

Disaster Risk Management in East Asia and the Pacific

EDUCATION

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INTRODUCTION

In the aftermath of the Wenchuan Earthquake, measures to restore education will be a critical part of the recovery efforts in Sichuan Province. The education system can play an important role in both (i) minimizing the impact of the disaster on children, and (ii) improving disaster preparedness. To help restore normalcy for children and provide them with physical and psychological assistance after such a traumatic experience,

restarting schools as quickly as possible is an immediate priority. To help strengthen disaster preparedness and management, a number of measures can be undertaken, such as rebuilding better school infrastructure and integrating school safety programs into the education curriculum.

This note will review international experience in using the education sector to pursue the dual objectives of promoting short-term recovery and ensuring better disaster preparedness over the medium term. In particular, the note draws upon examples from the countries of India, Iran, and Japan, which have all experienced devastating earthquakes in recent years that have resulted in loss of life and extensive damage to school infrastructure in the affected areas.¹ In all three countries, swift actions were taken in the education sector to assist students and rebuild schools, offering useful examples that China may wish to consider in shaping its own earthquake recovery efforts going forward.

RESTARTING SCHOOLS TO HELP COPE WITH DISASTER

For children who have experienced the trauma of a natural disaster and who may have lost their homes or loved ones, restoring normalcy can help facilitate and speed the psychological recovery process. Since schooling comprises such a significant part of a child's daily life, resuming the daily routine of going to school is a key element for restoring a sense of normalcy. At the same time, children can benefit greatly from reconnecting with teachers and fellow

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students who can offer support and a sense of community. Therefore, restarting schools should be regarded as a pressing priority for disaster recovery.

India's response to the Gujarat Earthquake in 2001 offers a striking example of how a government can quickly mobilize its resources to reopen schools and provide support to students. Immediately following the earthquake, which partially destroyed 10,000 schools and completely destroyed over 2,000 schools, the Department of Education initiated rapid damage assessment surveys and detailed technical surveys of affected schools to assess the damage. One survey found that the affected communities wanted their children to return back to school without much delay. Since teachers in these districts were initially reluctant or unable to attend school, officers from nonaffected districts were deployed to resume instruction in primary school centers. Within 90 days, over 2,000 temporary shelters for school children were constructed. Classes were held under trees, in tents, and in repaired classrooms, and in less than five months after the earthquake, about 10,000 of the affected schools had begun classes. The Department of Education also established more than 300 trauma treatment centers, which treated about 50,000 students.

It should be noted that using existing channels to deliver support can help speed school reconstruction efforts significantly. In India, the work of repairing and retrofitting schools commenced quickly: Within 45 days, Village Civil Works Committees (community-based organizations) were given funds to repair and retrofit nearly 9,200 schools. The funds for these activities were transferred directly from the state to the Village Civil Works Committee. This task, which normally would have taken years, was accomplished within six months and helped facilitate a quicker return to school for children.

IMPROVING DISASTER PREPAREDNESS AND MANAGEMENT

Beyond helping students return to school quickly, the

education sector can play an important role in improving disaster preparedness and management capacity. This section describes some of the measures that can be undertaken over the medium term to help ensure that the effects of any future natural disasters on schools, students, and teachers will be mitigated.

School safety programs: School safety programs and other awareness-raising initiatives are important for equipping students and teachers with the knowledge of how to handle a disaster. The 2003 Bam Earthquake in Iran, which resulted in the deaths of one-third of all students as well as one-third of all teachers in the affected areas, prompted the launching of the School Earthquake Safety Initiative. The initiative integrates earthquake education and preparedness into the school education program from kindergarten to the university level and aims to increase awareness among not only teachers and students but also the general public. New materials have been incorporated into the school curriculum across a variety of subjects such as science, geography, social studies, and technology. Schools are asked to form safety councils, which are operational teams that specialize in support, information, search and rescue, first aid and relief, fire extinguishing, and recovery.

Periodic drills should also be adopted as part of school safety programs. Practicing what to do and where to go can help ensure that children and teachers will know how to react and protect themselves when a disaster strikes. In Iran, national safety drills in schools are conducted annually and have grown from only 5 schools in the first pilot drill in 1996 to 140,815 schools in 2005. Other actors beyond the education authorities can help promote safety issues among children and the wider community. Japan's approach to disaster management provides a useful example in this regard. Following the Kobe Earthquake in 1995, Japan adopted a multifaceted approach that involved not only education authorities, but also the private sector and other actors. For ex-

ample, the Japan Society of Civil Engineers published a handbook for disaster prevention for kindergartens and nursery schools. Insurance companies developed materials that use cartoons to provide information on how individuals should respond to natural disasters in different situations—in the subway, theatre, bathroom, kitchen, bedroom, classroom, car, and streets.

Strengthening of school infrastructure: A critical measure to help minimize death and destruction in the event of future natural disasters is to ensure that the physical infrastructure of schools is sound. Efforts must be made to develop high standards and codes for school design and construction, ensure quality construction according to those standards, and perform regular maintenance.

In Iran, the government not only required that new schools be built to high standards, but it also issued guidelines for retrofitting of existing schools. In 2006 the parliament passed the School Safety Act, which provides USD 4 billion for the reconstruction and strengthening of nearly 258,000 “vulnerable” classrooms nationwide within four years. It aims to apply scientific and technical knowledge to reduce risks in all types of built structures and to ensure that future constructions are seismically safe.

Providing the necessary technical knowledge to the future engineers and architects who will be designing and building schools is another action that should be taken to help strengthen the infrastructure of schools and other buildings. Vocational and technical schools and engineering studies at the tertiary level provide natural channels for such education. As part of India’s School Safety Initiative, all engineering colleges must include seismic engineering and architectural courses. In Japan, technical high schools provide more in-depth studies on earthquakes and seismic reinforcement, and university programs include urban disaster risk management courses (i.e., fundamental mechanisms of combustion and fires, methods of precise forecasting, prevention, and control).

CONCLUSIONS

The above discussion points to some short- and medium-term actions that China can take in the education sector to facilitate recovery and improve disaster management. Some already have been undertaken by the Chinese authorities. Below is a summary of the key points raised:

- Restart schools as soon as possible to restore normalcy and provide physical and psychological help to children.
- Develop and implement school safety programs that integrate earthquake knowledge, awareness, and preparedness into the school curriculum and include periodic drills to improve preparedness.
- Ensure the soundness of physical school infrastructure by developing proper building codes and enforcing high-quality professional standards in planning, design, construction, and maintenance, as well as retrofitting older buildings as needed.
- For future construction of schools and other buildings, technical knowledge could be improved through the curriculum in construction for vocational and technical education and in engineering and architecture at the tertiary level. ■

End Note

- ¹ The Indian example uses information from a case study prepared by Deepa Sankar of the World Bank, who has been involved in the supervision of the Gujarat Emergency Earthquake Reconstruction Project. The Iran School Safety Initiative example draws from materials by the International Institute of Earthquake Engineering and Seismology in Tehran. The discussion of the response to the earthquake in Kobe, Japan draws from Disaster Education produced by the National Graduate Institute of Policy Studies in Tokyo.



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