

# Earthquake Safety



NATIONAL SOCIETY FOR EARTHQUAKE TECHNOLOGY-NEPAL

भूकम्प प्रविधि  
राष्ट्रिय समाज-नेपाल

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## Earthquake Safety Day 2010

The 12<sup>th</sup> edition celebrated amid series of gala events nationwide



Rt. Honorable Prime Minister, Honorable Home Minister & distinguished personalities at the National Meeting

### 12th ESD National Meeting

On 16th January 2010, Rt. Honorable Prime Minister Mr. Madhav Kumar Nepal inaugurated National Meeting of 12<sup>th</sup> Earthquake Safety Day 2010 amongst the large public gathering at Lalit Mandap, Jawalakhel. In his noteworthy address, Prime Minister Mr. Nepal stressed the need of and asserted the commitments from the side of Nepal Government to enhancing institutional capacities, strengthening relevant policy instruments and promoting collaborative efforts to achieve the desired level of safety. Prime Minister Nepal highlighted the vulnerabilities of Nepal to disaster and noted the recent quake in Haiti. On the occasion, Prime Minister also franked the Commemorative Envelope to mark the 12<sup>th</sup> Earthquake Safety Day 2010 and unveiled the National Disaster Report 2009.

From the chair, Honorable Home Minister and Chairperson of

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Earthquake Safety Day 2010 has been celebrated nationwide with series of gala events during January 16, 2010 and around. Government of Nepal had decided in 1999 to observe this day annually in commemoration of the most devastating tremor that quaked on 15th of January 1934 (i.e. 2<sup>nd</sup> Magh 1990 as per Bikram Sambat calendar) in Nepal-Bihar region. The general purpose to go on with such an initiative has remained to enhance earthquake safety in Nepali communities through various awareness raising programs on earthquake hazard, risk, and risk reduction measures including preparedness, and also to strengthen policy instruments to cope with potential threats. The main slogan for this year's celebration spells:

*"Enhance Community Safety; Reduce Earthquake Risks*

*Construct Safe Schools, Hospitals and the Settlements"*

12<sup>th</sup> Earthquake Safety Day National Committee executed all the set programs fully in coordination with different government/non-government, UN and International agencies, academia and many more community institutions.

### Officials from World Bank and NSET visit Project Schools

Representatives from World Bank Mr. Christoph Pusch, South Asia Regional Coordinator, Disaster Risk Management & Global Facility for Disaster Risk Reduction and Recovery (GFDRR), Mr. Saurabh Dani, Disaster Risk Management Specialist, South Asia Regional Team & and Global Facility for Disaster Risk Reduction and Recovery (GFDRR) and a team from NSET led by Mr. Amod Mani Dixit, Executive Director made a joint monitoring and evaluation visit to project school sites of Nawalparasi District on 21st February 2010 to observe project activities and the progress. The joint team observed

the construction activities for the new building of Kalika Higher Secondary School, Gaidakot, Nawalparasi. The work has been executed under the project "Developing a Strategy for Improving Seismic Safety of Schools in Nepal" through the support from the World Bank/GFDRR. Under this project, NSET is implementing School Earthquake Safety Program in 6 different government schools, 3 each from Nawalparasi and Lamjung districts. Project period duration is of August 2008 to July 2010.

During the visit, joint team had a discussion with school authorities,

parents and School Management Committee members on project activities, effectiveness and appropriateness of the program being implemented in order to improve seismic safety of schools. Mr. Pusch expressed his views that such type of



World Bank Representatives at the School Meeting

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Continues 'Official from World Bank and NSET' ...



Meeting with teachers and community people

community works will be a good example for other communities as well. Mr. Dixit shared the experiences of similar works from different parts of the country and showed his satisfaction on what has been achieved so far; but in the meantime he urged the extreme need to gear up such initiatives more extensively with the view to ensure earthquake safety in all schools in Nepal.

Also, earthquake safety drill was observed on the occasion. Nearly 1500 students participated on the exercise. Established in 2033BS, Kalika Higher Secondary School, Gaindakot, Nawalparasi has a total number of 1600 students and 32 teachers. "In order to raise awareness of students on earthquake preparedness, School earthquake preparedness drills are being conducted regularly. Such activities in school will certainly help students to gain knowledge on earthquake safety" says Principal Kamal Subedi. 'Our home, school buildings have to be made earthquake resistant and for that trained human resource, raised public awareness and strong will power is necessary' says Om Prakash Sapkota, President, School Management Committee, Kalika Higher Secondary School. "Prior to this, NSET also conducted specialized course of Mason Training for earthquake resistant construction here, we have seen overwhelming response and concerns from local communities for earthquake resistant building construction" says Mr. Nirakar Joshi, Engineer and Nawalparasi district project coordinator.

This project incorporates earthquake resistant construction of school buildings; namely Bageshwori Secondary School, Bichaur, Shanti Higher Secondary School, Kuncha & Marsyangdi Lower Secondary School, Sundarbajar Paundi from Lamjung



Observing real size model for mason training at Kalika Higher Secondary School, Nawalparasi

district; and Kalika Higher Secondary School, Gaindakot, Daunne Devi Higher Secondary School, Bardaghat & Shanti Srijana Lower Secondary School, Jhankre from Nawalparasi district. Under the technical supervision of NSET, retrofitting of existing buildings and earthquake resistant construction of new buildings are in progress.

NSET has also been working on raising awareness of the school teachers, students, masons involved and the local community on earthquake preparedness by conducting orientation program on earthquake safety. 'Before selecting these buildings as model buildings, a group of engineers from NSET had conducted earthquake risk assessment of the government and private schools buildings in both the districts' says Amod Mani Dixit, Executive Director, NSET.

'We all feel more secure and less worried as our new school building is being made earthquake resistant' says Mr. Dhruva Raj Pokhrel, President, SMC of Marsyangdi Lower Secondary School which was established in 2040 BS in Sundarbajar Paundi, Lamjung district.



Discussing with the School Management Committee of Marsyangdi LSS, Besi Sahar, Lamjung

Likewise established in 2017 BS Shanti Higher Secondary School of Kuncha VDC, Lamjung has around 600 students. With the support from World Bank, 3 out of 6 buildings of this school have been retrofitted under the technical supervision of NSET. 45 years old school buildings were in very vulnerable condition. The school has now reached to this stage due to the continuous support from the community people. Pitambar Gauli, a local resident expresses his happiness on achieving the safety of the children by retrofitting thus making the old and vulnerable school buildings earthquake resistant.

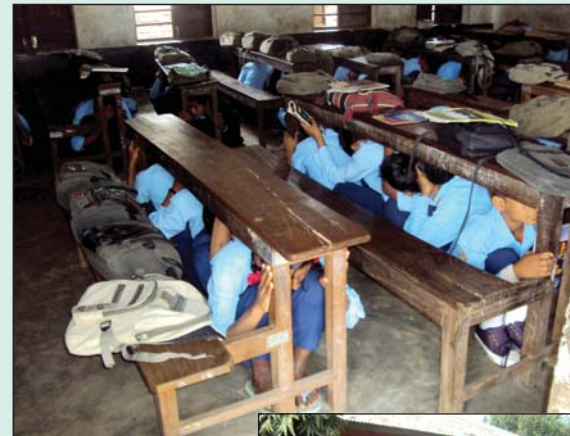
Local masons of Lamjung who were previously constructing houses in traditional manner have now learned the skill/technology of making schools and houses safe. 'We have already started implementing the new technology' says Kirtiman Limbu, a local mason. 'The masons have started giving advice to the house owners on earthquake resistant building construction these days', added Mr.



Retrofitting in progress at Shanti Higher Secondary School, Kunchha Lamjung

Dhruva Raj Pokhrel, President, SMC of Marsyangdi Lower Secondary School.

'Most of the schools in Nepal are still in vulnerable condition. Keeping in mind that those schools has to be made safe, NSET implemented the School Earthquake Safety Program in 3/3 schools of both Lamjung and Nawalparasi district and made those school buildings earthquake resistant so that they could be established as



Earthquake Safety Drill at Kalika Higher Secondary School, Nawalparasi

model/example in the society' says Dhruva Lal Pradhan, Engineer and Lamjung district project coordinator.

Earthquake preparedness programs being implemented in schools of Nepal are found to be highly effective. These sort of programs where there is direct contact with the people at the frontline have contributed significantly towards risk reduction.



### National Police Academy awards NSET for Capacity Building of Nepal Police

The National Police Academy (NPA) of Nepal has awarded National Society for Earthquake Technology– Nepal (NSET) in recognition of the latter's contribution in the capacity building of the country's police force through the Program for Enhancement of Emergency Response (PEER).

The certificate of appreciation was awarded to NSET on February 10, 2010, on the occasion of NPA's Annual Anniversary, at Maharajgunj, Kathmandu, Nepal.

The certification highlights for supporting Nepal Police personnel's skills development on emergency response, including search and rescue, to reduce mortality in Nepal and contribute in the overall disaster risk reduction.

Being one of the first to respond during emergencies, Nepal Police have been actively engaged in PEER since Stage 1.



Instructors evaluate participants' level of skills learnt from MFR through a group presentation. MFR Course, March 2-14, 2010, Kathmandu

National Police Academy has been identified as training institute for Medical First responder (MFR) and Collapsed Structure Search and Rescue (CSSR) courses.

### NSET ORGANIZES 2 MFR COURSES IN PEER PROGRAM YEAR 1 (January – March, 2010)

NSET/PEER, in collaboration with nodal agencies and partnering institutes, organized and completed two Medical First Responder (MFR) courses during January – March 2010. These two courses were conducted one each in,



Bangladesh and Nepal.

MFR course in Bangladesh was conducted from February 16-28, 2010, at Fire Service and Civil Defense (FSCD) Training Complex, Dhaka. During PEER Stage 2, FSCD organized MFR and CSSR courses with all-male participation. It is worthy to note that female participation was initiated during this MFR course and encouraged FSCD further to involve more female participants for gender balance and women empowerment. Bangladesh has 103 MFR graduates as of March 31, 2010.

MFR Course Nepal was conducted from March 2-14, 2010, at National Police Academy, making a total of 146 MFR graduates in Nepal as of March 31, 2010.

These three MFR courses were supported under PEER Partial Funding Assistance Program (PFAP), i.e. NSET/PEER and respective nodal agencies and partnering institutions carry out the activity through co-sharing scheme.

NSET/PEER will continue to assist countries in Stage 3 to institutionalize a sustainable training program in order for them to develop qualified emergency response instructors. Other courses lined up for instructor development process are: Collapsed Structure Search and Rescue Course (CSSR), Training for Instructors (TFI), MFR Instructors Workshop (MFRIW) and CSSR Instructors Workshop (CSSRIW). These courses are also planned to be completed in the beneficiary countries through PFAP.

### PEER IWS REFRESHER COURSE DEVELOPMENT KICKS-OFF WITH BRAINSTORMING MEETING

After the successful test of MFR and CSSR Refresher Courses in PEER Stage 2, there was a felt need to conceptualize a separate refresher's curriculum for MFR and CSSR instructors; hence, the proposal was approved to be carried out in Stage 3. In this regard, a Brainstorming Meeting was organized to start-off the course development of MFR Instructors Workshop (MFRIW) and CSSR Instructors Workshop (CSSRIW) refresher courses. The meeting was conducted on March 25, 2010 at NSET Office. Participants to said meeting were selected senior MFR/IW and CSSR/IW instructors from Nepal. Meeting highlights included recommendations on the following that will greatly help in the conceptual

Skills demonstration and practice are effective teaching methodologies utilized in MFR Course. MFR Course, February 16-28, 2010, Dhaka



Mr. Amod Mani Dixit, PEER Chief of Party, gives his message and guidance

framework of course development:

- Course development steps
- Course scope, methodology and guidelines; and
- Potential course developers from the region

When fully developed, the MFRIW and CSSRIW refresher courses are aimed to reintegrate inactive but qualified MFR and CSSR instructors into the PEER system.

### COUNTRY PLANNING MEETING (CPM) CONCLUDED IN INDIA

NSET organized Country Planning Meeting in India in collaboration with Ministry of Home Affairs (MHA), India, and National Disaster Management Authority (NDMA) on February 1-2, 2010. Along with MHA and NDMA, representatives and instructors from partnering institutions namely, Border Security Force (BSF), Central Industrial Security Force (CISF), Central Reserve Police Force (CRPF) and Indo-Tibetan Border Police (ITBP) attended the two days meeting. Ms. Andrea Tracy, Regional Advisor, USAID/OFDA, graced the two days meeting.

The Country Planning Meeting served as a platform to officially launch PEER Stage 3 in the India. Further, CPM aimed to:

Promote smooth transition from Stage 2 to Stage 3;

Share information on PEER Stage 3;

Explain roles of implementing parties and beneficiary countries in this stage;

Determine national strategic directions on training of emergency responders and assist countries in developing a roadmap for enhanced emergency preparedness for effective response.

Draft a timeline of activities for the conduct of planned PEER course events in the country

## Schools Safer Against Earthquake

The School Earthquake Safety Program (SESP) is one of the regular priority initiatives of NSET since 1997. The program is a complete community based earthquake risk reduction initiatives which provides opportunity to all the stake holders including community, school family, local government authority and departments to be part of entire process starting from project identification to implementation. Components of SESP include assessment of school physical facilities, implement risk reduction measures (retrofit or reconstruct), training to students, teachers and community people on earthquake preparedness and skill upgrading



During the masons training

training to local masons on earthquake safer construction technology.

NSET has been implementing SESP in various schools in and outside the valley with support from its partner organizations.

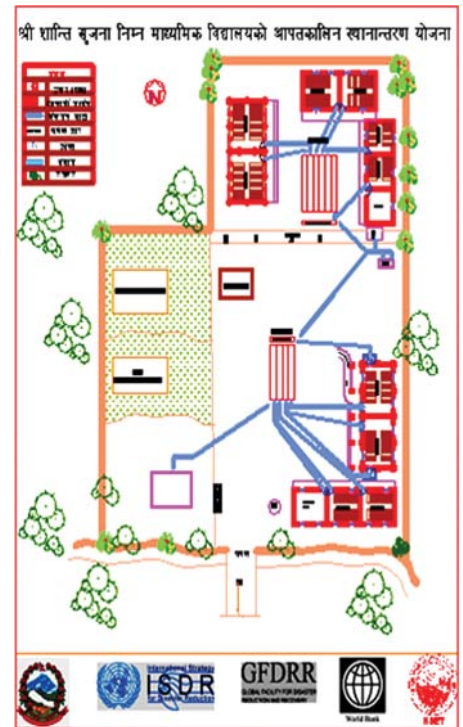
Under Nepal Earthquake Risk Management Project (NERMP) funded by USAID/OFDA NSET is implementing SESP in Mahendra Adarsha Higher Secondary School, Imadol, Lalitpur; Sakala Devi Lower Secondary School, Kadambas, Dibyapuri, Nawalparasi; and Kali Devi Higher Secondary School, Kavresthali, Kathmandu. And Under the Disaster Risk Reduction through School Project,

supported by DFID through ActionAid Nepal, 8 schools of 4 districts of Nepal (Makawanpur, Rasuwa, Banke and Kathmandu Valley) were included.

Similarly NSET has been developing National Strategy for Improving Seismic Safety of schools in Nepal under the financial support from GFDRR/ the World Bank since August 2008. Pilot project has been implemented at Nawalparasi and Lamjung District under which seismic safety improvement of 6 schools and different level of training programs on school earthquake preparedness and earthquake resistant construction have been conducted.

Activities accomplished and ongoing in Lamjung and Nawalparasi District under GFDRR/ The World Bank during the period are;

- Five days Mason training Program on Earthquake resistant construction of building at Lamjung District under GFDRR/The World Bank
- Five days Mason training Program on Earthquake resistant construction of building at Nawalparasi District under GFDRR/The World Bank
- On the job training on earthquake safety and construction method for mason at Kalika Higher Secondary School, Gaindakot, nawalparasi under GFDRR/The World Bank.
- On the job training on earthquake safety and construction method for mason at Daunne Devi Higher Secondary School, Bardaghat, Nawalparasi under GFDRR/The World Bank.
- Orientation on earthquake drill for teachers, students and SMC members at Kalika Higher Secondary School, Gaindakot, Nawalparasi under GFDRR/The World Bank
- Orientation on earthquake drill for teachers, students and SMC members at Daunne Devi Higher Secondary School, Bardaghat, Nawalparasi under GFDRR/The World Bank



Emergency response plan of Shanti Srijana Lower Secondary School, Nawalparasi

- Orientation on earthquake basics and preparedness for teachers, students, SMC and community at Kalika Higher Secondary School, Gaindakot, Nawalparasi under GFDRR/The World Bank.
- Orientation on earthquake basics and preparedness for teachers, students, SMC and community at Daunne Devi Higher Secondary School, Bardaghat, Nawalparasi under GFDRR/The World Bank.
- Orientation on earthquake basics and preparedness for teachers, students, SMC and community at Shanti Srijana Lower Secondary School, Jhankre, Nawalparasi under GFDRR/The World Bank.
- Orientation on earthquake drill for teachers, students and SMC members at Shanti Srijana Lower Secondary School, Jhankre, Nawalparasi under GFDRR/The World Bank.

## MISCELLANEOUS ACTIVITIES

Annual General Meeting of NSET was held on 5<sup>th</sup> February 2010 at CELC/NSET, Bhainsepati, Lalitpur. The meeting chaired by Mr. Shiva Bahadur Pradhanang, President, NSET reviewed various activities executed by NSET during last year and also discussed about forthcoming plans and programs of the institution.

An Orientation Training program has been held by NSET and Kathmandu Valley Earthquake Resistant Construction Technicians' Group (KVERCTG) on 8<sup>th</sup> March 2010 in Kathmandu with the theme of conducting Mobile Earthquake Clinic. Orientation programme for trained masons group of Katmandu Municipality aimed for:

- Dissemination of earthquake safety construction technology through practicing trained masons to the community.

- Refreshment on earthquake safe construction techniques for practicing trained masons.
- To convince and motivate potential house owners to incorporate earthquake safety structural elements in construction of their houses at site.
- Initiation to replicate the earthquake resistant construction technology in the community.

Major activities implemented under Earthquake Engineering Research and Training Division (EERT) during the Period

- Seismic Vulnerability Assessment of buildings  
Qualitative as well as quantitative seismic vulnerability assessment of buildings possessed by various organizations that include the buildings of American Embassy, NDI, PSI in Nepal was carried with the recommendation of improving seismic safety of the buildings.
- Construction Supervision of British Embassy Buildings  
One staff full time was employed for the construction supervision of retrofitting works in two staff residences of British Embassy in Lazimpat, Kathmandu. British Embassy has started the retrofitting of these two buildings as an initiation of structural mitigation with the aim of strengthening remaining buildings in stage wise manner.
- Development of Training Manual  
10 days Engineer Training Manual on "Earthquake Resistant Design of Buildings/ Nepal National Building Code and its implementation" was prepared that includes the documents such as power point slide, instructor's workbook and participants workbook as per the contract signed under the Earthquake Risk Reduction and Recovery Preparedness Program (ERRRP-NEP/07/010).
- 3-day training for Engineers at Biratnagar  
A 3-Day Training Course on "Earthquake-Resistant Construction of Buildings for Engineers" at

Biratnagar Sub- Metropolitan Corporation was conducted from 16 to 18 February 2010 as per the agreement with Nepal Government Citizen Partnership Project (NGCPP). A total of thirty one participants from District Development Committee, Morang; District Technical Office, Morang; District Educational Office, Morang; Department of Urban Development & Building Construction, Biratnagar; Biratnagar Sub- Metropolitan Corporation, Local Ngo's and consultant of Biratnagar participated in the training. This training course was the first step for assisting such technical professionals in acquiring basic knowledge and information on earthquake-resistant construction technology.

- Non-Structural Assessment and Retrofit Design of one of the buildings of Bheri Zonal Hospital  
Qualitative structural and non-structural assessment of all the facility buildings of Bheri Zonal Hospital at Nepalgunj was conducted. Detail structural assessment and retrofit design of Nutritional Rehabilitation Home was completed as per the agreement with Action Aid International Nepal. Recommendation was made for structural and Non-structural mitigation priority wise based on availability of fund and functional importance of hospital building.
- Survey of Non-Engineered Buildings in Nepal  
Survey and study of non-engineered brick masonry building construction practice in Nepal was done as per the agreement with National Graduate Institute for Policy Studies, Tokyo, Japan. The study was carried for new buildings under construction and the results are



Glimpse of training session



Field visit to building construction site

based on the detail survey of five selected construction sites in Kathmandu Valley.

- Support/Guidance to University students

A group of BE level students from KEC were supervised and guided for their final year project. Their study was focused on seismic design and cost comparison on symmetrical and non-symmetrical buildings. Result showed that asymmetric buildings are 5 % more costly as compared to symmetric buildings, meaning expensive and less safety.

MISCELLANEOUS ACTIVITIES

**Disaster Reduction International Conference convened in London**

Mr. Amod Mani Dixit, Executive Director, and Ms. Nisha Shrestha, Disaster Risk Communication Officer of NSET participated in the first Global Network of Civil Society Organizations for Disaster Reduction international conference convened in London 25th – 27th January 2010. More than eighty participants from forty countries representing international, national and local non-governmental organizations, community-based organizations, civil society networks, inter-governmental and donor institutions took part in the event.

The overall purpose of the conference was to share experiences and consolidate learning gained in the implementation of Views from the Frontline (VFL) 2009, with a view to building on the success of this joint action and identify next steps for the VFL program and the broader work of the Global Network. Encouragingly, there was

overwhelming support amongst participants to continue to work together on the VFL program and build on the opportunities the assessment has created, particularly the desire to take actions at local and national levels based on the review findings and recommendations.

National Society for Earthquake Technology (NSET) implemented the 'Views from the Frontline (2008-2009) Project' as the National Coordinating Organization (NCO) for Nepal. 'Views from the Frontline' is an action-research project undertaken by civil society stakeholders in conjunction with

government bodies. It aims at measuring progress towards implementation of the Hyogo Framework for Action (HFA) at the local level through the participation of different stakeholders across developing countries and regions.

Apart from the role of NCO, NSET was also given the responsibility of the overall coordination, management of the review process and finally the development of the regional report of the Region (South Asia and Southeast Asia), as a council member of Asian Disaster Reduction & Response Network (ADRRN) which is identified as the Regional Coordinating Organization (RCO) for the region.

During the international conference, London



## Disaster Preparedness for Safer Schools in Nepal (DPSS)

Disaster Preparedness for Safer Schools in Nepal is a regional program proposed to be implemented in few countries of Asia namely, Nepal, Bangladesh and China. The initial stage of the program will be implemented in Nepal and it will be expanded to other countries based on the experiences and lessons of the initial stage. The three countries are proposed because of their exposure to high levels of multiple hazards such as earthquake, flood, landslide and cyclone. These countries have high vulnerabilities of school buildings and school system and low level of country awareness and preparedness to the hazards. A lot has to be done to increase disaster awareness of the people and to enhance the

preparedness theory reducing the disaster risks.

Realizing this urgent need, National Society for Earthquake Technology-Nepal (NSET) conceptualized the program "Disaster Preparedness for Safer School in Nepal (DPSS) to be implemented jointly with Red Cross National Societies and with the funding support from American Red Cross (ARC). The main goal of the program is to: Reduce impact of disasters by building safer and resilient schools and communities. Its objectives are to i) Improve disaster safety of public schools through increased hazard awareness; improved disaster management skills among school children, teachers and



During the preparatory planning meeting at Bidur, Nuwakot

parents; and by establishing proper disaster preparedness and response systems; ii) Increase disaster awareness of communities through disaster awareness and training programs and



During the kick off

Continues 'Earthquake Safety Day 2010' ...



Rt. Honorable Prime Minister signing the Commemorative Envelope

Earthquake Safety Day National Committee Mr. Bhim Bahadur Rawal highlighted the government initiatives to Disaster Risk Reduction and also for earthquake safety despite number of adversities and prevailing political transition in the country. Dr. Govinda Kusum, Secretary, Ministry of Home Affairs shared about the recent promulgation of National Strategy for Disaster Risk Reduction and also on the process of Act formulation in this regard. Robert Piper, UN Resident & Humanitarian Coordinator urged to act on earthquake safety before it is too late. He urged- "Prime Minister, the safety of your citizens is profoundly important."

Mr. Amod Mani Dixit, Executive Director of NSET and Member Secretary of Earthquake Safety Day National Committee pointed out the acute risks prevailing naturally in this geography and hinted his confidence to enhance coping capacity of Nepalese communities which is possible but only with coordinated and collaborative efforts. Initially, Mr. Arjun Kumar Thapa, Chief and Executive Officer, Lalitpur Sub-Metropolitan City had put his cordial welcome note while in the later part Dr. Mahendra Subba, Deputy Director General, DUDBC put vote of thanks. Mr. Ramesh Chand Thakuri, Chief of Nepal Police; Mr. Sanat Kumar Basnet,

Chief of Armed Police Force, Mr. Shankar Prasad Koirala, Joint Secretary, Ministry of Home Affairs; Mr. Ratna Raj Pandey, Chief District Officer, Lalitpur were among other distinguished guests.

This year's national mass meeting was locally hosted by Lalitpur Sub-Metropolitan City. The mass had got converged through Earthquake Awareness Rally that walked along inner cities of Patan region. Mass meeting was with the participation of high level government officials, UN agencies, donor agencies, national/international NGOs, academic institutions and the public as well as community organizations.

### Earthquake Memorial Meeting 2010

In honor of those deceased ones by the largest ever earthquake in the Nepalese history of the year 1934 and in all the past earthquakes, Earthquake Memorial Meeting was held at the historical place of Bhugol Park, New Road, Kathmandu in the morning at 8:30 on the day of January 16, 2010. Honorable Minister Mr. Bhim Bahadur Rawal, MOHA, Mr. Shankar Prasad Koirala, MOHA; Mr. Ganesh Rai, KMC; Mr. Arjun Kumar Thapa, LSMC; Mr. Amod Mani Dixit, NSET; and government officials & security staffs, disaster



Hon. Home Minister & other personalities at the Earthquake Memorial Meeting

risk reduction professionals & activists; and community people paid tribute with one minute silence and national anthem followed by offering bouquets on Earthquake Monument.

### Earthquake safety Rally

As a part of 12th Earthquake Safety Day celebration, Earthquake Safety Rally was organized in Lalitpur. The rally was inaugurated by Honorable Minister for Home Affairs Mr. Bhim Bahadur Rawal at the premises of Lalitpur Sub-Metropolitan City, Pulchowk, Lalitpur. The rally was initiated with an Elephant at front carrying model of earthquake resistant building and decorated with earthquake safety awareness messages. The huge procession started from LSMC premises passed through Patan Dhoka, Nakabahil, Patan Durbar Square, Mangal Bazar, Lagankhel, Kumaripati and converged into the National Meeting at Lalit Mandap



Earthquake Awareness Rally

campaigns using schools as entry point; iii) Assist to institutionalize disaster safety concepts into regular education system by developing and assisting in implementation of national strategies for wide-spread application of concepts, approaches and methodologies to enhance disaster safety of entire education system throughout the country.

The program includes development and adaptation of training curricula on school disaster preparedness, delivery of training courses, preparation and implementation of school earthquake preparedness plans, disaster preparedness drills, community awareness and establishment of links between city/community preparedness plan and school preparedness plan. The first phase of the program envisions implementation of disaster preparedness training and disaster preparedness

activities in the first year in 50 schools as the pilot demonstration in Nepal. Nuwakot and Bhaktapur districts were selected for program implementation, and so far in course of project implementation, a one day National Level Kick Off workshop has been conducted on 14th February 2010 in order to share project goal, objective, approaches, working area and key intervention to the concerned stakeholders. A National Level Program Advisory Committee was formed for overall guidance of the project and project transparency during the workshop.

Likewise in order to introduce the program to the selected districts, District Level Program Kick Off workshops were held in each program districts Bhaktapur (5th March, 2010) and Nuwakot (18th March 2010).

With close coordination with NRCS and District Education Office, a total of 25 schools have been selected in each district to implement the program. And out of 50, 20 schools (10 in each district) have been selected as core program school for entire program intervention.

A (5-7 member) Program Steering Committee responsible for making necessary decision and providing assistance to the program team as per the need has been formed in each program district, Nuwakot and Bhaktapur.

Further, in order to mobilize and disseminate the message of disaster preparedness through junior and youth Red Cross Circle intensive session on disaster preparedness was provided to the District Level Junior/Youth Red Cross workshop held in both districts during February 2010.



workshop on DPSS

in Jawalakhel. On its way, the rally had paid tributes to Earthquake Monument at Mangalbazar, Lalitpur.

### Earthquake Safety Exhibition

Rt. Honorable Prime Minister Madhav Kumar Nepal inaugurated Earthquake Safety Exhibition 2010 at Jawalakhel on 16th January 2010. The exhibition was managed for the duration of Jan 16-19, 2010. Nearly two dozen agencies participated to display and expose their institutional initiatives & practices on DRR. The event was basically



Shake Table Demonstration

showing how buildings damage during earthquakes. It was performed on Jan 18 at 1:30 pm which was live telecasted by Sagarmatha Television, Kathmandu. Demonstration of fire drills, search and rescue etc. were other attractions of the Earthquake Safety Exhibition.

### Earthquake Safety Walkathon

As a concluding event for all the official celebrations of Earthquake Safety Day 2010, Earthquake Safety Walkathon was organized in Kathmandu on 23rd January. The program was inaugurated by Home Minister Mr. Bhim Bahadur Rawal at historical place of Bhugol Park, New Road Kathmandu with flagging off and handing Earthquake Safety Flag to Veteran Athlete Mr. Baikuntha Manandhar who then led Earthquake Safety Walkathon onward. More than 500 eager participants

from government and non government agencies, security institutions, veteran players and people from different clusters of Nepali communities walked along 4 Km track. Attractive Prize of participation was awarded to 10 Lucky Participants. Also 5 Lucky winners among from Earthquake Safety Exhibition visitors who had filled up feedback form were awarded on the occasion.

### Other key activities

National Symposium, on "Experiences in Disaster Risk Reduction and Response" Radio Message from the Honorable Home Minister on ESD, Eloquence contest on "Role of Students in Earthquake Preparedness", Interaction Program on Radios and Televisions, Masons Training on Earthquake Resistant Building Construction, Earthquake Safe School Building Handover Program; District Level ESD Programs by DDRC at all 75 Districts; ESD Programs at 25 Division Offices of DUDBC, Municipality Level ESD Programs by 58 Municipalities, Sensitization Workshop on "Issue of Safer Inhabitation and Rational Implementation of NBC in Nepalese Cities" Hetauda Municipality, National Drill on "Duck, Cover and Hold"; National Program on Human Chain to show commitment on Earthquake Preparedness, street drama and many others.



During Model building exhibition

with the view to demonstrating earthquake safer construction technologies, knowledge & skills required for earthquake safety, and initiatives for earthquake risk reduction by different agencies.

Real size model of building construction was an instrumental for transferring knowledge of earthquake resistant building construction amongst key actors of that job area. Number of engineering students & professionals, community people, DRR practitioners, academicians, university students, house-owners, and different people from various clusters visited the exhibition with keen interest. Yet another attraction of exhibition was Shake Table Demonstration. This is a test with 1:10 scale building models with and without earthquake-resistant elements



Hon. Home Minister inaugurating Earthquake Safety Walkathon



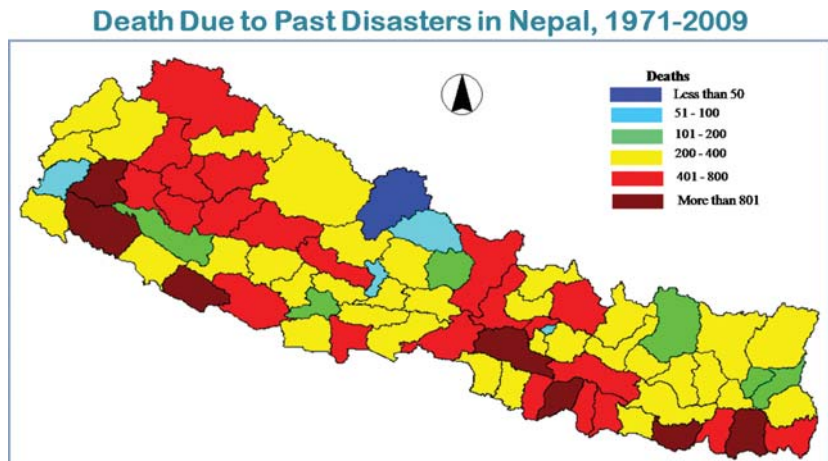
Street drama on Earthquake Awareness

Emergency Response plan of NSET is being updated based on new office building at Bhainsepati staff, and available resources. The Response plan is being developed for two situations i.e. emergency during office hour and non-office hour.

The major components of NSET Emergency Response Plan are:

- Emergency communication plan
- Emergency diary and ICE
- Spatial location (map representation) of all staff and board members
- Formation of emergency response teams and responsibility distribution
- Orientation for staff and staff family
- Earthquake Go Bags and emergency Household kits to all staff
- Structural/nonstructural assessment of NSET office building and its premise; and mitigation
- Structural/nonstructural assessment of NSET staff residents
- Identification of safe/unsafe places in the building and development of evacuation plan
- Capacity development (FA, LSAR, fire fighting etc)
- Preparation of annual calendar for emergency response activities
- Conduction of drill
- Preparation of complete document as Emergency Response Plan of NSET

NSET is now well equipped with complete Light Search and Rescue supplies. It has developed a concept of



distributing emergency household kits to the communities, including minimum LSAR supplies; some sample kits have already been prepared.

NSET has distributed Earthquake Go Bag to all staffs, and has planned to provide bags with complete items for public in request. It has provided 45 Go Bags for Action Aid with complete items.

**DesInventar Activities**

Because of its comprehensive database with wide coverage in terms of events, locations and fields, these days the demand of DesInventar database is very high and increasing day by day. Now NSET DesInventar database covers for the period of January 1971-December 2009. The database covers all scale (small, medium, large) natural disaster events (28 type of events are defined) occurred throughout the country during this period. The geographical resolution

of the information goes up to the village level and could be presented by map, table and graphs with different fields. NSET is providing the disaster information to different agencies and individuals/ experts in written request. However, the raw data are not provided to any agencies/ individuals so far.

**Effects due to past disasters in Nepal (1971-2009)**

Total reports		18,466
Human	Deaths	29,409
	Missing	3,260
	Injuries	56,722
Houses	Affected	5,783,017
	Destroyed	217,843
Farming and Forest (Ha)	Damaged	159,890
		976,116
Livestock		752,575
Reported loss value(N.Rs.)		17,466,303,023

Source: Nepal DesInventar Database, NSET 2010

**ORIENTATION PROGRAMS**

**Earthquake Orientation**

There has been significant increase in the requests for conducting Earthquake Preparedness Orientation/Trainings after the devastating earthquakes of Haiti and Chile. Agencies and even individuals are now more concerned about the safety of their structures, environment and preparedness for earthquake consequences.

NSET provided a number of orientation programs for different agencies during the period.

**January 2010:** An Orientation program on earthquake preparedness was conducted for the staff and family members of British Gurkhas at the British Gurkhas Nepal Headquarters, Man Bhaban, Lalitpur.

**February 2010:** An Orientation program on earthquake preparedness was conducted for the officials of US Embassy at US Embassy, Maharajgunj, Kathmandu.

**March 2010:** An Orientation program on earthquake preparedness was conducted for the staff of PASRA/ GTZ, Pulchowk, Lalitpur.

**March 2010:** An Orientation program on earthquake preparedness was conducted for the staff of Lincoln School, Ravibhawan, Kathmandu.

**March 2010:** An Orientation program on earthquake preparedness was conducted for the staff of Department for International Development, Nepal (DFID), Ekantakuna, Lalitpur

**March 2010:** An Orientation program on earthquake preparedness was conducted for the staff of The New Era Career Development Institute, Battispatali, Kathmandu.

**March 2010:** An Orientation program on earthquake preparedness was conducted for the members of Women’s Federation for World Peace, Naxal, Kathmandu.



Participants attending the orientation lecture



## Disaster Risk Reduction Tool Kit for CA members launched

Disaster Risk Reduction Tool Kit, a brief but comprehensive publication material on Disaster situations and priorities in Nepal has been released in Kathmandu on 24th February 2010. Ms. Purna Kumari Subedi, Vice Chairperson of Constituent Assembly unveiled this significant document amid an august gathering of more than 120 participants among from CA members, government officials, policy makers, UN Agencies, I/NGOs, Academia and various stakeholders. The publication has been produced with the view to inform and sensitize the Constituent Assembly members on disasters, risks and need for increasing attention and framework to address disaster risks. On the occasion, Mr. Alexander Spachis, EU Ambassador to Nepal and Mr. Robert Piper, United Nations Resident Coordinator jointly handed the first copy of DRR Tool Kit to the chief guest. Subsequently, another copy was handed to Dr. Govinda Kusum, Secretary, Ministry of Home Affairs.

The DRR Tool Kit is a professionally designed information pack on disaster risk reduction, specially designed to inform constituent assembly members on DRR, sensitize the policy makers on disaster issues and solicit their informed involvement and leadership to strengthen DRR framework in Nepal. The Tool Kit comprises of overview of disasters in Nepal, NSDRM, existing legislation on disaster management, HFA, need for strengthening DRR framework through an inclusive approach addressing special needs of differentially vulnerable people, disaster map of Nepal, disaster fact sheet and proposed flood early warning strategy as a key DRR measure for Nepal.

This compilation has been produced by key DRR stakeholders including Ministry of Home Affairs, partners of the DIPECHO program under European Commission, UNDP, Oxfam GB, Association of International NGOs, DPNNet, Nepal Red Cross and NSET.



## Pre-monsoon Workshop 2010

A two-day “National workshop on disaster preparedness and Pre-monsoon Planning in Nepal” has been held in Kathmandu during April 8-9, 2010. The main objective of the program was to share lessons learned from the last year’s disaster response activities and preparedness and make an effective district level plans for the better response and preparedness activities for this year’s monsoon led disaster. In his inaugural speech, Home Minister Mr. Bhim Bahadur Rawal stressed the need of political stability and commitment for better disaster risk management. The program was jointly organized by Ministry of Home Affairs, DPNNet-Nepal and NCDM in collaboration with different agencies.

Nepal is a disaster prone country exposed to various types of natural disasters mainly due to its rugged and steep topography and fragile geological conditions. The country falls under the seismically active zone and has suffered intolerable devastation of earthquakes on past. Disasters like floods, landslides, fire, windstorm, hailstorm, lightening, epidemics, GLOF, avalanche etc. occur from time to time causing enormous physical damages and human losses. Landslides and floods are the most recurring ones. This workshop is believed to be instrumental to move from reactive to proactive approach, processes to effective policies and translate



thoughts into actions. The workshop was concluded with plan of action.



Source: Press release by organizers

## MISCELLANEOUS ACTIVITIES

### CONFERENCE / WORKSHOPS

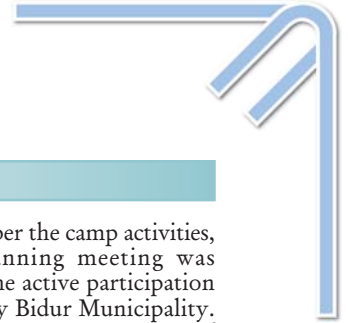
(January - March 2010)

Month / Year	Conference/ Workshops	Venue	Participation
January	Workshop on Use of Space Technology for Disaster Risk Reduction organized by National Institute of Disaster Management, Ministry of Home Affairs, Government of India and United Nations Office for Outer Space Affairs (UNOOSA)/ United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UNSPIDER), 11-13 January 2010.	Delhi, India,	Mr.Ganesh Jimmee
January	Joined as an Expert to the Results Management Council (RMC) of the Global Facility for Disaster Reduction and Recovery (GFDRR),	World Bank at Washington, DC; World Bank Headquarters	Mr. Amod Dixit
February	Expert Meeting on Non-engineered Buildings	Kobe, Japan	Mr. Amod Dixit
March	International Forum on Telling Live Lessons from Disasters	Yomiuri ,Kobe, Japan	Mr. Amod Dixit

- NSET professionals Mr. Ram C Kandel and Mr. Ganesh Jimmee participated in the Medical First Responder (MFR) Course as an Assistant Instructor and Mr. Khadga Sen Oli and Mr Suresh Chaudhary as participants .The course was organized by Nepal Police Academy and NSET with support from USAID/OFDA, Nepal Police Academy, Maharajgunj, Kathmandu, 2-14 March 2010.

- NSET professionals Mr. Kalyan Bista, Admin Director and Mr. Khadga Sen Oli, Advocacy and Outreach Manager attended a mini-communication workshop hosted by USAID for its partners on Writing Effective Press Releases on March 18, 2010 at its office premises.

- NSET professional Ms. Nisha Shrestha participated in the South Asia Planning Meeting “ Advancing Grassroots Women’s Leadership in Community Resilience” organized by LUMANTI and supported by HUIAIROU COMMISSION during 8 -11 February 2010 in Kathmandu Nepal.



## Earthquake Awareness Camp

NSET is working towards achieving Earthquake safe communities in Nepal by 2020 through developing and disseminating earthquake resistant technologies, conducting various orientations and training programs.

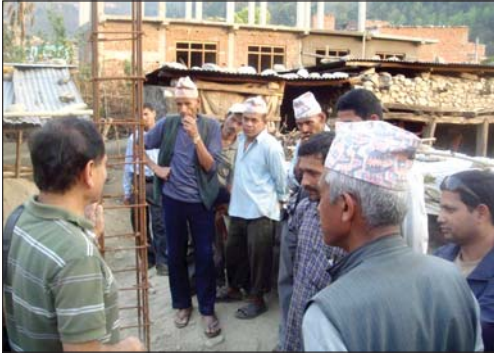
the potential hazard/risk based on the existing housing stock and prevailing construction practice; ii) Make the local government and non-government institutions including grassroots communities aware on earthquake risk of Nepal along with the required preparedness and possible mitigation measures iii) Make the community members understand the importance of simple, economic earthquake resistant construction technology and non structural mitigation options for earthquake risk reduction iv) Persuade the community members and the respective stake holders to initiate interaction and planning process for Earthquake Risk Reduction v) Look for potential local Champions to continue disseminating Community Earthquake Risk Reduction in and around the Municipality.

March, 2010. As per the camp activities, preparatory/planning meeting was organized with the active participation and ownership by Bidur Municipality. Following the meeting a series of orientation programs were organized at Bidur Municipality, Bhairavi HSS Nuwakot and Sachetan Library for the local people.

A total of 18 mobile clinics were conducted around the municipality area. During the building inventory survey it was found that NSET Participation with DUDBC has started showing positive results as the initiative of municipality engineer seem to be effective and clearly reflected on the construction practice, it was observed that the Column size has increased to 9”X12” though all the columns are oriented on the same direction and the “Toothing” was replaced by Stepped Continuation for load bearing wall.

The activities that will be carried out in the Earthquake Awareness Camps are Planning Meeting with the local Authority, Building Typology Sample Survey, Earthquake Awareness Rally, Earthquake Safety Exhibition, Earthquake Awareness Orientation Programs, Video Documentary Shows, and Earthquake Mobile Clinic.

Out of the five camps planned, first awareness camp was recently organized for Bidur Municipality during 19-24



Briefing at the Earthquake Mobile Clinic

In a seismically at risk country like ours the community needs to develop capacity to cope with unforeseen disasters, The Earthquake. If the local people are properly sensitized about precautions and preventive actions to be taken in case of a calamity, the loss of life and damage to the property could be drastically reduced. Considering the above facts NSET has decided to conduct Earthquake Awareness Camps in all the five development regions of Nepal with the objectives as: i) Study and assess



Participants of the interaction program on Earthquake Risk Reduction and Preparedness, Bidur Municipality

## National Symposium on “Experiences in Disaster Risk Reduction and Response”

As a part of Earthquake Safety Day 2010 celebration, a two day National Symposium on “Experiences in Disaster Risk Reduction and Response” was held at Yak Palace in Pulchowk, Lalitpur during 13-14 January 2010. Dr. Yubaraj Khatriwada, then Vice Chair, National Planning Commission in his inaugural speech stressed on the need of developing risk reduction technologies affordable, appropriate and sustainable. In the inaugural session chaired by Mr. Ashok Nath Uprety, DUDBC; keynote speakers Mr. Thir Bahadur G.C., MOHA; Mr. Yuri Chakalall, UNDP and Mr. Luc Verna, European Commission had made their invaluable remarks. In the beginning, Mr. Amod Mani Dixit, Executive Director, NSET had highlighted the objectives of the symposium. On behalf of organizers, Mr. Arjun Kumar Thapa, Chief and Executive Officer, Lalitpur Sub-Metropolitan City had exytened his welcome note to all the distinguished guests, session chairs, paper presenters, and participants.

Altogether 23 experts from various organizations through their presentations shared the experiences, exchanged “good practices” and raised the key issues

of DRR in Nepal in the following 6 thematic areas related to disaster risk reduction and response.

Session A: Experiences and Lessons of Emergency Response during Recent Disaster Events in Nepal

Session B: Achievements in Earthquake/Disaster Risk Reduction, Preparedness and Response

Session C: Mainstreaming Disaster Risk Reduction in Nepal

Session D: Earthquake / Disaster Safety of Schools in Nepal

Session E: Mainstreaming Disability Considerations into Disaster Risk Management

Session F: Climate Change Adaptation (CCA) in the Context of Disaster Risk Reduction

The program was jointly organized by Department of Urban Development and Building Construction (DUDBC), United Nations Development Program (UNDP), UN Office for the Coordination of Humanitarian Affairs (OCHA), Lalitpur Sub-Metropolitan City (LSMC) and National Society for Earthquake Technology-Nepal (NSET)



During the National Symposium



in association with Center for Energy Studies (CES), Institute of Engineering; Disaster Preparedness Network – Nepal (DPNet); Action Aid; Handicap International in Association with DIPECHO Nepal Partners; and National Federation of the Disabled Nepal (NFDN).

**Chile Earthquake One of the Strongest on Record but Caused Less Damage than Haiti Quake**

Although 27 February 2010 earthquake in Chile was 500-fold stronger than the one that struck Haiti in 12 January 2010, Chile has experienced far less devastation than Haiti, with an emergency response, for the most part, being managed without international help.

The 8.8-magnitude earthquake hit Chile's central coast early Saturday with multiple magnitude 6 and higher aftershocks, but the devastation was much less extensive than that associated with the Haiti quake. The earthquake in Chile was the world's fifth strongest since 1900, according to the US Geological Survey. The quake in Chile, although much stronger, is estimated to have killed fewer than 1000 people, whereas the quake in Haiti was a 7.0 magnitude and killed more than 200,000 people.

A major factor in the difference in deaths was the difference in building codes. The Chilean government has enforced anti-earthquake measures for new buildings, requiring features to be built into the designs that allow buildings to accommodate earthquake movement, rather than crumble during tremors. In contrast, Haiti has no building codes.

A study by the Organization of American States conducted since the Haiti earthquake concluded that many of the buildings in Haiti were so poorly constructed that they had no chance of remaining standing, even during a minor earthquake or any other type of natural disaster. Structures were built without proper foundations or containment structures, using improper building practices and insufficient steel and attention to development control, according to Cletus Springer, director of the Department of Sustainable Development at the Organization of American States in Washington, DC.

In addition, the Haitian government, unlike the Chilean government, was not able to meet the needs of the people after the quake. Chile, governed by a brutal military regime until 1990, has since become a democracy and now ranks 44th in the world in the United Nations Human Development Index.

Chile's Ministry of Health and the National Emergency Office of the Ministry of the Interior are "very well-organized and have significant experience in disaster preparedness, readiness and response," says the Pan American Health Organization.

"The Haiti earthquake was shallower, the high population area was closer to the fault that ruptured and, very importantly, the buildings and



Nepal Army in rescue operations in Haiti



Academy of Fine Arts building in Santiago after a huge 8.8 magnitude earthquake rocked Chile on February 27, 2010



Haiti's Presidential Palace collapsed due to the 7.0 magnitude earthquake that struck Haiti on 12 Jan 2010

infrastructure in Chile are designed considering earthquake effects - whereas Haiti had no building codes," said Jonathan Bray, an earthquake engineering professor with the University of California, Berkeley.

Although Chile is the richest country in South America, its quake-prone location has long kept its people and government on alert to natural disasters. Apart from conducting anti-disaster exercises, all buildings in Chile must meet quake-resistance requirements, which is also effective in reducing damage brought about by other catastrophes.

Source: Medscape Medical News, Different websites

**ADRRN launches its first Publication**

ADRRN launches its first publication: *Challenges to Human Security in Complex Situation: A Case of Conflict in Southern Philippines* edited by Merlie B. Mendoza and Victor M. Taylor.

Many countries particularly in Asia are not only beleaguered with natural hazards but also human-induced disasters arising from complex situations of conflict. The Philippines is among them. This first publication of the Asian Disaster Reduction and Response Network (ADRRN) focuses on the challenges to human security in complex situations, considering the situation in the Southern Philippines as a case study.

It is hoped that other countries will better understand the complexities of the situation here, may find some parallels with their own experiences and will learn some lessons from what is happening in the Philippines. This book discusses the various complex elements in areas of conflict and submits an analysis of the interplay of these factors.

Source: [www.adrrn.net](http://www.adrrn.net)



Merlie 'Milet' B. Mendoza

## QUAKE MONITOR (International)

Year	Magnitude	Location	Remark
03/01/10	7.1	Solomon Island	At least 60 homes damaged. Some of the damage was caused by a tsunami, with a run up height of 3 m on Rendova. Felt (VI) at Gizo.
10/01/10	6.5	Northern California	No reports of damage or casualties
12/01/10	7.0	Haiti Region	222,570 people killed, 300,000 injured, 1.3 million displaced, 97,294 houses destroyed and 188,383 damaged in the Port-au-Prince area and in much of southern Haiti
01/02/10	6.2	Bougainville Region, Papua New Guinea	No reports of damage or casualties
04/02/10	5.9	Offshore Northern California	No reports of damage or casualties
18/02/10	6.9	China-Russia-North Korea Boarder	No reports of damage or casualties
26/02/10	7.0	Ryukyu Island, Japan	No reports of damage or casualties
27/02/10	8.8	Offshore Maule, Chile	At least 507 people killed, many injured and at least 200,000 houses damaged by the earthquake and tsunami in the Concepcion-Valparaiso area
05/03/10	6.6	Offshore Bio-Bio, Chile	No reports of damage or casualties
05/03/10	6.8	Southern Sumatra, Indonesia	No reports of damage or casualties
08/03/10	6.1	Eastern Turkey	At least 51 people killed, 100 injured and 5,000 displaced, 287 buildings destroyed and 700 heavily damaged in the Basyurt-Demirci-Kovancilar-Okular area
11/03/10	6.9	Libertador O Higgins, Chile	Damage reported at Rancagua. A small tsunami was recorded
14/03/10	6.5	Near the East Coast of Honshu, Japan	Felt (IV) at Kitakami and Sendai; (III) at Ayase, Misawa, Tokyo, Yokohama and Yokosuka and (II) at Hamura
16/03/10	6.7	Offshore Bio-Bio, Chile	No reports of damage or casualties
04/04/10	7.2	Baja California, Mexico	One person died when a house in Mexicali collapsed
06/04/10	7.7	Northern Sumatra, Indonesia	No reports of damage or casualties

Source: USGS

### FOR TIPS ON EARTHQUAKE RISK MITIGATION TUNE IN TO...

Radio Sagarmatha (FM 102.4) at 7.30 PM, Tuesday  
Radio Annapurna (FM 91.8) at 7.30 AM, Wednesday  
Capital FM (FM 92.4) at 8.00 AM, Every Morning

### WATCH ...

Nepal Television every Saturday 8:25 am  
"Bhukampa Bishesh" section on Janachaso Program

*Think about making your home Earthquake-Resistant*

Attend our House Owners Consultation Program  
"Every Friday: 2-5pm"

**FRIDAY FREE EARTHQUAKE CLINIC**  
at NSET Office

## PROFILE

### Ganesh Kumar Jimée

Disaster Preparedness and Response Manager

**National Society for Earthquake Technology – Nepal (NSET)**



Mr. Ganesh Kumar Jimée joined NSET in May 2001 as the Project Manager for Dharan Environmental Mapping Project (funded by RUDO/SA/USAID), then served as Geographer and GIS Expert during 2002-2006 and was promoted to the position of Program Manager for Disaster Preparedness and Response Program of NSET in April 2009. Since then, he is involved in various earthquake disaster mitigation activities undertaken by NSET which includes orientation and training programs, earthquake vulnerability and risk assessment and above all his main task at NSET is towards emergency preparedness and response activities.

Before joining NSET, he served as Socio-economic Surveyor for Banepa- Sindhuli- Bardibas Highway for Ministry of Housing and Physical Planning.

Mr. Jimée holds a Masters' Degree in Earth Science (Natural Hazard Studies/Earthquake/GIS) from International Institute for Geo-information Science and Earth Observation (ITC), The Netherlands (2006) and a master's degree in Geography from Central Department of Geography, (T.U.), Kirtipur (1997).

During his professional career at NSET, Mr. Jimée has led several projects implemented by NSET as a Project Manager; some of the significant projects that he led are; Environmental Mapping Project-Banepa, Dharan, (funded by RUEPMSP for RUDO/SA/USAID); Disaster Inventory of Nepal (funded by United Nations Development Program); Disaster Preparedness and Response Plan Framework (DPRP) for Safe Drinking Water in Lalitpur Sub-Metropolitan City (funded by EU/UNICEF); and as a GIS Expert for the project Earthquake Vulnerability Reduction and Preparedness (EVRP) Program in Muzaffarabad and Mansehra Municipalities, Pakistan.

He is the Instructor for the Medical First Responder (MFR) Course, Hospital Preparedness for Emergencies (HOPE) and also graduate of Collapsed Structure Search and Rescue (CSSR) training courses given under the Program for Enhancement of Emergency Response (PEER) being implemented by NSET with support from USAID/OFDA. Mr. Jimée has also provided his professional input as an Instructor for Earthquake Risk Assessment and Planning using HAZUS tool for Planner, organized by Ministry of Food and Disaster Management and Comprehensive Disaster Management Program (CDMP), BCC, Argaon, Dhaka, Bangladesh during 18-22 August, 2009; Resource person for a Training on Earthquake Risk Assessment of Quetta, Pakistan conducted jointly by National Disaster Management Authority (NDMA) of Pakistan, UNDP/Pakistan in September 2008.

Mr. Jimée has represented NSET in various national and international meetings. He has also participated in World Conference on Earthquake Engineering (14WCEE) in Beijing, China, during 12-17 October 2008.

### FOR MORE INFORMATION ON

Earthquakes and NSET's efforts towards earthquake risk reduction log on to [www.nset.org.np](http://www.nset.org.np)



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