

# Country Report

## *Republic of Korea 2001*

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### **1. Disaster Prevention and Preparedness Activities**

#### **(1) The Long Term Disaster Reduction Programs**

##### ***a. Implementation of the Disaster Prevention Plan***

○ To cope with disasters which are taking more diverse forms and larger in scale and to defining basic guidelines for national disaster prevention policy, the government has formulated the Basic Five-Year Disaster Prevention Plan and the Yearly Disaster Prevention Action Plan.

- By the local Disaster Prevention Council, Local Plans for Disaster Prevention has been formulated in accordance with the Basic Disaster Prevention Plan and local conditions.

- Designated government agencies and public institutions have formulated the Detailed Disaster Prevention Operational Plan to reduce the disasters that they are responsible for.

○ During the Fifth Basic Disaster Prevention Plan Period (1997-2001) when "Disaster Preparedness" is employed as a policy concept, the government funneled more than about \$24 billion into 22 key areas such as forestation, flood control, disaster prevention technology development, and etc.

- Consistent with the Yearly Disaster Prevention Action Plan, the government has invested more than \$4.3 billion to forestation, river improvement, disaster prevention countermeasures, disaster prevention technology development, and etc. in 2001.

○ During the Sixth Basic Disaster Prevention Plan Period (2002-2006), the government will employ 6 strategies, i.e., Implementation of Comprehensive Disaster Prevention and Preparedness Countermeasures, based on the concept of "Establishment of Disaster Resistant Country."

### ***b. Disaster Impact Assessment (DIA)***

○ To protect lives and property in downstream areas from the impact of large scale development, the DIA was introduced in 1996 and the subject range of DIA is expanded in 2001 facilitating disaster prevention facilities such as retention reservoir in the development area.

- Subject Categories : 6 field 16 categories → 6 field 24 categories

- Subject Range : over 1.8 million m<sup>2</sup> → over 0.3 million m<sup>2</sup>

○ For small-scale Project less than 0.3 million m<sup>2</sup>, mayor of local government is responsible to assess the disaster impact. The subject categories are same as those of the central DIA's.

### ***c. Implementation of Improvement of Disaster Prone Areas***

○ Korea identified 537 sites most susceptible to inundation, collapse, and isolation by typhoons and floods, and labeled them as Disaster Prone Areas. A total of \$1.1 billion will be invested for wide-ranging improvements for seven years from 1998 to 2004.

○ Under this plan, \$323 million has been invested to improve 306 disaster prone areas since 1998, and \$54 million has been invested to 95 areas in 2001.

### ***d. Improvement of Safety of Small Rivers***

○ Small rivers in Korea are vulnerable to overflow and one of the main causes of flooding. Thus, the first step of the improvement for vulnerable small rivers is to refurbish 820km from 2000 to 2009 at the cost of about \$3.9 billion.

○ Since 2001, small river sites totaling 500km were refurbished at the cost of \$20 million, and \$12 million has been invested to 250km in 2001.

### ***e. National Institute for Disaster Prevention***

○ For the recent destructive natural phenomena and disasters which are taking more diverse forms and larger in scale, National Institute for Disaster Prevention (NIDP) has conducted systematic and scientific research in the field of disaster prevention. The research results have been adopted as national disaster prevention policies through pilot projects.

○ NIDP has spearheaded 70 research projects such as "Introduction of Flood Insurance", "Standard for Small River Facilities", "Evaluation of Slope stability Problems", and etc.

○ NIDP has finished 19 research projects in 2001 such as "Development of Disaster Impact Assessment Manual for Practical use" and "Development of Disaster Prevention Drill Program".

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## **(2) Disaster Mitigation Activities**

### ***a. Implementing the Disaster Prevention and Preparedness for summer season***

To reduce the loss of life, property damage, and economic hardship caused by natural disasters, the Korean government has designated the period from March 1 to May 31 in 2001 as the "Disaster Precaution Period." Several action plans were put into practice during this period.

#### 1) Inspection and Maintenance of Large-Scale Construction Sites

○ For large-scale construction sites, such as subways, golf courses, dams, and residential development sites, Disaster Preparedness Plans are prepared and maintained, assigning multiple government officials to monitor large-scale construction sites and setting construction priority for the landslide and flood prevention.

#### 2) Inspection and Maintenance of Disaster Prevention Facilities

○ Plans for repairing disaster prevention facilities including retaining walls, embankments, and reservoirs was established and inspecting and repairs for the facilities were completed before the rainy season.

#### 3) Securing Equipment and Facilities for Emergency Countermeasures

○ Equipment and facilities for emergency countermeasures have been secured according to the need averaged over the last ten year period and local conditions.

#### 4) Fund for the Natural Disaster Countermeasures

○ For proactive disaster prevention activities and emergency recovery during severe natural disasters, a fund has been allocated in 16 cities and 232 districts since 1997.

### ***b. Disaster Prevention Education, Drills, and Public Relation***

To cope with disasters in minimizing the loss of lives and properties, each local government implements full readiness and close coordination in disaster situations, Disaster Prevention Education and Drills. Especially in the "Disaster Prevention Day", May 25, comprehensive disaster prevention drill at the national level was held, which includes programs such as life saving, emergency relief, recover measures, etc.

#### 1) Disaster Prevention Education

○ Staff members related to disaster prevention were educated during the Disaster Preparedness Period to enhance their ability to cope with natural disasters. The program included planning, managing critical situations, damage investigation method, and studying relevant laws.

#### 2) Emergency Drills and Practice

○ In order to enhance rapid responses to disasters, exercises under computer-simulated disaster conditions, a comprehensive exercise for disaster prevention, and emergency drills specific to each region were carried out in each local districts.

- Exercise under computer-simulated disaster conditions: to develop the ability for managing disasters, the exercise hosted by all the national and local disaster prevention headquarters was

carried out.

- Emergency drills specific to each region: local governments carried out their own emergency drills for conditions that are specific to their own regions.

### 3) Comprehensive Exercise for Disaster Management at the National level

○ On May 25, 2001, a comprehensive exercise for disaster management was carried out at the Gok-Gyo River, Ah-San City, Chung-Cheong-Nam-Do Province. Most of the disaster prevention related staffs participated in the exercise.

○ This exercise focuses on the strengthening a close coordination between related agencies and developing the ability in disaster situations management. The drill programs includes life saving, emergency relief and recovery measures for the lifeline facilities.

### 4) Public Relations for Disaster Prevention

○ Following the recommendation by UN, Korea has designated May 25 as "National Disaster Prevention Day" to promote the public participation and awareness of disaster prevention.

○ For promoting awareness of disaster preparedness, several events for the "National Disaster Prevention Day" such as inspection of disaster prevention facilities, a campaign for disaster prevention, photo display of disaster stricken areas, and a contest for disaster prevention posters were held.

○ Especially, TV broadcasting stations were put under a obligation to send disaster preparedness program for citizens on the air. Additionally, to promote the disaster preparedness awareness to the people, several media such as large-scale advertising sign, stickers on disaster preparedness, educational VCR films were used.

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## **(3) Disaster Preparedness Activities**

### ***a. Management of Disaster Status***

○ The Korean government has designated the period from June 15 to October 15 as the "Disaster Preparedness Period". Korea National Disaster Prevention and Countermeasures Headquarters (KNDPCH) and competent local authorities prepare to manage possible disasters and maintain the close cooperation systems.

○ During the regular time, KNDPCH's Disaster Report Center operates 24 hours a day with 4 officials. During the Disaster Preparedness Period, 6 officials work responding the disaster situation.

- When the weather forecast issues an advisory against possible heavy rain (preparatory phase), the number of staff expands to 16, and when there is a more serious warning concerning heavy rainfall or a typhoon (alert phase), 34 officials are placed on alert.

- When disaster strikes nationwide (emergency phase), 52 officials will operate in a state of emergency and manage the situation in a timely and comprehensive manner.

○ Korea National Disaster Prevention and Countermeasures Headquarters supervises the entire operation of disaster countermeasures management to minimize the loss of life and properties, emergency countermeasures, citizen's evacuation, saving injured, and warning disaster status, etc.

- Relief activities, anti-epidemic measures, timely recovery, and reconstruction planning are implemented for rapid rehabilitation.

○ Local Disaster Prevention and Countermeasures Headquarters operate 24 hours a day in accordance with KNDPCH's time frame.

**b. Operating the Automatic Warning Facilities against Heavy Rainfall**

○ Automatic warning facilities which provide sirens to the campers or hikers in mountainous valley will be installed for 115 areas from 1996 to 2004 with investment of \$31 millions.

- Under this plan, \$11 million has been invested to 28 areas. In 2001, \$4.6 million has been invested to 20 areas.

○ During the heavy rainfall season last year, 1,741 warnings in 48 areas were given to over 63,000 campers helping them pre-evacuate to reduce the number of casualties.

**c. Operating the Automatic Voice Warning Facilities**

○ The automatic voice warning facilities which provide disaster status to the citizens by phone and town speakers will be installed in 232 municipals from 2000 to 2002 with investment of \$8.6 million

- Under this plan, \$5.4 million has been invested to 179 municipals. In 2001, \$3.3 million has been invested to 43 municipals.

○ During the heavy rainfall season last year, 2,241 warnings were given to 330,000 citizens.

**2. Disaster Statistics (Sep. 2000 -Aug. 2001)**

**(1) Summary**

○ During the period of September 1 to December 31 in 2000, 6 people died and \$112 million worth of property damage was incurred due to typhoons and torrential rains.

○ During the period of January 1 to August 31 in 2001, 82 people died and approximately \$951 million worth of property damage was incurred due to 5 major disasters, that is, torrential rains.

○ Hence, during the period from September 1, 2000 to August 31, 2001, the total damage caused by six natural disasters was 88 casualties and \$1,063 million in property damage. (Detailed damages are given in Table 1).

**Table 1. Total Damage caused by Natural Disaster during the Period from Sep. 2000 to Aug. 2001**

Classification	Units	Sep.- Dec., 2000	Jan. - Aug., 2001	Total
Casualties (Dead or Missing)	Person	6	82	88
Displaced Person	Family/Person	518/1,766	691/2,353	1,209/4,119
Farmland Lost or Buried	ha	59	1,356	1,415

House Destroyed or Damaged	Unit	194	396	590
Property Damage	U.S.\$ million	112	951	1,063