

ASDMA NEWSLETTER

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Release of the ASDMA Logo



**Towards a
Disaster Resilient
Assam**



EDITOR'S NOTE

ASDMA is committed for building a safer Assam. This Commitment has been institutionalised through the LOGO which represents the philosophy and approach of ASDMA and has been released by Hon'ble Chief Minister of Assam on 18th July 2011. This issue carries a note on the ASDMA logo.

The need for Disaster Management planning based on vulnerability and risk assessment is the need of the hour. A number of technologies are available today which can be put into use in the planning process so that losses can be minimised. This issue has a dedicated article on the role played by GIS, GPS and Remote Sensing for Disaster Management.

Besides the myriad of activities from the State Head Quarter and Districts, it also highlights the steps taken by ASDMA for Earthquake preparedness. ASDMA conducted Earthquake Preparedness drills as a part of the Great Assam School Shake-Out Programme, in 810 number of schools throughout the State.

Let's unite together for Disaster Management

Wishing you a good read

Sushmita Dutta

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RELEASE OF ASDMA LOGO

Assam, as we all know, is a multi-hazard prone State, vulnerable to both natural and man made disasters. While disaster is inevitable, its losses can be minimized through mitigation and preparedness. The vision of Assam State Disaster Management Authority (ASDMA) is to build a safer and disaster resilient Assam. ASDMA believes that when the initiatives of the Government machinery works together with the efforts of the people, it is easier to cope up with any kind of disaster. The logo, which is the visual representation of the approach and philosophy of ASDMA was released by the Hon'ble Chief Minister of Assam in a ceremonial function held at the NEDFi House on 18th July 2011. The vision of Assam State Disaster Management Authority (ASDMA) is to build a safer and disaster resilient Assam. ASDMA believes that when the initiatives of the Government machinery works together with the efforts of the people, it is easier to cope up with any kind of disaster.

The Form: The Logo illustrates two hands gripped in geometric shape symbolizing the firm, committed and "GAP-FREE" co-operation between the people of Assam and ASDMA. The shape of the logo is Triangle symbolizing the emphasis given by ASDMA to the three aspects of disaster management v.i.z., Preparedness, Prevention & Mitigation and Response & Rehabilitation. Also the shape "A" stands for the word "Assam" as in ASDMA. From ancient times most of the civilization had an inclination towards certain geometric shape. The triangle is one such powerful geometric symbol. In many cultures the upward facing triangle symbolizes the sun, fire, life, divinity, ascent, wisdom, inner knowledge, equality, and sensitivity. It signifies the convergence of all points of view into a divine point or summit.



The word "Assam State Disaster Management Authority", written below the graphic in a big bold typeface signifies the unwavering strength of the initiatives and efforts undertaken by the Authority.

The Colours: The Logo is hued in Orange and Purple; with the hand illustration at the top coloured in orange while the Bottom illustration of hand is coloured in Purple. The Orange is a colour that is symbolic of Vigour and Strength. The colour Purple which is a combination of blue and red is the color of purpose. Red is a focusing, dynamic and active energy while blue is cooling, calming and expansive. Purple brings a new dynamic to the expansion of blue and the activity of red. Hence the colours in the Logo speaks of the Soul of ASDMA which embodies in itself Energy, Strength, safety, endeavour and growth to fulfill the vision of ASDMA – To create a "state prepared" and build a "safer Assam" which is reflected in the Logo. ■

The Earthquake on 18th September 2011 in Sikkim which rocked the Northern and Northeastern belt of India was an alarm for all the States which fall in high risk seismic zone to assess their preparedness for such an eventuality. A brief account of the Earthquake Preparedness measures taken up by ASDMA is given below.

Response:

- # Positioning of the National Disaster Response Force at Patgaon, Guwahati: The NDRF trained on Collapsed Structure Search & Rescue with a contingent of around 1000 force under BSF is stationed at Patgaon Guwahati. It is a fully equipped force with trained manpower including a dog squad.
- # Constitution of the State Disaster Response Force notified under Directorate of Fire Services which is being renamed as Fire & Emergency Services. Finance Deptt has already cleared the creation of the posts for SDRF. This force will be trained and equipped in the lines of NDRF
- # Districts have been instructed to constitute the Quick Response Teams with Police, Fire & Civil Defence Personnel. The process is underway.
- # The State Disaster Response & Information Centre is fully operational (Control Room) 24x7x365 with a toll free No 1070. Districts have also been requested to operationalize their DDRIC (Control Room) on the same lines with a toll free No 1077.
- # Integration of Emergency Help Line Nos for a one point access to the public. It is in the final stage of implementation and as it will be through GVK EMRI set up, Health department has now been designated as the nodal department for implementing the Project.
- # Renotification of an expanded State level Crisis Management Group as per advise of the SEC explicitly designating the place for meeting immediately in the aftermath of an emergency.



Districts have also been advised to constitute similar District level Crisis Management Groups

- # Inventory of resources available with Govt agencies of all the districts in the State is being compiled.
- # 64 narrow roads of Guwahati city has been identified by GMC and DC Kamrup Metro has been asked to submit estimate for land acquisition of the same.

Preparedness:

- # The Assam State Disaster Management Authority is in the process of preparing the Assam State Disaster Management Plan. This document which should be ready by end October 2011.
- # Hazard Risk & Vulnerability Assessment is being done for Guwahati, Silchar and Dibrugarh towns and Dhemaji district on a pilot basis. The assessment reports seek to prepare hazard maps, vulnerability and risk profiles and risk quantification and exposure data. This facilitates planning for mitigating specific hazards and help in taking appropriate decisions on a scientific basis.



ASDMA FOCUS: EARTHQUAKE PREPAREDNESS ...contd

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- # A Status Survey of Hospitals and Schools of Guwahati city is underway where all schools and hospitals are being assessed for their structural safety. This will lead to having a risk map of schools and hospitals which will help in preparing the road map for reducing the risk
 - # Guwahati Municipal Corporation conducted a Safety assessment of 21 (G+2) schools of Guwahati. The Unsafe Schools have been sent "Notices" for undertaking corrective measures.
 - # Education Department has been directed to issue necessary instructions to all schools for making their School Disaster Management Plans. They have also been requested to conduct a survey of all their school buildings for safety requirements.
 - # GDD has been requested to conduct a safety audit of high rise buildings of Guwahati and it is informed that the process of selection of an Agency is underway
 - # PWD has been asked to do a safety audit of all lifeline government buildings
 - # Hospitals have been directed to prepare Mass Casualty Plans over and above their Contingency Plans to deal with any Emergency.
 - # Guwahati Building bye-laws amended to include provisions as per BIS codes in the year 2006. A Core Committee has now been constituted for reviewing the implementation of the building bye-laws. Further as informed by GDD, they have engaged CEPT, Ahmedabad and is in the process of further revision of the same.
 - # Uniform building bye-laws for the entire State is being planned and a draft is already in place.
 - # A road map was drawn for Earthquake Risk Mitigation in the North East which suggested various measures and the same is under review for implementation. A technical committee has been constituted for the same.
 - # A number of trainings have been conducted for Engineers, doctors, paramedics etc on:
 - Earthquake Resistant Technology
 - Retrofitting techniques
 - Hospital Preparedness & Emergency Health Management
 - Mass Casualty handling
 - # Awareness Generation A massive Awareness drive on dos and don'ts on Earthquakes have been undertaken by ASDMA through advertisements in print media (Newspapers), TV (News Live & DY 365), and Radio. A media plan in this regard has also been developed so that the same can be carried out on a sustainable basis.
 - # Mock Drills: Earthquake Mock drill in 30 schools of each of the 27 districts of Assam has been conducted in the months of August and September 2011. In 2010, 200 schools were covered in this drill and ASDMA is slowly increasing it and making it a regular feature.
 - # Capacity building in the Directorate of Geology and Mining, Assam to understand local seismology and to undertake earthquake mitigation measures.
 - # A discussion has been scheduled with all TELECOM operators to devise measures for avoiding disruption of communication in times of crisis.
 - # It is proposed to sensitise the management of cinema halls, theatre groups, sports bodies and various cultural organizations to take care of disaster mitigation measures during their shows so that people assembled in closed spaces do not suffer in the event of a natural calamity during the show/event. ■

SPECIAL FEATURE: Mock drills - a crucial tool for preparedness

Mukta Ram Deka, Project Manager, Disaster Risk Reduction, ASDMA

If we can give our child only one gift, let it be "A SAFER SCHOOL".

Children are the most vulnerable group of the society and their safety has been a major concern for all policy makers. School children and school buildings have always been greatly affected by all major natural and manmade disasters worldwide.

Snapshot 1: Bhuj Earthquake: This giant earthquake killed near about thousand students, more than 31 teachers besides damaging 1,884 school buildings and 5,950 classrooms. In this killer quake more than 10,000 school buildings suffered major to minor damages and more than 36,000 rooms became unfit for holding instruction sessions.

Snapshot 2: Kumbakonam Fire Tragedy: More than 90 lives of innocent children lost in the fire tragedy of Sri Krishna Primary School in Kumbakonam in Tamil Nadu on 16th July 2004.

Snapshot 3: Kashmir Earthquake: More than 16000 school children died of 2005 Kashmir earthquake in Pakistan

Snapshot 4: Dabwali Fire: More than 440 school children died in stampede at a school function in Dhabwali in India.



There are end number of such instances across the world which signifies the vulnerability of the student/ children community to disasters. Besides there have been instances of number of casualty due to fire, road accidents, drowning food poisoning etc. all over the country.

Assam State Disaster Management Authority has therefore taken up several initiatives for ensuring the safety of the children and Safer Schools. One such significant step is the School Safety initiative undertaken by ASDMA. The objective of this initiative is to make our schools "SAFE". This intervention include activities like training and capacity building of the teachers, students, volunteers etc. introduction of Disaster Management in State Education Board Curriculum, Structural Safety Assessment of all the Government & Private school buildings, involvement of Education Department in the process of School safety Initiative in Training of Teachers, Conducting Mock Drills, Preparation of School disaster Management Plans etc.

Mock drill – Mock drill is a very important tool to check the preparedness of a system or a plan. It is primarily a simulation exercise carried out by the stakeholders / community or institutions to calibrate the response system and to check the appropriateness of the DM plan .



. It helps in keeping the stakeholders alert for a probable crisis situation. Besides a number of earthquake and fire incident mock drills carried out at various levels in the State, ASDMA is emphasising on earthquake evacuation mock drills in Schools across the State.

ASDMA, has already conducted earthquake & fire evacuation mock drills in 210 schools in the year 2010 in two days i.e. 16th & 17th August 2010 coinciding with the 60th year of the Great Assam earthquake of 1950. The initiative received tremendous response from the society. ASDMA has gone a step further in this direction and this year earthquake mock drills have been conducted in 810 schools covering 30 schools in each of the 27 districts of Assam.

Objective of the exercise:

- To generate mass awareness among the school children and the community about earthquake preparedness and measures to be

adopted.

- To facilitate implementation of disaster preparedness activities in schools by generating interest in it.

Period of observance: August & September 2011

The Drill: The drill was based on hypothetical scenario of a moderate earthquake. The Students were trained to do Drop Cover Hold steps below their study tables in their respective class rooms and after two minutes, use the designated safe route to evacuate to their designated safe and open space on hearing a bell at the specified date and time. This was followed by Head count by the class teacher / volunteer and demonstrative search & Rescue exercise followed by another bell indicating re-entry to the respective classrooms and resume classes.





The Approach:

A multi stakeholder and inclusive approach was followed which included students, community, teaching and non-teaching staff of schools, school management body, education department officials, district administration and volunteers besides media.

Step by step activities followed for the drill:-

1. District Disaster Management Authorities in consultation with the Inspector of Schools / SSA identified 30 nos of urban centric and semi urban centric most vulnerable Schools depending on the vulnerability of the school building, location, exposure to vulnerability and no of students.
2. District Disaster Management Authorities in consultation with the Inspector of Schools / SSA identified 15 nos of district level volunteers/NGOs and trained them on Search

& Rescue and First Aid through Trained Trainers / Red Cross / Civil Defence / Home Guards / Experts along with the process of carrying out earthquake mock drill .

3. The identified and trained volunteers were divided into 3 teams with 5 members in each team. Each of the 3 teams were assigned 10 nos of Schools where mock drills were conducted by them.

4. A half day sensitization programme for the Teachers, Students and non-teaching staff were carried out before the conduct of the mock drill.

The Mock drills were conducted on school to school basis with the help of trained Local Volunteers who facilitated the whole exercise. The response received has been promising and ASDMA in its endeavour to build a disaster resilient Assam will continue such exercises on regular basis. ■



Role of Remote Sensing, GIS and GPS in Disaster Management

Biren Baishya, GIS Expert, ASDMA

Natural Disasters are inevitable and Indian subcontinent is prone to all types of natural disasters. They cause huge destructions to the lives and property of people. As disasters occur suddenly therefore, timely response from a monitoring and assessment system is essential. By developing and implementing well planned mitigation strategy, economic losses and human casualties can be reduced greatly. Through utilizing minimum time available before such disasters hit, the sufferings of the people can be alleviated by a great margin. Realizing the benefits of such disaster management strategies and its cost effectiveness, such measures have become an integral part of national policies of many countries. Modern tools like Remote Sensing and GIS integrated with GPS has played an important role in disaster management strategies. Remote Sensing and GIS integrated with GPS can be a very useful tool to complement conventional methods involved in Disaster Management

Role of GIS in Disaster Management

Any disaster can be managed well through spatial planning. Disaster Management activities can be grouped into the following phases i.e Planning, Mitigation, Preparedness, Response and Recovery .GIS as a tool can help in decision making for all these phases.

Planning: GIS is useful in helping with forward planning. It facilitates this process by allowing planners and disaster managers to view the appropriate combinations of spatial data through computer generated maps.

Mitigation: The use of GIS in disaster management can help with structural and non-structural mitigation. GIS allows you to spatially represent areas at risk and the level of risk associated with a particular hazard, which can be a guide in decision making.

Remote Sensing is the process of acquiring information about various geographic and environmental information using space-borne and airborne sensors. Remote Sensors due to its synoptivity can cover large areas of the earth's surface thereby providing real time/near real time information of an event. Moreover, due to the repetivity of the satellites pre and post disaster assessments can be analysed very easily

***Geographic Information System (GIS)** is a computer based system capable of integrating, storing, editing analyzing, sharing and displaying geographically referenced information. In a more generic sense, GIS is a tool that allows users to create interactive queries, analyze the spatial information, edit data, maps and present the results of all these operations*

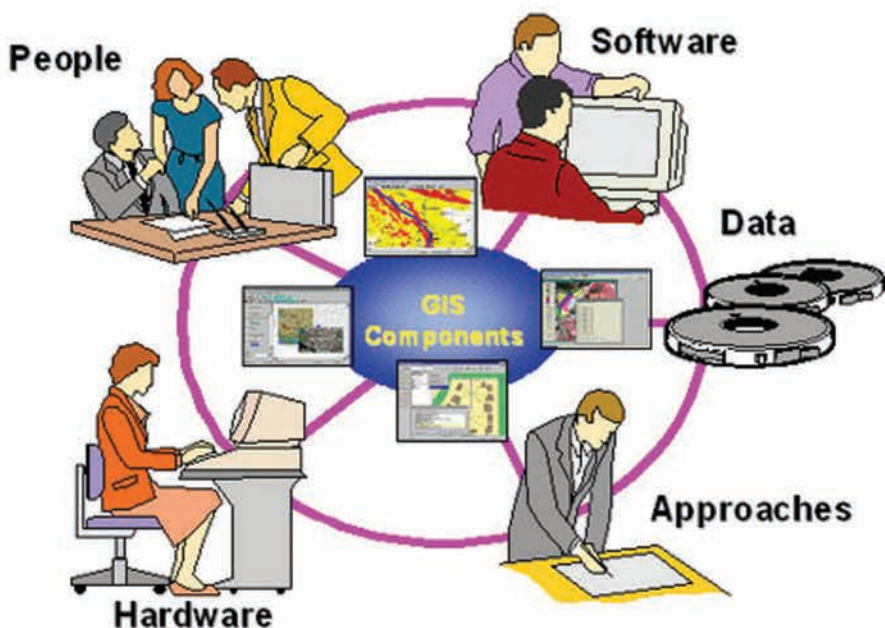
***Global Positioning System (GPS)** developed by United States Department of Defence consists of a constellation of 24 well spaced navigation satellites that orbit the earth and make it possible for people with ground receivers to pin point their exact geographic location with great accuracy.GPS systems were initially intended solely for US military purposes but later it was extended for civilian use*

It will facilitate the implementation of necessary mechanisms to lessen the impact of a potential emergency.

Preparedness: As a tool, GIS can help with the identification and location of resources and “at risk” areas. It establishes a link between partners and critical agencies, which allow disaster managers to know where relevant partner agencies are stationed. In the context of disaster management, GIS maps can provide information on the human resources present in an Emergency Operation Centre as well as on the ground personnel such as security, health providers and other key responders. This is particularly useful since the technology can help with strategic placement of emergency personnel where it matters most. GIS helps to answer the question of who is to be based where and at what phase during the emergency. It can help to determine whether or not road infrastructure and communications networks are capable of handling the effects of disaster and, if necessary, guide in the placement of resources.

Response: GIS technology can provide the user with accurate information on the exact location of an emergency situation. This would prove useful as less time is spent trying to determine where the trouble areas are. Ideally, GIS technology can help to provide quick response to an affected area once issues (such as routes to the area) are known. In the case of a chlorine explosion for example, GIS can indicate the unsafe area as well as point rescue workers to resources that are closest to the affected areas. GIS can be used as a floor guide for emergency response to point out evacuation routes, assembly points and other evacuation matters.

Recovery: Mapping and geo-spatial data will provide a comprehensive display on the level of damage or disruption that was sustained as a result of the emergency. GIS can provide a synopsis of what has been damaged, where, and the number of persons or institutions that were affected. This kind of information is quite useful to the recovery process.



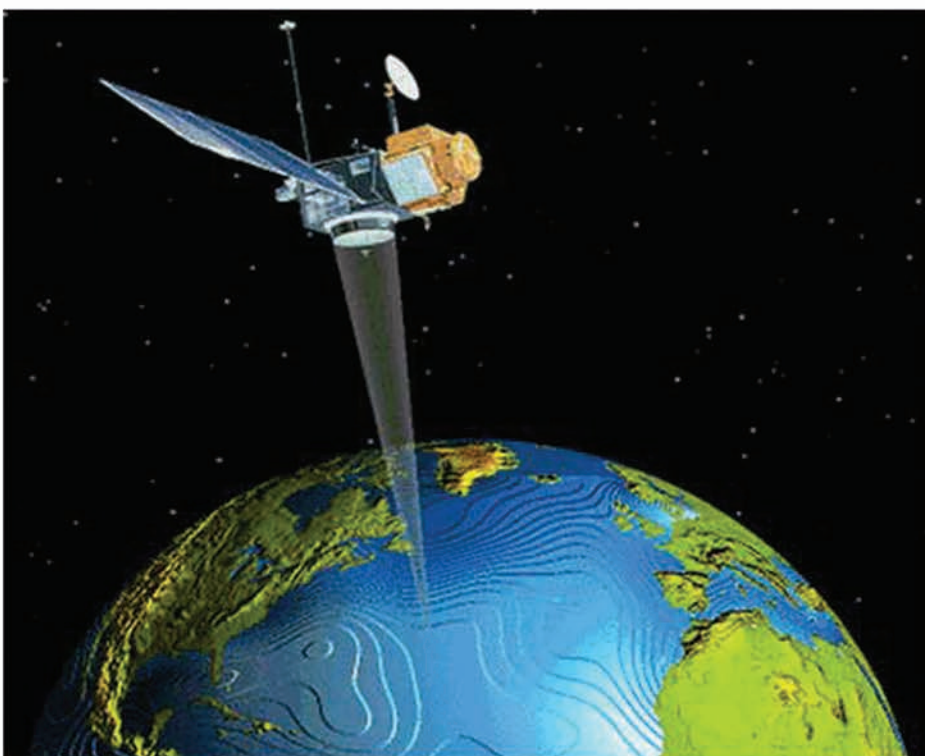
Role of Remote Sensing in Disaster Management

Remote Sensing provides a database from which the evidence left behind by disaster that have occurred before can be interpreted, and combine with the other information to arrive at hazard maps, indicating which area is potentially dangerous. Using remote sensing data such as satellite imageries and aerial photos, allows us to map the variabilities of terrain properties, such as vegetation, water, geology both in time and space. Satellite images give a synoptic overview and provide a very useful environmental information, for a wide range of scales, from entire continents to details of a few meters. Many types of disasters such as floods, droughts, cyclones, etc will have certain precursors that satellite can detect. Remote Sensing also allows monitoring the event during the time of occurrence while the forces are in full swing. The vantage position of satellite makes it ideal for us

to think of, plan for and operationally monitor the event.. Remote Sensing can also assists in damage assessment monitoring, providing a quantitative base for relief operation. After that it can be used to map the new situation and update the database used for reconstruction of an area.

Role of GPS in Disaster Management

GPS is particularly useful during disasters because it operates in any weather, anywhere and at all times. While it functions simply to give the location of the receiver, the level of precision of GPS makes it quite useful in disaster management. In many instances GPS data is integrated with GIS to overlay real-time activity during emergency. GPS find its greatest utility during the response and recovery phases; however it can also be utilized during preparedness and mitigation phases. ■





Release of the Flood Hazard Atlas

Assam is a highly flood prone area and its land surface is susceptible to flood damage and hence the Flood Hazard Atlas is necessary to help the State Government to formulate appropriate strategy for tackling and mitigating floods. The "Flood Hazard Atlas of Assam" was released by Shri Tarun Gogoi, Hon'ble Chief Minister of Assam in a ceremonial function held at the NEDFi House on 18th July 2011 organised by ASDMA. Hon'ble Minister, Revenue and Disaster Management Shri Prithvi Majhi and Hon'ble Minister Water Resources, Shri Rajiv Lochan Pegu, addressed the gathering and appreciated the role played by NRSC, Hyderabad and ASDMA which would be a great help for planning and preparedness activities.

The Flood Hazard Atlas was prepared by National Remote Sensing Center (NRSC), Hyderabad. Shri B Bhattacharjee, Hon'ble member, NDMA and Chairman of the Editorial Board briefly explained the background of the Flood Hazard Atlas for the State of Assam including the methodology followed while The Principal Secretary, Revenue and Disaster Management, Chief Executive Officer, ASDMA, Shri V Bhanumurthy, NRSC and other senior

officials were also present on the occasion preparing the same. The Principal Secretary, Revenue and Disaster Management, Chief Executive Officer, ASDMA, Shri V Bhanumurthy, NRSC and other senior officials were also present on the occasion. Shri Bhanumurthy also spoke about the web interface of the Flood Hazard Atlas of Assam.

Release of ASDMA Newsletter

Another significant feature of the event was the release of the Inaugural Issue of the Newsletter of ASDMA by the Hon'ble Chief Minister of Assam. The Newsletter is a quarterly publication covering activities of ASDMA in the State and in the Districts.

5th Meeting of the State Executive Committee

The 5th Meeting of the State Executive Committee was held on 13th September 2011. The Meeting was Chaired by the Chief Secretary, Assam. Besides reviewing the actions taken on the decisions of the previous State Executive Committee Meetings, it also gave directions to the different Department on the pending issues. In the meeting, the SEC requested the Home Department to accelerate the process for raising the battalions of SDRF and asked the Health Department to expedite the operationalization of Emergency Help Line. SEC also directed the Crisis Management Group should be renotified to include a wider group as well as a designated meeting place in case of any event.

Flood Review meeting

As a regular feature during the flood season, Flood review meetings were held every Monday to take stock of the week that preceded and the rainfall forecast for the coming week. Situational review was also undertaken of the flood affected districts and directions were issued for alleviating the problem. Thirteen numbers of flood review meetings were organised in the third quarter (July 2011 to September 2011) by ASDMA to discuss the flood scenario of the State and to adopt strategies to mitigate losses. One of the major highlight of these meeting was the constitution of a committee for Coordination of bathymetric studies in major rivers of Assam. The first meeting of this committee was held on 15th August in which IIT, Guwahati was requested to prepare and submit a proposal on the same.



Meeting on Data Requirement (Spatial and Non Spatial) from different organisations of Assam

ASDMA is in the process of developing a GIS database on utilities and infrastructure that will help the Authority in decision support for planning and response. Hence ASDMA organised a meeting on 11th July, 2011 on Data Requirement (Spatial and Non Spatial) from different organisations

of Assam for developing a Disaster Management Information System. The purpose of the meeting was to find out the availability of data and to avoid duplication as different organisations may have their own database. A number of Departments as well as representatives from Telecom Operators, Oil Refineries, Airport Authority of India, UDD/GDD etc, attended the meeting and were asked to submit both spatial and non spatial data of their key installations, life line facilities and critical infrastructures.

Coordination Meeting on Response

A Coordination Meeting on Response with Army, Air Force, Para Military Forces and telecom Operators was convened by ASDMA on 16th August 2011 under the Chairmanship of the Chief Secretary, Government of Assam. The Meeting highlighted the challenges faced for coordinated response in the times of crisis. All the agencies present in meeting were requested to share their SOPs regarding the procedures to be followed for seeking assistance.

Training of Civil Defence Volunteers

Volunteers play an important role in Disaster Management. Hence, to build a cadre of trained volunteers on Search and Rescue and First Aid, a training of the Civil Defence Volunteers was organised from 1st September 2011 to 12th September 2011 at Central Training Institute (CTI), Panikheti. 50 (fifty) numbers of civil defence volunteers from Dhubri, Kokrajhar, Sivsagar,

Karbi Anglong, North Lakhimpur, Jorhat, Golaghat, Darrang, Bongaigaon, Goalpara, Guwahati, Tinsukia and Dibrugarh were trained in the programme. The training would help them to understand the principles of Disaster preparedness and planning and enable them to organise immediate response measures and also support local recovery operations.



Training for Doctors & Paramedics on Emergency Management & Mass Casualty handling

The Government of Assam has selected Health and Education Sectors as key sectors for "Disaster proofing". Initiatives are being taken to build up the capacity of the doctors and paramedics on Emergency Management & Mass Casualty handling. During the third quarter two such Trainings were organised by ASDMA.

One was a two day Training for Doctors on Emergency Management and a one day training for Paramedics on Mass Casualty handling was organized by ASDMA at Assam Administrative Staff College, Khanapara. 40 (Forty) numbers of



doctors & 34 Numbers of Paramedics attended the training which was conducted by the Academy of Trauma, Guwahati. The training focused on Mass Casualty Management, Emergency Management at site, Triage, Hands-on training with Manikins, Interactive sessions, etc. All the participant doctors actively participated in the hands-on exercise and expressed their readiness to join such skill enhancing training to handle health emergencies.

Another similar training for Doctors and Paramedics were again held on 16th-17th September in which 58 Doctors and 33 Paramedics were trained in the programme.

Training of Junior Engineers

In order to build the capacity of the Engineers on Earthquake Resistant Structures and Rapid Visual Screening, a training of Junior Engineers was organised at the Assam Engineering Institute, Guwahati. 51 Junior Engineers from the Panchayat & Rural Development department participated in the three day training from 21st September to 23rd September 2011. ■

Fourth Meeting of the Advisory Group on IRS

The Fourth Meeting of the Advisory Group for preparation of a Road Map for Institutionalization & Training of the Incident Response System in the State was organised by ASDMA on 16th July 2011.

Empanellment of Training Agencies

After following an elaborate process of EOIs, RFPs, Presentations etc., ASDMA empanelled three training agencies for Design & Implementation of Trainings on different aspects of Disaster Management. The Agencies are;

- Tata Institute of Social Science (TISS)
- All India Disaster Mitigation Institute
- Lord Krishna Group of Institution (LKGI)

Landslide congress

The 2nd Landslide Congress was held on 15th -16th September 2011 at Indian Institute of Entrepreneurship (IIE), Guwahati under the aegis of the North Eastern Council. Honourable Minister for Revenue and Disaster Management, Assam inauurated the Congress and announced two projects on landslide risk mitigation for the State. The Two Projects are
(i) "Landslide Hazard Zonation Mapping for the entire State"
(ii) "Landslide Risk Mitigation for Guwahati City"

Brand Building

As a first step toward brand building, ASDMA carried out a series of advertisements on the LOGO of ASDMA in print as well electronic media. This initiative helped in building the identity and image of ASDMA among its stakeholders.

Also, "Times Of India", a premier Newspaper of India, carried out a half page article on the activities, initiatives and interventions of ASDMA.

Consultation Workshop

A consultation workshop for preparation of the State Disaster Management Plan (SDMP) was organised by ASDMA on 30th September 2011. The workshop was organised to take feedback and suggestions from concerned departments on the draft outline of the SDMP prepared by the Consultancy firm, Taru Leading Edge Pvt. Ltd. engaged for the purpose. 25 State Government Departments participated in the workshop and gave their valuable inputs and concerns.



The following is a brief account of the activities carried out in the Districts by the Districts Project Officers.

- # Orientation Workshop for DDMA/Govt. Officials of Line Departments were conducted in **Nagaon, Kamrup, Baksa, Barpeta, Goalpara, Bongaigaon, Dhubri, Cachar and Lakhimpur** in the third Quarter in which **524 officials** were trained. Participation from Women Officials was also very encouraging. Over 25 Line Departments from the various districts participated in the Orientation workshop.
- # One day coordination workshop for Ex-servicemen organised on 12th August at DC's conference Hall, **Nagaon**
- # Eleven Districts are in the process of Updating their respective District Disaster Management Plan whereas other 16 Districts are in the process of preparing it which should be completed by the end of this year
- # Workshop on School Safety & Preparation School Safety Plan was conducted in **Kamrup, Nalbari, Goalpara, Dhubri, Cachar, Karimganj and Lakhimpur covering over 260 schools**. Principals and Schools Management Committees participated in the Workshop
- # Training on Earthquake Preparedness & Mitigation were organized by District Disaster Management Authority of **Kamrup, Tinsukia and Sibsagar**.

- # Training on **Rapid Visual Screening** was conducted in Nalbari in which 15 participants attended the programme.

- # District Disaster Management Authority of **Kamrup and Nalbari** organized training for Doctors on Emergency Health Management in which a total of **98 Doctors** were trained.



A specialized training of the task forces on Search & Rescue and First Aid was organised by the District Disaster Management Authority of **Kamrup Metro, Kamrup, Sonitpur, Darrang, Karimganj, Lakhimpur, Sibsagar, Jorhat and Karbi Anglong** to build up the capacity of the community. A total of **721 volunteers** were trained in the techniques of **Search & Rescue** in these Districts and **685 volunteers** were given hand-on training on **First –Aid**. Participation of Women in these training were also highly encouraging.



ASDMA conducted **Earthquake Preparedness drills** as a part of the **Great Assam School Shake-Out Programme**, reaching out to 810 number of schools throughout the State covering all the **27 Districts** (details given in earlier pages)



Evacuation drill was done at the Deputy Commissioners Office

Besides the Mock Drills conducted as a part of the Great Assam Shake Out programme, drills were also organized by in **Sonitpur, Nalbari, Barpeta and Goapara**. Departments like Fire Service, Civil Defence Volunteers, 108 Mrityunjoy, Home Guard and Police participated in the mock drill on fire preparedness in Sonitpur. Similar drill was also conducted at the DC Office in Barpeta. Again, in Barpeta, a Flood Rescue Drill was carried out with the Army personnel on river Beki. In Goalpara, an Emergency

The District Disaster Management Authority of Barpeta conducted training on Disaster Management Plan to the Volunteers of 3 Villages, namely, Kanara Gaon, 1 No. Chasra and 2No.Chasra of the Baghbar Rev.Circle, on 8th & 9th September 2011. Also another two day Training for Block level Officials on preparation of Disaster Management Plan.



Awareness Generation through hoardings on Dos & Don'ts for different disasters were carried out in **Kamrup, Sibsagar, Nalbari and Karimganj**. In **Sibsagar**, a Cycle rally was organized to motivate the community on Disaster Management Issues ■

The Recent Earthquake in Sikkim emphasizes on the significance of understanding the importance of the dynamics of this ever changing earth. Natural hazards like Earthquake will be occur always but if we are better prepared, the consequences can be handled and managed to a large extent. Being informed is of crucial importance to ensure that people take appropriate steps when living in earthquake prone areas and support policies and decisions that will save lives and property.

The Earthquake Science Explained is an exceptional booklet created by the United States Geological Survey. Compiled by Matthew A. D'Alessio, this document contains ten short articles on earthquakes designed for classroom use. The articles originally appeared in the San Francisco Chronicle, and they include such titles as "Find the Fault: Recognizing Active Faults", "Looking into the past with earthquake trenches", and "How do we make buildings and roads

safer?". Written by eminent scientists, the articles go beyond traditional textbook information to discuss state-of-the-art thinking and technology that we use today.

It is highly encouraged to explore this informative publication as well as the U.S. Geological Survey's science education Web site at <http://education.usgs.gov/>. The articles can be read, downloaded and even printed from the website. Each article contains helpful graphics, illustrations, and photographs for better understanding of the concepts. The unique part of this article is that it is not only for educationist or scientist rather it is for the understanding of common people as well.

In order to print or download or read visit <http://pubs.usgs.gov/gip/2006/21/gip-21.pdf>

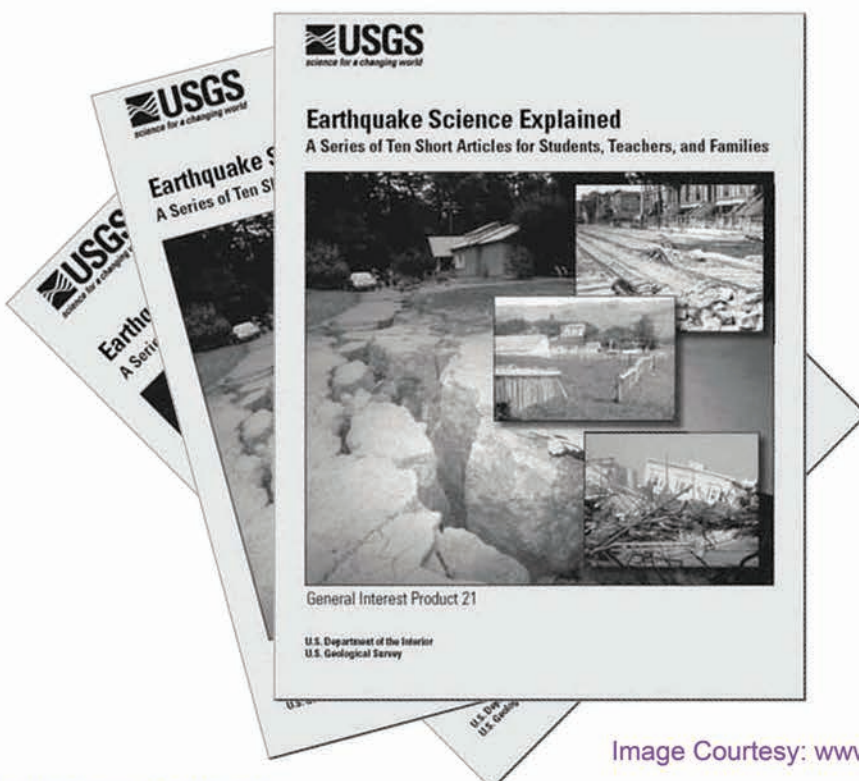
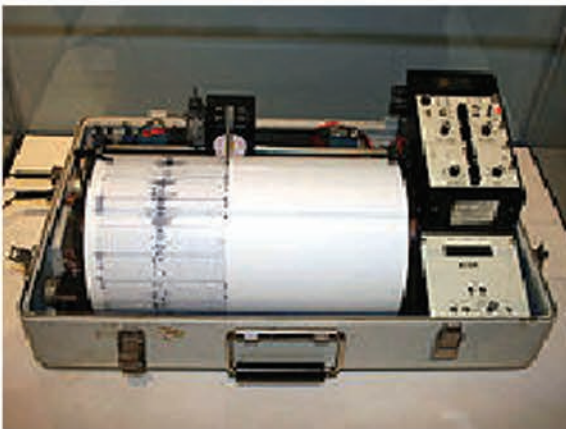


Image Courtesy: www.pubs.usgs.gov/in

LET'S LEARN: Seismometers, Seismographs and Seismoscopes

We often come across terms like Seismometers, Seismographs and Seismoscopes while discussing earthquake and more than often these terms appears to be same for many. Below these jargons are discussed in simple way for better understanding. It is a excerpts from the website Wikipedia.org

Seismometers are instruments that measure motions of the ground, including those of seismic waves generated by earthquakes, volcanic eruptions, and other seismic sources. Records of seismic waves allow seismologists to map the interior of the Earth, and locate and measure the size of these different sources. The word derives from the Greek word, "seismós", a shaking or quake, from the verb, to shake; and métron, meaning measure. Modern instruments use electronic sensors, amplifiers, and recording devices. Most are broadband covering a wide range of frequencies. Some seismometers can measure motions with frequencies from 500 Hz to 0.00118 Hz ($1/500 = 0.002$ seconds per cycle, to $1/0.00118 = 850$ seconds per cycle).



A Kinemetrics seismograph, formerly used by the United States Department of the Interior.



Seismograph

Seismograph is another Greek term from seismós and gráphō, to draw. It is often used to mean seismometer, though it is more applicable to the older instruments in which the measuring and recording of ground motion were combined than to modern systems, in which these functions are separated. Both types provide a continuous record of ground motion;

Seismoscopes, is the instrument which merely indicate that motion has occurred, perhaps with some simple measure of how large it was. The seismoscope was invented by philosopher Chang Hêng in AD 132. At its center is a jar with eight dragon heads sticking out, each with a small ball in its mouth. Below every dragon is an open-mouthed toad. When an earthquake strikes, the shaking jostles the balls, and one will fall into the mouth of one of the toads. This was used to determine the direction of shaking long before the invention of the seismograph

**To know more about Seismographs and Seismometers,
VISIT: [Wikipedia.org](https://www.wikipedia.org)**

Image Courtesy: Google Images



Training on earthquake preparedness at Nalbari

CORRESPONDENT

NALBARI, Aug 18 – The Nalbari district disaster management department has decided to hold a series of awareness meet and mock drill on the impact of earthquake and its management in around 30 schools of the district.

For that, the district disaster management department organised a three-day training on earthquake management among the volunteers at Nalbari Deputy Commissioner's conference hall from August 16 to 18. The Additional Deputy Commissioner Renu Mahanta formally inaugurated the training. In the training, Dinesh Barman and A Shyamanta took part as resource persons.

It may be mentioned here that the volunteers who completed training at the camp will hold awareness meet at 30 school from August 16 to 21 in three groups. Then the volunteers will perform mock drill from September 6 to 21 in order to create awareness among the students about the rescue operation.

Workshop on disaster management conducted

Workshop on disaster management was held at Nalbari...



The workshop was conducted by the district disaster management department...



Workshop c

CORRESPONDENT

GAURIPUR, Aug 23 – Under the aegis of the Dhubri District Disaster Management Authority, a one-day orientation workshop on disaster management was organised at the conference hall of the office of the Deputy Commissioner, Dhubri recently.

The orientation programme was attended by the heads of various departments, NGOs, civil defence personnel and the civil SDO, Bilaspur and the DIPRO, Dhubri. Monoranjan Gogoi, chief executive of the District Disaster Management Authority while explaining the importance of measures to be taken at the time of any disaster, stressed the need about the prevention of natural calamities.

In his key address, the Additional Deputy Commissioner, Gogoi appealed to the officials to organise awareness campaign among the common people so that devastation could be minimised. The programme was also attended by Project Director, DRDA, Chief Executive Officer, Zila Parishad and a few others.

Health hazard: The sale of sweets like *bundia*, *jelapi*, *khurma*, *batasha* etc., in the open space without having any cover in the markets of Dhubri, Gauripur, Alamganj, Balajan, Golakganj, Paglahat, Agomani and Halakura has caused great concern among the society.

Various types of insects; seen flying over the uncoated sweets kept for sale creating serious health hazard. Specially the children of low poverty line are seen chasing these sweets without having any knowledge about their health and as a result large number of children are suffering from various stomach ailments.

People seldom notice if presence of the food inspectors to prevent such open sale. A child specialist of the district told this correspondent that ten to twenty per cent children have been suffering from stomach pain due to constant use of these unusable sweets sold in open space.

Workshop on disaster mitigation was held at Guwahati...

Workshop on disaster mitigation was held at Guwahati...



Workshop on disaster management held at Bilaspur

Workshop on disaster management was held at Bilaspur...



The workshop was conducted by the district disaster management department...

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