



International Strategy for Disaster Reduction



Local Governments and Disaster Risk Reduction

Good Practices and Lessons Learned

A contribution to the "Making Cities Resilient" Campaign

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Watch and learn: Children and communities study mountain and urban risks



Abstract

In 2004, Saijo City was hit by record typhoons that led to flooding in its urban areas and landslides in the mountains. As a small city with semi-rural mountainous areas, it faces unique challenges in disaster risk reduction. First, Japan's aging population represents a particular problem. Young able-bodied people are very important to community systems of mutual aid and emergency preparedness, and as young people tend to move away to bigger cities, smaller cities and towns in Japan have an even older population than the already imbalanced national average. Secondly, people within a small city with semi-rural areas may not often be familiar with how to help people in a different physical environment just on the other side of town. To meet both of these challenges, the Saijo City Government has instigated a risk awareness programme targeting schoolchildren, and focusing on different physical environments of the city, from the mountainside to the town.

The initiative

The 'Mountain-watching' and 'Town-watching' project for educating students and communities about disaster risks has been implemented by the Saijo City Government since 2005. The project has been a part of the recovery from the 2004 typhoon damage to the area, turning that event into a learning opportunity for disaster risk reduction.

Saijo City is in the eastern part of Ehime Prefecture of Shikoku island in Japan, with a population of 113,000. Two thirds of all cities in Japan have less than 100,000 people. After the 2004 typhoons, Saijo City found that it was facing several key challenges in disaster risk reduction, some quite pertinent to Japan's other small towns and semi-rural areas.

It is estimated that by 2030, 32.4% of Japan's population will be over 65 years of age, and this imbalance is even more pronounced in smaller cities, especially in rural or isolated areas, as young people tend to move away for education and work. Saijo City found during the 2004 typhoons that its isolated mountain communities suffered from their lack of young able-bodied people to help with emergency evacuation and community systems of mutual aid and disaster preparedness. Their relative lack in these smaller cities means that there has to be more investment in building capacity of those young people remaining.

Secondly, smaller cities like Saijo City often have a mix of geographic terrains – an urban plain, semi-rural and isolated villages in hills and mountains, and a coastal area. Communities in these different areas are physically and socially isolated from each other, often with little knowledge of the other. But disasters pay little heed to these social barriers, as was shown in 2004 when the landslides and avalanche of wood debris in the mountains dammed a bridge below, flooding the urban plain. Different physical environments are still connected, so residents need to know about how their neighbours' geography will affect the whole city area.

Thirdly, despite local historical knowledge of hazards, the 2004 typhoons surpassed any experience in the memories of Saijo City's elderly mountain inhabitants. They were simply unprepared for typhoon destruction of such scale. It was clear that relying on local historical

experience was not enough, and that the 2004 catastrophe needed to be used as a new starting point for education and preparation.

To respond to all of these challenges at once, this initiative established a disaster prevention network, taking young people and communities from the urban areas and connecting them with the elderly in the mountains, to learn together and remember the local lessons of the 2004 typhoons.

The project takes schoolchildren, accompanied by teachers, local residents and municipal officials, on risk education field trips to the mountains and around the cities. There, they all learn about the risks specific to both of those environments and how they are connected. When mountain watching, the students are accompanied by teachers, local government staff, local mountain residents and forest workers. The group visits the area affected by the typhoon near the upper area of a river alongside a school. They view the site, which was damaged by the 2004 typhoon, and hear stories from eye-witnesses. When town watching, students are accompanied by teachers, their parents, local government staff, and leaders and members resident associations (Jichikai). The group walks around the school zone and searches for dangerous places, useful facilities in case of disasters and important places that they don't notice otherwise in daily life.

The project officially ended in March 2009, however, the education process is ongoing. The project was funded by the Saijo City Government, with technical resources provided by Kyoto University Graduate School of Global Environmental Studies.

Results

Town watching has been implemented in five primary schools and mountain watching in three secondary schools as part of a disaster education programme targeting 12-year olds. A total of around 600 students participated in the trips, accompanied by around 20 teachers, 15-20 government officials and 20-30 resident association leaders.

Questionnaires conducted before and after the mountain and town watching activities has shown that all the participants improved their level of knowledge about the impacts of the 2004 typhoons.

The benefits of the mountain and town watching visits have extended beyond the trips themselves. In Saijo City a teachers' association for disaster education was been set up after the programme started. Motivated teachers share information with each other on disaster education, hold meetings, and have produced a guideline for others to carry out the mountain and town watching activities based on their experiences. The first series of mountain and town watching visits was conducted by Kyoto University and Saijo City Government. However, the next series was conducted by the teachers themselves, using the handbook developed by the teachers' association.

A Kids' Disaster Prevention Club is also being set up, consisting not only of students, but also teachers, parents, and community people who have been motivated by their participation in the mountain and town watching. Students suggest topics for further learning, and ask questions based on their mountain and town watching, while parents and teachers provide support and information.

A disaster prevention forum for children is held city-wide once or twice a year. Students from each school in Saijo City make presentations on lessons they have learnt about disaster management, including those from mountain and town watching.

The good practice

- The initial activity has been institutionalized through participant teachers developing a mountain and town watching handbook. This means teachers anywhere in Japan will be able to carry out the same initiative as a part of the school curriculum.
- It is a successful tool for community participatory risk education in smaller cities and towns. Coordinated by the local government to start with, it has involved many stakeholders, such as pupils in elementary schools and junior high schools, teachers, parents, urban residents' associations, residents in mountains, forest workers, the Citizens' Safety Department and the Education Board. This provides an excellent way for different sectors of the community to build relationships that are vital for community disaster preparedness and response.

- The approach turns disaster recovery into an opportunity for increasing risk awareness and disaster preparedness.

Role of local government

The mountain and town watching programme was conceived and implemented by the local government of Saijo City. It is an excellent example of a local government leading a multi-stakeholder and community-based disaster risk awareness initiative that can then become self-sustaining. The government supported the programme through providing professionals from disaster reduction and education departments, funding the town and mountain watching, and putting on the annual forum.

The special strengths of local governments are highlighted in the programme's emphasis on truly 'local' knowledge. Local governments have a particular responsibility to bring together multiple sectors and different people in their constituencies for better community disaster awareness of the local physical environments. Saijo City did this using grassroots participatory methods. This strengthened local community relationships by bringing people together directly to learn from and interact with the natural and built environment.

Lessons learned

- Sustainable disaster prevention that starts at school can come to involve the entire city. The involvement of schoolchildren can attract different elements of the community to work together and build valuable relationships.
- The very direct and participatory methods of mountain and town watching are good for inspiring participant interest in their local area, and motivating learning about disaster prevention.
- Mountain and town watching should not just happen once. It is enriched through repetition.
- A clear implementing body and a guideline are necessary for successful and continuous implementation.

Potential for replication

The key concept of this initiative is community-based education, which is very much replicable in other cities and local government areas. As a method it is inexpensive and cost-effective, and can be used in developing countries. Similar types of town watching programmes have been implemented in Viet Nam, Malaysia and India. To conduct this programme widely in different cities, local governments should coordinate with the education department and local school teachers. The mountain and town watching guidebook for teachers is in both Japanese and English, and can be a resource for other cities. For details of the guidebook, visit <http://www.iedm.ges.kyoto-u.ac.jp>

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