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Korea

CORRIGENNDA

page/line	sub-title	corrections
3/20	II. Disaster Prevention Organization	Ministry of Constructions →Ministry of Construction and Transportation
5/11	1)River Improvement	\$1,235 billions→ \$1,234 millions
5/13	"	(30416km →30,416km)
6/5	2)Construction of Multi-Purpose Dam	muti-purpose→multi- purpose
6/7	"	muti-purpose→multi- purpose
6	Table 3	muti-purpose→multi- purpose
6	Table 3	(m' ton) → (m' millions ton)
8/9	2)Revision of the Prevention -Rlated laws and Regulations	residends:delete
8/22,23	4)Disaster Prevention Education	municipality→ municipalities
9/26	6)Set up Disaster Prevention Measures plan	has:delete
11/29	IV. International Cooperation	INDNR→IDNDR

C O N T E N T S

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I. NATURAL DISASTER CONDITIONS

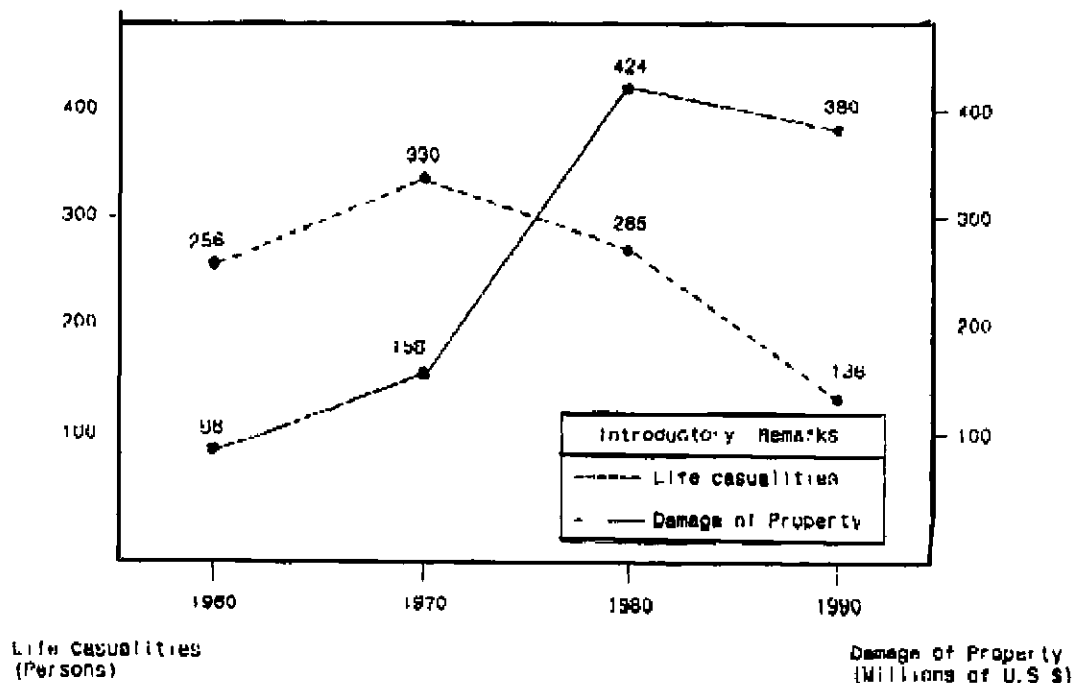
1. Natural Disaster Environment

The most severe factors of natural disaster in Korea are heavy rainfalls and typhoons which cause the majority of the damage. Taking a view from a hydrological circumstance, Korea is situated at the midpoint of the continental and oceanic climates and 79% of the average annual rainfall is concentrated during the months of June through September because of monsoonal rainfalls.

Rapid expansion of municipal areas due to industrialization and municipalization causes adverse effects of a decrease of the retard basin and an increase of impermeable areas. Also, use of flood-labile lowlands and landslide-labile hillsides cause an increase of runoff amount. However, in current state, government's proper policy has not prepared yet against the damage.

2. Natural Disaster Statistic

The government has been concentrating its efforts in establishing measures to prevent the natural disasters. It has brought an dramatic decrease in the average annual number of losses in human lives, showing 265 in 1960s, 330 in 1970s, 285 in 1980s, and 136 in 1990s ; however, the financial amounts of property damages will increase continuously.



II. DISASTER PREVENTION ORGANIZATION

In order to cope with war, peace-time and accidental disasters, the government of Korea has established the Civil Defense and Disaster Management Headquarters at the Ministry of Home Affairs. It is headed by an Assistant Deputy Minister level official.

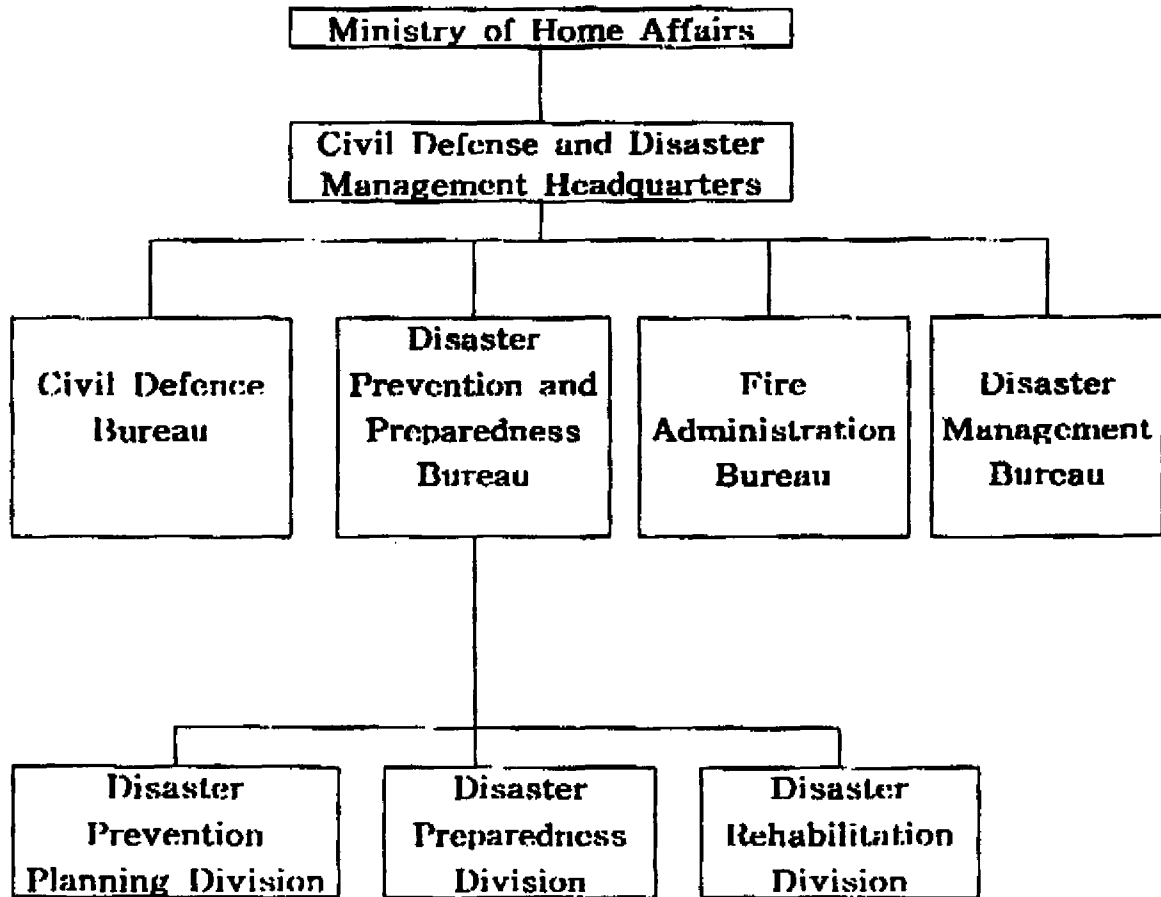
Civil Defense and Disaster Management Headquarters is organized together with the Civil Defence Bureau, the Disaster Prevention and Preparedness Bureau, the Disaster Management Bureau, the Fire Administration and Disaster Management Bureau. The Civil Defence Bureau takes charge of war disasters, the Disaster Prevention and Preparedness Bureau, of natural disaster, the Disaster Management Bureau, of accidental disaster, and fire prevention and life rescue tasks of the Fire Administration Bureau.

The Disaster Prevention and Preparedness Bureau is consists of 3 divisions, 1) Disaster Prevention Planning Division, 2) Disaster Preparedness Division, 3) Disaster Rehabilitation Division, and have 44 personnels.

The National Disaster Prevention and Countermeasures Headquarters is headed by Minister of Home Affairs, and the assistant by Vice Minister of Home Affairs and that of Ministry of Constructions. All of the members are 15 as bureau chief level officials. It functions in adjustment and control of the disaster prevention task among the central government organizations.

In the local areas, each self governing body has its own Local Disaster Prevention and Countermeasures Headquarters. In the case of provinces and cities, the task of disaster prevention and preparedness is the responsibility of 5 to 6 members of the Disaster Prevention Subsection, the Flood Control division of the Construction and Traffic Bureau. The number of members vary with each local government. Minor cities, countries and district offices have 2 or 3 member of the Disaster Prevention Subsection of the Construction Division, which executes the disaster control duties.

Table-1 Disaster Prevention Organization



III. DISASTER PREVENTION COUNTERMEASURES

Our government executes various works to protect the lives and property of people against a natural disaster. Prevention measures are largely classified by structural and non structural prevention and preparedness.

1. Structural Disaster Prevention and Preparedness

1) River Improvement

In order to prevent inundation caused by floods, the most important works of the structural Disaster prevention and preparedness Division is river improvement.

The Government has invested U.S. \$1,235 billions for the river improvement works in the last five years. As a result, the ratio of improved length(20,568km) to the total length (30416km) of rivers has reached 58%.

Table 2 shows the investment level for river improvement in the last 5 years.

Table-2 Government's Investment for River Improvement
During the past 5 Years

classification	year	'90	'91	'92	'93	'94
	average					
Length of rivers improved (in kilometers)	363	459	366	380	313	289
Investment (in millions of US dollars)	247	211	189	276	292	266

2) Construction of Multi-Purpose Dam

Our country has constructed multi-purpose dams in the river system since 1960. It has greatly contributed to secure water resources and supplies for industrial, municipal and agricultural uses. After the year 2001, the total number of multi purpose dams will be 18 with flood control capability of 2.4 billion cubic meters. The current status and future plans about the multi-purpose dams are as follows.

Table 3 The Current Status and Future Plans about the Multi-Purpose Dams

CLASSIFICATION	SITES	EFFECT(m ³ ton)
Operated	10	Flood Control Capacity. 1800
Under construction	5	Flood Control Capacity 380
Planned	3	Flood Control Capacity. 220

3) Landslide Prevention

To prevent landslides in urban or densely populated areas, the construction of retaining walls and other means of slope protection are being carried out. Also, 142 landslide prone areas in the entire country have been designated as disaster-vulnerable areas. The places shall be managed gradually with special arrangement of government oversight in the summer season, that flood damages most frequently occurs. Despite continual efforts, 28 of the 147 from storm and flood related deaths last year were due to landslides.

4) Perpetual Restoration Works

Analysis of disaster restoration works show that the restoration rate versus the damage amount is gradually increasing. This is the result of increasing improved restoration demand as national economic scale is growing.

2. *Non Structural Disaster Prevention and Preparedness*

1) Disaster Prevention and Preparedness Plans

Korean disaster prevention and preparedness plans are defined as two categories : Basic five year disaster prevention plans, and the annually established disaster prevention execution plan.

In addition to the above, there are also local disaster prevention plan established by local self governing bodies, and the detailed execution plan for disaster prevention established by the specific government agencies, such as Korea Water Resources Development Corporation, etc..

The task of disaster prevention will require an organized and close cooperation among the various competing organization units. Of these disaster prevention and preparedness plan is the most important and positive factor.

During the term of the 4th Basic Disaster Prevention Plan(1992 1996), the government has invested about \$9.5 billion(US) into 17 key fields, which include afforestation and flood control, disaster prevention measure, and relevant technical development, etc..

2) Revision of the Prevention-Related Laws and Regulations

Due to increase of disaster vulnerable factors and unusual changes of meteorology, disaster is getting diversified and huge. The necessity for prevention countermeasures are required as a part of progressive measures. "Act of Storm and Flood Disaster

Countermeasures", which was newly established in 1967, is fully revised in the name of "Act of Natural Disasters Countermeasures".

The main points of the Act, of natural disasters, earthquake and drought have been newly incorporated into the new Act along with flood, storm, heavy snowfalls, and sea-quake, etc. that were included in the former Act. Thus the new Act has incorporated the overall provisions optimally adjusted to counter the various natural disasters.

In order to protect the residents at the downstream residents from damages caused by huge land development constructions, the government has adopted The Risk Assessment Evaluation System of Disaster Impact to strengthen the disaster prevention policies.

3) Firming up Earthquake Disaster Countermeasures

Earthquakes of various magnitude have occurred recently around the world. Despite insistence by earthquake specialists that Korea is under no threat from earthquakes, apart from the safety territory of a seismic zone, it has been judged that there is always possibility of medium magnitude earthquake in any part of the country. Accordingly, government will take preventive measures against potential of earthquakes.

4) Disaster Prevention Education

The competent public servants of fifteen(15) Broad Municipality, 230 basic municipality, and the towns and local administrative bodies including the designated administrative organizations and the members of the relevant agencies, etc., a total of 150 thousand staffs, have been educated by the end of May in this year before the rainy season.

5) Disaster Prevention Exercise

The disaster prevention team members are required to undergo repetitious training programs. Mutual cooperation among the related organizations should be performed reflexively in a state of

emergency. The disaster prevention exercise in Korea has been implemented roughly in two types, theoretical exercise and practical field exercise programs. The theoretical exercise program will be learned by the administrative agencies, police and official rescue workers, and other relative agencies including county office and is concurrently implemented via Civil Defence Drill on May 15, for two nights and 3 days. The areas of exercise are the river basins of the four largest rivers in Korea according to the extent of flood damage within the past five years on rotating basis.

In addition, the regional exercises conducted by local areas, and the integrated model exercise conducted by public servants of the broad administrative self governing bodies have been implemented for one day monthly.

6) Set up Disaster_Prevention Measures Plan

In preparation for the rainy seasons, the government has set up Disaster Preventive Measure Plan prior to the potential disaster period commencing June 15. Importantly, the preventive materials such as flood prevention materials have been preserved for quantity equivalent to the average quantity of material consumed during recent 10 years by each basic municipality. Necessary equipments are supplied by civilians, if required.

In addition, relief goods including food and clothing have been stored. Facilities such as schools and large halls are designated as disaster shelters prior to the emergency.

Also, the government has designated potential areas of disaster as Disaster Vulnerable Areas and has prepared the prevention of disaster with each annual budget. For these areas, a planned sheltering system has been established and implemented against disasters.

Disaster prevention structures such as roads, tide embankments, and river banks, as well as huge construction sites have been prepared to cope with floods through the established measure before the rainy season.

7) National Disaster Prevention Research Institute Establishment

The Research Laboratory for disaster prevention was set up on March 2, 1993 at Local Administrative Research Institute attached to Ministry of Home Affairs. The main concern of the laboratory is system development through research and review of related system consideration for increasing international cooperation.

According to a recent trend of diversification and enlargement of disaster damages, disaster control for advance prevention is much more considered than before. The plan of establishing National Disaster Prevention Research Institute is due in January 1997.

8) Formation of Computer Networks for Disaster Prevention

In case that disaster occurs, the city, county and district authorities shall rapidly gather information regarding damage situation and emergency countermeasures through their computer terminals, and then the city, provincial and the National Disaster Prevention and Countermeasures Headquarters offices will grasp the situation of disaster in real time by the on-line system in order to make optimal support measures to cope with the emergency situation rapidly.

The government plans to complete the nationwide on-line system during 1996 to enable the terminal offices towns, counties and districts to grasp the accurate information in real time of the nationwide weather, rainfall, level of water in the rivers, and dams, all of which are closely related to the flood control. The 1006 conventional rainfall observatory systems provided with town, Myun and Dong offices scattered nationwide have been replaced with automatic rainfall observatory systems.

By May 1996, automatic water level observatory systems will be installed at the 111 main points of major and minor rivers in order to secure water level observation network. By the end of 1995, computer network interconnecting among the relevant agencies will be fully organized.

9) Public Awareness to Peoples about Disaster Prevention

To create an atmosphere of pan-national participation into disaster prevention campaigns, and to develop an autonomous movement for disaster prevention, the government has been systematically advertising preventive methods, situation control, and rehabilitation, etc, through the mass media of broadcasting and newspapers. May 25 each year has been designated as "National day for Disaster Prevention", and on that day the government leads the campaign and picture exhibitions explaining the disastrous scenes and others related. Also, the public information has been delivered to the residents and the school facilities following the national act outlines in order to cope efficiently with disaster.

10) Carrying out "Prearranged Sheltering Plan"

When Typhoon 'Robyn(9307)' hit the country, the government authorities had taken prevention and preparedness activities one step earlier than the onset of natural disaster, according to the weather forecast. By notifying the public of each phase, damages of property and human life could be greatly minimized.

Based on this experience, preventive methods have been applied to all kinds of natural disaster with prior preparations. This is called as "Prearranged Sheltering Plan".

Accordingly, the "Preparedness Sheltering Plan" is to secure an advance establishment for shelter according to disaster. With the weather forecasting informations, this is a system to form a shelter guidance team at an early stage so as to inspect the disaster prone area, and to minimize the losses of human lives through the guidance of shelter.

IV. INTERNATIONAL COOPERATION

The country has actively participated at INDNR, TC, every international conference and seminars for establishing a more

scientific and advanced preventive measure policy. Also with introducing prevention methods against disaster from advanced countries, we are making our best efforts to reflect it in our preventive works.

Now, we wish to exchange the items below in a mutual cooperation, taking opportunity of ASIAN NATURAL DISASTER REDUCTION CONFERENCE. We wish to :

1. Provide an opportunity to mutually dispatch prevention related personnel.
2. Regularly exchange informations with regard to the results from disaster reduction research.

Concluding, I appreciate the effort of Japan, which holds the conference and wish to deliver my gladness with friendship to all the representatives from different countries in this conference.

Thank you very much.