

# Human Security and International Contributions by Civil Engineering

## International cooperation through infrastructure support: Making the world safer for future generations

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#### Importance of building infrastructure in developing countries

The Japan Bank for International Cooperation (JBIC) contributes to economic and social development as well as economic stability and growth in developing countries by means of yen-denominated loans. One characteristic of these yen-denominated loans is an emphasis on building economic and social infrastructure. Building infrastructure is an essential condition for economic growth and poverty reduction in developing countries, and in recent years, the international community has reappraised the importance of building infrastructure in light of its contribution to the UN Millennium Development Goals. Building infrastructure, including efficient transportation and highly reliable electric power, improves productivity and increases the potential for economic growth. In addition, infrastructure support is directly related to support for the poor, since roads are indispensable for access to education and medical services, and a supply of safe water is essential for health maintenance of poor people.

#### Yen-denominated loans in varied fields

Due to the current diversity of development needs, a wide range of support is

provided using yen-denominated loans, including reconstruction assistance toward peace-building, assistance for world heritage preservation, and efforts for human security. In infrastructure building and various other yen-denominated loan projects, it is important to take the perspective of human security, focusing on the survival, life, and dignity of individual human beings, in addition to the perspective of the national or regional level. For example, when JBIC provided a yen-denominated loan for the Sihanoukville Port Emergency Rehabilitation Project in Cambodia, steps were taken to incorporate the standpoint of human security, such as an event (Photo 1) which was held to promote education and awareness raising for people related to the project, including area residents, and to protect people from the threat of HIV and AIDS.



Photo 1. Event held in Cambodia to prevent the spread of HIV

### Ensuring safety for the people of developing countries

Natural disasters are a major threat to people's lives. In developing countries with large populations of poor people, who are the most vulnerable to disasters, disaster risk reduction is an important factor for sustainable development and poverty reduction. In addition to emergency assistance (recovery), disaster countermeasures must also involve comprehensive, consistent efforts at every stage, including prevention and medium to long-term reconstruction. Because natural disasters are so unpredictable, investment in disaster prevention tends to be a low priority, especially in developing countries with inadequate financial resources. However, investment in disaster prevention during ordinary times can help to control damage when disasters occur and contribute to continuous stable development, thereby providing the basis of safety for future generations.

In the area of disaster reduction, Japan has taken many steps to cope with its frequent natural disasters. In addition to investing in structures, these efforts have included improvements in the legal system as well as various activities for disaster prevention and coping with disasters. Therefore, Japan is able to play an important role in cooperation with developing countries in the field of disaster reduction by transferring its knowledge regarding the technologies and systems that it has established up to the present time.

JBIC has provided a yen-denominated loan for a project for the seismic reinforcement

of large-scale bridges in Istanbul. Following an earthquake in northwestern Turkey in 1999, this project was launched for seismic reinforcement of large-scale bridges on major belt highways in Istanbul for the sake of future disaster prevention. The Turkish side recognized the value of the earthquake-resistant reinforcement technologies that Japan has developed on the basis of its past experience, including the 1995 Kobe earthquake, and requested Japan's cooperation in this project. (Fig. 1, Photo 2)

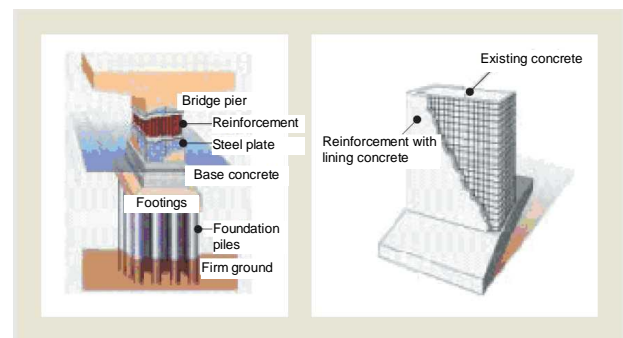


Fig. 1. Conceptual diagram of the seismic reinforcement project



Photo 2. The Second Bosphorus Bridge, scheduled for seismic reinforcement

For disaster countermeasures to be more effective, it is important for the administration at the local government level to

take action in a proactive fashion, giving consideration not only to measures for "hard" aspects (structures and infrastructure) but also to thoroughgoing measures for "soft" aspects (services and systems) whose effects extend to residents. To that end, it is useful to strive to actively utilize Japan's technologies and experience regarding disaster reduction, and to strengthen collaboration with Japan's local governments and other organizations.

Based on these considerations, JBIC promotes collaboration with Japanese local government organizations as part of its yen-denominated loan projects. At the time of the earthquake in northwestern Turkey, in addition to assistance for "hard" aspects, such as the project for seismic reinforcement of large-scale bridges in Istanbul, JBIC also provided support for "soft" aspects, including advice regarding disaster reduction manuals and Turkey's legal framework related to disaster reduction. The Hyogo Prefectural Government, which had experienced the 1995 Kobe earthquake, collaborated by presenting the lessons that Hyogo Prefecture had learned from that earthquake disaster and the practical steps that it had taken to cope.

In a project for urgent hazard mitigation following the eruption of Mt. Pinatubo in the Philippines, activities were held at the citizen level. For example, members of Shimabara Fugen Kai, a nonprofit organization, visited the site and provided Pinatubo residents with explanations concerning the reconstruction after the eruption of Mt. Unzen-Fugen and subsequent disaster reduction activities. (Photo 3)



Photo 3. The experience of Mt. Unzen-Fugen is applied in reconstruction in Pinatubo.

In the future, the perspective of human security will become even more important in the area of infrastructure building, which plays an important role in economic growth and poverty reduction in developing countries. When providing assistance in the area of disaster reduction, which is necessary to ensure people's safety, there is a need for comprehensive efforts that involve the central government, local governments, NGOs, local residents, and others, in addition to drawing on Japan's technologies and knowledge.