BUILDING RESILIENCE through COMMUNITY LIFELINES









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Preface

This report explores the process of Localizing the Hyogo Framework for Action (HFA) and building local resilience through the use of community lifelines, namely schools and hospitals. It is targeted at local parliamentarians across India, aiming to build awareness and encourage action from this stakeholder group.

The report covers and expands on the following aspects.

Schools and hospitals as community lifelines: The importance of schools and hospitals in a community places them in a unique position to provide DRR education and capacity building services.

Communities as first responders: Communities are always the first responders, especially in areas like the Himalayan states where accessibility is poor and emergency response agencies are short on staff and equipment.

Community lifelines as catalysts for building local resilience: The presence of these community lifelines in almost every corner of the nation, combined with their catalytic role and suitable contextual conditions makes them a springboard to empower the local population and build community resilience.

Safe schools and hospitals: The imperative need to invest in these public institutions and the steps needed to do so.

Government support: The leap forward brought about by the National Disaster Management Act and ongoing government support to intisutionalise DRR.

Lessons from the field: The case study of the SEEDS India and EHA project, "Localizing the Hyogo Framework for Action: Integrated community based DRR through school and hospital safety'.

The key emphasis is on the fact that through an integrated model of schools, hospitals and the local population, communities become more resilient. The combination of community outreach and education, structural enhancement of public infrastructure and public advocacy empowers the community in a new manner. Not only do they gain critical DRR skills and knowledge, but by instilling a sense of ownership, the ongoing process of DRR is truly localized. It opens the door for a much-needed culture of safety to be born.

Manu Gupta Executive Director SEEDS



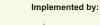
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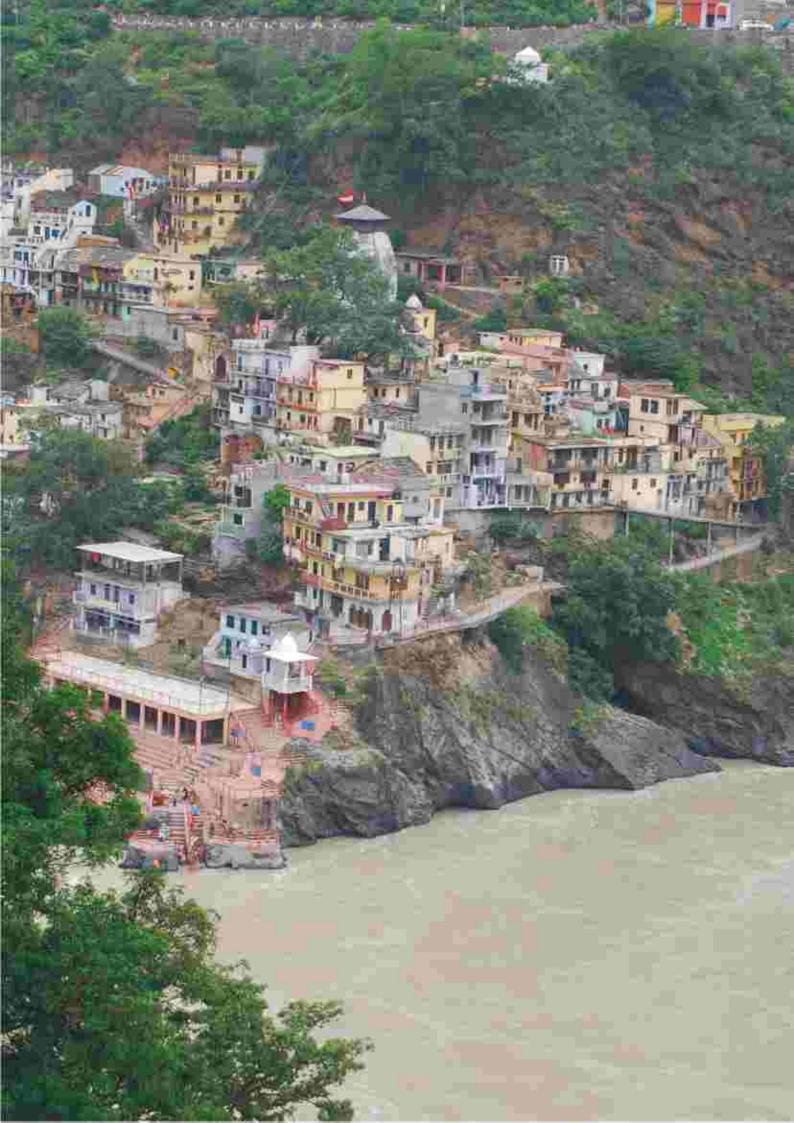






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Introduction

Every year, India faces the threat of massive natural disasters, from floods and landslides to earthquakes and avalanches. The toll from these disasters – including human lives and livelihoods, the destruction of homes and public infrastructure and disruptions to normal life – runs into financial losses of billions of dollars. For a developing nation like India, especially, this can be a devastating setback to progress.

Unfortunately, natural disasters themselves cannot be fully averted. However, investing in disaster prevention and disaster risk reduction (DRR) programs can substantially reduce the economic and social fallout when they do occur.

To this end, in January 2005, India, along with 167 other countries, signed the Hyogo Framework for Action (HFA). The HFA is a guideline to help communities become more resilient against natural disasters and protect their development gains. The aim is to substantially reduce disaster losses to life as well as to social, economic and environmental assets of the community.

There are five priority actions within the HFA:

 Ensuring that disaster risk reduction (DRR) is a national and local priority and that there is a strong institutional basis to implement it.

- Identifying, assessing and monitoring disaster risks and enhancing early warning.
- Building a culture of safety and resilience at all levels through knowledge, innovation and education.
- 4. Reducing the underlying risk factors.
- 5. Strengthening disaster preparedness for effective response at all levels.

The HFA is a ten-year plan and the goal is to meet it by 2015. In order to do so, however, one critical aspect that cuts across many of these priorities must be addressed. For HFA to succeed, particularly in India, national level acts are not enough. Implementation, education and advocacy structures need to be built at the local level. Strengthening public infrastructure, namely schools and hospitals, both structurally and as centers for knowledge dissemination is a key factor.

This report explores the seminal role that public infrastructure can play, the urgent need to strengthen schools and hospitals and the steps that can be taken to build community resilience through these community lifelines.



COMMUNITY RESILIENCE: How Quickly Can a Community Bounce Back?

The frequency and intensity of natural disasters means that governments cannot handle the response alone. At the local level, communities need to build the strength to bounce back when disaster strikes. Community resilience is a measure of this strength, of how quickly a community can recover from a disaster - financially, physically and socially. This means not just minimizing structural damage and death tolls, but the disruption to people's lives. The foundation to this resilience is preparedness. Structurally, institutions need to be strengthened. Clear disaster management plans that take into account the local vulnerabilities need to be drawn up. A culture of safety must be inculcated and the local residents equipped with the necessary skills and knowledge. Underlying all of this is the critical need for a sense of ownership and involvement in disaster risk reduction (DRR) among the local population themselves.

So with communities growing increasingly disparate, especially in semi-urban and urban areas, there needs to be an integrated method that brings people together and involves them in DRR at the grassroots level. Community lifelines serve this very purpose.



Community Lifelines as Drivers for DRR

Both legally and socially, education and health are viewed as a fundamental right of citizens around the world. This basic premise ensures that schools and hospitals occupy a special status within every community. They do more than fulfill basic needs, actually serving as powerful symbols of social progress and a prerequisite for economic development. Perhaps most significantly, they are 'hubs' within the local community, prominent, respected and home to large gatherings of people.

This inherent importance day-to-day uniquely positions schools and hospitals to serve as 'community lifelines' for Disaster Risk Reduction (DRR), both in terms of developing resilience and as shelters during a crisis.



Building Local Resilience through Schools and Hospitals

One of the key defining features of a viable community lifeline is its accessibility. Schools and hospitals are a common thread weaving across India. For the most part, even remote villages are equipped with some means of education and health facilities. This gives them the innate ability to serve as launch pads for disaster risk education, community social mechanisms and capacity building services in all four phases of the disaster cycle: non-disaster, before, during and after a disaster. In fact, the added investment between a safe and unsafe school or hospital can spell the difference between the life and death of a future generation.

Hospitals and health facilities, especially, assume an even greater role during emergencies. If this

critical machinery collapses, then the situation can often be worse than the disaster itself, exposing the community to a magnified risk. By ensuring that they remain functional and safe, the larger goal of creating resilient societies can be addressed.

Recent experiences from the Gujarat earthquake of 2001, the Indian Ocean earthquake and tsunami of 2004 and the Kashmir earthquake of 2005 clearly indicate that unprepared communities, coupled with unsafe development patterns and buildings lead to a colossal loss of life, primarily women and children. At the same time, it has been shown that when the community is consulted at every phase, the success ratio of DRR program is higher.



COMMUNITIES: First Victims or First Responders?

Disaster history also reveals that when communities become victims, the affected help each other more than any outside forces.

After any major disaster, trained first responders who can provide search and rescue, fire and first aid are usually unable to meet the full demand for these services. Even in the best case scenario, many of these communities, particularly in hilly areas such as Uttarakhand, have limited accessibility and emergency response agencies are often low on staff and equipment. It is the local civilian population that is most responsive in meeting immediate life saving and life sustaining needs till outside agencies get through. In other words, building community resilience means minimizing losses for generations to come.

The 2001 Gujarat earthquake, the 2004 Indian Ocean tsunami and the 2005 Kashmir earthquake all saw remarkable case studies of untrained family members, neighbors, colleagues and employees immediately taking responsibility to help those in need. So with insight into search and rescue and first aid, the death toll may have been significantly different.

Equipping local communities with the answers to a few basic questions and facts can help civil societies prepare better to be first responders in a crisis.

The different hazards and past histories of disasters.

The immediate basic needs and services in the aftermath of any disaster.

Dos and don'ts for different disasters.

Roles and responsibilities of different stakeholders for mitigation, preparedness, and response.

Specific training on life saving skills i.e. search and rescue, first aid and use of fire extinguishers.

Organizing the community into various task forces and emergency response teams to serve as first responders.



SCHOOLS & CHILDREN: Agents of Change for DRR

When we talk of engaging the community, one of the key stakeholders are the young. Children are a dynamic and powerful force of change and the major players in creating awareness in the community. Their unique perspective and energy can help build viable local solutions.

Schools are also more than a place to learn. In the aftermath of a disaster, education services are one of the most important ways to restore the sense of pre-emergency routine to the community. It plays a key role in facilitating the psychological healing of children and adolescents through peer interaction and a sense of normalcy.

A three-point agenda – learn, reflect, empowerbased on Dr. Daisaku Ikeda's proposal *The Challenge of Global Empowerment: Education for a Sustainable Future* is an effective way to approach disaster education in schools. It helps engage the students on three levels.

To Learn: Students deepen their awareness about hazards and risks when they understand realities and learn facts. Recent natural disasters are well documented and shared. These serve as case studies for teachers as well as students. Wherever needed, disasters are simulated with the help of portable models. The learning process is strengthened by changes in the curriculum. To Reflect: Students analyze factors leading to human casualties and injuries in disasters, so that they can recognize development practices and human actions that can cause disasters or prevent them. Students are connected to their own local communities and families and share their learning with them.

To Empower: Students take concrete action toward reducing risks in their environment. Classroom and school exercises are introduced to help them take small definitive actions that can lead to bigger investments for disaster risk reduction. School students, teachers and management together develop disaster management plans for their schools. In the process, they discover existing structural and non-structural weaknesses. Efforts should be made to ensure that the school community takes ownership of the plan and makes the necessary updates.

At the same time, the community as a whole needs to be involved. Strengthening structural investments with participatory on-site and off-site programs is a key factor in ensuring the success of any DRR initiative. Any adopted risk reduction approaches need to be simple, easy to understand, implement, replicate and manage with available tools and resources at the community level.

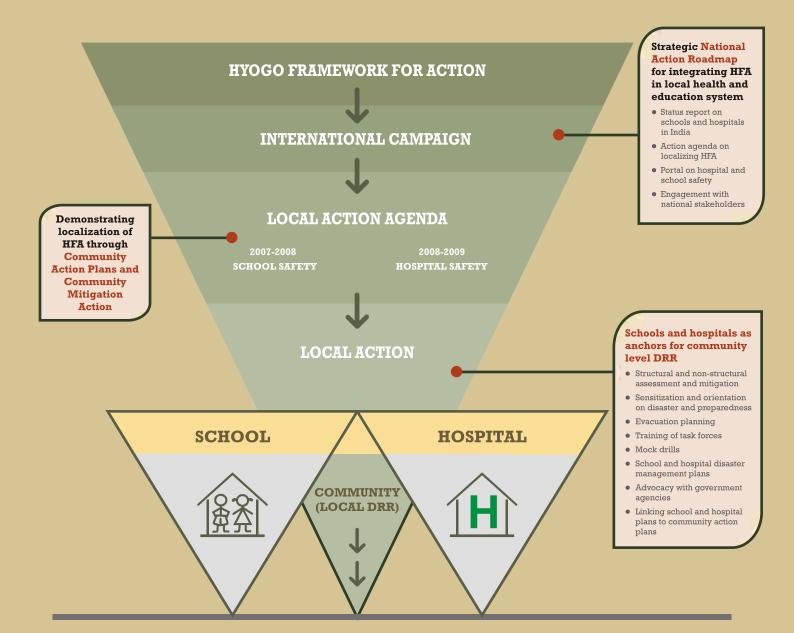


COMMUNITY LIFELINES: A Public Advocacy System

Empowerment in this manner leads to public advocacy by the local community themselves.

During disaster times, a variety of stakeholders come together to restore normalcy, acting as a hub for public advocacy. The problem is that DRR is an ongoing process and during non-disaster times, when many organizations have left the area, local communities need to have the skills to continue these practices. This advocacy is a critical component to ensuring that the idea of 'preparedness' remains at the forefront of disaster management during non-disaster times. With their insight into specific needs of the area and supported by local leaders, grassroots level organizations within the community can bring about significant change.

LOCALIZING THE HYOGO FRAMEWORK FOR ACTION Integrated Community Based Disaster Risk Reduction through School and Hospital Safety



An Integrated Approach to Building Community Resilience

Each of these three facets themselves – school safety, hospital safety and community outreachare not novel concepts. The idea of school safety has slowly been gathering steam. Hospital safety is a fairly new idea and may take some time to catch on. Community outreach too is practiced by several organizations across India. The novelty lies in connecting these three stakeholders into one cohesive campaign. By building an integrated model of schools, hospitals and the local population, communities become more resilient. The combination of community outreach and education, structural enhancement of public infrastructure and public advocacy empowers the community in a new manner. Each of these elements complements and strengthens the other. Not only does the community gain critical DRR skills and knowledge, but by instilling a sense of ownership, the ongoing process of DRR is truly localized. It opens the door for a much-needed culture of safety to be born.



HOSPITALS: Challenges and Opportunities of an Integral Community Lifeline

While not yet taken seriously in India, the concept of hospital safety is clearly emphasized within HFA's fourth priority action area. The objective is to ensure that new hospitals are built with a level of resilience that helps them remain functional in disaster situations. Existing health facilities, particularly those providing primary care, need to be reinforced with mitigation structures.

The loss of life in a hospital setting can be due to two main factors: structural failure or falling hazards. Strengthening building parts using the appropriate retrofit technologies and ensuring that disaster resistant technology is used in all new construction can address the first. The second is answered by non-structural mitigation (NSM) within the hospital. This refers to arranging furniture and equipment in a manner that can prevent injury and having clear, easily identifiable evacuation routes.

Coupled with in-depth contingency plans and improved risk reduction capacity, these investments will play a key role in building resilience and meeting the United Nations Millennium Development goals.

While the vision is admirable, its implementation,

especially in the Indian context, faces severe challenges. A lack of comprehensive policy is compounded by no standard data collection forms. There is an abundance of irrelevant or duplicate data collected and the time lag is too long to prove useful.

Most importantly, DRR is still not seen as a priority so there is a complete lack of funding for safety measures. Every year, crores of rupees are spent on the health sector. Just a small proportional investment is required to incorporate DRR, a fraction compared to the losses incurred in a disaster, yet it is still unaddressed. There is an urgent need to learn from past experiences and correct the pitfalls. The tendency till today is still to just respond immediately after a crisis without considering the broader ramifications and necessities. This is compounded by a lack of safety awareness and disaster safety techniques.

What's more, the complex operational structures, scant resources and time crunch in most general hospitals means that any step forward will take some time to catch on. Clearly, further education and research is required to bring hospital safety even up to the school safety standard.



Investing in Safe School Buildings in South Asia

Structurally, investments in ensuring school safety are required at two levels. First, retrofitting or reconstruction of the existing buildings and second, ensuring that all new buildings are made safe from disasters. Retrofitting costs range from between \$ 4 to 5.5 per square foot. The cost of reconstruction is higher, but in cases where retrofitting exceeds 50% of reconstruction costs, it may be the only option. On the other hand, as confirmed by an UNDP supported initiative in India, incorporating safety measures into new construction only raises costs by a marginal 8%.

A broad analysis was carried out in 2008 for seven South Asian countries overlaying school data on existing vulnerability maps. Schools which fall under seismic zone 4 & 5, high flood prone zones or within 10 kilometres of the sea and highly vulnerable to cyclone and tsunami risks were considered. In India alone, this covered 422,799 schools with an enrollment of 68,706,398 students (2008).

The analysis revealed that India would need to spend an estimated \$3,200 million to retrofit all of these buildings. This amounts to 12% of the total expenditure on education in 2008. A total of \$7.5 billion is needed to retrofit every school in vulnerable zones in South Asia. In light of the number of students whose lives can be saved, however, this works out to just \$ 55 per student.

At the same time, the 1999 Turkey earthquake showed us that 50% of the injuries and 3% of the deaths were caused solely by non-structural hazards. Stressing simple non-structural changes such as safe storage of flammable and toxic chemicals in the laboratories or minimized fire risk in school kitchens can have a profound impact.



Safety as a Part of Sarva Shiksha Abhiyan (Education for All)

Funding, as always, becomes the stumbling point for many of these programs. Yet, upholding the spirit of the Sarva Shikhsa Abhiyan (Education for all) initiative means providing more than just an education – it means providing a safe education. Options to share part of the costs of retrofitting with Sarva Shiksha Abhiyan bugets and strictly enforcing structural norms for all new schools built under the scheme should be explored.

The Critical Need to Invest in Community Lifelines

While the investment may seem daunting, the question today should not be can we afford to do

this, but can we afford not to? The statistics speak for themselves.

Year	Drought	Earthquake (seismic activity)	Extreme temperature	Flood	Mass movement wet	Storm	Total
2000	588,000	0	0	907,500	0	0	1,495,500
2001	0	2,623,000	0	361,924	0	0	2,984,924
2002	910,722	0	0	50,772	0	416	961,910
2003	0	0	400,000	169,000	0	44,000	613,000
2004	0	1,022,800	0	2,776,000	0	0	3,798,800
2005	0	1,000,000	0	6,190,000	50,000	0	7,240,000
2006	0	0	0	3,390,000	0	0	3,390,000
2007	0	0	0	376,151	0	0	376,151
2008	0	0	0	1,45,000	0	0	145,000
2009	0	0	0	2,434,000	0	300,000	2,734,000
Total	1,498,722	4,645,800	400,000	16,800,347	50,000	344,416	23,739,285

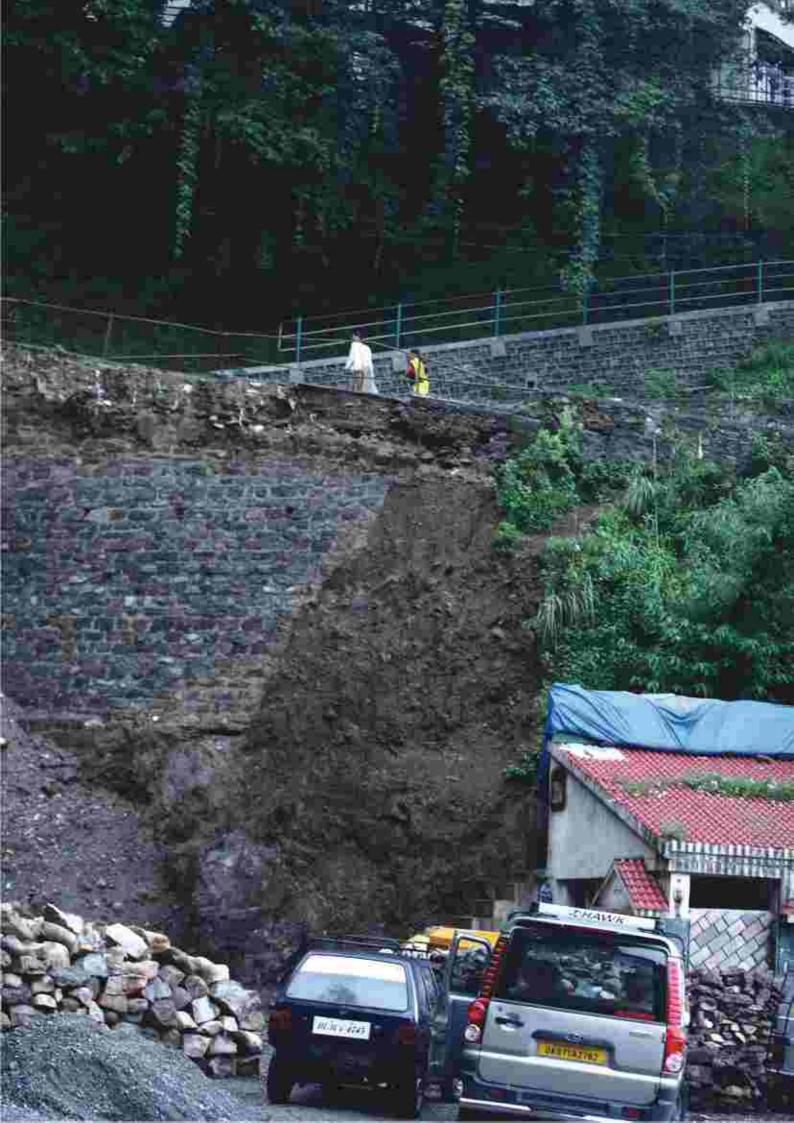
Economic Losses (in 000 \$) by Disaster Type between 2000-2009 in India

Source: "EM-DAT: The OFDA/CRED International Disaster Database

- The Gujarat earthquake on 26th January, 2001 claimed 13,805 lives.
- An estimated 1,884 school buildings collapsed and 5,950 classrooms were destroyed, while 36,584 classrooms were rendered unusable.
- 1,813 health facilities were also destroyed and 3,812 partially damaged and rendered inoperable.
- In the 2005 Kashmir earthquake, 2,448 schools collapsed and 17,000 children died.
- Thousands lost their lives or are missing after the South Asian tsunami of 2004.
- Worldwide, approximately 1.2 billion students are enrolled in primary and secondary school; of these 875 million school children live in the high seismic risk zones and hundreds of

millions more face regular flood, landslide, extreme winds, cyclones and fire hazards. About 785,550 South Asian schools are located in such high risk zones.

- In 2008, 1,23,89,350 people were affected by natural disasters in India alone.
- The World Disasters Report 2009 data estimates damage from disasters just in Asia in 2008 to be \$115,935 million.
- Worldwide, direct disaster damage costs alone have shot up from \$75.5 billion in the 1960s to nearly a trillion dollars in the past ten years (Munich RE 2002, CRED 2009.)
- \$3.15 billion spent on reducing the impact of floods in China averted losses estimated at \$12 billion (DFID 2004).



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Government Support and DRR Institutionalization

The urgent need to localize the Hyogo Framework for Action and convert paper work into field level action means that mainstreaming and institutionalizing disaster risk reduction is critical.

Over the last five years, the Indian Government has taken significant steps forward in this regard. This new approach stems from the conviction that unless disaster mitigation is built into it, development is not sustainable. Investments in mitigation are also much more cost effective than expenditure on relief and rehabilitation.

Against this backdrop, the National Disaster Management Act (NDMA) constituted by the Government of India in 2005 laid down institutional and coordination mechanisms for effective disaster management at the national, state and district levels. For India, this was a much needed leap forward. In fact, Dr. Anbumani Ramadoss, the Union Minister of Health and Family Welfare, Government of India described it as the right impetus for a paradigm shift from response to prevention, preparedness and mitigation.

At the center of this act are 169 multi-hazard prone districts in 17 states. Each village will have a Disaster Management Plan drawn up by the Disaster Management Committee consisting of government officials, primary health center staff, teachers and other prominent locals. The plan encompasses prevention, mitigation and preparedness measures. The teams are provided basic training in evacuation, search and rescue and other critical areas and are responsible for generating awareness among their villagers on the 'dos' and don'ts' for specific hazards.

It also recommends evaluation and retrofitting of lifeline buildings in seismic zones III, IV & V. Schools, hospitals and other public infrastructure must be in compliance with Bureau of Indian Standards (BIS) codes and bye laws.

What's more, it officially proposes that schools and hospitals be utilised to create high public visibility. Furthering the attempt to inculcate a culture of safety disaster management, disaster management has been introduced as a subject in the school curriculum for Class VIII & IX by the Central Board of Secondary Education (CBSE). Teachers are being trained and State Governments have been advised to take similar steps vis-à-vis their school boards. In fact, several State Governments have already introduced the same curriculum in Class VIII.

Over and above the NDMA are certain milestone initiatives such as a Supreme Court Judgment on 13th April, 2009. Stringent guidelines were issued for all government and private schools across the country that will help prevent accidents like the July 2004 fire in a Tamil Nadu school in which 93 children were killed. The directives include: Fire safety measures in schools; training of teachers and staff; school building specifications; and ensuring buildings are safe from 'every angle' before issuing recognition or affiliation to schools.



Localizing the Hyogo Framework for Action: Integrated Community Based Disaster Risk Reduction through School and Hospital Safety

A case study

Objective

To demonstrate an integrated, community-based DRR model centered on schools and hospitals that builds resilience to natural disasters and contributes to the localization of the Hyogo Framework for action.

The Project

SEEDS in partnership with Emmanuel Hospital Association (EHA) introduced a project called 'Localizing the HFA: Integrated community-based DRR through school and hospital safety'. Uttarakhand, where the project took place, is located on the Indo-Australian tectonic plate and is highly prone to devastating earthquakes, landslides, avalanches, forest fires, cloudbursts and flashfloods.

The project was implemented in two blocks across Dehradun, covering 10 villages, 10 schools and two well-known hospitals in the area. It was the first time any organization in India has attempted to link three different entities – schools, hospitals and communities –in an integrated DRR model in line with the Hyogo Framework for Action (HFA).

Task forces were set up in areas such as first aid, fire safety and search and rescue, while separate volunteer groups worked on advocacy, awareness and action.

The program demonstrated how school and hospital safety initiatives can be integrated into a comprehensive approach to build local level disaster preparedness. While the schools became a hub for disaster reduction activities such as village watching, the hospitals served as centers for disaster response and preparedness. On-site and off-site activities in both locations created horizontal linkages with the neighbouring communities. This outreach included engagement with public officials at both the block and panchayat level, as well as all respective State Directorates on incorporating the DRR approach into ongoing health and education programs. Vulnerable groups such as women and the differently-abled were paid special attention in the structural designs and disaster management plans.

The project covered advocacy for 5,300 government officials, policy level stakeholders, civil society and DRR practitioners. Awareness activities educated 12,350 students, teachers and school staff. 280 locals, volunteers and field practitioners from local NGOs and CBOs were involved. 200 doctors, nurses and community health workers were also trained.

Outcomes

For one, the program has encouraged local governments to become more proactive.

Vinod Kumar, Deputy Pradhan, Attenbagh Panchayat, is appealing to the district administration to introduce schemes and incentives to encourage the building of disaster resistant houses. Geeta Nautiyal, District Education Officer, Dehradun, has suggested the incorporation of GOLFRE (Global Open Learning Forum for Risk Education) modules into the school curricula. Jot Singh Gunsola, MLA, Mussoorie District, is advocating a separate DM policy for Uttarakhand in the State Assembly and aims to make Mussoorie a 'model district' with disaster-resilient practices in housing, construction and civil works. Examples from the local population make it clear that the community has truly imbibed the values of risk reduction.

In the Buraskhanda village on the Mussoorie -Dhanaulti road, the sensitization to DRR has begun paying off. A women's Self-Help Group (SHG) led by Mamta Joshi, which has been an instrumental partner in empowering women in the community, has sent a proposal to Uttarakhand's Department of Disaster. The proposal seeks a community hall (to serve as a shelter during disasters) and an afforestation scheme to arrest landslides in the area. "As a group, we are learning to use advocacy with the government to build disaster resilience in our villages," says Mamta.

Seema Singh is a SEEDS India Volunteer and Task Force Member, Chandalgarhi Village, Mussoorie. Her group of volunteers has sent a proposal to the State Government to award priority status to disabled people and pregnant women in civil hospitals in her district.

The school administration in Barotiwala Government School in Herbertpur, Dehradun district, has already put in place a post-disaster strategy that includes critical areas such as evacuation, fire safety and search and rescue.

Herbertpur Christian Hospital (HCH) has taken several measures to secure the structural and nonstructural safety of its buildings and has started disaster management training for its staff through SEEDS workshops and drills.

While these actions cannot be measured in a traditional sense until tested in an emergency, the seeds for a more empowered population have been sown and the local community is equipped to take the journey forward.

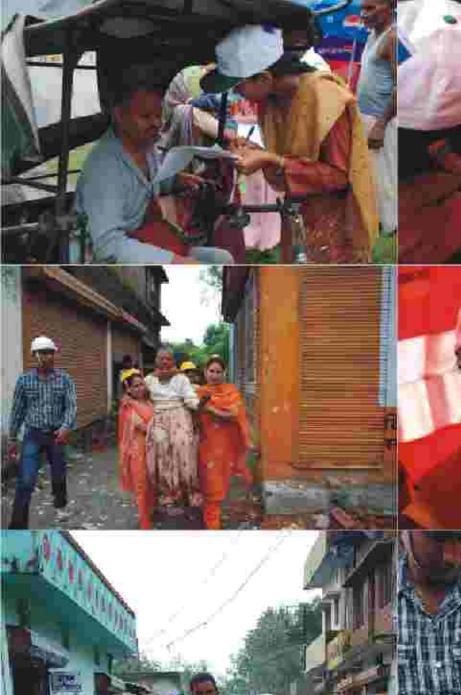
PORTAL for safe schools & hospitals http://safecommunities.info/



INTERGRATED APPROACH Hospital, Community and School Mock Drill



















The Way Forward

The future of DRR across South Asia, and particularly in India, may depend to a large extent on an integrated model of schools, hospitals and the community. Creating awareness and a culture of safety is the foundation to sustaining the momentum of the ongoing process of DRR and community resilience. Ensuring the construction of safer community lifelines such as schools and hospitals is the first step. Building them into hubs for knowledge dissemination and task force action is the second. Much work remains to be done on the possibilities where hospitals are concerned, but this integrated model clearly helps reach a much larger segment of the community. By building their community lifelines, villages, towns and cities across India can make themselves much more resilient.

Eight Priority Actions for People's Representatives

While an empowered community can bring about transformational changes, a critical component to the success of DRR initiatives is the involvement and support of local governments. MPs and MLAs have a unique role in representing and communicating local concerns to national governments, placing them in an ideal position to campaign and legislate for disaster - resilient development in their constituencies. Backed by the ability to influence national policies, spending and government knowledge on DRR, they can help bridge the gap between 'national policy' and local implementation.

- Embrace DRR as a critical priority and emphasize preparedness, rather than waiting for a disaster to react.
- Create disaster preparedness and contingency plans for all schools and hospitals.
- Take local insights from community members in account when making decisions DRR issues.
- Build DRR into ongoing development projects.
- Weave DRR into school curriculums.
- Ensure that as many schools and hospitals as possible are structurally up to code.
- Raise awareness and encourage training in critical DRR skills within the local community.
- Represent local vulnerabilities at the national level to secure funding.

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SEEDS is a non-profit voluntary organization working to make vulnerable communities resilient to disasters. For this, SEEDS adopts a multi hazards locally based approach seeking to empower communities through awareness generation, training and action.

SEEDS 15/A Institutional Area, R.K. Puram, Sector IV, New Delhi-110022 Phone: 91-11-26174272 Fax: 91-11-26174572 Website: www.seedsindia.org E-mail: info@seedsindia.org