

## Korea

### Disaster Impact Assessment System in Korea

Since 1996 Korea has been carrying out a disaster impact assessment program. The Disaster Impact Assessment (DIA) system aims at fundamentally eliminating potential causes of disasters inherent in various development projects in advance and ultimately protecting people's lives and property. The DIA was introduced to protect lives and property in downstream areas from the impact of large-scale development through disaster prevention facilities such as retention reservoirs in development areas. In 2001, the DIA's coverage was expanded and it was integrated with other impact assessment programs such as environmental impact assessment based on the Impact Assessment Act for Environment, Transportation, and Disaster. However, since their purposes and techniques differ, each impact assessment program is reviewed and regulated separately despite their legal integration.

The Disaster Impact Assessment program is one good example of the implementation of sustainable development. When a development plan is proposed, its disaster potential in such areas as increased flooding, sediment yield and slope stability problems is thoroughly reviewed. The main objective is to minimize any increase in the potential for disaster caused by the development by using appropriate facilities and techniques such as building a sediment-yield retention area during construction.

The disaster impact assessment system is implemented when the area of targeted development is 300,000 m<sup>2</sup> or more. With respect to small and medium-sized development projects (150,000–300,000 m<sup>2</sup>), each city and province has introduced a local disaster impact assessment system. Currently, DIA is applicable to 24 categories in six fields such as urban and industrial development and the development of tourist attractions and mountain areas. Up to November 2004, 186 development plans had gone through this important program.



A part of the construction process of a retention reservoir required by the DIA

Even though Korea operates the DIA effectively, the program needs to be updated and improved. Continuous urbanization and industrialization may necessitate expanding the categories of DIA to reflect climate change, design frequency, and changes in land use. To ensure a fundamental reduction in disaster-causing factors in land development, a "Pre-Consideration and Deliberation System on Disaster Impact" is to be introduced. The purpose of the new system is to define new categories, including future directions and detailed plans for operation. It is still under development, with many experts carrying out systematic research.

Sustainable development can be defined as development that does not increase disaster potential or vulnerability. However, to develop any area without any disturbance is almost impossible. To reduce disaster factors due to development, regulations should be considered that safeguard not only the development site itself but also areas downstream. The Disaster Impact Assessment system currently in force in Korea is effective in reducing disaster factors and offers to be a good example for implementing sustainable development.



Reservoir during normal circumstances



Reservoir during the rainy season

#### - **Background**

A reduction in possible disaster factors from development was required.

#### - **Objective**

The system aims for the fundamental elimination in advance of potential causes of disasters inherent in various development projects, ultimately protecting the lives and property of people both at the development site and other areas.

#### - **Term/Time Frame**

Begun in 1996 and expanded in 2001. Current research on the "Pre-Consideration and Deliberation System on Disaster Impact" will be finished by February.

#### - **Activities Undertaken**

Continuous updating and research for improving the guidelines on how to measure, predict, and find appropriate countermeasures for disasters are under development.

#### - **Major Achievements**

So far, 186 development plans have gone through the DIA program. DIA is applicable to 24 categories in six fields including urban and industrial development and the development of tourist attractions and mountain areas

#### - **Total Budget**

The budget is determined by law, and, each DIA therefore requires private funding from contractors. Generally the DIA system requires about US\$100,000 or more depending on the size of development.

#### - **Contact Details**

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