

## V. Institutions

In China, there are a number of institutions responsible for reducing the cost of damages caused by landslides and some of these are listed below:

### Public Agencies

Public agencies play an important role in landslide management. The important agencies and their responsibilities are listed below.

- The Ministry of Urban and Rural Construction and Environmental Protection - design and building codes and control of landslides related to urban construction and development.
- The Ministry of Railways - avoidance, design and building codes; as well as control of landslides for protection of railways.
- The Ministry of Communications - avoidance, design and building codes; as well as control of landslides for protection of highways and waterways.
- The Ministry of Metallurgical Industry - control of landslides in relation to specific mining areas.
- The Ministry of Energy - control of landslides in relation to major hydro-electric power stations.
- The Ministry of Water Conservation - control of landslides in the watersheds of rural areas where necessary.
- The Ministry of Forestry - managing national forest land to minimize landslide damage.
- The Ministry of Mines and Geology - mapping of landslides in important development areas.

### Research Institutions

The institutions that carry out research activities on methods of reducing the impact of landslide disasters have been given below.

- The Chengdu Institute of Mountain Disasters and Environment.

- The Centre for Environmental Geology of the Ministry of Mines and Geology.
- The Debris Flow Prevention Institute of Dongchuan City, Yunnan Province.
- The Geological Institute of the Chinese Academy of Sciences.
- The Northwest Institute of the Chinese Academy of Railway Sciences.
- The Research and Coordination Centre for Geological Hazards of Gansu Province.

*The duties of these institutions are :*

- to undertake research on landslide mechanisms,
- to conduct research on real time predictions for landslides and debris flows,
- to develop methods of landslide inventory and mapping,
- to develop methods of landslide risk assessment,
- to develop and improve design and construction techniques for the control of landslides and to minimize landslide damage,
- to provide expert advice to public agencies and local governments,
- to provide technical assistance and training assistance, and
- to disseminate research results to planners, decision makers, governments, and communities.

The universities and colleges also carry out studies on landslide disaster mitigation individually or jointly with the institutions mentioned above.

### Provincial and Local Governments

Provincial and local governments carry out the following responsibilities :

- establishment of landslide monitoring/warning systems,
- mobilisation of resources and provision of expert assistance for help and rescue operations,

- compilation of inventories of landslides occurring in areas under their jurisdiction,
- promulgation and enforcement of grading ordinances and building codes to minimize landslide occurrence and damage,
- prevention of the construction of public facilities in landslide-prone areas and relocation of obsolete public facilities in landslide-safe areas,
- provision of information to make the public aware of landslide hazards, and
- coordination of private sector resources in the event of an emergency.

### Landslide Societies

There is no national landslide society in China as yet. Recently, several landslide societies or committees have been established in those provinces that are most susceptible to landslides. The Landslide Committee of

the Geographical Society of Sichuan was established in 1982, the Gansu Society of Landslides and Debris Flows in 1984, the Landslide and Debris Flow Committee of the Shaanxi Geology Society in 1985, the Landslide Control Committee of Shaanxi Civil Engineering Society in 1985, the Landslide Society of East China in 1987, and the Landslide Society of Hubei in 1988. These societies have more than 1,000 members altogether, mainly composed of researchers and engineers specializing in geology, geomorphology, topography, geophysics, civil engineering, erosion control, forestry, agriculture, civil engineering, and other landslide-associated fields. Members are drawn from research institutes, universities and colleges, public organizations, consulting agencies, and government agencies. They hold national or provincial symposia and seminars, together or separately, for the exchange of information on landslide processes and control methods. International symposia have also been held such as the China-Japan Field Workshop on Landslides that took place in 1987.