

Korea Environmental Policy Bulletin

Issue 1, Volume V, 2007

Policies on Conservation of the DMZ District Ecosystem

I. Background

The Korean Peninsula has been divided by the 248km-long Military Demarcation Line (MDL) from East to West across the areas of Gyeongsang, Ganghwa-gun, and Myeongho-ri, Goseong-gun since the end of the Korean War in 1953. Along this line, a 2km-wide Demilitarized Zone (DMZ) was set up on both sides of the line. As a historical relic of national division, the DMZ is unique because it allowed the conservation of the natural ecosystem as both North and South Korea have strictly restricted access to the area. Along with the Baekdudaegan Mountain Range and Coastal areas, the DMZ is one of the three Core Eco-Networks for the conservation of the national natural environment (See Fig.1).

To systematically manage the DMZ District, thorough analysis of the ecosystem, including the natural environment, should come first. In line with this, there have been a number of studies, beginning in 1965 with an investigation of the ecosystem along the northern part of the Civilian Control Line (CCL), conducted by The International Union for Conservation of Nature and Natural Resources. However, since the studies place disproportionate emphasis on partial aspects of the ecosystem and maintenance plans, an effective plan has yet to be introduced. In particular, as environmental conservation plans are not embodied, development plans and actions are not controlled, so the area that needs conservation is not managed properly.

C O N T E N T S

I. Background	1
II. Concept and Current Situation within the DMZ District	3
1. Spatial Concept	3
2. Setting up DMZ District Management Range	5
3. Geographical Features and Configuration	6
4. Land Use and Land Cover	6
5. Climate and Ecosystem	9
6. Current Economic/Social Conditions	9
7. Land Ownership	9
8. Results of National Environmental Conservation Assessment	10
III. Conservation Strategies for the DMZ District Ecosystem	11
1. Range of Measures	11
2. Basic Principles	11
3. Conservation Strategy	12
IV. Implementation of Major Plans and Policies	13
1. Designation of Protected Areas based on Field Survey Data	13
2. Establishment of Measures for the Residential Area near DMZ	14
3. Protection of Biodiversity through Designating a Biosphere Reserve	14
4. Maintaining Environmental Characteristics through Public-Private Joint Commission	14
5. Operation of a Joint Research Group on Environmental Impact of Rail & Road Construction Projects within the DMZ	15
V. Conclusion	15

Fig.1 Eco-Networks of the Korean Peninsula



* EMR : Environmental Management Region

Due to a recent thawing of tensions on the Korean Peninsula, active exchanges between the two Koreas are expected. Accordingly, with possible development projects envisioned, the environmental effects of such plans should be taken into consideration. Therefore, the National Assembly and the media have been paying close attention to measures regarding the environmental conservation and sustainable use of resources in the area. Currently, the “Military Base and Facility Protection

Act” to scale back the civilian access distance from 10km to 1km from the MDL, and “Act on the Designation and Management of the Unified Special Economic Zone” which would allow a number of economic activities within the DMZ are being discussed in the National Assembly. In line with such plans, specific and general management plans to control such activities are urgently needed in order to conserve the area. For this, plans to effectively manage the DMZ District have been drawn up.

Fig.2 A View of the DMZ



Source : Green Korea United

II. Concept and Current Situation within the DMZ District

Article 2-13 of the Natural Environment Conservation Act states that the DMZ should be managed as a Nature Reserve Area for two years starting from the point it belongs to the Republic of Korea. However, to properly conserve and manage the DMZ, it is vital to grasp its relationship with surrounding areas, and to generally manage those relationships. In this regard, strengths, weaknesses, opportunities, and threats regarding the DMZ should be clearly examined <Tbl.1>.

1. Spatial Concept

The DMZ District covers the DMZ and the surrounding area. From the South's viewpoint, it is defined as the DMZ and the adjacent area to the

South, but in general, the DMZ District includes the DMZ, the Northern area of the CCL, and the border area defined by the Border Area Support Act. See <Fig.3> for spatial conditions, and <Fig.4> for an illustration.

The entire area of the DMZ was originally 248km long and 4km wide according to initial regulations, however after the Northern Limit Line(NLL) and Southern Limit Line(SLL) moved to the MDL, the area reduced to about 907.3km², or 0.41% of the Korean Peninsula. In addition, between SLL of DMZ and the area 0-10km to the South, the CCL is set allowing only primary industry such as agriculture, and 8,097km² area is set as the border area by the Border Area Support Act.

Tbl.1 SWOT Analysis of the DMZ and CCL

Strengths	Weaknesses
<ul style="list-style-type: none"> 1. Various animal and plant habitats 2. Rich forest ecosystem 3. Hub of broad eco-networks 4. Future environmental asset 	<ul style="list-style-type: none"> 1. Rising awareness of damage among local residents due to infringement of property during the development 2. Destruction of the ecosystem due to illegal development 3. Destruction of the ecosystem due to military facilities 4. Contaminated soil due to military facilities 5. Insufficient data on the ecosystem due to North/South tensions
Opportunities	Threats
<ul style="list-style-type: none"> 1. Eco-tour area 2. Factor to boost the local economy 3. Could be adopted as a Transboundary Biosphere Reserve by UNESCO 4. Symbol of peace after reunification 	<ul style="list-style-type: none"> 1. Pressures to develop the area after reunification 2. Ownership conflicts following reunification 3. Overlapping investments by self governing bodies along the border area 4. Risk of reckless development 5. Risk of rash development due to competition

Fig.3 Spatial Concept of DMZ District

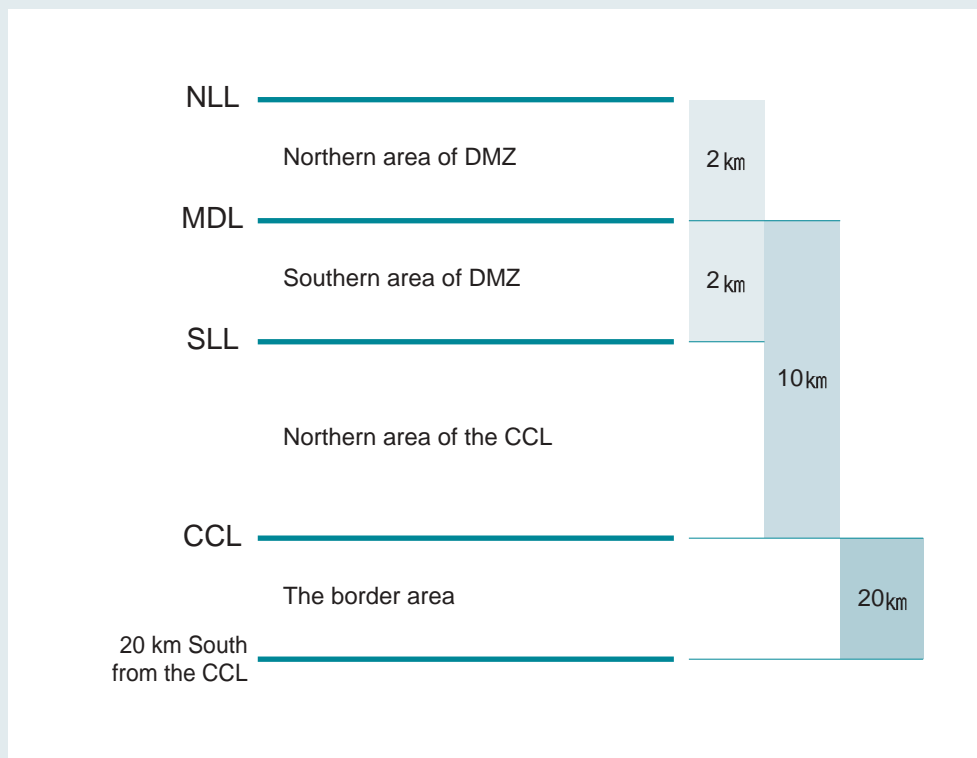
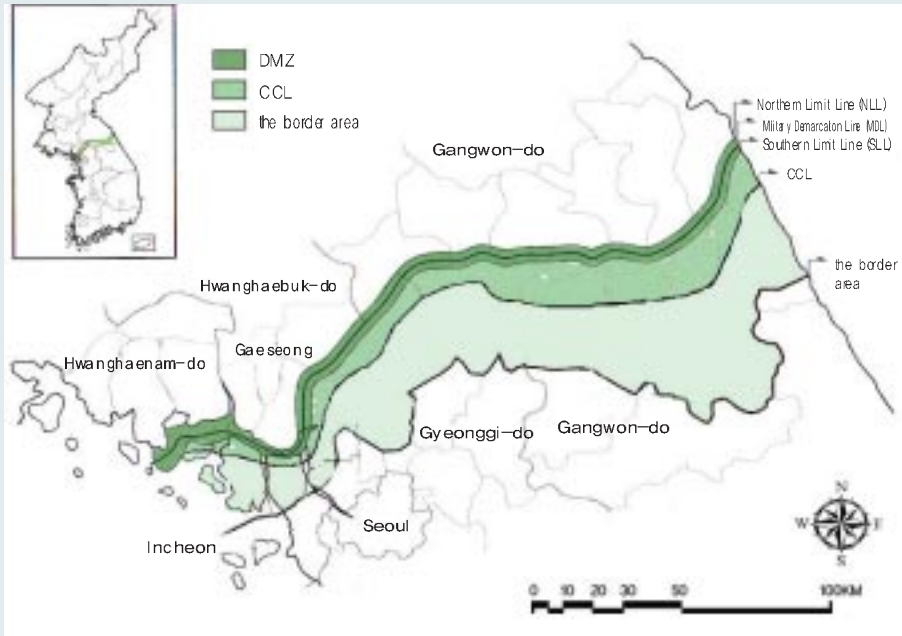


Fig.4 Current DMZ District Conditions



2. Setting up DMZ District Management Range

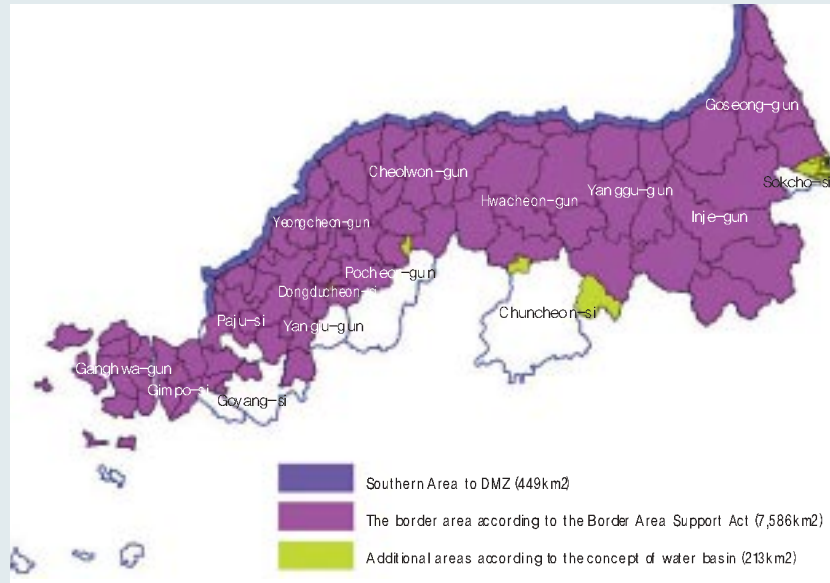
To effectively manage the DMZ District, administrative and ecological characteristics, as well as features of watershed should be given priority consideration when setting up the management

range. So, the range was set considering artificial demarcation such as legal or administrative districts and biogeographical demarcation like bioregion and basin districts. The data used for the setup of the range is illustrated in <Tbl.2>, and the management range is shown in <Fig.5>. The total area of the DMZ District is 8,248 km².

Tbl.2 Data used in setting up the DMZ District management range

Data	Governing Body	Scale	Related Act
Bioregion Map	Ministry of Environment, Rep. of Korea	1/25,000	Natural Environment Conservation Act
Water Resource Unit Map	Korea Water Resources Corporation	1/25,000	-
Border Area Map	Ministry of Government Administration and Home Affairs, Rep. of Korea	-	Border Area Support Act
Administrative District Map	National Statistical Office, Ministry of Environment, Rep. of Korea	1/25,000	-

Fig.5 Designated Management Range



3. Geographical Features and Configuration

Like topography of Korea in general, the DMZ District is of an asymmetrical structure. With the Taebaek Mountain Chain at its center, the eastern side inclines steeply, while the western side slopes gently. In the eastern area, the Hyangrobon mountain range stretches to the coast. Unique to the area is a basin dubbed the “Punch Bowl” by war correspondents during the Korean War (See Fig.7). Within the basin, the average altitude is 450m, while the area around is surrounded by 1,000m high mountains. Attempts to explain the origin of the basin include theories such as differential erosion and meteorite impact.

4. Land Use and Land Cover

Changes to the land cover of the DMZ District,

including North Korea, from the late 1980s to 2001 were analyzed using Landsat TM satellite imaging data¹⁾. The results are presented in <Fig.8> and <Fig.9>.

Comparisons of the land cover during the two time periods indicate that changes in North Korea are much more distinct than the changes in South Korea. The analysis results, in terms of land use and land cover are as follows:

First, there is the possibility that changes to swamp and wetlands could have been due to rainfall during the time of filming, but there seemed to have been only slight change. Second, although built-up areas occupy a small portion of the DMZ District, the areas almost tripled in size due to urban expansion in Gaeseong and Paju. Third, big changes occurred in forested areas. The size of Forest 1, which includes forests in both good and bad conditions, was reduced by roughly 30,000ha from 728,439.8ha to 699,534.4ha. About 120,000ha of the area in which forests were in good shape were lost. Forest 2 area, which includes young forests, shrubs, bushes, and

1) In this analysis, the forest areas are categorized as ‘Forest 1,’ and ‘Forest 2’ which include forests in good shape and bad shape, respectively. Forest 2 includes some grassland. Pure grassland within the DMZ makes up a relatively small area, and consists of mostly bushes and short trees. That is why grassland was included in the Forest 2 category.

Fig.6 The Korean Peninsula DEM

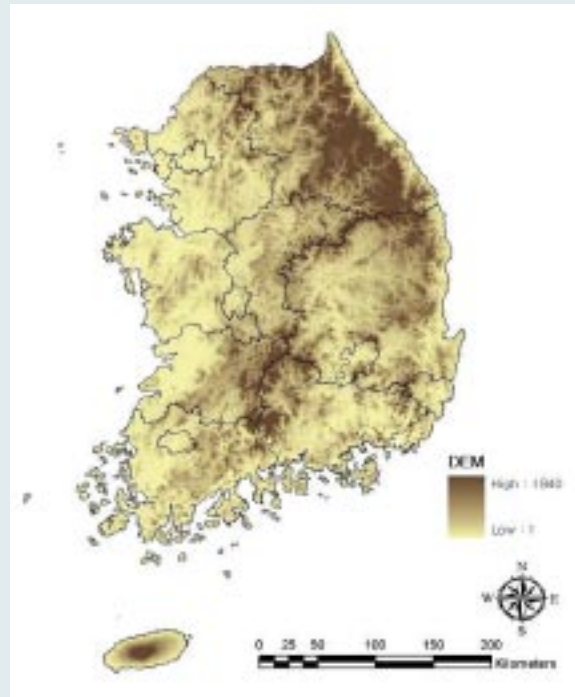


Fig.7 Punch Bowl Digital Elevation Model

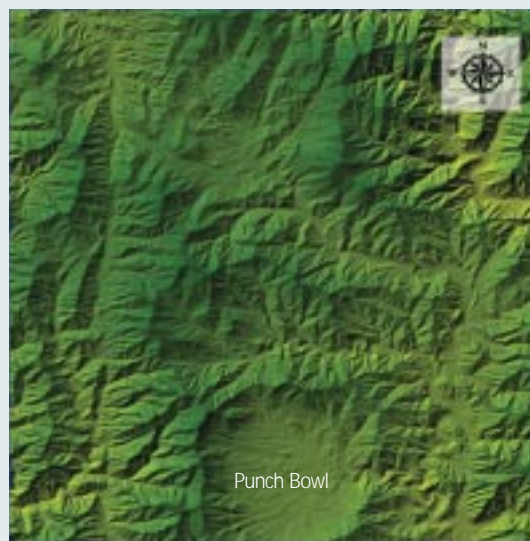


Fig.8 Changes to DMZ District Land Cover

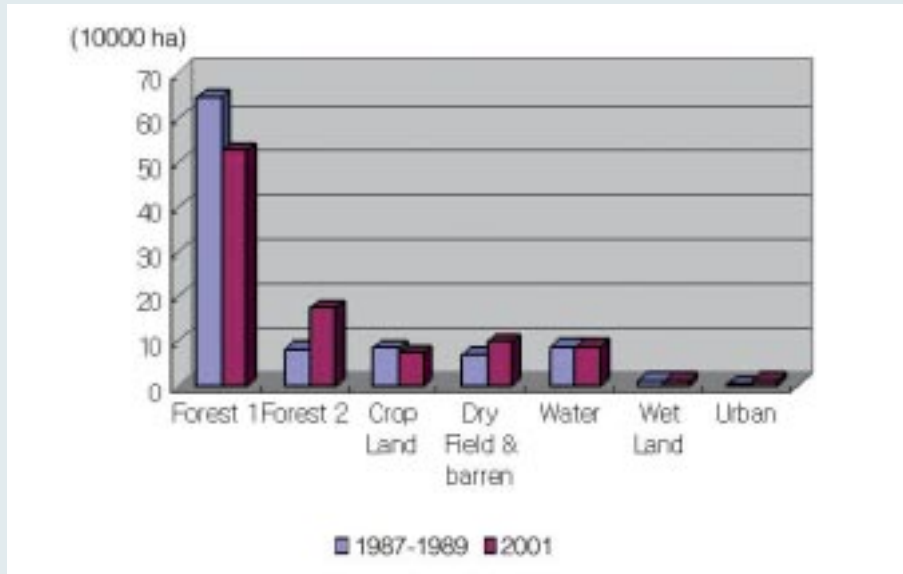
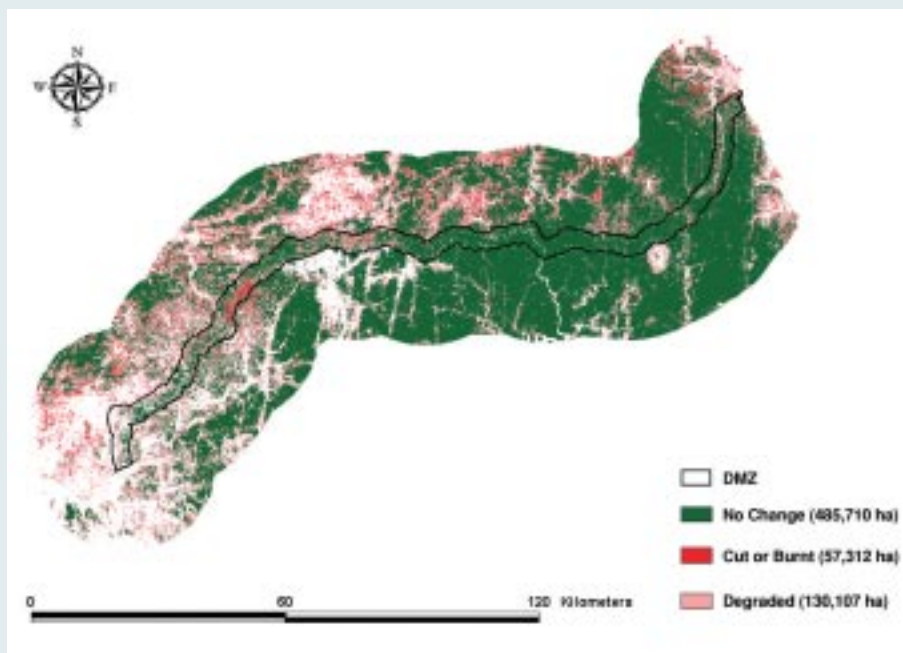


Fig.9 Changes to Forest Areas between 1987-1989 and 2001



grassland resulting from degradation, more than doubled, increasing by 90,000ha. Furthermore, dry and barren areas increased about 45%, or roughly 10,000ha. It is assumed that this is the result of deforestation and fire on the North Korean side of the DMZ.

With regard to Forest 1 on the North Korean side, in which woods are in good conditions, reports indicate that areas are largely decreasing, except the area surrounding Geumgang Mountain in the east. In South Korea, the areas consisted of healthy forests have given way to slightly unhealthy or young trees with lower density. However, there were no significant changes found in cut or burnt forest areas, except for areas of the east coast where deforestation and fire occurred.

5. Climate and Ecosystem

Because the DMZ District features high mountains, plains, and hilly areas, the area experiences unique and varying climates from east to west. Consequently, the ecosystem of the area is said to hold a more diverse number of organisms than any other part of the Korean Peninsula. Results of ecosystem analysis of limited regions such as Paju City, Gyeonggi Railway lines, and areas covered by the South-North connecting road project show that 2,716 animals and plants, and 67 endangered species/protected animals and plants inhabit, including Cranes and Black Faced Spoonbills of international importance. For this reason, the DMZ

District is drawing attention of international organizations such as UNESCO, and experts on ecosystem from home and abroad.

6. Current Economic/Social Conditions

The DMZ District is rapidly emerging as a key area of cooperation between North and South Korea, and development projects such as the Gyeonggi Rail and road connections, Geumgang Mountain sightseeing routes, Donghae Railroad, and transportation routes for the Gaeseong Industrial Complex are increasing. Considering the fact that the western area of the DMZ District is made up of plains, connecting the metropolitan areas of South Korea with Gaeseong and Pyongyang, the possibility of rapid development due to increased cooperation between the two countries is great.

7. Land Ownership

It is almost impossible to grasp the ownership of land within the DMZ District. Due to the Korean War, subsequent division, and land reform policies in North Korea in 1946 and South Korea in 1949, it is quite difficult to ascertain who owns the land. In 1997, the Ministry of Justice conducted a survey in the Gyeonggi, Paju, and Yeoncheon areas and found

Tbl.3 Results of the National Environmental Zoning of the DMZ District (km²)

Classification	Total	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	Unassessed
Total	8,224.03 (100%)	4,828.96 (58.7%)	1,412.92 (17.2%)	1,129.33 (13.7%)	224.69 (2.7%)	549.74 (6.7%)	78.40 (1.0%)
Southern areas within the DMZ	443.02 (100%)	344.99 (77.9%)	41.73 (9.4%)	53.32 (12.0%)	0.07 (0.0%)	2.92 (0.7%)	
Total border areas	7,568.04 (100%)	4,352.63 (57.5%)	1,351.33 (17.9%)	1,052.46 (13.9%)	214.89 (2.8%)	518.34 (6.8%)	78.40 (1.0%)
Total additional areas	212.97 (100%)	131.34 (61.7%)	19.86 (9.3%)	23.56 (11.1%)	9.73 (4.6%)	28.48 (13.4%)	

Note : Daecheong-myeon, Ongjin-gun (16.92km²), Baekryeong-myeon (52.98km²), and Yeonpyeong-gun (8.50km²) were excluded in the calculation. The area was calculated in a 30m grid pattern.

that ownership of 78% of the land was unknown, 16% was owned by private persons, and 6% by the government. By using data supplied by the Ministry of Government Administration and Home Affairs, ownership examinations were extended to include the DMZ District including the CCL and border areas. Results indicated that 54% of the lands were national or public, while 46% were owned by individuals. Of the lands that were national or public, 68.9% were in Gangwon-do, 29.0% in Gyeonggi-do, and 15.6% in Incheon-si.

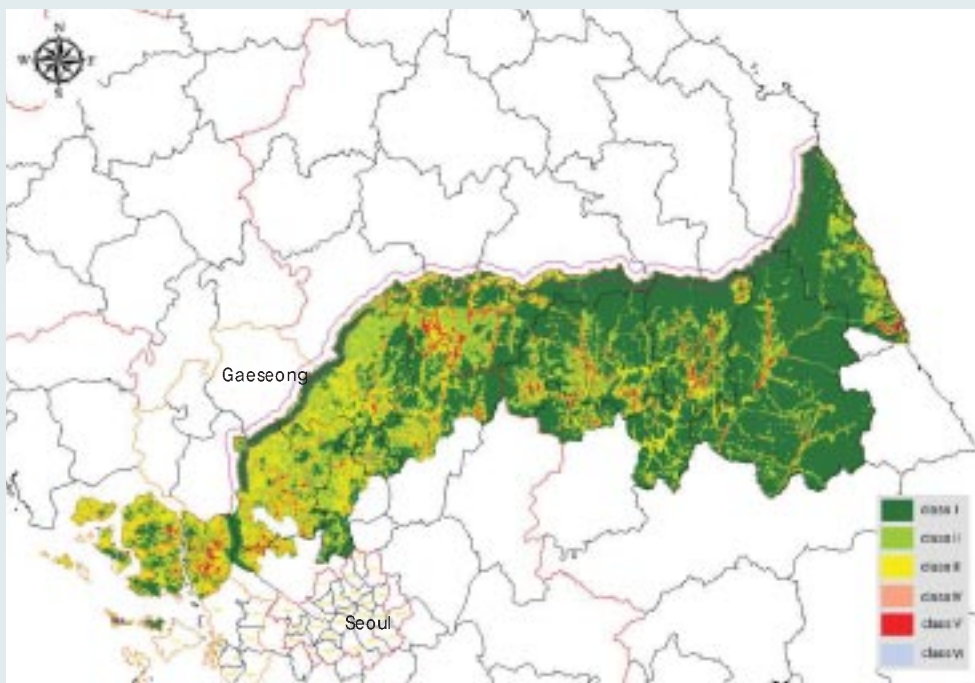
8. Results of National Environmental Conservation Assessment

To manage the DMZ District, environmental values of the land in the District should be clearly identified.

Thus, according to the national environmental conservation assessment method, which assesses value factors, the zoning of the DMZ District was conducted. The results are presented in <Tbl.3> and <Fig.10>.

In the DMZ District, the 1st grade area of environmental value accounted for 58.7%, the 2nd grade area 17.2%, 3rd grade area 13.7%, 4th grade area 2.7%, and 5th grade area 6.7%. More specifically, 77.9% of the southern part of the DMZ District fell into the 1st grade areas category, and 57.5% of border areas and 61.7% of additional areas took up the 1st grade areas. On the contrary, 5th grade areas in the southern part of the DMZ district accounted for only 0.7%, 6.8% of the border areas, and 13.4% of additional areas. The DMZ District shows that the extent of access to the public is in direct proportion to the distribution of grades.

Fig.10 Results of National Environmental Zoning of DMZ District



III . Conservation Strategies for the DMZ District Ecosystem

These measures were drawn up in cooperation with various divisions under the direction of the Ministry of Environment in 2005.

significant in terms of the ecological features, and should be included in the reorganization to manage under law. The total area accounts for 213km².

1. Range of Measures

In consideration of the ecological aspects of the DMZ District, the region was divided into the Southern DMZ, the CCL area, the border area, and additional areas in order to establish proper measures. The Southern DMZ accounts for 449km² and stretches from the MDL to SLL, while the CCL is 5-20km from the SLL. The border area is the area regulated by the Border Area Support Act, including the CCL and 20km south from the CCL. In general, a large area of the CCL and the border area overlap. The total of these two regions accounts for 7,586km². The additional areas are south of the border area, which is

2. Basic Principles

As for the measures to conserve the DMZ District ecosystem, the following principles will act as the basis:

First, since the DMZ District will be connected ecologically, systematic plans should be established in this regard. The current conditions should be examined for each region, and in consideration of the fact that problems may occur with regard to land ownership and administrative execution, plans should be differentiated.

Tbl.4 Draft Principles for Management of DMZ District Ecosystem

Evaluation Grade	Concept as a conservation-needed area	Management Principles
1st grade (very high)	Core Area	- Top priority conservation area: no development allowed - Environmental/ecological core areas to be conserved; environment should be permanently conserved.
2nd grade (high)	Core Area	- Priority conservation area: no development allowed in general, but small-scale development may occur - When included in the development plan, the area should be adopted as a conservation area first or kept as a green area.
3rd grade (normal)	Buffer Area	- Although the area should be conserved, conditional development may be allowed in consideration of the act, scale, and content of the development. - Development should not disturb the functions of the ecosystem. - Prior to the establishment of a development plan, environmental plans should come first.
4th grade (low)	Transition Area	- Areas which are already developed or under development; development may be allowed, but the area will be set for partial conservation and management. - Environment-friendly development
5th grade (very low)	Developing Area	- Development permitted area; systematic and general consideration of the environment should be a priority. - Promotion of planned use

Second, with regard to the Southern part of the DMZ, where it is hard to grasp current conditions and land ownership, regular investigations of the ecosystem should be conducted, and possible land ownership issues within the protected areas should be dealt with based on governmental “basic directions.”

Third, as for the DMZ District, CCL, and border area, systematic conservation and management should be performed through strict Prior Environmental Review System and the designation of protected areas that reflect ecosystem characteristics. The management principles for each grade are illustrated in <Tbl.4>

Fourth, there should be consistent promotion of South/North Korea Cooperation Projects such as the UNESCO Biosphere Reserve.

3. Conservation Strategy

The Southern part within the DMZ and the DMZ District should be considered separately for the establishment and promotion of DMZ District conservation strategies.

3.1 Southern Area within the DMZ

As for the Southern part within the DMZ, conservation measures should be established and executed in the order of ecosystem investigation, property arrangement, the establishment of conservation measures and designation. This is summarized as follows:

First, regular investigation of the ecosystem and designation of protected areas should be promoted. According to the analysis report using satellite images and indirect investigation methods, the Southern part within DMZ is of high value, thus the necessity for conservation is also very high. However, various limitations make it hard to examine certain areas. The DMZ District contains not only a unique ecosystem, but also various historical and cultural resources. Thus, proper plans should be established to accurately analyze the information, and meetings of related divisions should be held for consistent investigation. Highly valued areas confirmed by examination will be designated as special regions protected under the law. These areas would include ecosystem protection areas and wetland protection areas, etc.

Second, alternatives should be drawn up to address ownership problems of land within the protected areas. There is no data regarding the ownership of land within the DMZ, and no social agreement has been drawn up regarding the management of land after unification. Thus, land ownership problems should be handled according to a social agreement drawn from a commission made up of related divisions and parties. For this, projects of measuring DMZ SLL and grasping current conditions such as computerization of the Southern part within the DMZ should be implemented.

Third, measures to preserve biological resources within the DMZ should be promoted. As artificial intervention within the DMZ has been minimal, a number of rare species unique to Korea exist there. However, there has been no systematic investigation, and sample collection and management has not been conducted. Thus, to preserve biological resources within the DMZ, and to promote education on the ecosystem, a DMZ ecosystem investigation and promotion center, aquarium, and sampling center will be established at the “Inje DMZ Peace Garden.”

Fourth, the classification of the area as a UNESCO Transboundary Biosphere Reserve should be promoted. Through discussions with related divisions, including the Ministry of Unification, issues regarding a Transboundary Biosphere Reserve need to be raised consistently and discussed during ministerial-level talks between South and North Korea. In line with this, the government shall facilitate contacts with public and private parties during international conferences, international academic meetings to create a common ground with regard to DMZ conservation and encourage participation of the North in international cooperation.

3.2 The DMZ District (the CCL, the border area, and additional areas)

The DMZ District is under high pressure for development, and if a systematic management plan is not drawn up, there is a high risk of sprawling development. For the sustainable use and conservation of the area, the following policies should be promoted:

First, through Prior Environmental Review System and Environmental Impact Assessment, review and approval of development projects in this region

should be strengthened. According to National Environmental Zoning method, 87.3% of the DMZ District is of very-high or high value, which indicates that the area needs to be conserved. Thus, regarding major development projects, strategic environmental assessment for very-high and high value regions should be strictly applied from the planning stage in order to pursue harmonization between conservation and development.

Second, areas of high ecological value, including rare bird habitats, scenic areas, plant habitats, and wetlands should be designated as priority protected areas based on existing laws. Major areas that need protection include the primitive forest region of Seorak Mountain to Geumgang Mountain, Dae-am Mountain area, Dutayeon, the largest fresh water habitat for Salmon, Cheolwon plain, where Cranes migrate in winter, and the estuaries of Imjin and Han rivers as wetlands for migratory birds.

3.3 Marine Area & Others

The designation of the coastal region of the West Sea as an International Marine Peace Park will be promoted. The West Sea border line from North to

South, from the mouth of the Han River to Baekryeongdo is a treasure-trove of creatures such as Black Faced Spoonbills, Herons, Cranes, Seals, etc, which indicates that this area is ecologically valued, and has been maintained as the only river mouth along the West Sea that has not been damaged by reclamation. Designating this area as a Peace Park will serve to change the symbol of the region from the tension between North and South Korea to cooperation between the two Koreas. In this regard, the creation of the park will be promoted as a South and North Korean joint-project. Relevant institutes and academia will direct data and information collection which will be available for both Koreas.

Promotion measures to conserve the ecosystem of the DMZ District will be pursued. Conservation of the DMZ District ecosystem should be conducted in the long-term perspective, and to that end, the public should be given access to information regarding the ecosystem of the District. Therefore, for elementary, middle, and high school students, pamphlets and education material regarding the DMZ ecosystem should be developed and distributed. In addition, for military personnel who are stationed at the DMZ, its ecological importance should be educated in order to help with its conservation.

IV. Implementation of Major Plans and Policies

1. Designation of Protected Areas based on Field Survey Data

There have been investigations of the DMZ District through various channels, but most of them were limited to a certain area or not sustainable. To overcome the limitations of such investigations and combine the data drawn up so far, the Korean Ministry of Environment produced ecosystem/nature maps of the border area and posted them online in March 2002. They were based on the results of a national nature environmental survey, which was highly comprehensive, including both animal and plant species. In addition, combining existing study results, "The General Report on the DMZ District Ecosystem" was published in November 2003 in

which ecological characteristics and biodiversity in the DMZ District were analyzed.

Since the data above was insufficient, the "DMZ District Ecosystem Investigation Plan" was established in April 2006 to accurately grasp the number and variety of species within the DMZ District and establish conservation measures. Since then, negotiations with the UN Secretary General, who has the authority to allow access to the DMZ, were carried out, but an investigation was not allowed due to safety concerns. However, an investigation of the ecosystem north of the CCL was conducted, and the mouth of the Han River was designated and announced as a protected wetland in April 2006. In April 2007, the UNEP/GEF and the Ministry of Environment of Korea adopted the area as a pilot project to raise public awareness on wetlands.

2. Establishment of Measures for the Residential Area near DMZ

The Ministry of Government Administration and Home Affairs of Korea has established and promoted a Comprehensive plan for the border area according to the Border Area Support Act in order to improve living conditions and promote economic development of the area near the truce line. The plan is to present mid- and long-term development directions and strategies for peaceful unification, residential welfare, and environmental protection and management. These strategies will benefit a population of 656,000, 98 Eup/Myeon/Dongs, 15 Cities/Counties, three major cities (Incheon, Gyeonggi, Gangwon), settlements north of the CCL, and the border area to the south of the CCL. However, general measures for the border region are for areas currently in poor condition. Most areas in the DMZ District where there are no residents and the northern part of the CCL are not included in the plan. In addition, the plan focused on improving welfare and building infrastructure for residents rather than on establishing environmental conservation measures.

3. Protection of Biodiversity through Designating a Biosphere Reserve

After the Korean government established a plan to adopt the DMZ as a UNESCO Transboundary Biosphere Reserve²⁾ in cooperation with North Korea in April 2001, the National Security Council (NSC) delivered an official notice from the Chairman of the Man and the Biosphere Programme (MAB) of South Korea to the Chairman of MAB, North Korea. The purpose was to emphasize the environmental value of the DMZ and the necessity to conserve it. The notice also proposed the designation of the DMZ District as the Transboundary Biosphere Reserve³⁾, but North Korea objected to the proposal since it regarded the project of a Transboundary Biosphere Reserve exploiting the pain of national division, and the project has been halted since.

In order to create an atmosphere of environmental exchange and cooperation between the two countries, International Symposium on the Ecosystem Restoration (Seoul, May 2003), the DMZ Forum (New York, July 2003), and the Discussion on Peaceful Use of the DMZ (Chuncheon, July 2003) were held. At international conferences, which North Korea took part in including the 8th Northeast Asian Transboundary Biosphere Reserve Conference (Hustai Nuruu Biosphere Reserve, Mongolia, 2003), the 17th UNESCO MAB International Adjustment Board (Paris, October 2004), and the 19th MAB International Adjustment Board (Paris, October 2006), the need to designate a Transboundary Biosphere Reserve was consistently raised. Nevertheless, North Korea has not shown any interest or provided any official opinions.

4. Maintaining Environmental Characteristics through Public-Private Joint Commission

Local Governments located in the DMZ District are establishing utilization plans that reflect regional characteristics and have promoted them through the media.

Gangwon-do launched the construction of the “DMZ Museum”, which exhibits information regarding the DMZ (March 2006), and announced that it will develop the DMZ as a popular tourist destination (April 2006). In addition, Inje-gun Gangwon-do will create a 1.3 million m² DMZ Peace and Life Garden, which will feature the border area in Seohwa-myeon and utilize it as an exhibition hall, education center, and ecosystem tour field. Construction began in 2006 and is expected to be completed in 2009. Gyeonggi-do has announced that it will develop a miniature park which will feature the DMZ and North Korea near Majeong-ri, Munsan-eup, Paju-si (September 2007). In July 2007, considering the need to establish a body to coordinate various policies and plans conducted by different organizations, the Ministry of Environment established the “Public-Private Joint

2) The Biosphere Reserve system was introduced by UNESCO to seek ways to harmonize sustainable use and conservation of biological resources. As of September 20, 2007, 529 sites in 105 countries have been designated as the Biosphere Reserve. In the Korean peninsula, Seorak Mountain, Hanra Mountain, Baekdu Mountain, and Guwol Mountain have been designated.

3) When two or more countries are involved, a Transboundary Biosphere Reserve is designated, and as of 27 October, 2005, seven sites were designated worldwide.

Commission for the DMZ District Ecosystem Conservation Measures” in which government agencies, Gangwon-do, Gyeonggi-do, academia, civil groups, institutes, and other related parties gathered to discuss the conservation and use of the DMZ District. The commission decided to meet twice a year.

5. Operation of a Joint Research Group on Environmental Impact of Rail & Road Construction Projects within the DMZ

During the process of preparing an Environmental Impact Assessment Form for the Southern section of

rail and road projects (see Tbl.5) that are to connect the South and North, experts and environmental groups formed the Environment/Ecosystem Joint Research Group in June 2001. The research group conducted site investigations and devised plans to minimize environmental degradation and promote ecosystem conservation. Furthermore, through consistent monitoring, the group is planning to regularly check mid- to long-term environmental impacts, the effect of supplementary measures, etc.

The Environment/Ecosystem Joint Research Group announced that monitoring activity was conducted two years after the Gyeongui Rail and Road construction projects, and that over 60% of the ecosystem prior to the construction was restored due to substitute wetlands created in the DMZ District damaged by construction (April 2005).

Tbl.5 Major Construction Projects within the DMZ

Project Name	Length (km)	Length of each section (km)	Executing Agency	Discussion Date
Gyeongui Railroad Restoration Project	24.0	Northern section: 12.0 Munsan Station ~ Jangdan (MDL): 12.0	Korea Railroad	2001.7.10
South/North Connecting Road	17.1	Northern Section: 12.0 Tong-il Bridge ~ Jangdan (MDL): 5.1	Ministry of Construction & Transportation	2001.4.8
East Sea Railroad	24.6	MDL ~ Onjeong-ri: 18.0 Unification Observatory ~ MDL: 6.6	Korea Railroad	2003.3.29
East Sea Road	14.2	MDL ~ Northern demarcation line: 10.0 Unification Observatory ~ MDL: 4.2	Ministry of Construction & Transportation	2003.3.28

V. Conclusion

Due to the division of Korea and the limited range of activity in the DMZ, the DMZ District has become an important ecosystem with various and abundant species. The area not only has great ecological value, it represents the last symbol of national division in the world. In the future, this area should be conserved and managed as a base to advance the movement toward the reunification of the Korean Peninsula, a treasure-trove of ecosystem, and a site for tourism and historical education. In this respect, for the systematic planning and environment-friendly management of this area, the participation of North

Korea is essential. Thus, building common ground through various channels and support from the international community is required.

In this context, the management range of the DMZ District and the establishment and promotion of ecosystem conservation measures are timely environmental policies. The various measures presented in this document were established based on discussion and agreement by a number of related divisions, and they should be promoted more actively in order to ensure sustainable DMZ District management beyond unification.

Published by

Ministry of Environment

Government Complex Gwacheon, Jungangdong 1, Gwacheon-si,
Gyeonggi-do, 427-729, Republic of Korea
Tel. (822) 2110-6552 Fax. (822) 504-9206

Korea Environment Institute

290 Jinheungno, Eunpyeonggu, Seoul, 122-706 Korea
Tel. (822) 380-7777 Fax. (822) 380-7799

Written by Dr. Seong Woo Jeon

Edited by Dr. Hyun-Woo Lee, Yoonmee Lee, and David Matte

