SUPPORTING RESILIENT POST-EARTHQUAKE RECOVERY IN CHINA

Building back better in the aftermath of disaster

AT A GLANCE

Country China

Risks Seismic risk and other natural hazards

Area of Engagement Enabling resilient recovery

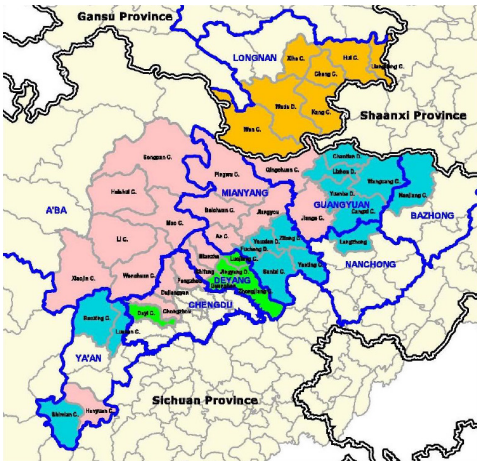
Following the 2008 Wenchuan earthquake, the Wenchuan Earthquake Recovery Project helped to restore essential infrastructure, health, and education services, promote disaster risk reduction, and enhance local capacity to manage recovery.

ONE OF THE COSTLIEST AND DEADLIEST EARTHQUAKES IN RECENT HISTORY

Facing a range of natural hazards including flooding, landslides and wildfires, southwestern China also sits on an active fault system, putting the region at high risk of major seismic events. On May 12, 2008, that risk became reality when an 8.0 magnitude earthquake struck the region, centered in Wenchuan county of Sichuan province. Leaving a trail of death and destruction across six provinces — Sichuan, Gansu, Shaanxi, Henan, Yunnan, and Hubei — the Wenchuan earthquake claimed the lives of over 69,000 people and resulted in 374,000 people injured and 18,000 missing.

The costliest earthquake to hit China since the 1976 Tangshan earthquake, the Wenchuan earthquake caused staggering economic losses in the six affected provinces. Total direct economic losses are estimated to be over US$133 billion, with Sichuan and Gansu provinces bearing the brunt of these losses. Asset damage was severe and widespread in the six provinces, including: 34,000 kilometers of highways destroyed; 1,263 reservoirs damaged; 7,444 schools and 11,028 hospitals and clinics in a state of collapse; and the houses of more than 4 million families either destroyed or damaged.

Project countries in Sichuan and Gansu Provinces



Provincial Boundary
Prefecture Boundary
Twinning Assistance Supported Counties
Sichuan Recovery Program: Infrastructure, Health
Sichuan Recovery Program: Health
Gansu Recovery Program: Infra., Health, Education
237 Earthquake-affected Counties

BUILDING BACK BETTER AFTER THE WENCHUAN EARTHQUAKE

In the immediate aftermath of the Wenchuan earthquake, the Global Facility for Disaster Reduction and Recovery (GFDRR) and the World Bank supported the Chinese government in undertaking a comprehensive damage, loss, and reconstruction needs assessment. Informed by this assessment, the Chinese government subsequently implemented the Wenchuan Earthquake Recovery Project (WERP) which provided assistance to restore and enhance basic infrastructure, health, and education services in 27 severely affected counties in the two hardest-hit provinces, Sichuan and Gansu. Supported by GFDRR and the World Bank, the project was carried out from 2009 to 2016.

Recognizing the need to strengthen resilience to disasters in southwestern China, WERP adopted a “Build Back Better Plus” approach in the reconstruction which mandated that

all project construction activities must use higher seismic-proof standards and flood risk management codes, and that project design and implementation should take into account poverty reduction and economic development considerations. In an effort to foster the sustainability of reconstruction activities, the project also worked to strengthen the capacity of provincial, municipal, and county-level governments to manage the recovery.

Complementing the physical reconstruction efforts, GFDRR supported the preparation of policy notes, the mobilization of international experts, and the provision of disaster and emergency preparedness training for teachers, school staff, and hospital staff. GFDRR also worked with the Chinese government to review the implementation of its national reconstruction master plan and six sector-specific reconstruction plans. Furthermore, GFDRR provided technical assistance to advance the dialogue on disaster risk reduction with provincial authorities in Sichuan, an effort which continues today in conjunction with the World Bank-funded Lushan Risk Reduction Project (2016-2022).

LESSONS LEARNED

Strong government leadership at both the national and local level can go far toward strengthening the effectiveness of recovery efforts.

The Chinese government's leadership in undertaking a comprehensive damage, loss, and needs assessment immediately after the earthquake was critical to making recovery efforts responsive to conditions on the ground. Meanwhile, the Sichuan provincial government proactively provided technical assistance to relevant provincial bodies in order to overcome weaknesses in their ability to support implementation of the project.

A flexible approach to implementation can help ensure that the project is able to accommodate evolving needs on the ground.

Rather than specifying activities ahead of time, WERP was designed in such a way that specific investments could be identified over the course of project implementation on the basis of a general framework and guidelines. In doing so, the project was able to accommodate the most immediate and urgent needs on the ground. For example, in Gansu province, the education component of the project was revised to focus on middle, senior secondary, and vocational schools after primary schools in the province became a priority for the Chinese government's own reconstruction program.

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nearly
13 MILLION PEOPLE
benefitted from restored infrastructure

ESSENTIAL INFRASTRUCTURE RESTORED

In Sichuan and Gansu provinces, many essential infrastructure, health and education services have been restored to levels prior to and even exceeding the Wenchuan earthquake. WERP built or renovated 300 roads, constructed and equipped 67 health facilities, and rehabilitated and constructed nine wastewater treatment plants. Overall, the improvements directly benefitted 12.7 million people.

VULNERABILITY TO SEISMIC HAZARDS REDUCED

Reconstruction efforts were designed to meet earthquake safety standards based on an 8.0 event on the Richter scale, compared with the previous standard of 6.0. Demonstrating the successful application of these new standards, reconstructed assets sustained only minor damage following the 7.0 magnitude earthquake which struck Lushan county in Sichuan province in 2013.

LOCAL GOVERNMENT CAPACITY STRENGTHENED

Provincial, municipal, and county-level governments in Sichuan and Gansu provinces benefitted from a comprehensive training program designed to strengthen their ability to manage the recovery. Training activities covered a range of technical areas including procurement, financial management, engineering design, and construction supervision.