Disaster Prevention
A Safe Foundation for Full Inclusion

How are millions of students excluded from schools year after year, by disasters around the world? Natural hazards (earthquakes, storms, floods and droughts) are not just occasional phenomena with unfortunate consequences. They are a common fact of life, whose impacts have increased with urban population growth and climate change. In a recent 12-month period more than 400 disasters have impacted 115 countries and killed 93,000 people. In 2008 alone we have seen Cyclone Nargis and the Sichuan Earthquake kill tens of thousands of children and displace millions more, making them "environmental refugees" and threatening their education. Three-quarters of the world's population were affected by these phenomena at least once between 1980 and 2000. Floods affect an average of 520 million people a year. Worldwide, 450 cities each with a population over 1 million face recurring earthquakes. Cyclones, typhoons and hurricanes are amongst the most deadly and costly of disasters. Droughts and desertification currently affect 250 million people and threaten 1.2 billion in 110 countries (UNESCO, 2007). The World Education Forum's Dakar Framework for Action: Education for All (EFA) (UNESCO, 2000) acknowledged that natural hazards pose significant challenges to countries in meeting their EFA goals, and would require international level support. As this threat has continued to grow, neither national nor international commitments have kept pace with the huge numbers of children affected. ***The rights of all children, to both education and safety, must be safeguarded simultaneously.*** Governments bear the moral imperative to ensure equal access for all children to education and to *safe* schools. These rights must also remain of foremost concern, even during emergencies.

Each time a disaster occurs, masses of children are excluded from school:
- In NW China more than 20,000 students were permanently excluded from an education and a future when their school buildings collapsed on them. Tens of thousands were seriously injured. At least 7,000 classrooms were destroyed. Education has been severely disrupted for at least a million school children, made homeless.
- In Kashmir 17,000 students died while they sat in their school classrooms at least 20,000 were seriously injured or disabled when the 2005 earthquake struck. Eight thousand of the nine thousand schools in the area were destroyed.
- In Gujarat 1,002 students and teachers died in the 2001 earthquake. Thousands were saved only by chance of being outdoors for holiday celebrations. Schools destroyed: 1,884. Schools seriously damaged: 11,761. Classrooms out of use: 36,574.
- In Bolivia's 2008 floods, the education of 20,000 students was interrupted when 347 schools were damaged.
- In Cambodia's disaster prone areas, principals report that floods cause 60% of their schools to close for 2.5 months of every school year.
- In Kocaeli, Turkey children were out of school from September through December following the August 1999 earthquake.
- In Bogotá, Colombia 77% of those children who were attending school and were displaced by disaster did not continue schooling after displacement.
- Floods annually disrupt education in many parts of Nepal. After the 1988 earthquake school was interrupted or stopped for 300,000 students.

- In Afghanistan, and in other places where school safety has not be prioritized and assured, school attendance drops significantly.
- Girls have been disproportionately impacted, due to differential skill training (eg. swimming) and inflexible dress expectations.

DISASTERS HAVE PHYSICAL IMPACTS ON STUDENTS AND STAFF –The ultimate exclusion occurs when students and staff are killed in unsafe schools, built in harms way, or not built to withstand expected and recurring natural hazards. Non-structural risks like falling objects, bursting pipes, and blocked fire exits can make children, teachers and staff victims of wholly preventable fatal or serious injury and disability.

DISASTERS HAVE PHYSICAL IMPACTS ON SCHOOL FACILITIES – Schools damaged beyond repair or unsafe, and nowhere to go. When student are denied continuous schooling many may never be able to catch up and often drop out permanently. Without plans for alternative locations and facilities, children may be excluded from school in large numbers.

DISASTERS HAVE ECONOMIC IMPACTS THAT AFFECT SCHOOL ENROLLMENT – Loss of income, housing, delays in matriculation make it challenging for families to support children continuing their education. Schools damaged beyond repair or unsafe require a level of reinvestment many times higher than the initial small incremental cost of building safely. Death or injury of parents or caregivers, or parents' loss of income forces school-age children to look after younger siblings, or take on new livelihood responsibilities. Loss of housing forces families to relocate, causing disruption to education. Delays in matriculation make it impossible for family to support students' education. Parents cannot afford the direct costs of schooling, including registration, school fees, tuition and examination fees, other informal fees and contributions, clothing, transportation or materials, resulting in non-attendance.

DISASTERS HAVE EDUCATIONAL IMPACTS ON STUDENTS – Where there are no plans for alternative locations and commitment to educational continuity, large numbers of students are excluded from the educational rights they had previously enjoyed, and others still enjoy. Valuable instructional time is lost. Schools may be closed due to lack of administration or staff. Quality of education may be impacted by insufficient supply of experienced. School or identity records destroyed prevent appropriate credit, matriculation, and education continuity. Inflexible procedures for qualifying examinations, admission and scholarship applications close options for students. Lack of provisions for making up missed schooling leads to inability to matriculate in timely manner. There may be a lack of training or commitment to maintain minimum standards for education in emergencies.

DISASTERS HAVE PSYCHOSOCIAL IMPACTS ON STUDENTS AND STAFF – Lack of resiliency development and prior empowerment leaves school-communities ill-prepared to deliver psychological first aid and to recover quickly. School communities lacked the vital knowledge of the hazards they face and how to reduce their vulnerability and risks, and are not empowered to be part of the solution. Everyone needs basic information about how to protect themselves, proactively. The curriculum may not have prepared children for this catastrophic event and may now seem irrelevant. Prolonged school closure prompts loss of trust in the support of the school community. Students lose a sense of continuity of their identity and their belief in their future hopes and plans including their commitment to continue formal education. Post-traumatic stresses and lack of psychosocial support make it impossible for some children to re-focus on their studies.

Disaster–resilient education and safe schools are within reach. It requires cooperative efforts to assess local risks. It requires leadership to systematically reduce these risks and to assure that natural hazards do not exclude children from school.

1. CREATE SAFE LEARNING ENVIRONMENTS WITH SAFE LOCATION, CONSTRUCTION AND RETROFIT

A. Select safe school sites and design and build every new school to be a safe school – Select school sites away from shore and from known fault line, landslide, flooding risks, and major commercial transit routes (railways, highways). Regulate and monitor disaster-resilient school construction. Use standard disaster-resistant designs with locally available materials. Be sure that construction workers are trained, supervised, and construction is monitored.

B. Prioritize replacement and retrofit of unsafe schools – Use engineering expertise to filter and prioritize using a comprehensive paper study, sidewalk survey of identified high risk schools, and detailed inspection of those that are revealed to have visible problems. Plan for staggered replacement, retrofit and repair of unsafe schools.

C. Minimize non-structural risks – Take measures to secure building roof, heating, ventilating and air cooling systems, water tanks, equipment, shelving, hazardous materials and similar items against wind and shaking. Eliminate hazardous materials exposure (water supply, asbestos insulation, lead paint, cleaning supplies, other toxics). Take fire precautions (esp. kitchens, laboratories) and keep evacuation routes clear. Assure clean water supply.

2. MAINTAIN SAFE LEARNING ENVIRONMENTS WITH SCHOOL DISASTER MANAGEMENT

A. Engage school administrators, staff, students and parents in ongoing school and family disaster prevention activities – Form a school safety committee or council. Undertake both regional and local assessment of hazards facing each school. Develop guidelines and templates for school disaster plans. Support participation in and implementation of disaster risk reduction measures at school. Require school staff to function as disaster workers and expect them to engage in their own family preparedness. (See eg. School Disaster Planning Checklist at www.riskred.org). Plan for safe reunification of families by requiring emergency contact and release permissions and establish protocols for supervision and release of children.

B. Practice simulation drills for expected and recurring disasters – Develop skill-training programs for everyone to be effective participants in disaster simulation drills, using ongoing reflection to develop ever-higher standards.

C. Maintain building structural and non-structural safety measures – Use on-site resource people and local community to check and maintain safe conditions, and external controls to maintain quality.

3. PROTECT EDUCATIONAL ACCESS WITH CONTINUITY PLANNING

A. Develop school and regional contingency plans in advance for school continuity. Include as necessary: alternate school locations, alternate transportation, alternate schedules, alternate curriculum delivery methods, retention and recruitment of students, exam preparation and administration, and resources and training for psychosocial support. Back-up educational records in safe locations.

B. Learn and implement "Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction". Be prepared to rapidly conduct post-disaster assessment of school damage, school closures, teachers affected, and continuity measures activated.

C. Incorporate the needs of children not-yet-in-schools, children with disabilities, girls.

4. TEACH AND LEARN DISASTER PREVENTION AND PREPAREDNESS

A. Teach disaster prevention and preparedness and principles of disaster-resilient construction and environmental protection through co-curricular and informal means: Provide students and families with urgently-needed access to life-saving safety information and disaster prevention strategies. Discover local hazards; teach early-warning systems and evacuation measures; learn physical and environmental measures for risk reduction; teach and practice safety skills and simulation drills (first aid, light search and rescue, fire suppression, water safety and swimming, incident command systems). Hold assemblies, exhibitions, sports-day events, drawing, writing and knowledge competitions. Engage in community-service projects, participate in community fairs and outdoor activities. Reach out to families. Use cultural arts: music, dance, street theatre, puppetry, magic, drama and visual arts. Teach skills needed for different hazards, for example structural safety measures for earthquakes education and water-safety and swimming lessons for flood hazards.

B. Incorporate disaster prevention and preparedness throughout the formal curriculum: Enrich existing curriculum at all grade levels by introducing skills and competencies for disaster risk reduction, safety and environmental stewardship, throughout the curriculum. Steps include: identification of scope and sequence of disaster risk reduction knowledge and skills, curriculum audit, and infusion through readings, exercises, and practical community-based projects incorporated during curriculum adoption cycle.

C. Engage teachers and students in adapting, developing and testing high quality interactive materials and strategies: Use regional resources and search and share materials on Global Library for Disaster Risk Reduction Education Materials (forthcoming on www.preventionweb.net) to find existing educational material. Evaluate, adapt and develop materials with both scientific and local experts, teachers and users. Reading materials, lesson plans, toys, games, models, videos and other curriculum support materials are all important.

5. BUILD A CULTURE OF SAFETY AND INCLUSION

A. Train faculty of pedagogic institutes and post-secondary trade schools: To sustain disaster prevention education, embed it in training programs for primary and secondary school teachers. Include knowledge and skills for disaster-resilient construction and infrastructure in vocational training programs and trade schools.

B. Involve school communities and reach out through non-formal education: Involve everyone in your wider school community as stakeholders in school safety: parents, families of staff, residents and businesses in the surrounding neighborhood, and public agencies and authorities through community-based needs and capacity assessment,.

C. Leadership begins with you: Everyone can begin with their own Family Disaster Plan and then become leaders in school and organizational disaster risk reduction (see www.riskred.org). Be a positive role model and set and example that others can follow.

Disaster prevention education provides children with the knowledge and skills needed to systematically recognize hazards and vulnerabilities, to reduce the physical risks in their environment, make use of capacities and resources, and protect themselves and others from hazard impacts. It strengthens children's thinking, team-building and problem-solving skills, encourages young people to analyze information, identify problems, propose solutions, and motivates them to take an active role in community protection and environmental stewardship. Education counteracts fatalism and passivity, and facilitates changes in attitude and behavior towards a culture of safety.

Education in Emergencies: when our disaster prevention efforts are not enough?

The InterAgency Network for Education in Emergencies have *Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction* cover the following areas:

1. Essential areas of community participation: focuses on use of local resources, initial assessment, appropriate response and continued monitoring and evaluation applicable to the other four categories.

2. Access and learning environments focuses on partnerships to promote access to learning opportunities and essential inter-sectoral linkages with protection, health, water and sanitation, nutrition and shelter to enhance security and physical, cognitive and psychological well-being.

3. Teaching and learning: focuses on critical elements that promote effective teaching and learning:curriculum, training, instruction and assessment.

4. Teachers and other education personnel: focuses on the administration and management of human resources, including recruitment and selection, conditions of service, and supervision and support.

5. Education policy and coordination: focuses on policy formulation and enactment, planning and implementation, and coordination.

RESOURCES

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Risk
RED

Risk Reduction Education for Disasters
www.riskred.org