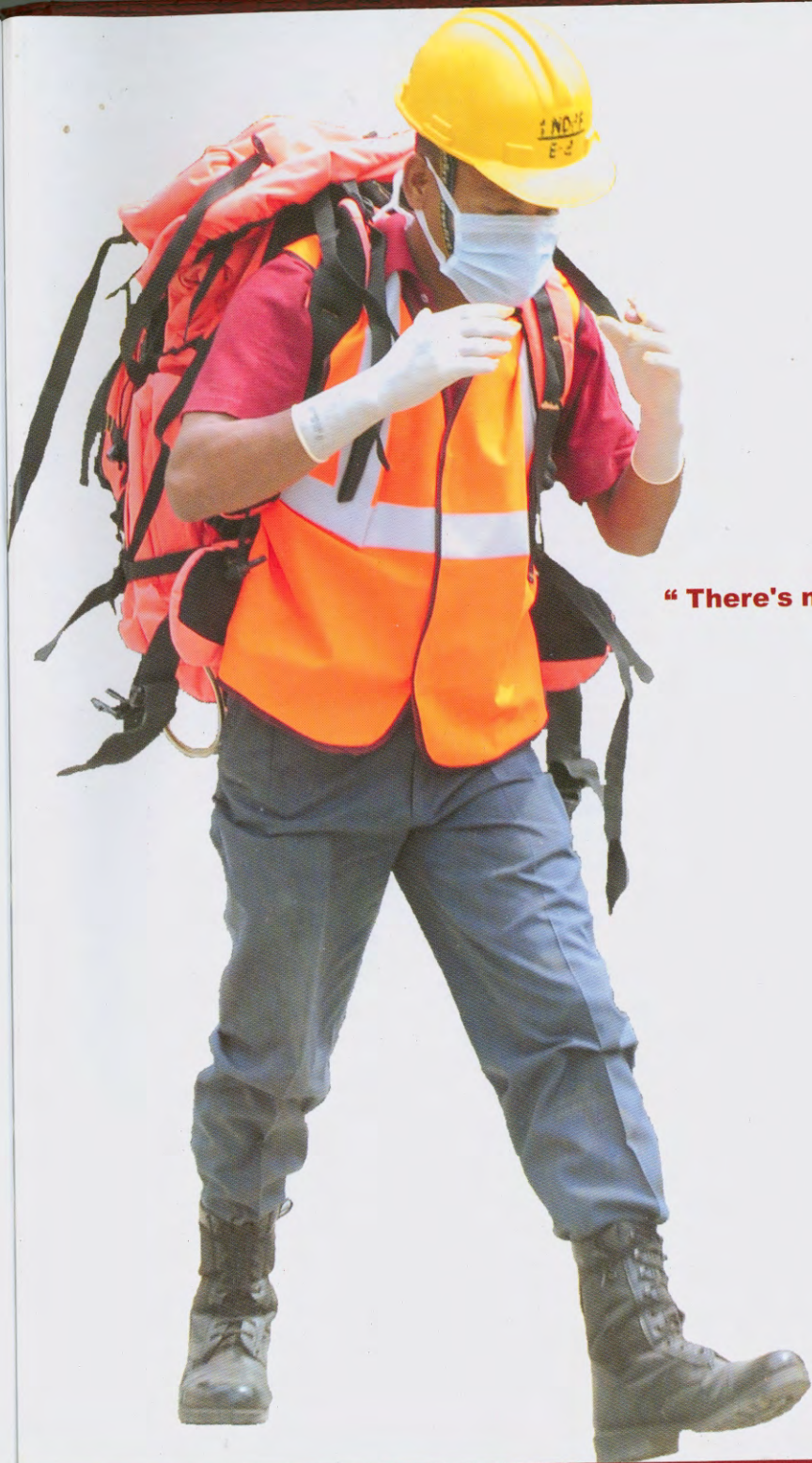
DOCUMENTATION



Assam State Disaster Management Authority

Multi - State Mega Mock Exercise

Scenerio : Earthquake



**“ There's no harm in hoping for the best as long as you're prepared for the worst.”
— Stephen King**



Assam State Disaster Management Authority (ASDMA) with the support of National Disaster Management Authority (NDMA) and District Disaster Management Authority (DDMA)s of Kamrup Metro, Jorhat and Cachar undertook a Mega Mock Drill Exercise "Earthquake Scenario: Multi - State Exercise for North East" on March 10 and 13, 2014. The entire exercise was carried out in order to test the preparedness of response activities at the event of an earthquake (simulated) of magnitude ~ 8 and thereby to identify the constraints in the process. Moreover, the exercise made an effort to integrate the principles of IRS into the Response Mechanisms.

The exercise was carried out with the support and participation of officials of line departments, NEIST, NDRF, SDRF, Civil Defence, Police, volunteers, school authorities, students and the public. The entire program received overwhelming response from the participants on all the fronts.

A documentation on the exercise is a much need, as this would allow us to peep through the entire exercise being carried out by the various emergency responders and share with you the same.

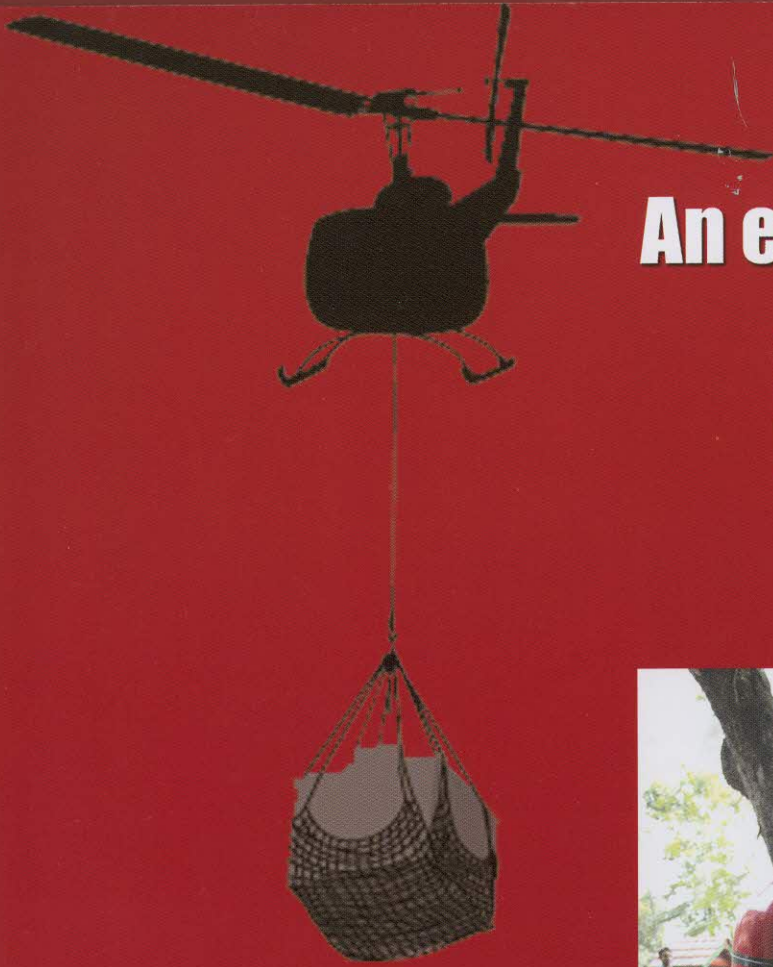
Here, ASDMA Team look forward to a continued support from all the agencies for disaster preparedness in the state including support from the community.

ASDMA Team

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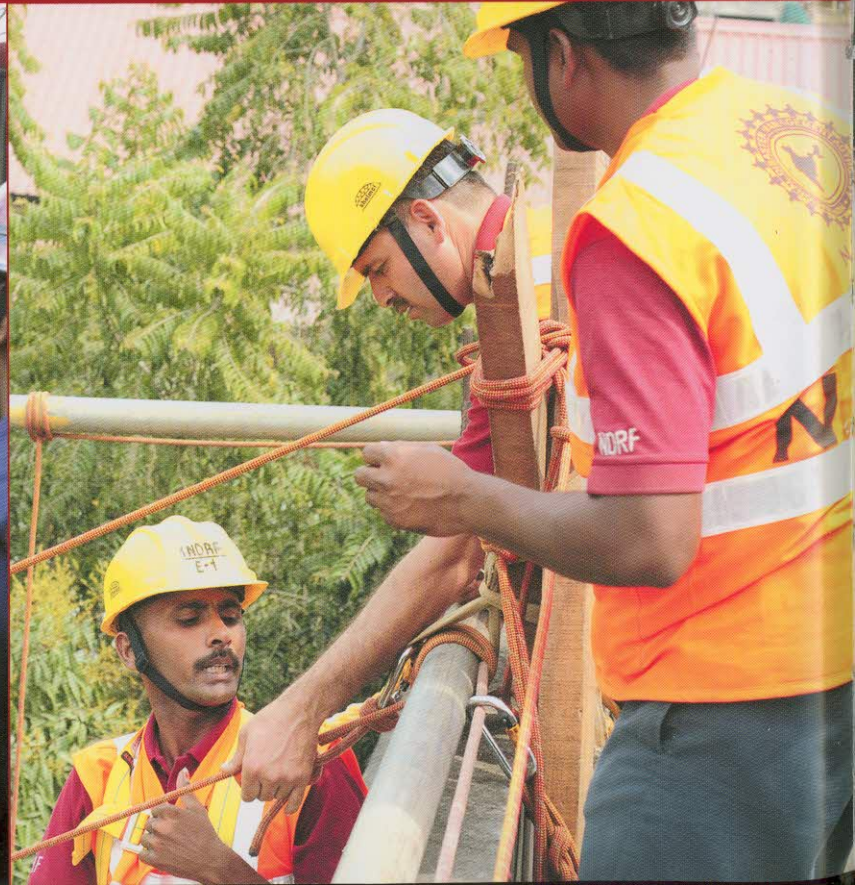
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An exercise on

DISASTER

PREPAREDNESS



t he state of Assam



Students taking part in Mock Drill

With its incredible range of cultures and landscapes Assam spreads over three major landscapes—the Brahmaputra Valley, the Barak valley and the Karbi Anglong- Dima Haso Hills. Assam shares its borders with countries like the Kingdom of Bhutan in its north and Bangladesh in south along with the states of Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Tripura, Mizoram and West Bengal. It spans around 78, 438 sq. km. and has a population of over 3,11,69, 272 (Census 2011). The mighty Brahmaputra River that has its origins in Tibet flows through the State. The Brahmaputra Valley is an alluvial plain about 724 kms in length enclosed on the north by the mighty Himalayas, south by the Garo, Khasi, Jaintia and Naga Hills. The Barak valley in southern Assam, which derives its name from the Barak river is bound by Karbi Anglong- Dima Haso Hills in north, Mizo hills to the south, Manipur to the east and Hailakandi, Karimganj & Bangladesh to the West.

Assam is a multihazard state prone to floods, earthquake, storms and landslide besides manmade disasters. It falls under seismic zone V making the entire state prone to earthquake of moderate to very high intensity. Also the state faces acute flood & erosion problem.

Assam has a history of disasters ranging from large earthquake to severe floods. This has impeded the development gains of the state by many times.

The State of Assam is situated in one of the most vulnerable seismic zone of the world i.e. zone V [high risk zone], and all the 27 districts are vulnerable either to flood, erosion, landslides, urban flood, storms and other man-made disasters.



NDRF taking part in Mock Drill



Hon'ble members of NDMA headed by Shri S. Shashidhar Reddy, Vice Chairperson, NDMA in conversation with the officials of Government of Assam outside the State EOC at the event of the Earthquake during the conduct of the Mock Drill



eed of the exercise

With the polarization of increasing population in the capital cities of the North Eastern region, there has been a tremendous change in the building typology as the traditional houses and buildings have been replaced by un-engineered concrete structures to accommodate the population. The change in the building typology taken with the high seismic vulnerability of the region presents a very damaging scenario in the event of an earthquake of high magnitude.

In an effort to provide an in-depth knowledge of the likely losses, the science of the earthquake scenarios has been developed in the recent past. The Earthquake Scenarios makes an estimate as to what would happen if any of the earthquakes of high magnitude strikes the region.

National Disaster Management Authority (NDMA) in collaboration with leading national scientific institutes and the SDMAs undertook development of such scenarios so as to examine the strength and weaknesses of the existing facilities to mitigate earthquake hazard. Such an exercise was conducted for an M~8 earthquake near Delhi in February 2012 and the repeat of the Kangra earthquake of 1905 in the western Himalaya in February 2013. For the North East region, a similar exercise was undertaken repeating the 1897 Shillong earthquake of M 8.7. The multi-state mega mock exercises for two groups of northeast states were conducted on March 10 and 13, 2014.

In the first phase, on March 10, 2014, mock drill was conducted at Guwahati and Jorhat in Assam; Arunachal Pradesh; Meghalaya and Sikkim. In the second phase on March 13, 2014, Mock drill was conducted in Cachar district of Assam, Mizoram, Tripura, Manipur and Nagaland.

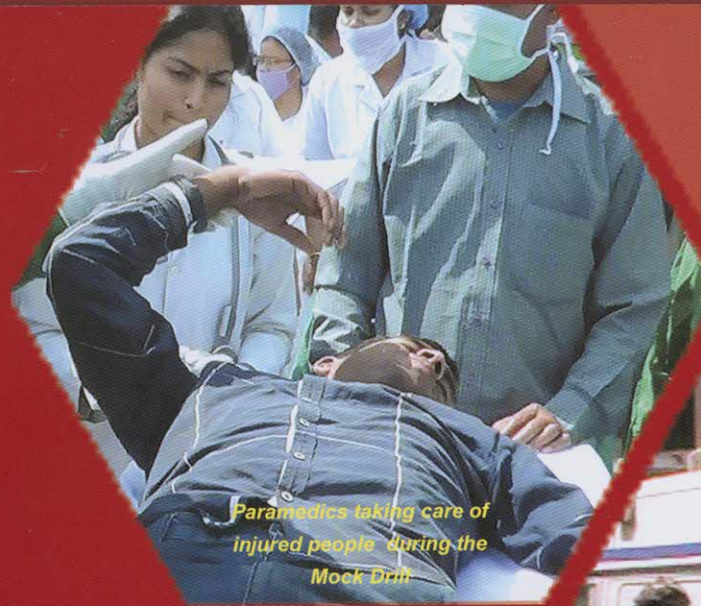


Civil Defence, National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), Fire Service and Police personnel in action during the Mega Mock Drill conducted at different sites.

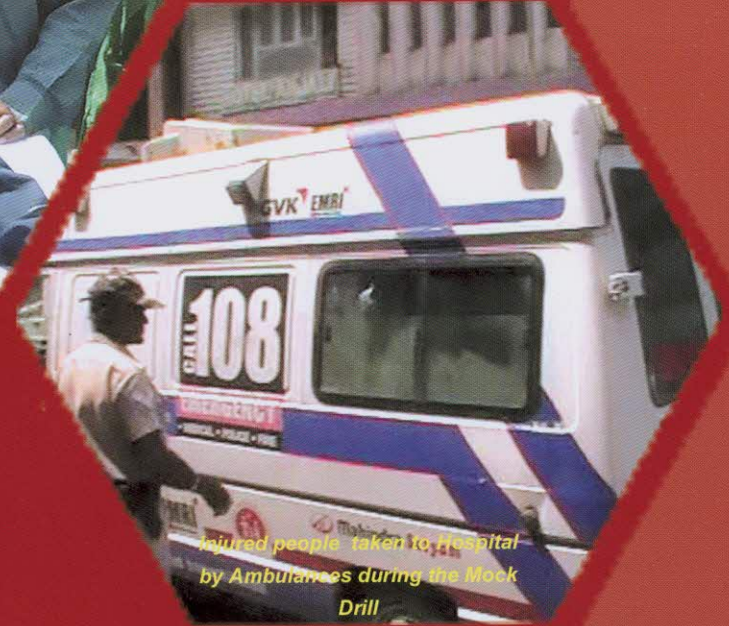
C

ollaboration

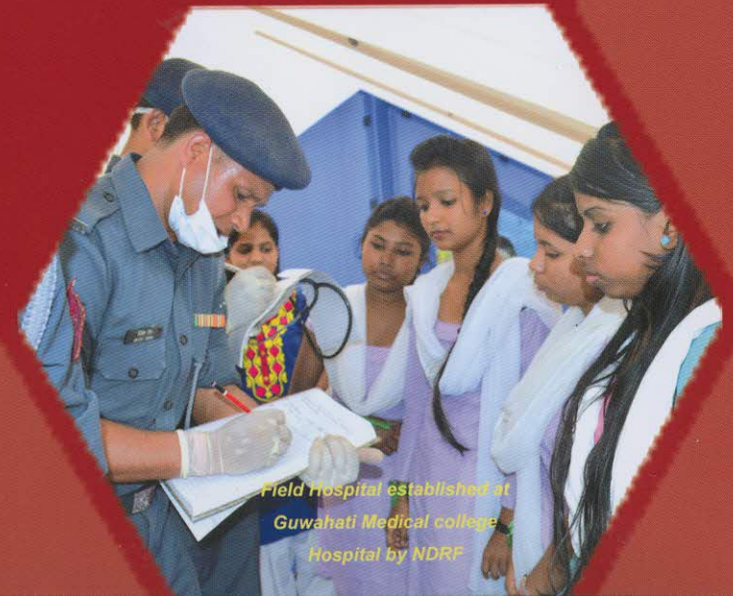
The multi-state mega mock drill was conducted by National Disaster Management Authority (NDMA) in association with the State Disaster Management Authorities of all the eight North East States. The scenario for the mega mock drill was developed by CSIR-NEIST (North Eastern Institute of Science and Technology), Jorhat. They also facilitated coordination of the project implementation with NE States. Major players of the state involved in the exercise were DDMA's of Kamrup Metropolitan, Jorhat and Cachar districts, National Disaster Response Force, State Disaster Response Force, Fire and Emergency Services, Civil Defence and Home Guards, Health services, GVK EMRI, PWD, GMC, Public Health Engineering Department, Transport Department, Information and Public relation Department, Police, Assam Police Radio Organisation and others.



Paramedics taking care of injured people during the Mock Drill



Injured people taken to Hospital by Ambulances during the Mock Drill



Field Hospital established at Guwahati Medical college Hospital by NDRF



EARTHQUAKE

O

bjectives

1. To generate awareness amongst the stakeholders about an earthquake of a high magnitude
2. To understand the direct and indirect consequences of such an earthquake
3. To facilitate preparation and updating of response plans
4. To undertake capacity building exercise for earthquake disaster management
5. To facilitate inter-departmental and inter-state co-ordination
6. To assess multi state earthquake disaster preparedness and identify gaps

P

reparatory phase

NDMA in association with ASDMA conducted the following as a part of the preparatory works:

- * **Inter State Discussion on 'Mw 8.1 Shillong 1897 Earthquake Scenario : NE Multi-State Preparedness Campaign'** was held on August 22-23, 2013 at Assam Administrative Staff College, Guwahati, Assam. State Disaster Management Authorities of all the States of the North East participated in the workshop. Shri Prithbi Majhi, Hon'ble Minister, Revenue & Disaster Management Assam was present on the occasion as the Chief Guest. Shri P.P. Verma, Chief Secretary, Government of Assam; Shri Hari Krishna Paliwal, Chief Secretary, Government of Arunachal Pradesh; Shri Subhash Das, Additional Chief Secretary to the Government of Assam; Shri V.K. Pipersenia, Additional Chief Secretary to the Government of Assam; Shri Ajay Tewari, Chief Executive Officer, ASDMA and Shri P. P Shrivastav, Hon'ble Member North Eastern Council (NEC) were present to grace the occasion. Personnels from the Fire Services, Civil Defence, Army and dignitaries from other states also graced the occasion. Distinguished Members of NDMA, Prof Harsh Gupta, Shri. J K Sinha, Shri K M Singh, Brig (Dr)B K Khanna and Shri Shivajee Singh and other senior officers from NDMA were also present to conduct the technical session.



Shri Subhash Das, Additional Chief Secretary to the Govt of Assam and Shri Ajay Tewari, CEO, ASDMA attending the Inter State Discussion



Shri Prithbi Majhi, Hon'ble Minister, Revenue & Disaster Management Assam attending Inter State Discussion as the Chief Guest.



Pic-1



Pic-2



Pic-3



Pic-4



Pic-5



Pic-6

Photographs of the different preparatory programmes conducted as a part of the Mega Mock Drill

1. Workshop on Incident Response System
2. Capacity Development Programme (CDP) for Multi State Mega Mock Exercise
3. Media sensitization workshop
4. Workshop on Incident Response System
5. Table-Top Exercise
6. Discussion with the officials of the N.Eastern states

- * **Follow-up meetings** on the preparatory works conducted at ASDMA Headquarter, Guwahati were attended by officials of ASDMA, DDMA (Kamrup Metro), NDRF, Civil Defence, Fire Service
- * **Two Capacity Development Programme (CDP)** of three-days duration were conducted in two districts viz. Kamrup Metro and Jorhat. The programme involved training on Incident Response System (IRS), Table Top Exercise(TTE) culminating into a Mock Exercise on the final day.

7. *Workshop on Inter State Discussion on the Mega Mock drill*
8. *Press Meet on the Mega Mock Drill*
9. *Media Workshop*
10. *Workshop on Inter State Discussion on the Mega Mock drill*
11. *Mega Mock drill*



Pic-7



Pic-8



Pic-9



Pic-10



Pic-11

- * **A press meet** on Mega mock exercise was held on March 9 , 2014 chaired by Shri M. Shashidhar Reddy, Vice Chairman, NDMA
- * **A five-day training on Rapid Visual Screening** was conducted from December 30- January 3, 2014. The training was attended by 66 junior engineers from all the districts of the state.
- * **Awareness generation activities** were carried out for creating a mass awareness on the programme.

AWARENESS

GENERATION



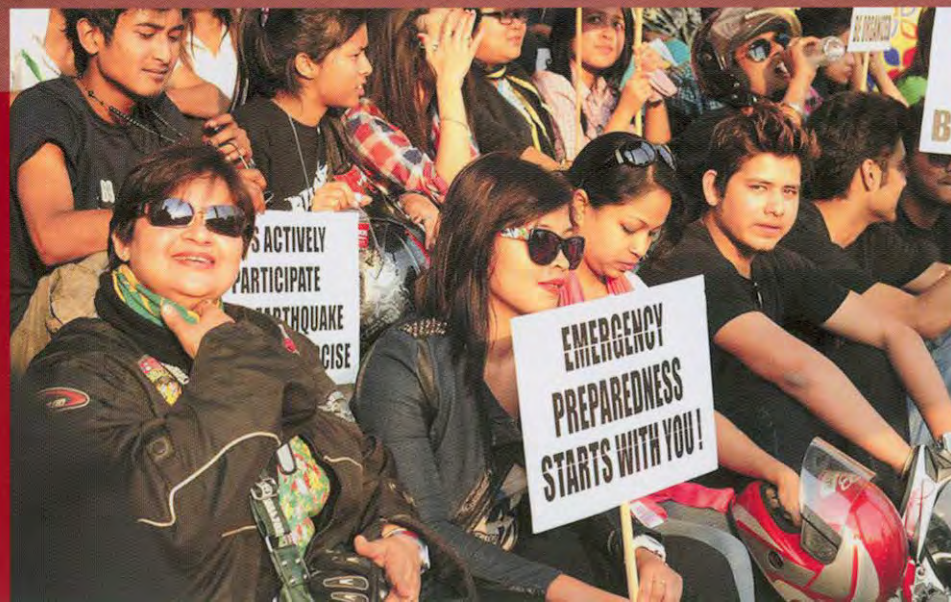
Awareness generation activities carried out as a part of the Mega Mock Drill





Awareness generation activities carried out as a part of the Mega Mock Drill







t

he exercise

Details of the Earthquake Event

Time of the Earthquake : 11.30 Hrs

Epicenter : N 25 deg 54' 56.29" , E 90 deg 38' 39.05" in Meghalaya

Focal depth : 15Km

Magnitude : 8.7 in Richter scale

(Source : NEIST, Jorhat)

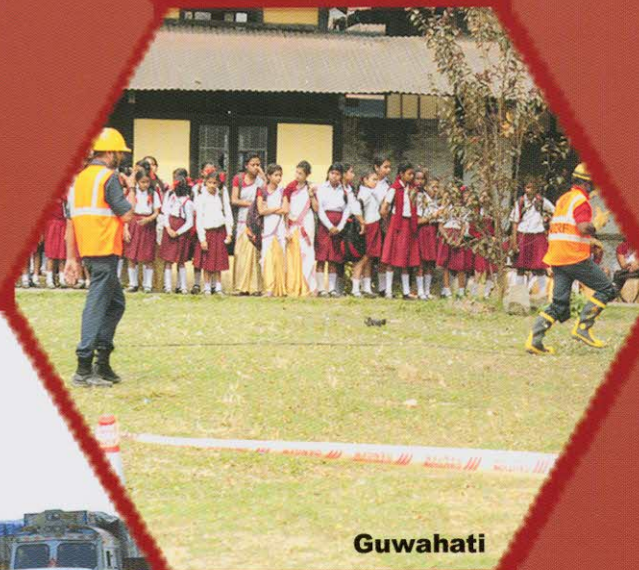
Affected Sites

Entire State has been affected but Guwahati, Jorhat and Silchar has been the most severely hit. The sites were:

in Guwahati - Bijulee Bhawan, TC Girls' High School, GMCH, Subham Apartments, Uzanbazar, Reliance Trends Mall.

in Jorhat - DC Office Jorhat, Jorhat Government boys High School, Jorhat Medical College and Hospital, Vishal Mega mart and Madhukunj Apartment

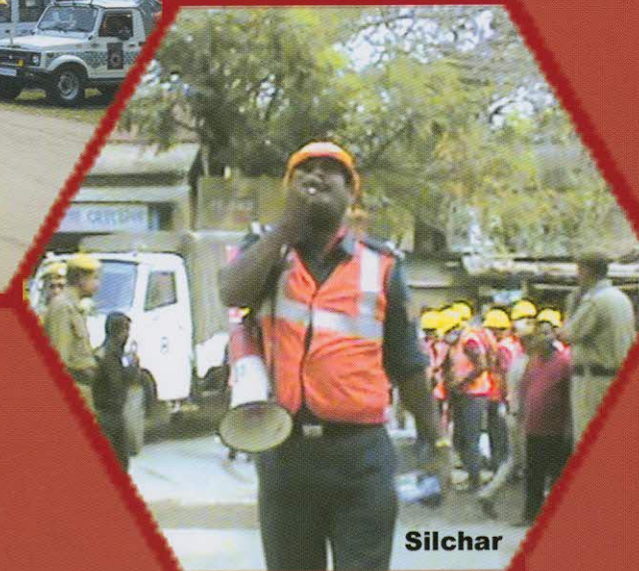
in Silchar - Valley Hospital & Research Centre, Meherpur; Gol Dighi Municipal Mall, Premtola; Sanjay Market, Rangirkhari; Office of the Joint Director of Agriculture, Sadar Ghat Road; and Don Bosco School, Ram Nagar.



Guwahati



Jorhat



Silchar

t

he siren



Blowing of the Siren during the Mock Drill

earthquake

..... *the evacuation*

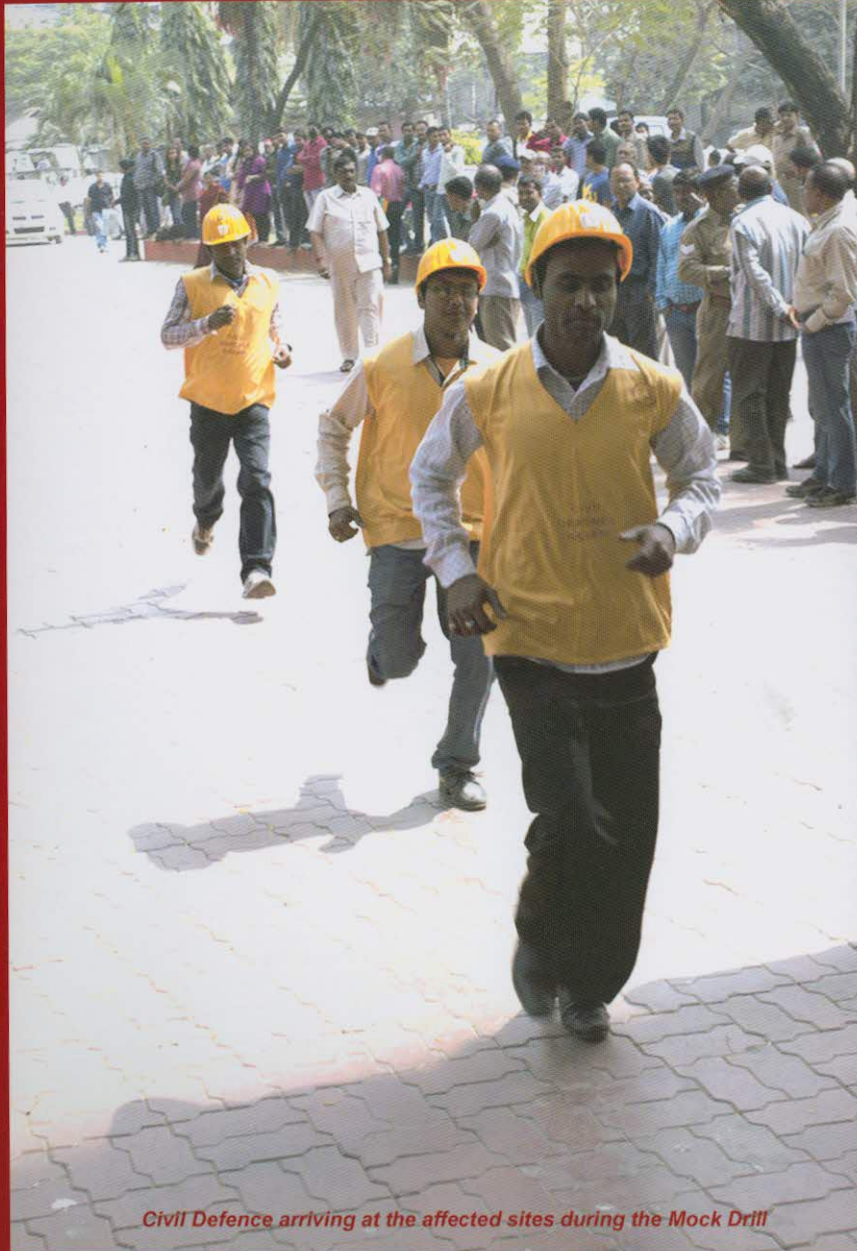


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irst responders

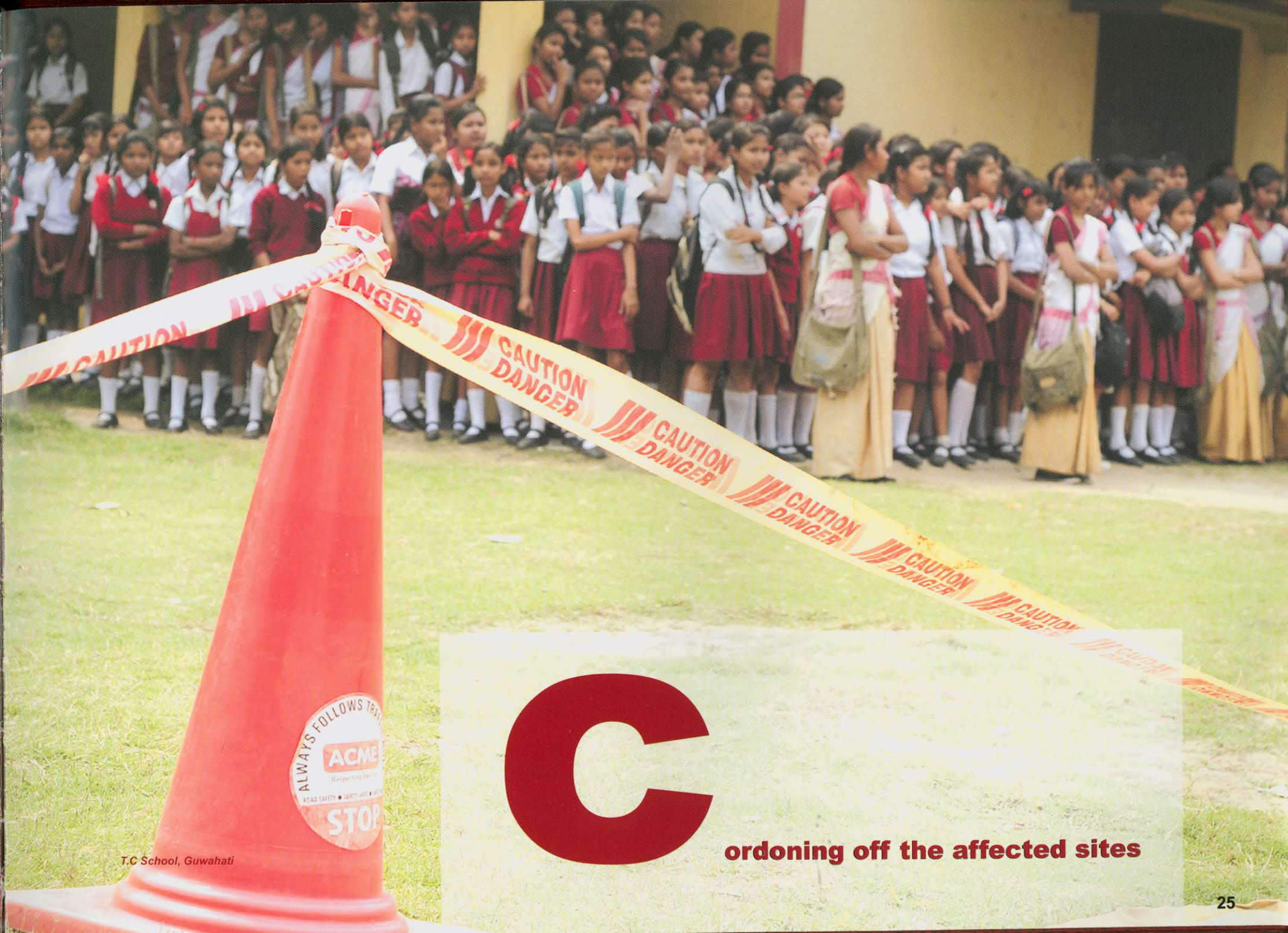
Civil Defence arriving at the affected sites





Civil Defence arriving at the affected sites during the Mock Drill





ALWAYS FOLLOWS TRAFFIC
ACME
Respecting the traffic
ROAD SAFETY • SAFETY WORK • SAFETY
STOP

C

Ordering off the affected sites

T.C School, Guwahati



Bijulee Bhawan, Guwahati



08/04/2014

T. C. School, Guwahati



Reliance Trends, Guwahati

S

taging area



Staging Area at Guwahati

Staging Area

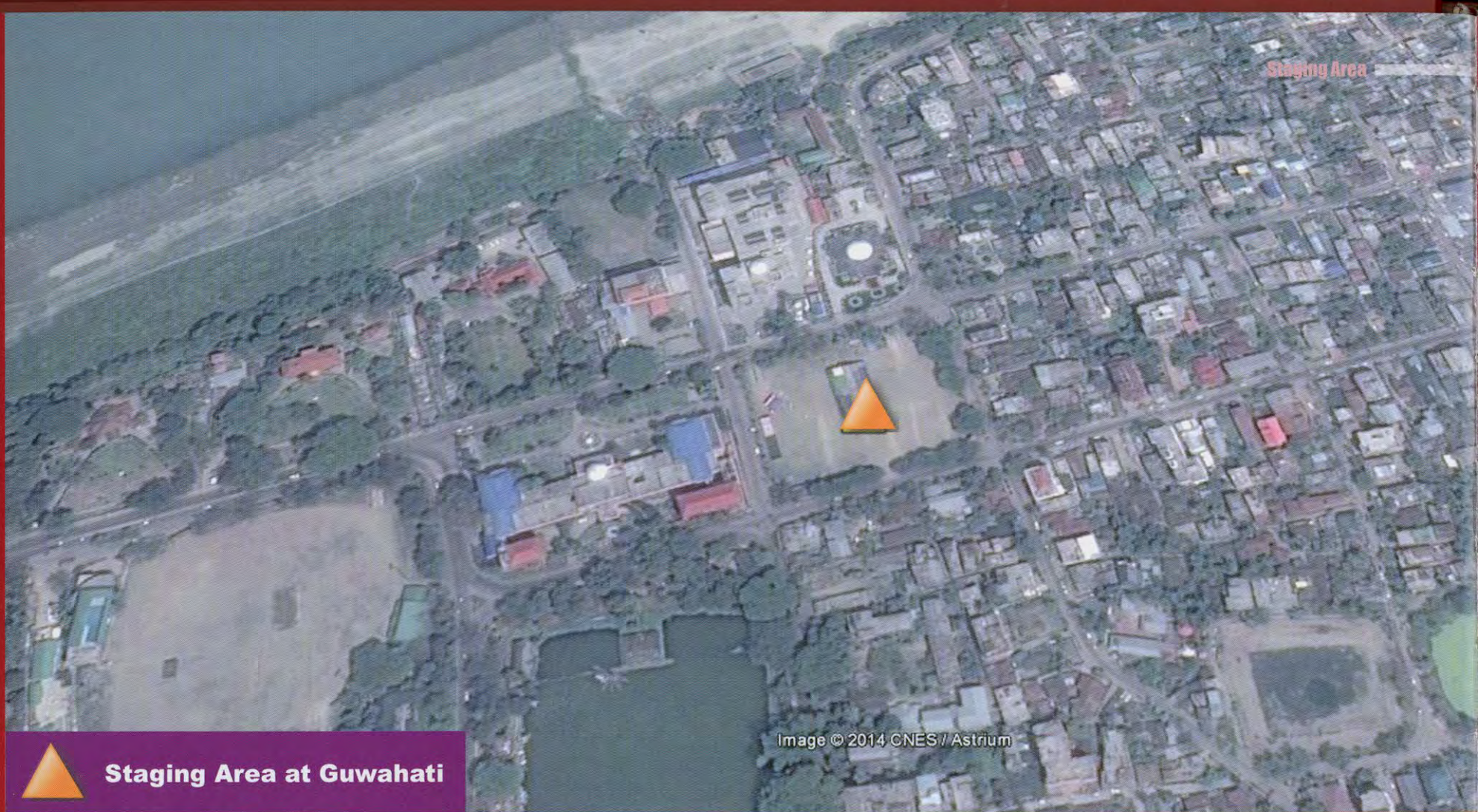
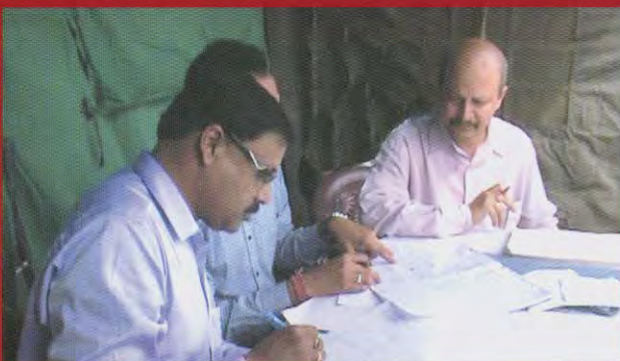


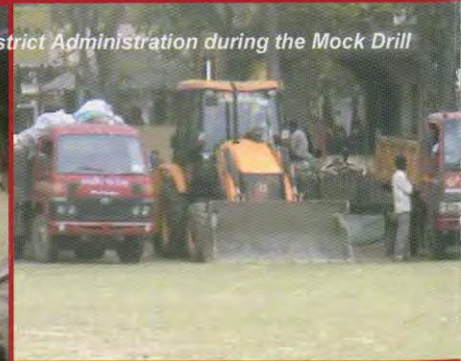
Image © 2014 CNES / Astrium



Staging Area at Guwahati



Staging area manned by officials from District Administration during the Mock Drill



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he casualties



EARTHQUAKE!

S

etting up of the casualty loading point





S

earch and rescue operations





Search and Rescue Operations by Civil Defence, SDRF and NDRF during the Mock Drill

Search and rescue operations

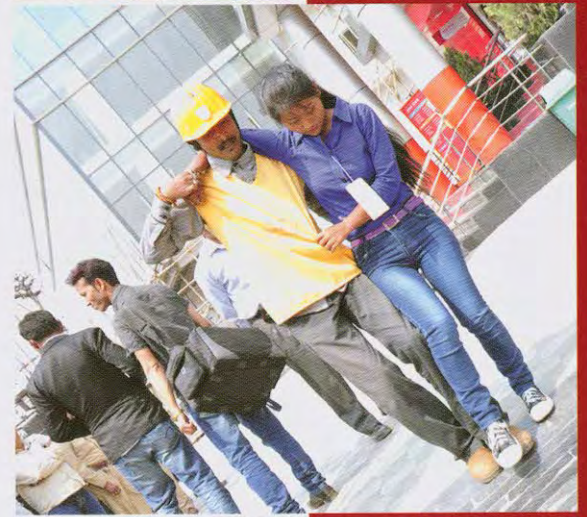




*NDRF announcing / alerting people trapped inside the shopping mall
with mega phone.*



Search and rescue operations

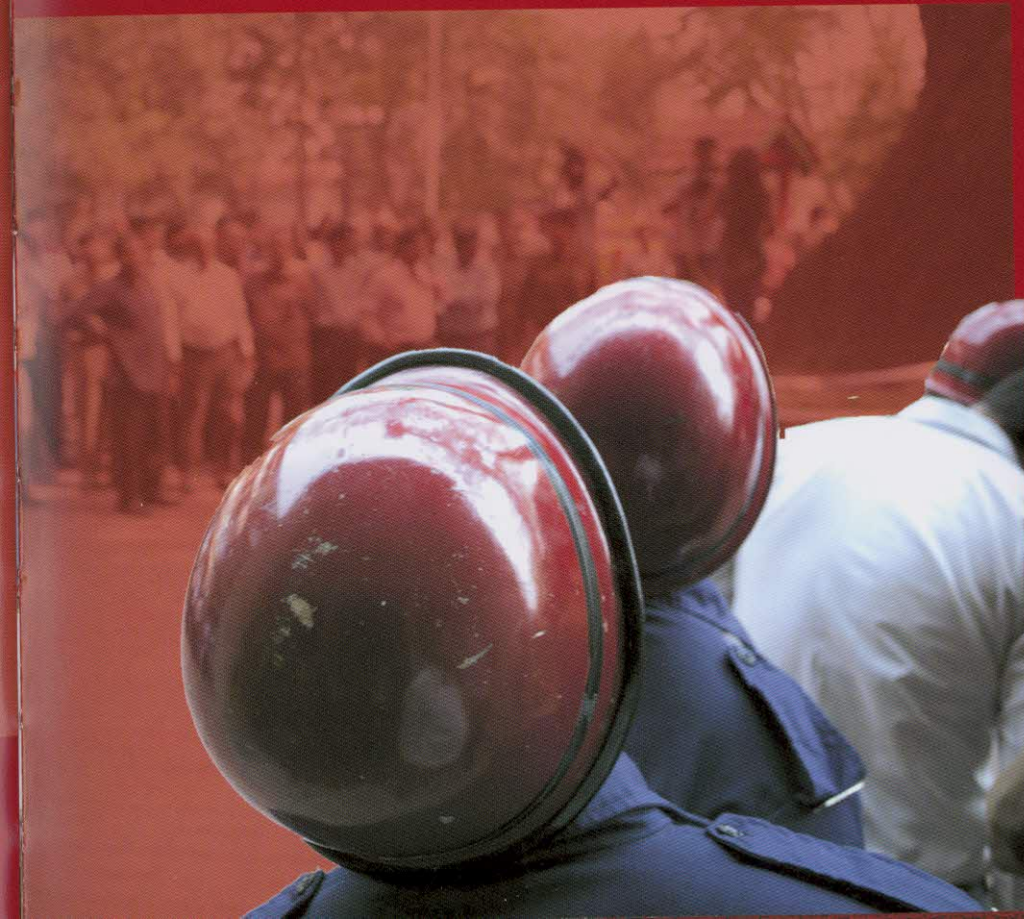




Search and Rescue Operations by Civil Defence and SDRF during the Mock Drill



Search and rescue operation by SDRF





Police arriving at the affected sites and taking stock of the situation from Civil Defence

t

riage and first aid



Injured ones were triaged with red, yellow, green, white and black tags.

- * **Red tags** (immediate) are used to label those who cannot survive without immediate treatment but who have a chance of survival
- * **Yellow tags** (observation) for those who require observation (and possible later re-triage). Their condition is stable for the moment and they are not in immediate danger of death. These victims will still need hospital care and would be treated immediately under normal circumstances
- * **Green tags** (wait) are reserved for the “walking wounded” who will need medical care at some point, after more critical injuries have been treated.
- * **White tags** (dismiss) are given to those with minor injuries for whom a doctor’s care is not required.
- * **Black tags** (expectant) are used for the deceased and for those whose injuries are so extensive that they will not be able to survive given the care that is available.



Civil Defence and NDRF carrying out triage and giving First Aid during the Mock Drill



Injured ones were given First Aid by the Paramedics, NDRF and Civil Defence during the Mock Drill

t

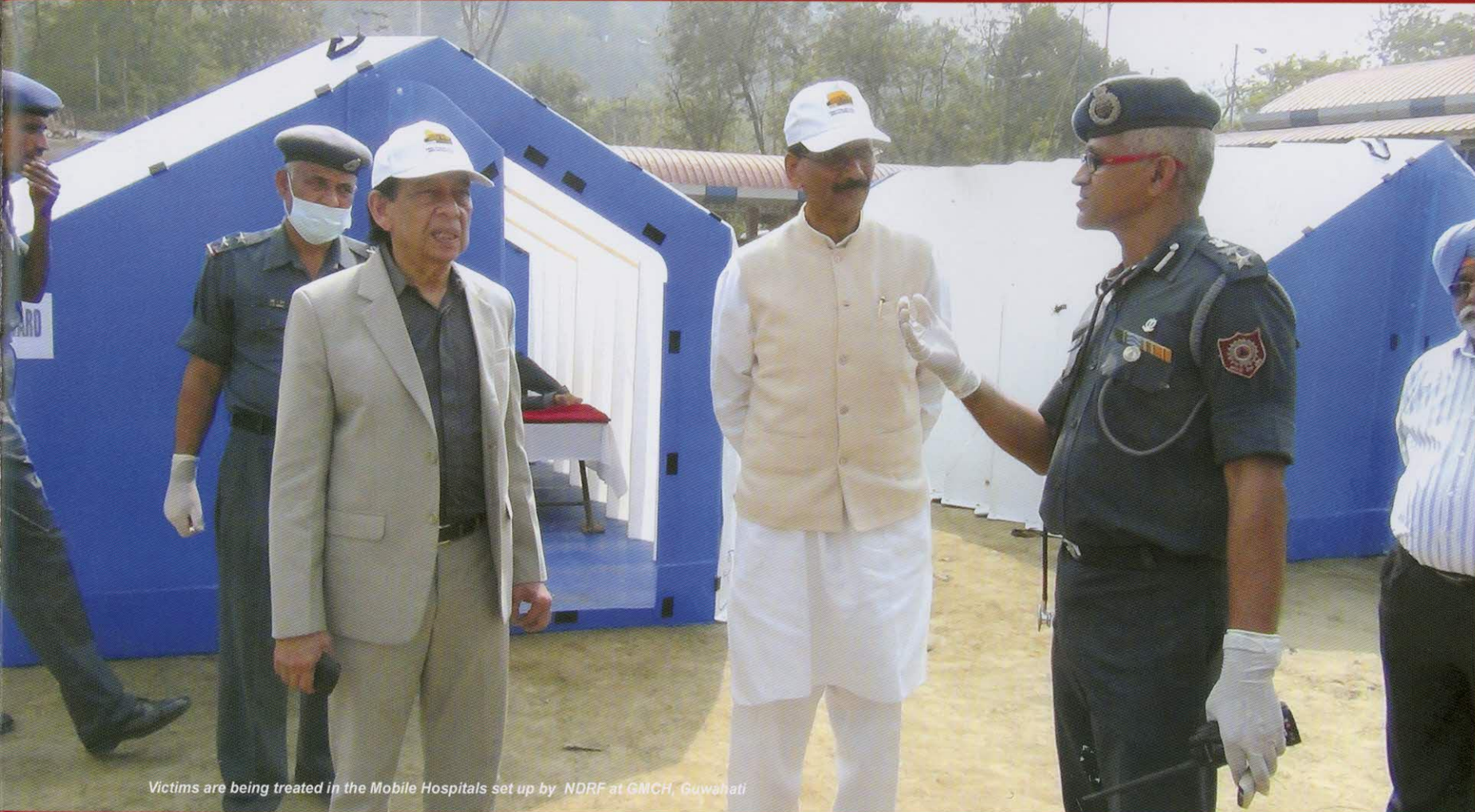
ransporting to hospital



Paramedics, Civil Defence and SDRF personnels carrying the injured persons to the Ambulances for transporting them to Hospitals

t

reatment at the hospital



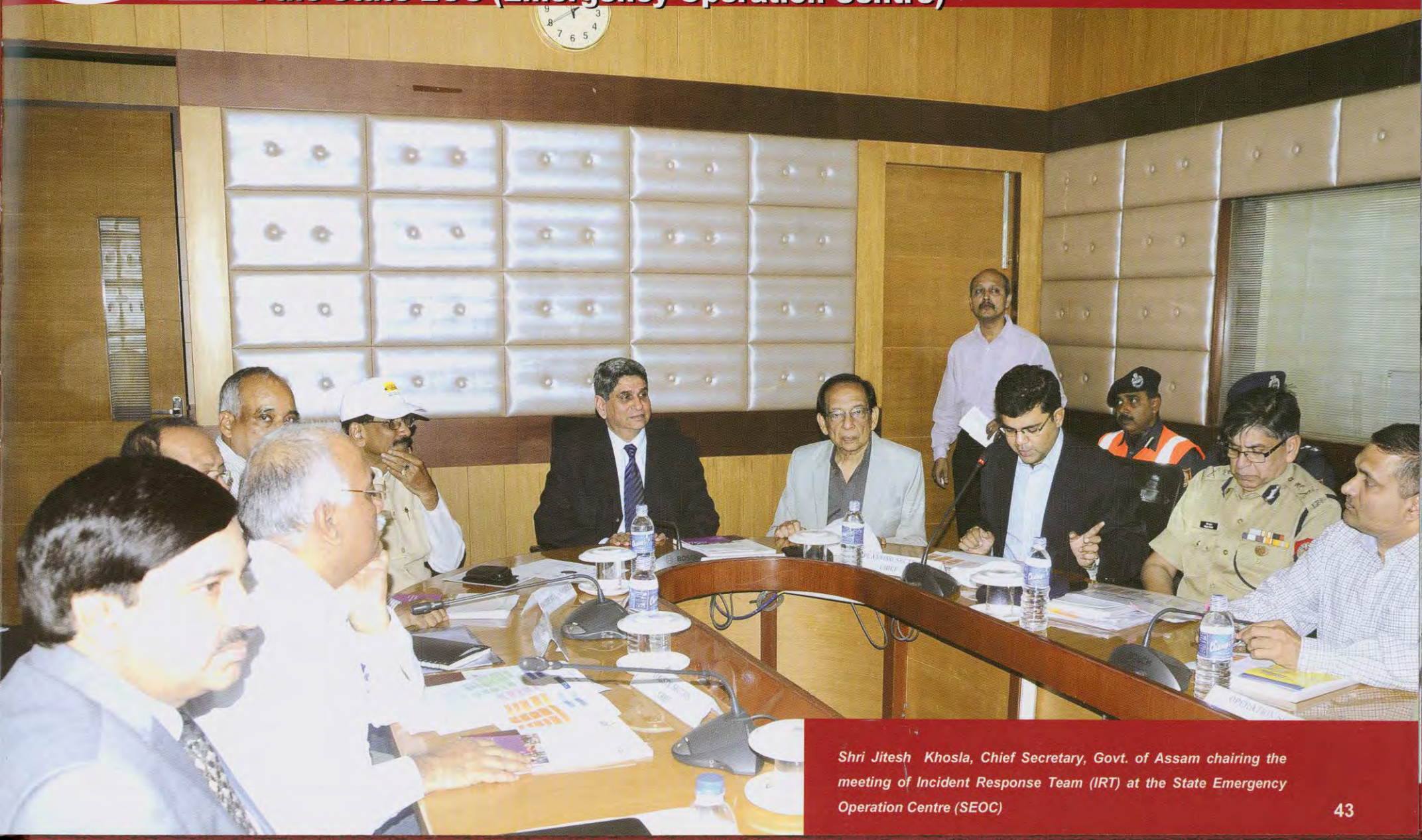
Victims are being treated in the Mobile Hospitals set up by NDRF at GMCH, Guwahati



Injured persons being treated by the Paramedics and Doctors at the hospitals



t the State EOC (Emergency Operation Centre)



Shri Jitesh Khosla, Chief Secretary, Govt. of Assam chairing the meeting of Incident Response Team (IRT) at the State Emergency Operation Centre (SEOC)



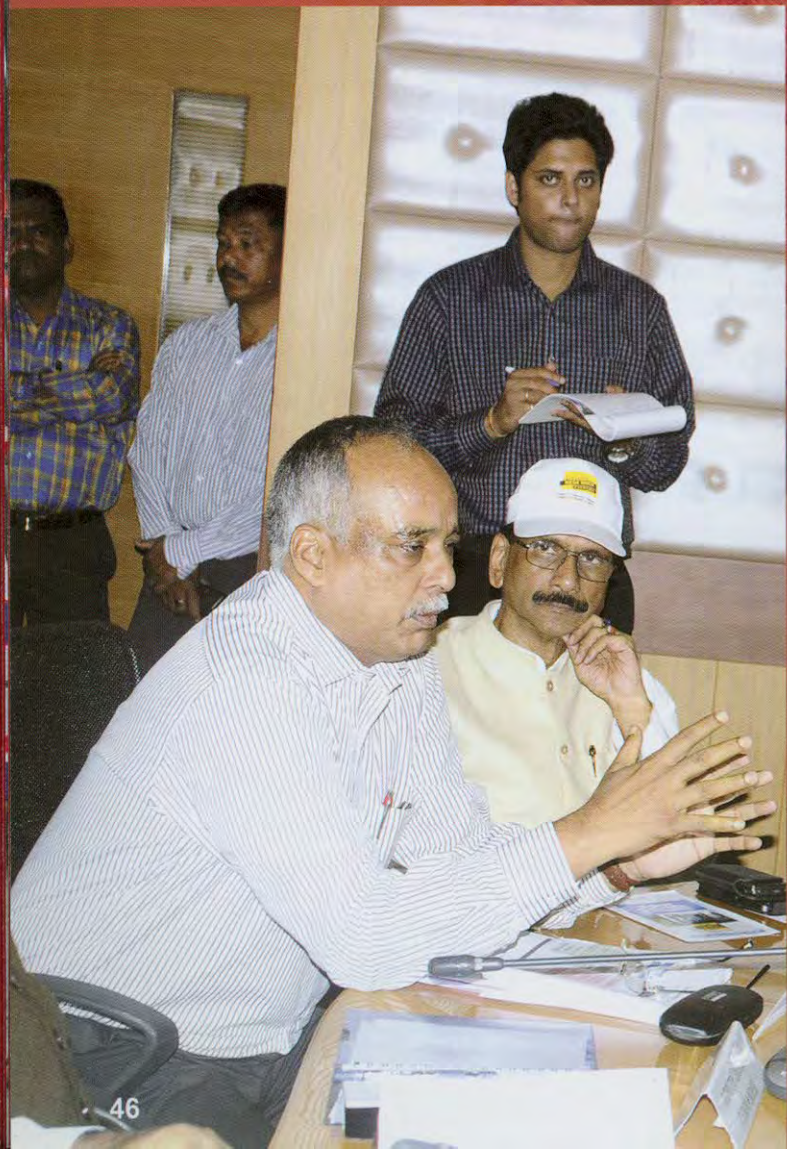
*Communications being carried out from the State Emergency
Operation centre during the Mock Drill*



Members of Incident Response Team (IRT) arriving at the at the State Emergency Operation Centre (SEOC) at the event of the major earthquake



Communication Unit receiving messages at the NDRF Coordinating Centre that was set up adjacent to the SEOC

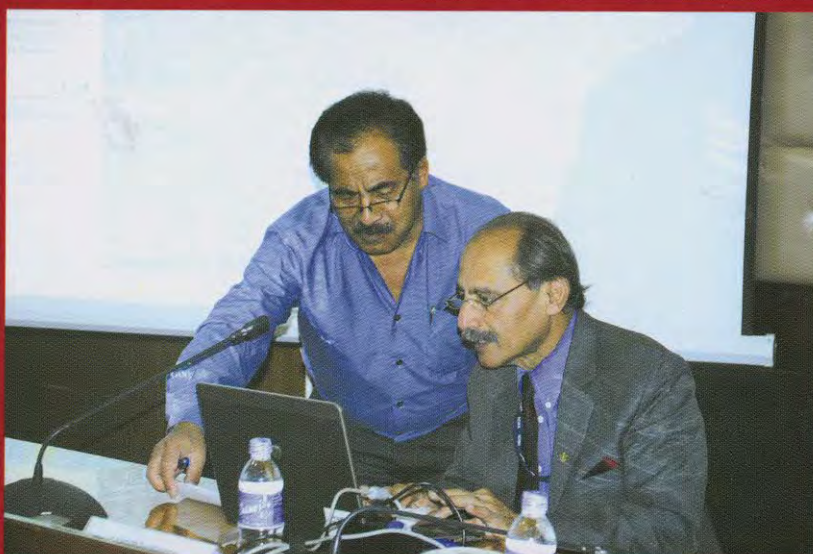


Shri Subhas Ch. Das, Addl. Chief Secretary, Govt. (left) of Assam with Shri S. Sashidhar Reddy, Vice-Chairman, NDMA (right) at the State Emergency Operation Centre during the Mock Drill



Shri Ajay Terawi, CEO, ASDMA (Picture-1) with an official of ASDMA and Shri Jitesh Khosla, Chief Secretary to the Govt. of Assam (Picture-2) with Shri Harsh Gupta, Hon'ble Member, NDMA at the State Emergency Operation Centre (SEOC)





*Different officials as
Emergency Support
Functionaries in the
State Emergency
Operation Centre
(SEOC)*



Officials at the State Emergency Operation Centre (SEOC)

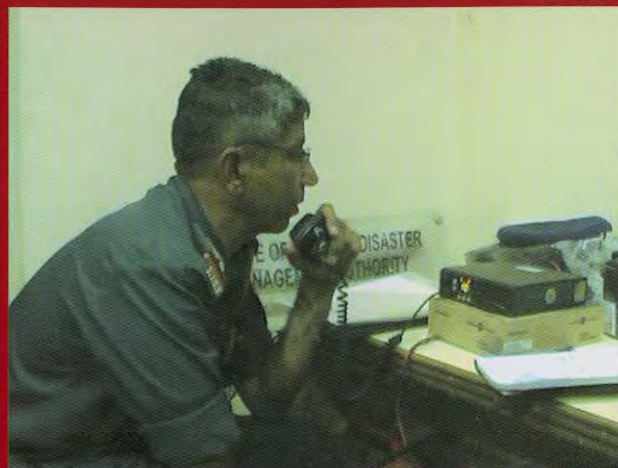
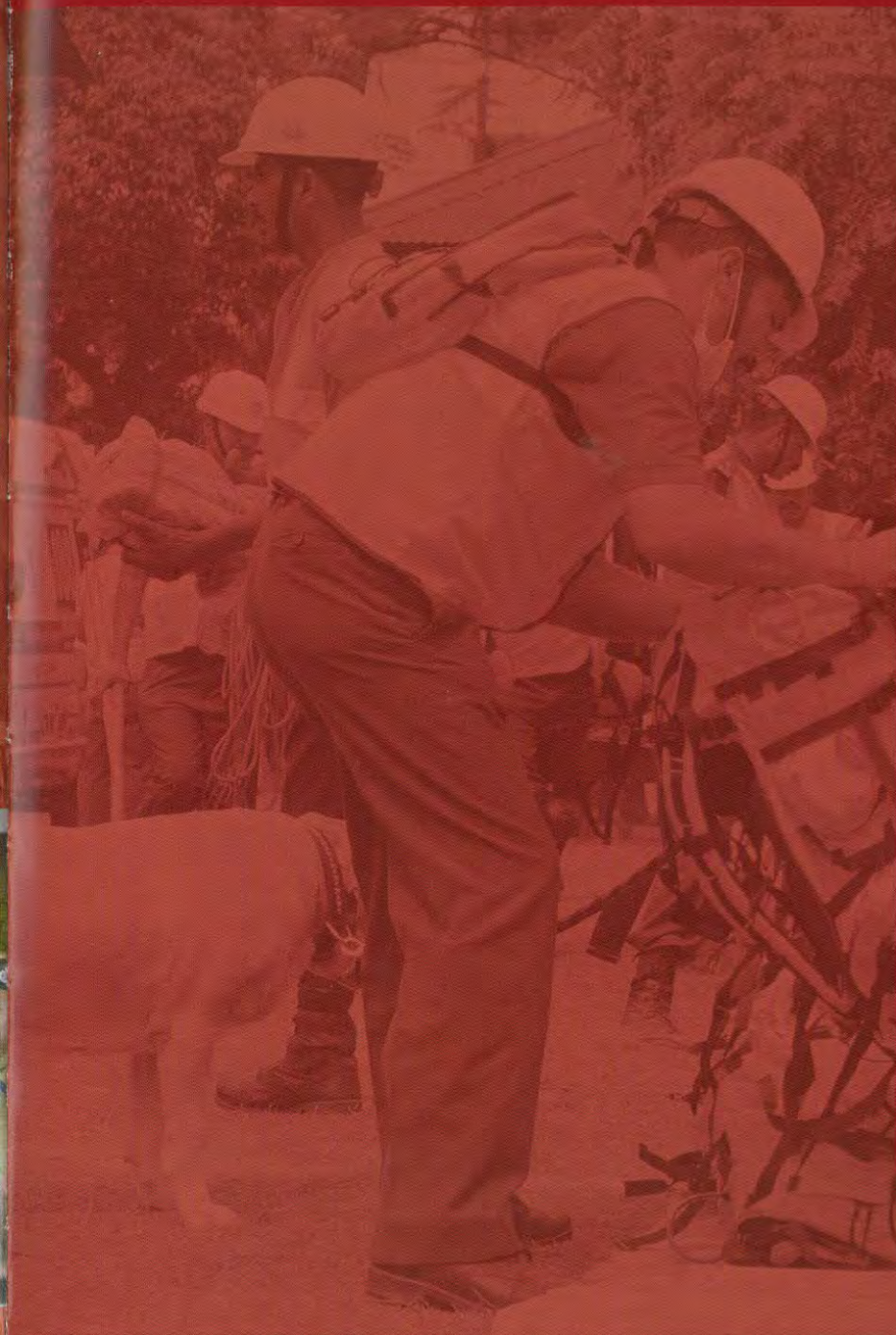
a

at the District EOC (Emergency Operation Centre)



Officials at the District Emergency Operation Centre (DEOC), J





Officials at the District Emergency Operation Centre (DEOC), Kamrup Metro





Officials at the District Emergency Operation Centre (DEOC), Sirsi





Lessons learnt

- o IRS Guidelines to be incorporated in the Response Plan
- o Strengthening of SEOC and DEOC with failsafe communication
- o Resource inventories to be completed
- o State Disaster Response Force needs to be strengthened
- o Police personnel required to be trained in DM
- o Civil Defence/Home guards need more training
- o Medical resources and medical teams need to be up dated
- o Community Participation to be increased and awareness generated
- o More interaction needed with local Army
- o Hospitals should build their capability to operate outdoors
- o Policy for management of the dead need to be in place
- o Departments and the core DM officials are required to be trained
- o Need for regular drills and exercises
- o Need for table top exercises

দৈনিক যুগশান্তা

শৌরভের ৬৪ বছর

শিলচর, গুৱাহাটী ও ডিব্ৰুগড় থেকে একযোগে প্রকাশিত

শিলচর, গুৱাহাটী ও ডিব্ৰুগড় থেকে একযোগে প্রকাশিত



মুকিমেশ মেতা দুৰ্যোগ মোকাবিলাৰ কৌশল শেখাতে শিলচৰত প্ৰাথমিক স্তৰত কৰা হৈছে। বৃহস্পতিবাৰ, ছবি, গাৰ্গী শীৰ্ষক।

বিপর্যয় মোকাবিলাৰ কৌশল শেখাতে শিলচৰে মেগা মকড্ৰিল

গুৱাহাটী অতিবেলা, শিলচৰ। মুকিমেশ মেতা দুৰ্যোগ মোকাবিলাৰ কৌশল শেখাতে বৃহস্পতিবাৰ শিলচৰত মেগা মকড্ৰিল কৰা হৈছে। এজন হতভাগীক সন্দেহিত কৰা হৈছে। এজন হতভাগীক সন্দেহিত কৰা হৈছে। এজন হতভাগীক সন্দেহিত কৰা হৈছে।

বিপর্যয় মোকাবিলাৰ কৌশল শেখাতে শিলচৰে মেগা মকড্ৰিল

শিলচৰত মুকিমেশ মেতা দুৰ্যোগ মোকাবিলাৰ কৌশল শেখাতে বৃহস্পতিবাৰ মেগা মকড্ৰিল কৰা হৈছে। এজন হতভাগীক সন্দেহিত কৰা হৈছে। এজন হতভাগীক সন্দেহিত কৰা হৈছে।

The Sentinel

Mock drill held in Silchar to assess disaster preparedness



An injured person being taken to Silchar Medical College and Hospital by a stretcher. The mock drill was held as part of the mega mock drill.

SHILCHAR, March 13 - The National Disaster Management Authority (NDMA) has organised a mega mock drill in Silchar to assess disaster preparedness. The exercise was held in the presence of the district collector and other officials.

The Telegraph

First phase of exercise from today

Drill to test calamity plan

SHAKY HISTORY

Date	Quake	Magnitude
June 16, 1951	Assam	4.2
Oct 15, 1951	Assam	5.8
July 8, 1978	Assam	7.2
July 16, 1981	Assam	7.2
July 16, 1981	Assam	7.2
July 16, 1981	Assam	7.2
July 16, 1981	Assam	7.2
July 16, 1981	Assam	7.2
July 16, 1981	Assam	7.2

ASSAM GOVERNMENT TO FORM LAND POLICY INSIDE

metro

GUWAHATI WEDNESDAY 12 FEBRUARY 2014

Timely quake plan to avoid disaster

SHILCHAR, Feb 11: More than eight lakh people might be affected by a major earthquake in the region, officials of the disaster management authority said today.

IF TRAGEDY STRIKES

Town	Population	Estimated Casualties
Assam	6,00,000	40,00,000
Guwahati	80,000	4,00,000
Tezpur	60,000	4,00,000
Manipur	20,000	1,00,000
Nagaland	30,000	1,00,000
Mizoram	17,000	1,00,000
Assam	15,000	80,000
Assam	12,000	70,000

THE TIMES OF INDIA

NDMA to hold mega mock exercise raise awareness on earthquake safety

NEW DELHI, Feb 11: The National Disaster Management Authority (NDMA) has announced a mega mock exercise to raise awareness about earthquake safety. The exercise will be held in the presence of the district collector and other officials.

সতানিষ্ঠ সাংবাদিকতাত উৎসর্গিত

আমাৰ অসম

গুৱাহাটী, মেহাবতী আৰু লখিমপুৰ পৰা প্ৰকাশিত

গুৱাহাটী ০ বুধবাৰ ০ ২৯ মাৰ্চ ১৯৩৫ শক ০ ১২ ফেব্ৰুৱাৰী ২০১৪ ০ সপ্তম

বাত্মীয় দুৰ্যোগ ব্যৱস্থাপনা

প্ৰাধিকৰণৰ সাংবাদিক কৰ্মশালা

গুৱাহাটী, ১২ ফেব্ৰুৱাৰী। বাত্মীয় দুৰ্যোগ ব্যৱস্থাপনা প্ৰকল্পৰ উদ্বোধন আৰু বাত্মীয় দুৰ্যোগ ব্যৱস্থাপনা প্ৰকল্পৰ সন্মোহন অনুষ্ঠানত অংশগ্ৰহণ কৰিবলৈ গুৱাহাটী প্ৰান্তৰ ১১ জন সাংবাদিকক লৈ গুৱাহাটীত এটা কৰ্মশালা অনুষ্ঠিত হৈছে।

Quake-preparedness drill planned for NE States

GUWAHATI, Feb 11 - The National Disaster Management Authority (NDMA) is undertaking multi-state mega mock exercises, covering the eight states of the NE region, on March 10 and 13 next to assess the gap in the earthquake preparedness plans of the region.

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