

# *School Safety Approach*

## *and the Scaling Up Strategy*

Nepal is vulnerable to disasters that put children, (one quarter of the population 6.3 million) who are enrolled in school and their 141,000 teachers at risk. Flood, earthquake and landslide are among the hazards posing serious threat to the schools for number of reasons: a) schools are located in risk areas, b) most of the buildings are built without earthquake resistant technology, c) over crowded class rooms, d) lack of preparedness plan in the school and e) unavailability of critical services such as search and rescue at the local level, etc. Many schools are located in inaccessible areas, particularly in the high altitude mountainous areas. **A 6.6 magnitude earthquake in Udayapur in Eastern Nepal in 1988 damaged 6000 schools. Fortunately, the quake took place at night when the schools were vacant.**



**Children** in Nepal go to schools that are too weak to resist a medium size earthquake. The proportion of schools that is vulnerable to earthquake is yet to be determined. A disaster like the 2005 South Asia earthquake in Kashmir valley, which killed 17,000 children, could occur in Nepal.

### **Where we are in Nepal?**

The country is located in one of the most seismically active regions in the world, which is hit by a medium size earthquake once in every 75-100 years. A review of the seismic vulnerability of the public school building in Katmandu valley shows that among 900 schools surveyed, 58% are built with traditional materials (adobe, stone rubble or brick in mud mortar). While the remaining 40% used modern materials such as brick in cement mortar or reinforced concrete, they are not necessarily safer as they did not follow safety standards. Only three school buildings followed the National Building Code.

Following the 1988 earthquake, the NGOs, UN and government adopted a variety of school safety approaches that range from making schools disaster resistant,

school preparedness, awareness raising, to training for teachers and students. Apart from government, who have a clear focus on building new earthquake resistant school blocks, most of the NGO works are piloting. After adoption of the Hyogo framework of action and the UNISDR campaign on education and children, there has been a growing demand to work on school safety. However, there is a lack of a comprehensive approach, the coverage is limited and a strategy is needed to scale up the school safety initiatives.

**In this context, the school safety approach wants to serve two purposes:**

- 1. a comprehensive approach to school safety, which can be used, promoted and replicated by the variety of actors in Nepal.**
- 2. provide an outline of a strategy for scaling up comprehensive approach to school safety**

# APPROACH USED FOR SCHOOL FOCUSED PROGRAMMES IN NEPAL

Wide variety of school safety approaches are practiced in Nepal by the NGOs, UN and government, with the objective to enhance the readiness of the school in reduction of death and injury. Some of the approaches are specific to school safety; some has adopted school safety within their community based disaster management programmes. Individually, the actors are not using all the approaches, nor do they have a similar objective.

There is no mechanism to share each others' approaches. Knowledge gaps are consistent to all the approaches:

- i) frequency of simulation exercise,
- ii) information of students by age and teachers,
- iii) duration of first aid training, ratio of first aid trained people in relation to total number of student,
- iv) how to make it sustainable.



## WHAT is school safety?

There are two broad areas of school safety: First of all, buildings are seismically safe and there is a system in place to handle primary rush in case of an emergency. Secondly, building leadership and skills of the children, teachers and school management committees to save their own lives and handle emergency situations in community.



## Why School Safety

### A) Insecurity in the Schools is a threat to access and quality of education and barrier to achieve MDG

Frequent flood may not kill or injure children but can seriously affect children's education where as earthquake may result in death and injury. This is also a big threat to achieving goals of education in MDG affecting both access to school and quality of education. Access to school is seriously hampered by annual floods in many parts of Nepal. A potential earthquake can also make school inaccessible for long period. Quality of education can seriously be affected as a result of injury and death of teachers, or destruction of education materials. It takes years to train teachers and education staff.

### B) Children are willing to learn and capable to apply.

Children can learn DP issues quickly and are keen to learn as well. The school level orientation and training to teachers can increase knowledge and skills in the remote places like DIPECHO has done in Rupendehi district.

### *Learning on DP from school saved my mother and brother's life*

Babita Thapa is seven years old and studying in class two. She is living with her parents and younger brother in Bagkumar tole of Devdaha VDC, Rupendehi district. *"One day in May 2007, when I came back from school I found that my mother was touching a electrical wire and my baby brother was about to touch my mother. I immediately realised what happened to my mother. It was electrocution. My teacher just told us in a class that day when she was telling us about disasters and hazards in daily life. I stopped my brother from touching my mother, picked him up and then shut down the switch board. Then I started calling my neighbours for help. I learnt to help from the school programme started in our school."*

This is a story from DIPECHO project implemented by ActionAid Nepal through local partners. That day, the teacher taught Babita and others about the hazards like flood, land slide and electrocution. Her mother Sharaswati was burnt but not injured too much. She recovered quickly.





However, **TWO** issues remain unresolved and require for further inquiry:

1. An agreed common approach in the area of school safety. It is difficult to determine whether a particular school is completely safe or not.
2. Equitable and consistent growth - the coverage of a school safety programme is limited to number of schools in few particular districts.

## The Challenges in SCHOOL SAFETY WORK in NEPAL

### KEY CHALLENGES

#### A. Knowledge gap and sharing mechanism (for improving practice)

There is a consensus among the experts that pedagogy of school safety is yet to be developed. As a result, the school safety programmes are based on unchecked assumptions where further scientific research is required:

- i. frequency of evacuation and simulation exercise that is manageable and sustainable. This is particularly in relation to the earthquake where frequency of occurrence is low. Flooding is a regular occurrence which makes simulations manageable and more sustainable.

- ii. types and nature of information that is minimum and necessary to be provided to the various age group of students, (disability information should also be included),

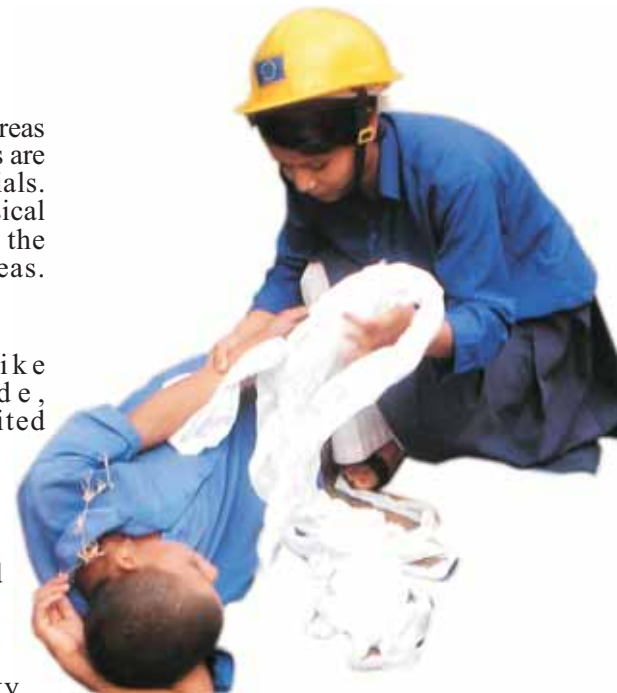
- iii. duration of first aid training and optimum ratio of first aid trained students and teachers to the total number of students and teachers,
- iv. make school safety programmes sustainable when resources for follow up are limited and time bound (mostly donor dependent).

#### B. Coverage of school safety programme

School safety programme is very limited and there is no national plan to guide equitable coverage using proper vulnerability criteria. Since most of the NGOs have very limited financial and operational capacity, they focus on the areas where they can operate conveniently. As a result, total coverage is small (around 200 schools

out of 28000), and the mountainous areas are not covered. Traditionally, schools are built with locally available materials. Nepal is divided into three geophysical areas, which largely characterise the vulnerability of each of the areas.

- Mountain (high hill): a) prone to geophysical hazards like earthquake and landslide, b) accessibility is very limited and c) all schools are built as stone and mud structures.
- The hill and valley (medium hill): a) prone to flood, landslide and earthquake, b) schools are built with traditional masonry such as stone, bricks and some cases concrete and c) accessibility is limited.
- Terai (plain land): a) flood, earthquake and fire are main hazards, b) schools built mostly masonry and concrete and c) easily accessible.



The following table presents the coverage and gaps by locations:

*Coverage of school safety programme by geophysical characteristics of Nepal*

Geological region	Total number of schools	Number of students in millions	Coverage by NGOs as of 2007
Mountain	3,498	.49	3
Hill and Valley	16,637	3.06	105
Terai	7,996	2.74	46
Total	28,131	6.30	160

Though frequency of disaster is less in mountain areas, an earthquake can create a great impact on the half a million children going to the schools.

Reaching all the schools is a very challenging and a long term task but selection of school in strategic locations and ensuring a school has a school learning system is an urgent and short term priority in the mountain areas.

## C. School is a heterogeneous entity

Of the total 6.3 million children enrolled in all schools as of 21 May 2006, 4.3 million were in primary school; the figure corresponds to 1.3 and 0.67 million in lower and higher secondary schools in Nepal. The children are not a homogeneous group and thus have differential learning attitudes, and issue which needs to be considered in the school safety programmes. Boys and girls have different ability and experience in facing disasters. There are a total number of 141,605 (male - 98,059 and female - 43,546) trained teachers in the school, of which a total number of 1,288 teachers have some types of disability. The total enrolment for students with disabilities is 46,135 (girls - 20,766 and boys - 25,369), which is almost 1% of the total share of students.

## D. Sustainability

Most of the school safety programmes are donor funded projects; thus, they have a limited period of engagement between NGOs and schools. Almost all NGOs particularly the local ones, have no capacity to follow-up their efforts once project is phased-out. All the workers and teachers agreed that follow-up mechanism is necessary.

Partnering with and using existing formal and informal structures in the education sector are the most sensible ideas to go with in order to achieve sustainability of school safety programmes. Existing mechanisms such as district disaster relief committees, stronger school management committees and Red Cross systems can be considered by NGOs as follow up mechanisms. Sustainability funds could also be established in the schools for maintenance works of buildings and replenishment of emergency supplies.

# The Collective & GENERAL CHALLENGES



- There is a gap in both funding and capacity of the actors. Most of the school safety programmes funded by donors provide relatively small funding for construction of school buildings.

- The NGOs face difficulties in engaging schools as they are busy completing the schedule. Schools in urban areas, particularly the private schools, are perceived as more difficult to engage. There is a lack of the government order or guidelines that can build confidence of the SMC to engage with NGOs.

- Cooperation and coordination among sectors and actors are the main limitations. Dialogue between development and disaster risk reduction actors is necessary to identify each other's comparative advantages to increase the coverage of school safety. At the same time, the actors already engaged in school safety should develop mechanism to share information and learning with people in education to achieve a pedagogy in school safety.
- A lack of disaster vulnerability mapping, which can guide decision making on geographical coverage. Such mapping is an expensive and long term process as well.

# A FRAMEWORK

## of comprehensive school safety approach



The comprehensive school safety approach is proposed to guide planning and decision making of the existing and future school safety programmes in Nepal. **Three purposes of school safety programmes** include: a) reduction of injury and death, b) building future leadership and c) resumption and/or continuation of education during (except earthquake) and after a disaster.

### Four elements of comprehensive school safety approach

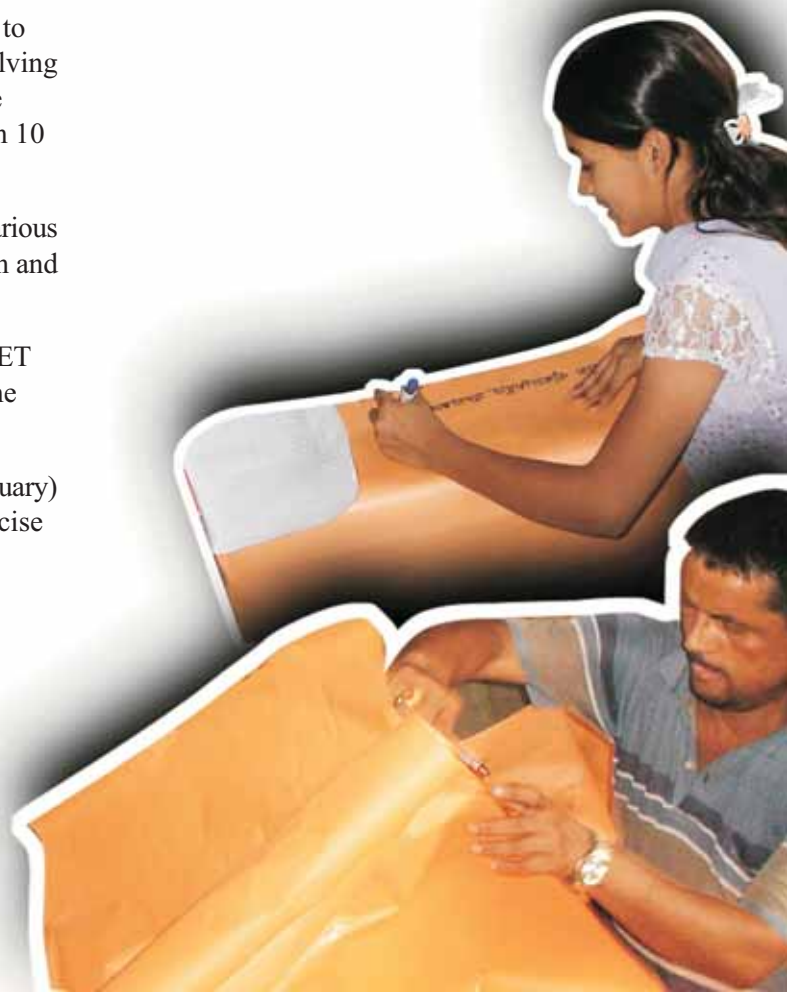
- **Information dissemination and awareness raising about potential effects of earthquake risk (and other hazards) on population, children and schools and their reduction. Provide training on critical areas like first aid, leadership, swimming lessons, etc.**
- **Making school structures resistant to earthquake and floods.**
- **Putting in place school disaster preparedness plan and regular evacuation drills which are linked to the community contingency plan.**
- **Planning for arrangement to run school during and quickly after a disaster.**

# The Process

- **The targeted audience:** schools, policy makers, general public, media, doctors, masons, etc.
- **Mass awareness using popular media:** Street dramas, folk songs, FM radio programmes, TV programmes, newspaper coverages, etc.
- **Targeted orientation:** The awareness raising targeted to school teachers, neighboring communities, school management committees and parents can change perception about disasters and creates demand for further knowledge and action.
- **Curriculum review:** A review of all school curriculum to explore how and where disaster can be incorporated. Involving CDC will increase the ownership. CDC will review of the curriculum in every 5 years and make necessary change in 10 years.
- **School based activities:** Encourage schools to organise various extra curricular activities such as essay competition, speech and drama on school safety and disaster in general.
- **Innovation and use of awareness raising tools:** NSET used earthquake scenario in the Katmandu Valley using the shaking table.
- **Day observation:** Annual Earthquake Safety Day (15<sup>th</sup> January) can be used for various activities, such as simulation exercise at schools and communities regularly and nationwide.

## Making school buildings resistant to earthquake and other disasters

A National Building Code was developed and enacted after the Udayapur earthquake in 1998. A number of projects in Katmandu Valley have been initiated. The school safety component of the EFA currently adopted an approach of co-financing with community to build school blocks.



# Possible Scenario of earthquake impact on school in Kathmandu Valley

Two scenarios to be considered – no intervention and intervention, for seismic improvement of school buildings. In the no intervention scenario, the expected loss is more than 29,000 school children dead or injured, and more than 77% buildings incurring direct building loss, damages of which have been estimated to be USD 7 million. In the intervening scenario, 24,000 lives can be saved and the buildings protected.

(Source: Dixit, A.M, NSET, 2007)



## School Vulnerability Analysis

- physical and engineering vulnerability of school: weakness/faults and physical vulnerability---types of building, materials used, etc.
- non structural: furniture, doors, windows, electricity, evacuation routes, physical location, evacuation site, open space, etc.
- capacity analysis: local resources and skills (e.g. materials for dams, trained masons), volunteers, neighboring community, etc.

PVA guidelines by ActionAid, VCA guide by RC, HVCA by NSET, vulnerability assessment of the school building - non engineering by SSE.

**Regular Simulation exercise; evacuation plan; stockpiling of first aid and light search and rescue materials are the key to safety**

### Partners in implementation:

- Local: SMC, local NGOs, district level education offices, etc.
- National: government, donors, UN and INGOs, Education network, Private Teachers association (PABSON), Parents associations, association of School management committees), DPNET (Disaster Preparedness Network Nepal), SCF Alliance, UNICEF and UNDP



# The scaling up strategies

Scaling up strategies should have three goals in the school safety approach: a) improving quality of school safety programme, b) achieving quantity and spread, finally c) ensuring sustainability. The civil society groups, NGOs working on disaster, education and child rights, the Red Cross, the UN and teachers associations should implement and advocate for the following strategy. The advocacy targets are government and donors.

1. Pedagogical work should be initiated to include disaster as key barriers to access and quality. The indicators of access and quality of education should be reviewed in the context of disaster in Nepal. **School safety is a child rights issue, so it should get the highest priority.**
2. The constituency for promoting school safety should be diversified to include various government and non governmental actors.
3. All efforts should be undertaken to integrate school safety as a key priority in the Education for All programme in Nepal. Similar initiatives should also be undertaken by all other government and donor funded (bi-lateral and multilateral) education programmes. Two important things should be done: inclusion of school disaster plan in the education process and adoption of a comprehensive approach in the school building. The monitoring and reporting processes of MOE/DOE should include vulnerability reduction and DP as key indicator. Building of new school should be used as means and end to promote a culture of safety. Government should adapt that the guidelines and train appropriate engineers to provide technical support.
4. Selection of schools for safety programmes must be equitable, which can be achieved by including vulnerability criteria in the process.
5. Building capacity of the local NGOs on comprehensive approach, planning for school programmes.
6. Follow-up is a must to ensure that school safety activities such as simulation exercise, training for the new students/teachers and updating the school preparedness plan are ongoing.



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# It is the role of government to ensure a comprehensive coverage of schools through the school safety approach and provide training to the politicians on the issue. School Safety should be part of a Human Security agenda to save the future citizens of Nepal.

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## Glossary

PVA	– Participatory Vulnerability Analysis
HVCA	– Hazard Vulnerability Capacity Assessment
DP	– Disaster Preparedness
MDG	– Millenium Development Goal
VCA	– Vulnerability & Capacity Assessment
DOE	– Department of Education
EFA	– Education for All
NSET	– Nepal Society for Earthquake Technology
UNISDR	– United Nation International Strategy for Disaster Reduction
DRR	– Disaster Risk Reduction
NGO	– Non Government Organisation
DIPECHO	– Disaster Preparedness of European Commission Directorate-General for Humanitarian Aid
SMC	– School Management Committee
CDC	– Curriculum Development Centre
DPNet	– Disaster Preparedness Network, Nepal
MOE	– Ministry of Education
SSE	– School of Shelter & Environment
NRCS	– Nepal Red Cross Society
SCF	– Save the Children Fund

## Sources

NSET, Dixit A.M, Nepal Red Cross Society, Education for All, DPNet, Save the Children Alliance, CARE Nepal, UNDP, Teachers Association, Centre for Policy Research & Consultancy (CPReC), Education Network, ActionAid Nepal.

## Photographs Credit

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