NEWSLETTER

Earthquake Safety

NATIONAL SOCIETY FOR EARTHQUAKE TECHNOLOGY-NEPAL

NSET
भूकम्प प्रविधि
राष्ट्रिय समाज-नेपाल

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Damage caused by the October 8, 2005, quake in Pakistan

NSET in the aftermath

BUILDING ON THE RUINS IN PAKISTAN

NSET began activities to support earthquake recovery and reconstruction in Pakistan from November 19, 2005. The program involved training technicians on earthquake-safe construction techniques and demonstrating how such construction techniques can save lives and property.

The earthquake measuring 7.6 on the Richter scale that jolted northern Pakistan on October 8, 2005 resulted in Pakistan in the death of over 73,000 people. Another 83,000 were injured. The quake also rendered more than 3.3 million people homeless. The direct economic losses caused by the quake are estimated to be over US$ 5bn – an amount more than twice the annual budget of the government of Nepal.

THE AFTERMATH
• 73, 000 dead
• 3.3 million homeless
• US$5bn (direct economic loss)

The quake caused major damages in the northern regions of the country, including areas in Azad Jammu and Kashmir (territory of Kashmir to the west of the line of control between India and Pakistan). Much of the quake-affected area is rural with population scattered over large distances. (The quake of the scale in an urban setting could have caused far greater damages, especially in the absence of adequate preventive measures).

Almost a year after the earthquake, Pakistan is still struggling with the reconstruction involving the building more than 350,000 new homes, repairing infrastructures and supporting people whose livelihoods have been shattered.

"We cannot guarantee 100 percent prevention of loss but we now have techniques that can help reduce the earthquake losses significantly," says Amod Dixit, Executive Director, at NSET. "What we are doing in Pakistan is essentially, trying to help people to Build Back Better so as to protect themselves from future earthquakes."

Earthquakes are natural phenomena which cannot be stopped. But there are now ways in which the losses can be reduced. This, NSET hopes to achieve by training technicians, masons, and especially the owner-builders, on earthquake-safe construction methods.

The project 'Capacity Building for Reconstruction of Earthquake-Affected Areas of Pakistan (Bagh and Muzaffarabad)' was implemented under the United Nations Development Programme (UNDP)/Pakistan during November 2005-March 2006. NSET provided technical assistance that included demonstrating "people-centered, cost-effective, environment-friendly transitional shelters and to prepare a housing strategy incorporating earthquake-resistant techniques in permanent reconstruction" while ensuring sustainable livelihoods and habi-

See Building, pg 7

IN THIS ISSUE

LETTER FROM THE EXECUTIVE DIRECTOR

NSET has come a long way since its inception when a few professionals came together to develop a forum to discuss earthquakes and ways to reduce the risk associated with earthquakes and other natural disasters. Today we have earned for ourselves the reputation of being one of South Asia's best-known repositories of knowledge and information on disaster reduction and coping with earthquakes. We can therefore be proud of our achievement but also need to continue efforts towards spreading the knowledge we have acquired so far for saving lives and property of the people living in areas prone to earthquakes and other natural disasters.

Since its establishment in 1994, NSET has been actively involved in research and development of approaches and methodologies for managing earthquake risk. It has also devised and implemented successful mitigation measures that range from reinforcing existing buildings for improving seismic performance to assessing the risk of public infrastructure and designing their reinforcement and retrofitting. It's knowledge sharing activities range from organizing informal education and awareness sessions at the community level to development and execution of formal technical training programs aimed at reaching out to a varied target group ranging from masons to engineers and decision makers.

We have already done much, but much more remains to be done. We believe that technical fixes are only part of the solution in terms of disaster reduction and overall protection can result only from wide awareness and widespread adoption of the safety measures. This newsletter represents the start of renewed efforts by NSET to contribute towards building earthquake awareness and earthquake safety as well as a means of networking with other institutions engaged in disaster risk reduction and communication. We did publish a newsletter in the past but the effort could not continue for various reasons. This initiative comes alongside renewed efforts to enhance risk communication initiatives within NSET, including our new-and-updated website (www.nset.org.np)

This newsletter and the website will serve as a platform for exchanging information and experiences on earthquake risk reduction activities and approaches. Information in this quarterly newsletter will be complemented and updated more regularly in our website, which also allows interaction with professionals in the organization. NSET will also continue efforts towards upgrading and publishing technical manuals, posters, information leaflets and general awareness-building materials, in addition to using different media forms to spread the word on the need for the proverbial 'stitch in time' that can actually save lives.

We encourage readers to provide us feedback on what you would like to be included in the newsletter's forthcoming issues as well as suggestions on improving the website in terms of content, interactivity and issues you want discussed. (Please address all communication to: editors@nset.org.np).

REGIONAL TRAINING PROGRAM

Preparing Countries for Emergency Response

The Program for Enhancement of Emergency Response (PEER) is a regional training program implemented by NSET since 2003 in Bangladesh, India, Indonesia, Philippines, and Nepal under a cooperative agreement with the U.S. Agency for International Development, Office of U.S. Foreign Disaster Assistance (USAID/OFDA). The main objective of the programme is to strengthen disaster response capacity in Asia.

The National Society for Earthquake Technology (NSET), Nepal, manages the programme in collaboration with three US-based subcontractors, namely, International Resources Group (IRG), Johns Hopkins University/Centre for International Emergencies, Disasters and Refugee Studies (CIEDRS), and Safety Solutions, Inc.

PEER's objectives include development and implementation of National Training programs and curricula, development of a training system that continually provides disaster response knowledge and skills to personnel involved in search and rescue and medical first response and preparation of hospitals to be able to provide life supporting emergency response to the disaster victims. The third objective is to establish effective networking among individual responders and emergency response institutions including training institutions for mutual consultation for further improvement of the training course and system and for creating conditions for enhancing regional cooperation in emergency response. The main courses of PEER are Medical First Responders (MFR), Collapse Structure Search and Rescue (CSSR) and Hospital Preparedness for Emergencies (HOPE).

See: PEER Events, pg 8

A simulated disaster situation and response drill

TRAINING SUPPORT FOR EARTHQUAKE RESISTANT RECONSTRUCTION IN PAKISTAN (TSERR)

NSET is assisting the Earthquake Reconstruction and Rehabilitation Authority (ERRA) of Pakistan by providing technical assistance in policy support and capacity enhancement for earthquake resistant reconstruction. The program is

A training of master trainers

being implemented under a Grant from the US Office for Foreign Disaster Assistance (US OFDA), a subset of the USAID, in close co-ordination with UN-Habitat.

TSERR comprises of assistance in the development of training policies and capacity enhancement of technical and non-technical personnel involved in earthquake reconstruction of houses in Ajad Jammu and Kashmir (AJK) and the North West Frontier Province (NWFP) of Pakistan.

The training programs are being implemented through 12 Housing Reconstruction Centers (HRC) that are evenly spread in the two provinces that were devastated by the earthquake.

NSET first trains the technical personnel of the HRC and Partnering Organizations (PO) to become trainers in earthquake resistant reconstruction and supervises and monitors the training programs conducted by the potential master trainers and mobile team members belonging to the HRCs and the POs. (A Partnering Organization, PO, is a local or international non-governmental organization that works within the jurisdiction of a Union Council for providing support to the communities.

NSET has developed suitable training curricula and training materials for various target groups based on its experience in conducting similar training programs in Nepal and elsewhere. The curricula are adapted to the match the socioeconomic realities of the earthquake-affected areas. The similarities of topography, geology and also building typologies between Nepal and Pakistan have greatly helped NSET to develop the curricula and training materials. The ability of Nepali

A training session of lead masons

technicians to communicate in Urdu, the official language of Pakistan, enhanced the efficiency of the training programs.

NSET also provided training on damage assessment and earthquake-resistant construction to the engineering unit of the Pakistan army that had been assigned to undertake damage assessment and provide technical inputs for reconstruction in several Union Councils, especially in the remote areas of northern Pakistan.

A total of 5,505 people comprising of technical professionals, construction workers and the army officers of Pakistan were trained by NSET- or NSET-trained local trainers in the various roughly 130 training events conducted between February and August 2006.

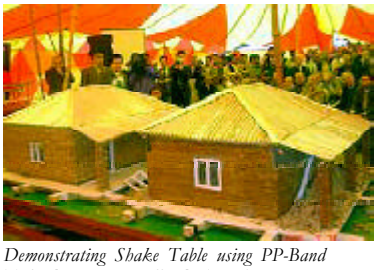
Month	No of Training Conducted	No. of Participants									
		Technical Professional		Construction Worker			ARMY				
		Architect/ Engr	Sub Er.	Mason	Carpenter	Steel Fixer	Engg. Officers	Engg. Non Officers	Other	Social Mobilizer	Total
Feb – August 2006	130	**91**	**151**	**711**	**257**	**67**	**96**	**1088**	**2378**	**243**	**5,505**

Surya Narayan Shrestha, Senior Structural Engineer of NSET serves as the Team Leader of TSERR. He can be contacted at sshrestha@nset.org.np and at shresthasn@gmail.com

NEW TECHNOLOGY FOR REINFORCING MASONRY BUILDINGS

NSET provided technical assistance to the Japan International Cooperation Agency (JICA) and the University of Tokyo in the dissemination in Pakistan of a new technology that uses poly-propylene band (PP-Band, the band used for binding luggage at security checks at airports) for strengthening of new and existing masonry buildings. For the first time, the usefulness of the recently-developed PP-Band Technology was demonstrated using the NSET Shaking Table method in Muzaffarabad. NSET collaborated with the Meguro Laboratory of the Tokyo University during the preparatory works for the highly successful demonstration.

NSET also assisted JICA in the construction of a model earthquake-resistant building using the PP- Band Technology. Both the model building and the Shake-Table Test demonstrated the potential of the technology as an



Demonstrating Shake Table using PP-Band Technology in Muzaffarabad, Pakistan

alternative low-cost solution for enhancing earthquake performance of masonry construction in developing countries.

TRAINING PROGRAMS IN NEPAL

Mason attending the lecture

NSET has been implementing various earthquake risk-reduction training programs aimed at a diverse target audience. It has ready to use modules for training masons, contractors, technicians, junior engineers, engineers, schoolteachers and policy/decision makers. NSET has organized many of these courses in collaboration with Nepal's Department of Urban Development and Building Construction (DUDBC), municipalities, professional societies, business community and other partner institutions.

Mason training program

Masons are the key actors who translate designs into reality, especially in developing countries where more than 90% of the buildings are non-engineered, and the masons are commonly serving as the "best technical hand" available for building construction. Therefore, masons need to be aware of the technology they are working with in order to ensure optimum, efficient and effective use of the building materials and the construction processes. NSET began training masons several years ago with the objective of making them aware of the techniques used for risk-reduction with a full understanding of "why" and "how". At present, the mason training program of NSET, which combines class-room training with hands-on field exercises, has become very popular in Nepal and abroad. NSET organized such training programs also in different countries including Afghanistan, India, Iran, Indonesia, Pakistan, Japan and Tajikistan.

Field Exercise – Trainees making frame model

Some recently conducted mason training programs in Nepal include five-day training in Nepalgunj, Nepal (March 24-29, 2006) which was conducted in partnership with the Save the Children Alliance.

A similar training was held at the Adarsha Saul Higher Secondary School at Bungmati of Kathmandu, where NSET is assisting the retrofitting/construction of the school building. The training program was a part of NSET's School Earthquake Safety Program (SESP).

TECHNOLOGY TRANSFER ...

Mr. Amod Dixti receiving the award

Simulating a quake and a Shake-Table

The Shake-Table designed by NSET is an award-winning model for technology transfer and to spread awareness on the effectiveness of earthquake-resistant construction. The demonstration model won the San Jose Tech Museum Award under Microsoft Education Award Category in 2004.

The low-tech innovation has been highly effective in educating people about the structural shifts in buildings during earthquakes and for raising awareness about safe building construction. The Shake-Table is essentially a building built to a given scale and mounted on a table which is put through certain force to see the effects of similar jolts that buildings go through during an earthquake. NSET demonstrated its first Shake-Table test in January 1999. It has so far been demonstrated in many countries of the Asia-Pacific region including Afghanistan, India, Indonesia, Iran, Pakistan, and Tajikistan. NSET has also assisted many partner institutions to design their own shake-tables to spread awareness on safe building construction. NSET also supported UNCRD in the organization of special sessions on Shake-Table demonstration at the World Conference in Disaster Reduction (WCDR), Kobe, Japan in January 2005.

The Shake-Table essentially has two identical buildings of the same shape and size scaled to 1:10 of the actual sizes. One of the buildings is built using earthquake resistant techniques and the other is done traditionally – or without taking any special measures. Both the buildings are placed on the same shaking platform (table) and thus exposed to forces similar to that buildings have to endure during earthquakes. Increasing load is applied to the table through which the force is transferred to the scaled models, and the weaker one made without earthquake-resistant elements progressively collapses. The tables are used to demonstrate how risk-reduction techniques in construction can help buildings withstand the forces during an earthquake and convince them of the simplicity of integrating earthquake-resistance into the buildings. NSET has conducted more than 25 such demonstrations in Nepal. An A3 size (300 x 420mm) Shake-Table has also been developed for use with small-scale models for demonstrations at schools.

Before and after: A Shake Table Demonstration

ORIENTATION PROGRAMS

Orientation Programs on Risk Reduction

NSET organized an awareness program on earthquake safety at Adarsha Saul Higher Secondary School, Bungmati on May 26, 2006. The orientation presentation was made by Mr. Ram Chandra Kandel, Civil Engineer of NSET. Mr. Amod Mani Dixit, Executive Director of NSET spoke on the possibility of making Nepalese school safer against earthquake through earthquake awareness, reduction of non-structural vulnerabilities, and making schools and communities safer through formulation and implementation of emergency response plans. The program was focused on teaching safety messages to the student, teachers and parents to increase their earthquake preparedness. A large number of students, teachers and members of the community attended the interaction program.

Delievering orientation lecture

Another introductory orientation was organized on School Earthquake Safety for the Birendra Sainik School on June 4, 2006. The talk was attended by teachers and students of the school and members of the school management board and also officers from the Nepal Army. The presentation was made by Mr. Ram Chandra Kandel, Civil Engineer and Mr. Ganesh Jimee, Urban Planner of NSET.

Yet another program for providing earthquake orientation to teachers and students was organized at the White Field School, Shova Bhagawati, on June 9. Mr. Bijay Upadhyay, Earthquake Technology Training Specialist of NSET delivered the lecture.

OTHER OUTREACH PROGRAMS

- **June, 2006**: Mr. Amod Mani Dixit, Executive Director, made a presentation on Earthquake Awareness at Kasthamandap. The meeting was organized by the Rotary Club of New Road.
- **May 20, 2006**: Mahesh Nakarmi, Project Manager NSET, and Ram C Kandel, Civil Engineer NSET, made presentations on "Earthquake Hazard and Risk of Nepal/ Kathmandu – An overview" at the 11th Reyukai Branch, Lalitpur.
- **June 6-7, 2006**: An orientation program on earthquake preparedness was for ICRC staff members. Mr. Mahesh Nakarmi and Mr. Ram Chandra Kandel of NSET made presentations at the meetings.
- **July 21, 2006**: An orientation on earthquake safety was organized at NSET for the staff members of International Rescue Committee (IRC) Nepal. Mr Jitendra Bothara, Senior Earthquake Engineer of NSET conducted the program.

CONFERENCE/WORKSHOPS

Year	Conference/ Workshops	Venue	Participation
Feb 2006	International Conference on Rethinking Capacity Development for Disaster Risk Reduction: Action 2005-2015, UNDP	Geneva	Amod Mani Dixit
Feb 2006	International Framework for Development of Disaster Reduction Technology List on Implementation Strategy, MEXT-NIED	Japan	Amod Mani Dixit
March 2006	International conference "Towards the realization of the strategic Goals of the Hyogo Framework for Action 2005-2015, organized by Asian Disaster Reduction for Cities (ADRC)	Seoul/ South Korea	Amod Mani Dixit
March 2006	Third International Conference on Early Warning (EWC III)	Bonn / Germany	Mahesh Nakarmi
June 2006	International workshop on "Preliminary Regional Discussions for the Preparation of the First Global Platform on Disaster Risk Reduction"	Bangkok, Thailand	Amod Mani Dixit
June 2006	Asian Disaster Reduction and Response Network (ADRRN) Regional Workshop entitled "Enhancing the capacity and role of NGO networks in Disasters"	Bangkok,Thailand	Yogeshwor Parajuli
June 2006	UN Habitat Disaster Management Program (DMP)-sponsored networking event: "Sustainable Relief and Reconstruction - turning discussions into operational reality" and dialogue event "Urban Safety and Security Taking Responsibility" at the World Urban Forum III (WUF)	Vancouver, Canada	Surya P. Acharya
June 2006	International workshop on "Preliminary Regional Discussions for the Preparation of the First Global Platform on Disaster Risk Reduction"	Bangkok, Thailand	Amod Mani Dixit

Earthquake Safe Schools

NSET organized in collaboration with the United Nations Centre for Regional Development

Participants involved on group discussion

(UNCRD) an international workshop on "Keeping Schools Safe from Earthquakes" from June 1- 2, 2006 in Kathmandu. The meeting served as a forum for organizations working on risk-reduction to discuss case studies and exchange experiences.

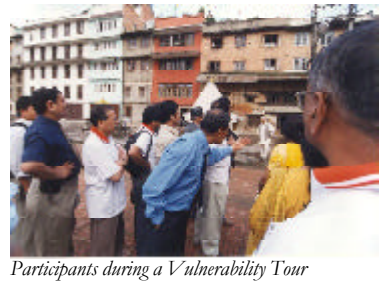
Disaster Risk Management Master Planning

A three-day workshop on 'Disaster Risk Management Master Planning (DRMMP)' was organized by the Kathmandu Metropolitan City (KMC) in Kathmandu during July 4-6, 2006 in coordination with the Cross Cutting Capacity Development (3CD) program of the Earthquake and Megacities Initiatives (EMI), the Pacific Disaster Centre (PDC), and NSET. The first day of the workshop brought together stakeholders to discuss disaster risk management plans. Similarly, on the second day, the participants discussed the available 'Options for Building Code Implementation and Enforcement' and the third day was spent on 'Ward Level Emergency Response/ Preparedness Planning' session. An MOU between KMC and NSET designates latter as the technical advisor for implementing the DRMMP.

Workshop participant makes a presentation

Seismic Vulnerability Tours

NSET organized a 'Seismic Vulnerability Tour' of core area of Kathmandu Metropolitan City for the visiting delegates from the US Office of Foreign Disaster Assistance (OFDA) on June 15, 2006. Earthquake Engineers of NSET conducted the tour through Mahabaudha-Ason and in the Ason-Indrachowk-Makhan-Darbur Square-Ason-Mahabauddha-Bir Hospital area. The walk-over vulnerability tour helps to understand the details of existing weaknesses of the buildings as well as of the city to earthquakes, and it also helps to identify priority actions for reducing the earthquake risk along the route traversed.



Participants during a Vulnerability Tour

Technical Assistance

A team of experts from NSET visited Banda Aceh, Indonesia on July 9, 2006 to conduct training of technicians and conduction of a shaking table demonstration using 1:10 models of building with standard designs adopted for reconstruction. The visit was organized at the invitation of the World Bank-supported project on reconstruction being implemented by the Building Research Institute (BRI), Tsukuba, Japan.

New Cooperation Agreements

- A Memorandum of Understanding (MOU) was signed between NSET and the Bangladesh Disaster Preparedness Centre (BDPC) on January 19, 2006 for enhancing cooperation and collaboration in areas of disaster risk management. The MOU was signed in Kobe, Japan during the launch of the International Transfer Live Lessons Network (TeLLNet).
- NSET and Disaster Prevention Research Institute (DPRI) of Kyoto University, Japan signed at **Tsukuba, Japan on March 1, 2006** another Memorandum of Understanding for the establishment of Case Station and Field Campus (CASIFICA). **The goal of CASIFICA is to** conduct action research in the field of disaster mitigation and disaster preparedness in five countries including Nepal, and extend the cooperation for similar collaborative work at regional and international levels.

Demonstration at Bande Aceh

- A separate MOU was signed on June 22, 2006 by NSET and the Shree Adarsha Saul Higher Secondary School, which has formally been included under the School Earthquake Safety Program (SESP) of NSET. Under SESP, NSET will support the school in the design and construction of the new building making sure that the construction duly considers the seismic-resistance elements for improving seismic performance of the new building.

tats for earthquake-affected communities.

The key outputs of the technical support were capacity building, support to affected rural communities for emergency shelter construction and confidence building of communities through training and demonstration projects.

The technical assistance program

The main objective of the technical assistance program was transferring knowledge on earthquake resistant construction to builders and the construction industry and assisting in the confidence-building processes by taking these techniques to the rural communities. The specific activities were:

- Training stakeholders of the construction industry on earthquake-resistant construction of new houses and on safe repair and retrofitting of damaged buildings.
- Shake table demonstration for earthquake awareness and construction of model buildings for demonstration, awareness and technology transfer.

The demonstration component covered construction of two model houses and two shake-table demonstrations. The training activity was conducted in two tiers. First NSET resource persons conducted end-user training on earthquake-resistant construction for engineers and technicians. Trainees with potentials of serving as trainers were identified and given a follow up training for trainers. Subsequently, the local trainers thus trained were given the responsibility of conducting classes under the guidance, supervision and facilitation of NSET Instructors. Out of 90 graduates of the Training for Trainers programmes, seven are successfully engaged and conducted training sessions in the villages and others are engaged in the training processes of their organizations. Six experts and four technicians from NSET spent 104 person-months in Pakistan under the technical assistance programme.

Outputs

The scale of the damage caused by the earthquake called for a massive intervention in terms of capacity building and training, which in itself was a challenge. Quite naturally, the people affected by the earthquake were expecting relief, rather than know-how on earthquake-resistant reconstruction. Therefore, much of the time was spent in confidence-building and reassuring the people on the need of safe reconstruction. Despite the apparent mismatch between the people's expectations and the services NSET was there to offer, the technical assistance project could receive full acceptance and was able to attain all of the training targets.

The technical assistance programme also provided useful lessons for NSET. The key lesson has been a realization of the need to integrate earthquake mitigation and preparedness measures even during the relief and early recovery phases. The combination of relief and recovery with earthquake mitigation and preparedness programs has not only the obvious long-term effect; it also helped prepare the people for the aftershocks – which in the case of Pakistan also caused significant damages.

PROFILE

Bal Krishna Kasula was born to a middle class Newar family at Nangkhel VDC Bhaktapur in 1973. The father of three children did not attend university and does not have a formal engineering degree.

However, today Kasula is one of the busiest technicians at NSET. His skill in building earthquake resistant buildings has taken him around the world with NSET professionals for training other engineers, masons and builders on safe building techniques.

He became involved in earthquake safe construction as a trainee organized by NSET at a school in Bhaktapur in 1999. He became a part of the NSET team that went around retrofitting schools in Bhaktapur, Kirtipur, Nagarkot and Kathmandu and was also involved in training masons.

So far he has helped to rebuild more than 20 schools and trained more than 50 brick layers in Nepal. He has also trained local masons in Afghanistan, India, Iran, Indonesia, Pakistan and Tajikistan.

Mr. Balkrishna with the demo-model in Bande Aceh

Kasula attended the World Conference on Disaster Reduction (WCDR) in Kobe, Japan in January 2005, where he assisted in conduciting Shake Table demonstration of Nepalese traditional house and also assisted in training a group of university students. He also contributed to the design of earthquake resistant houses by combining Japanese and Nepali building techniques.

Kasula was a member of the senior NSET professional team that visited Banda Aceh, Indonesia in July 2006 to provide technical assistance to the World Bank/Indonesia through BRI/ Japan. The NSET team was there to assist in organizing Shake-Table demonstration and to train local technicians, including engineers, on earthquake resistant construction.

The Royal Nepal Academy of Science and Technology (RONAST) awarded Kasula with the RONAST Science and Technology Award 2062 (2005). He was recognized for 'outstanding contribution in the field of science and technology by using traditional knowledge in the design of earthquake resistant buildings, their maintenance and training others on earthquake resistant model houses'.

RADIO PROGRAM

Earthquake Awareness on Community Radio

NSET has been cooperating with two FM stations, namely, Radio Sagarmatha in Kathmandu and Radio Annapurna in Pokhara, for weekly programming on earthquake safety on radio. The weekly talk and discussion programs aim at enhancing earthquake awareness and influencing public policy on disaster management by creating public demand. The programs also inform people on Dos and Don'ts before, during, and after an earthquake. The main messages conveyed by the programs each week is: BE PREPARED.

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

QUAKE MONITOR

Epicentre	Year	Magnitude	Location	Deaths
Pakistan	2005	7.6	Pak/ India	>75,000
Bam	2003	6.6	Iran	26,000
Bhuj	2001	7.7	Gujarat, India	13,800
Northridge	1994	6.7	San Fernando, USA	61
Spitek	1988	6.4	Armenia	20,000
Udaypur	1988	6.4	East Nepal	721

PEER EVENTS CONDUCTED DURING (JAN- JULY) 2006

Events	Event level	Date
India CPM	Standard National	January 30-31
Indonesia - Training for Instructors (TFI)	Standard National	January 12 - 16
Indonesia - Medical First Responder Instructors'		
Workshop (MFRIW) Indonesia Collapsed Structure Search and Rescue Instructors'	Standard National	January 19-23
Workshop (CSSRIW)	Standard National	January 25-27
India HOPE	Standard National	Feb 6-9
India HOPE-Training for Instructors (TFI)	Standard National	Feb 13- 17
Philippines Master Instructor's Workshop (MIW)	Standard Regional	Feb27- March 3
India HOPE II	Standard National	March 6-9
India HOPE-TFI-IW	Standard National	March 11-15
India - Regional Networking Meeting (RNM)	Regional	April 26-28
Nepal HOPE	Standard National	May 30-june2
Philippines MFR	Standard National	May 29- June 10
Bangladesh MFR	Standard National	25 Jun- July 8
Bangladesh HOPE	Standard National	July 10- 13

TIPS ON EARTHQUAKE SAFETY

- Identify safe and unsafe places in each room at home (and in the office). Safe places are spaces under well-built (sturdy) furniture such as heavy tables, against an inside wall, close to door frames and supporting pillars.
- Identify a safe place outside your home (or office). The safe places outside are empty fields – away from buildings, trees, telephone and electrical lines etc.

LIST OF NSET PUBLICATIONS

S. N.	Name Of Publication
1	The Kathmandu Valley Earthquake Risk Management Action Plan, 1999
2	Earthquake Scenario of Kathmandu Valley (Nepali), 1999
3	Earthquake Preparedness Hand Book, 1999
4	Bhaicha (Illustrated Story on Earthquakes)
5	A Manual for Designers and Builders, 2002
6	Abstract Book, ASC 2002
7	Proceedings of Asian Seismological Commission, ASC 2002
8	Earthquakes (30 Frequently Asked Questions and Answers) (Nepali), 2003
9	Non-Structural Vulnerability Assessment of Hospitals in Nepal, 2003
10	Guidelines for incorporation Earthquake Safety Measures in Repair and Maintenance of Buildings with Historical/Archaeological Importance, 2004
11	Earthquake Scenario of Kathmandu Valley (English), 2004
12	Guidelines for Seismic Vulnerability Assessment of Hospitals, 2004
13	National Building Code 203 (In Nepali), 2004
14	What to do during an Earthquake (In Nepali), 2004
15	Earthquake Resistant Construction of Building Curriculum for Mason Training (Guidelines for Training Instructors), 2005

POSTERS AND FLIERS

1	Risk Land
2	NSET brochure
3	Earthquake-induced cracks in building (size 20" X 30")
4	Earthquake safety through community-based initiative (size 17" X 22")
5	Modified Mercalli Intensity Scale (Size 20" X 30")
6	Earthquake risk reduction of non-structural Items
7	Citizens' responsibility during mass casualty management
8	ESD-2005 Poster
9	ESD – 2006 Poster
10	NSET Newsletters
11	Guideline for training instructors
12	Fliers on earthquake safer construction (concrete frame (pillar-beam system), stone and brick masonry, earthquake safety and retrofitting)

For more information on

Earthquakes and NSET's efforts towards earthquakes risk reduction log on to www.nset.org.np

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