

Emergency Relief Measures and the Rehabilitation Policies in the Aftermath of the 1999 Nantou (Taiwan) Earthquake

Daigee Shaw

**Graduate Institute of Natural Resource Management,
National Taipei University and
Institute of Economics, Academia Sinica**

ABSTRACT

On September 21, 1999, the most powerful earthquake felt on this island in one hundred years struck central Taiwan. With a magnitude of 7.3 on the Richter scale, the earthquake caused widespread devastation. More than 2,400 people lost their lives, many thousands were injured, and more than a hundred thousand were made homeless. Infrastructure was severely damaged, and the tremendous force of the quake radically altered even geographical features.

The estimate of direct property damage from the earthquake is about NT\$282.2 billion. The government's fiscal deficit for the second half of 1999 and 2000 reached NT\$126.2 billion, while economic growth for 1999 was reduced by 0.3-0.4 of a percentage point below pre-quake estimates.

In the disaster's immediate aftermath, both the central and local governments promptly mobilized all their resources for rescue and relief efforts, joined by NGOs, private groups and individuals from all over the island as well as teams from many foreign countries.

After attending to the emergency measures of rescuing trapped survivors, treating the injured, and providing care and shelter for the needy, the government focused its attention on the long-term task of reconstruction, rehabilitation, enhancing the prevention and rescue mechanism, and implementing industrial recovery plans, rehabilitation plans, and communities' revival plans. The government has set up a new organization called the Council for the Post-quake Reconstruction under the Executive Branch of the government.

Taiwan's insurance industry has provided earthquake insurance policies since 1972. They are available by attaching the relevant endorsements and payment of additional premiums to fire insurance, engineering insurance, automobile insurance and life insurance. Fire insurance and engineering insurance are the two most important ones among them. The demand for earthquake insurance policies is quite low. In fact, among 660,000 fire insurance policies bought in 1991, only 3,107 (0.47%) purchased the attached earthquake insurance. The written premiums of the earthquake insurance only accounted for 1.0% of that of the fire insurance in 1991, with most buyers being industries and businesses.

It is thus clear that the majority of the earthquake damages has to be borne by the victims themselves and the government through subsidies, emergency relieves and reconstruction.

The total government expenditure including victim relieves, subsidies for housing reconstruction, and infrastructures' reconstruction is estimated to be NT\$128

billion. These expenditures will be financed through a credit from the Central Bank, by diverting funds from other budgeted items, and from private donations.

Other than rehabilitation works, the central government has started to enhance long-term earthquake prevention and rescue mechanisms, including:

1. Enacting the Disaster Prevention and Rescue Law.
2. Setting up the emergency communication network.
3. Enhancing software, hardware, and functions of the emergency prevention and rescue system including rescue vehicles and equipments, transportation capability for emergency medical service, and an air rescue system—Helicopter Rescue Teams, the National Search and Rescue Teams.
4. A three-level insurance system for man-made capitals including co-insurance by insurance companies, re-insurance by re-insurance companies, and government funding is now under study. Some insurance companies are studying or offering some forms of catastrophe risk transfer mechanisms such as catastrophe insurance and catastrophe bonds.