

# ECOLOGICAL MANAGEMENT AND PEACE BUILDING IN KOREA'S BORDER REGION

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## **Introduction**

Korea's border region between South and North Korea was designated as a Demilitarized Zone (DMZ) for military purposes since the "Korea Armistice Agreement" on July 27, 1953, and local residents' comings and goings have been restricted. As a result, the border region is a place where the primitive forests have been maintained and the bio-diversity is in a high state of preservation over the last 50 years. International organizations such as UNESCO, IUCN, etc., have suggested that the area should be protected as an international natural environment park and biological conservation region. Besides, the border region has been of great interest to many parties, including the media, environmental NGOs, governmental agencies, i.e., the Ministry of Environment, the Ministry of Administration and Home Affairs, the Ministry of Construction and Transportation, and the Ministry of Unification.

However, the border region including the Demilitarized Zone has lacked systematic protection and management owing to the importance of military installations and activities between South and North Korea. In particular, since a local self-government system was launched in 1995, the border region has been degraded because local governments pushed ahead development-

oriented policies. Under these circumstances, the Ministry of Environment in 1995 tried to designate one section of the border region as an area for ecological protection but local residents strongly opposed the proposal owing to infringement of property rights. In 1988, the Ministry of Construction and Transportation tried to formulate a "Management Proposal for a Peace Period Between South and North Korea" but it failed. In 1999, the Ministry of Environment attempted an ecological research on the Demilitarized Zone and was faced with opposition by the Ministry of National Defense. Afterwards the "Supporting Border Region Act" was created and proclaimed in the National Assembly.

In spite of increasing interests inside and outside of the country, viable management proposals for the border region have not been suggested as of yet. The Ministry of Government Administration and Home Affairs, being in charge of the border region, just framed a "Comprehensive plan for the border region by the end of 2000", but there's no concrete foundation to date. Moreover, the studies of scholars and researchers on the border region fail to ascertain the scope of dichotomous argument between protection and development. It is so important for us to find a comprehensive approach, including conservation, development, and management over the area after unification. In other words, we have to grope for an alternative that realizes ecological protection, the development of residents' interests, and the value of peace building.

This study poses suggestions and alternatives for the development of ecological protection, residents' interests, and furthermore to contribute positively to an elevation of the quality of life after the unification in the border region. For this purpose we wish to apply an 'ecological model', which has a meaning as an integrated design with not only natural and environmental value, but also political, economical, and institutional value. In particular, this approach is advantageous in that it is useful in understanding site-specific problems and proposals for management.

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## The Origin and Character of the Korean Border Region

### The Origin of the Border Region

After liberation from Colonial Japan, Korea encountered the tragic division of South and North Korea while under occupation by the U.S.S.R. and the U.S.A. respectively. After 1950, North Korea was supported by the U.S.S.R and Communist China which led to the Korean War. The Korean War lasted 3 years and ended with the "Korea Armistice Agreement," on July 27, 1953. A truce line was established starting from the mouth of the Han river, Kyodongdo, via the southern part of Gaesung, Panmunjom, central Chulwon, Hwachon, and ending by connecting to Myunghori in Kosung-gun of the east coast amounting to 4 percent of the whole Korean peninsula. Along the Demilitarized Zone, military installations southward and northward retreated from the armistice line 2Km respectively. The southern area of the Demilitarized Zone has been under the control of the U.N. military armistice committee, In particular, the Civilian Control Line (CCL), within 15Km of the Military Demarcation Line (MDL), was installed, and a military installations protection and security maintenance zone were designated. Therefore, the 'border region' means "the areas of the civilian control zone and the military installations protection zone added together where ordinary civilian activities are prohibited for military actions, including the Demilitarized Zone."

The border region is under the control of several laws such as the 'Military Installations Protection Act' and any development activity in that area is strictly restricted. Licenses for development are controlled and approved by the military. However, some civilians' residences are allowed within the Civilian Control Line, while passage of non-residents is under strict control. The number of civilians permitted to reside within the Civilian Control Line is about 23,000 as of 1995, taking 3% of the total 600,000-some residents along the border regions. The population of border regions in general has been showing continuous decrease with the exception of Paju City.

## The Environmental Character of the Border Region

Over 70% of Korea's border region consists of forests, the remaining area being pasture, farmland, and swamp. While the border region consists of forests to the east, there are low grounds and a plains reaching west. This border region is worth preserving because it has been beyond the reach of a human for the last 50 years, so an abundance of animals, plants, and rare species live within. In particular, the Korean Demilitarized Zone (DMZ) is a place where plants are well protected and the biological diversity within is excellent among the nations of the world. The northern part of the Civilian Control Line is damaged because of the installation of military equipment and roads as well as cleaning visual fields. But 69.1% of the forests of this area (946.35Km<sup>2</sup>) are well protected. Furthermore, the biological diversity is excellent in the valleys and mountains and the forested areas of the east coast are excellent. A primitive state of nature has been maintained and has become a habitat for species of wild animals and plants, which are near to extinction. For example, such areas as the Chulwon plain, Daeamsan Yong-swamp, Dootayoun, Gunbongsan, Hyangrobong, Aegibong, Chiljulbong, etc. The Chulwon plain is known as a habitat for the winterization of white-naped cranes and kestrels. A rare ecological system, a high swamp Yong-swamp is located on the peak of Daeamsan mountain which was designated as area No. 240 of the natural protection district. Dootayoun is the largest habitat of fresh-water fish and to the east, Gunbongsan, Hyangrobong, Aegibong, and Chiljulbong has beautiful scenery which are home to a large variety of animals and plants.

According to recent research, an abundance of plants are distributed within the border region, such as: ferns - 15 families 27 genera 50 species, the gymnosperm - 3 families 8 genera 13 species - the angiosperm - 100 families 471 genera 1,157 species, and altogether 118 families 506 genera 1,220 species were found. Living among the fauna are over 5 kinds of birds, including the yellow-billed white heron and the blackfaced spoonbill, etc. In addition, 10 kinds of precious natural monuments including mammals like the water tiger, flying squirrel, bear, otter, musk deer, antelope, etc. Upon research it was

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found there are over 3,800 kinds of fauna as well as eel, rare fish and so on. It is not certain because accurate ecological research has not been done to date, but it is likely, more animals and plants will be found if ecological research is conducted. In addition, the archaeological value of the area is certain to be high as there are many tombs, castles and temples yet to be catalogued.

## **Management Policy and Problems within the Border Region**

### **The Position and Phases of the Border Region**

The border region is a peculiar place involving many various factors, among which is land division, ecology, as well as the concerns of local residents .

### A Symbol of Division Between South and North Korea: The Peace Zone

Korea's border region is a symbolic expression of the division between South and North Korea. Of course, there are many border lands dividing states in the world, but the Korean border region's character is of an area that has been divided forcefully by powerful countries. Since 1945's liberation of Korea and the ending of the 'Korean War', the allied united powers and the communist countries of China and the U.S.S.R along with the North and South Korean established the 38th parallel as the dividing line between North and South which ultimately led to the current state of division that has brought so many separated families into existence. Therefore, the border region is an artificial curtain which has created many separated families which have lived more than half a century without knowing of the lives or deaths of their family members.

In the long run, the Korean border region is a place where a large number of people place their fervent desire for unification. So the border region must be used as a buffer integrating the divided nations, that is, as a bridgehead accomplishing peace. In other words, the border region is a position of

exchange between South and North Korea, and a shock absorbing zone following unification, so that the border region can play a bridge role as a place accomplishing peace, and of exchange and coordination, of dialogue and meeting. To be sure, we can find important meaning in connection with its ecological value and the life which lives within.

### A Small State and it's Environmental Degradation

Korea is half the size of England and is a small country of about 98,779 Km<sup>2</sup>. Through 1970's and 1980's, Korea has undergone rapid industrialization and economic growth, but it has also given rise to serious ecological crisis. As England went through its industrial revolution, Korea also went through one similarly. Most regions are suffering from pollution, water contamination, and soil degradation, Korea caused ruthless development and nature damage even to Nature Preserve Districts and water supply sources and also national parks (Sa, Deugwhan, 1997).

The national land resources are becoming more devastated, and so we need various environmental buffers created. A buffer zone is a minimum condition for human beings, going further so nature and the man to live together. The buffer zone is needed so that we can make a sustainable society (Fischer and Black, 1995; Sa, Deugwhan, 1998). Therefore, we have to understand that the border region is a last stronghold to make the 'quality of life' better for Koreans considering the desolated situation of state lands.

### **Management Policy and Problems in the Border Region**

In spite of the important position and phase of Korea's border region, systematic management and protection has not been arranged yet. Plants in the border region were cut because of installation of military equipment, the opening of military roads, and the laying of mines. Both South and North Korea removed plants for the purpose of cleaning visual fields for military operations. As a result, 20.3%, 184.2Km<sup>2</sup>, of the whole area became grassland. As we go further to the central plain and western plains, military roads are

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entangled like a spider's web. Also military roads have been set up partly in mountainous areas in the east, so systematic management is pressing. Unlike other regions, the Civilian Control Line (CCL) was established from the armistice line within 3 to 10km in the west coast and plain areas. Such areas are becoming a place of permanent residence further damaging the natural ecology of the region.

Under these circumstances, the governmental agencies including the Ministry of Government Administration and Home Affairs haven't established much in the way of systematic research or protection planning. However, in 1998, the Ministry of Construction and Transportation arranged "The South-North Korea Peace Period Border Region Management Proposals" which includes an industrial complex, construction of a peace city, an agricultural land joint development project, and building up the Mt.Sorak-Hwajinpo-Mt.Kumgang area in the east coast as a tourist site in North-East Asia (JoongAng Ilbo, Nov. 11, 1998). But in December of 1999, the "Act of Supporting Border Region" passed the National Assembly, and the function fell under the jurisdiction of the Ministry of Government Administration and Home Affairs.

The July 22nd 2,000, The "Act for Border Region Support" was criticized as a development-oriented law which was made by a local assembly for the purpose of supporting local residents and developing the border region and was found to be lacking. To begin with, the desire of development among local residents and the city and county's projects are treated preferentially. The competent authority is to be the Ministry of Government Administration and Home Affairs and the Ministry of Government Administration and Home Affairs has an inclination supporting and controlling residents' interests and the city and county's projects as a department of development. However, we must know the value of the protection of the ecological system, and peace in the border region is no less important than the latency of development.

Secondly, it is a problem that a scope of the border region was limited by a district of jurisdiction to the south of the Civilian Control Line in the region the Presidential Decree sets up. But as mentioned above, the border region

comprises the Civilian Control Line and the military equipments protection zone including the Demilitarized Zone. Therefore, it is to blame that the scope of the border region was restricted by excluding the ecological value, and used intentionally to further the residents' interests.

Thirdly, it is expected that because the "Act for Border Region Support" is a special law allowing and encouraging installation of all sorts of facilities, inviting a manufacturing factory, and giving various tax favors, so this area will be wrapped in a strong development wind generating problems like speculative investment in real estate followed by the rising price of land, destruction of the ecological system, conflicting interests, and the loss of government finance potential. The same allowed the Ministry of Government Administration and Home Affairs to establish a "Comprehensive Planning for the Border Region." This also shall be a comprehensive plan involving deregulation and local development.

## **Korea's Border Region and Policy Alternatives of the Ecological Model**

The management controversy surrounding the border region has been divided into the logic of protection and development, and sometimes the other alternatives has been offered.

### **Reviews of Border Region Policies**

An existing discussion of border region is summarized with tense controversy between protectionists and developers. Primarily, protectionists insist that pro-protection management should be requested stressing the protection of the natural ecology system and the protection of rare animals, and the 'quality of life' after unification. On May, 1997, the Committee for Driving Globalization made clear that management - "proposals should be natural environment protection-oriented", and Yang insists that we should divide the border region into an absolute protection area, a protection-



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oriented development area, and also setting allowable areas for development before and after reunification (Yang, Buyngi, 1997: 297). Protectionists say that it is not desirable to develop the border region because of its natural ecology system and the rare animals and plants which exist densely in the Demilitarized Zone. Besides it is not desirable to develop the border region because of the rising of land prices, speculative investment in real estate followed by development and the difficulties in restoring the area if the border region is degraded.

On the contrary, protectionists insist that we should develop the border region by stressing the efficient utilization of the national land, the development desire of local residents, and solidifying it as a base for unification. These are as follows: One is Oh's insistence of creating a reunification base, preferentially, that we have to establish through researching this area and then utilizing the land (O, Jinmo, 1997: 300), another is Lee's insistence that we should regard the border region as subject to development emphasizing the inevitability of development (Lee, Haejong, 1997: 201-226), Another view is the "Act of Supplying the Border Region" that Lee Yong-Sam, as a member of the National Assembly drafted. In particular, developers insist that the border region is to be a contact spot in the exchange and cooperation between South and North Korea and seek to design systematic propulsion of local management through legislation. In addition, it was posed as a proposal for peace that the area should be arranged as a base to establish the foundation of trust (Ahn, J. Y. and McGahey, 1992: 468).

Both protectionist and developers do not always insist absolute protection or reckless development, but they understand that some degree of development is inevitable. The matter is a difference of degree carrying cognitive weight for either development or protection. Nevertheless we have to know that management of the border region is linked with another value, and that is, the quality of life for the next generation.

## **Policy Alternatives of the Border Region: For the Ecological Management and Peace Building**

The management of the border region is persuasive when we consider a “Comprehensive ecological model” connecting development, protection, and the value of peace together. The ecological approach is that we consider centering around not just the human being but the ecological system within the scope of carrying capacity. In particular, this approach doesn’t insist upon solely unconditional protection, but sustainable development within limits not given to damaging the environmental capacity. Therefore, this approach has value as an integrated design that implies that not only natural and environmental values but also political, economical and institutional values are to be considered. This approach has an advantage in that the approach is useful for understanding problems of a site-specific region and also proposals for management (Simons, 1981; Stern, Dietz and Guagnano, 1995).

The Border Region should be developed with restrictions that assume that protection is prior policy, that is, accomplishing protective development for the ecological region. Therefore, for the exchange and cooperation of South-North Korea and the inhabitant’s life, inevitable projects and installations should sublate a development style of material superiority, and head for pro-environmental development. It is important that both South and North Korea register and authorize this area as an international ecological park for peace.<sup>1)</sup>

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<sup>1)</sup> If we establish an ecological district like an international park, it will decrease political tensions and promote a peaceful state (McNeil, 1990; Shine, 1997).

**Figure 1. Comprehensive Ecological Model on the Border Region**

## The Ecology Protection zone for Peace

The border region has been maintained on the whole as a virgin forest for the last half century, so the region is highly worth preserving. In 1992, the UNEP proposed making an environmental park within the Demilitarized Zone (DMZ). Therefore, management of the border region which puts prior value on ecological protection, can achieve limited development without damaging the border region. From this viewpoint, it is desirable to divide the border region as an ecology protection area, quasi-protection zone, and a revision area.

First, ecology protection aims to preserve and develop the ecological value, and exclude harmful effects to natural protection. In this area, artificial activities except for military activity and military installations are prohibited, and the government will manage it strictly as a national domain. The areas subject to control are the Demilitarized Zone, the northern part of the Civilian Control Line, the western coast area, Chulwon plain, and the east coast area, i.e., Daeamsan, Dootayoun, Hyangrobong mountains.

Secondly, quasi-protection zone is a region adjacent to the ecology protection area and carries out full activities as an ecological buffer without harming the purpose of the ecological protection area. In particular, this area can be allowed minimally to function as an ecological resort for sightseeing, i.e., opening roads and as touring course.

Thirdly, a revision area is a place considered to have ecological protection value for a development project, to build places of permanent residence, i.e., ecological site for sightseeing. In this area, residents can develop and utilize the land for their agricultural activities.

To accomplish these things, to begin with, we first thoroughly research the ecology of the border region. Based on this research, we have to divide and establish a protection area, a quasi-protection zone, and a revision area. Recently the Ministry of Environment, for the first time in 50 years, intended to investigate the Demilitarized Zone with the Ministry of National Defense, but it was very regrettable as the investigation was rejected upon entering the Demilitarized Zone by the U.N. Forces in Korea and the Ministry of National

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Defense. Secondly, we have to systematically manage the historical and cultural relics and natural resources scattered in this region. In particular, in the case of the development of sightseeing we should sublimate development that exhausts resources and causes destruction to the environment, and head for sustainable development which utilizes good ecological resources near the border region, and positively uses the historical and cultural relics for education. Under these circumstances, a liaison tour belt connecting Mt. Sorak, Hwajinpo, and Mt. Kumgang with Hyangrobong mountains will be spotlighted.

#### North-South Agreements and National Interests

Management proposals of this region should be arranged through agreements between South and North Korea in the long run. On the one hand, Choi says that only South Korea should have a plan of protection and utilization of this area (Choi, Sangchul, 1996: 50~75). This cannot be reviewed as a good alternative, because if we exclude North Korea, and expect the border area to be an advanced base and a model for a world natural heritage area after reunification, the contrary effect will be high. In order to establish South-North agreements, it is above all important to have mutual consent regarding national interests. In particular, considering the management problem of the border region, it is advisable for us to approach non-politically by collaborating a delegation of the UNEP and the UNDP as well as South-North Korea's scholars, and gradually move toward a political solution.

#### Curtailement of Development Costs

Even though the border region is an area for repair and maintenance, reckless developments should be sublated, and a thorough analysis of the costs and benefits of the development should be conducted. First, installations of roads and railroads are inevitable. And, as much as possible, utilizing the road and railroad system installed before the 'Korean War,' to protect the ecological system is advisable. To begin with, the road and railroad

connecting Seoul with Gaesung and Sinwuiju can be considered. Secondly, the road and railroad connecting Seoul with Wuijungbu, Chulwon, Wonsan, and Pyungyang can be considered in the western part. And thirdly, the road and railroad connecting Yangyang with Wonsan, and Hamheung can be considered as part of South-North Korea's joint transport system.

In addition, there is a need to build a peace city (or free city) in preparation for reunification after arranging the ecological district. The peace city can play a role as a bridgehead for mutual exchange between South and North Korea. In particular, it is necessary for the reunification of two states which has had a different culture for over half a century to develop a peace city as a filtering apparatus. The construction of a peace city can prohibit temporary southward movement, and function as a field of learning to homogenize the different cultures mutually, and play a role as a meeting place for separated families.

Without doubt, the locating of the peace city is of paramount importance. The location of a peace city, in my judgment, should be in northern parts of the east coast in South Korea rather than P'anmunjom and the area near Seoul is appropriate from the viewpoints of protection of the natural ecology system, curtailment of unification costs (construction costs of city), accessibility, and control. Besides we can expect the area to function as a filter in preparation for the temporary inflow of North Korean residents following unification, as well as satisfying the above conditions. However, it is possible to have the dissent of local residents and slums in the region. Therefore, the government has to determine the required cost wholly. At the same time, we can consider construction of political and administrative cities for the South-North Korean exchange in the area passing the highways and railroads (P'anmunjom, Chulwon etc.) near the border region. In this case, a political and administrative city can play a role for a political and administrative exchange.

#### Arrangement of an Institutional Mechanism

On the one hand, for the management of border region, it is necessary to make up for all sorts of legal and institutional mechanisms to make the conditions of life better for local residents. In particular, from the viewpoint of

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improving the conditions of life for local residents those can be considered. First, local development is to be pushed forward within the framework of the "Comprehensive Planning of the Border Region." Local development neglecting the environment can turn a quick profit, but becomes an obstacle against local development in the long run. Once the environment is destroyed, a lot of money and time will be needed to recover it, so a deteriorated environment will be a burden for the local economy and thus, can deteriorate the quality of life of the residents.

Secondly, a compensatory measure should be arranged for property damage for land owners according to the regulation of private land. In particular, the government positively has to examine land compensation planning, and make proposals for purchasing land in the long run. The government also has to arrange a source of income for the survival of residents.

Thirdly, the government must establish programs to deal with military purposes in the short term. In particular, when we develop the border region, we have to consider both military purpose and ecological protection because the harmonious conducting of military operations is an actual duty.

Protection and management of the border region is not proper and suitable to be driven forward by only one administrative institution, i.e., the Ministry of Government Administration and Home Affairs. It also can't guarantee a better alternative. Therefore, we have to arrange comprehensive management programs in the midst of the agencies which are concerned. At present, the Ministry of Government Administration and Home Affairs, the Ministry of Construction and Transportation, the Ministry of Environment, the Ministry of Unification, and the Ministry of National Defense, and each local government are concerned. And these agencies are approaching from their various standpoints. In particular, the Ministry of Government Administration and Home Affairs, the Ministry of Construction and Transportation, and the local governments are approaching from the standpoint of pro-development, and the Ministry of Environment from the standpoint of pro-protection, and the Ministry of Unification from the standpoint of making a base of unification, the Ministry of National Defense

from the standpoint of national security, and the Ministry of Finance and Economy from the standpoint of finance and budget cutting. So, pan-governmental opinion coordination, and protection and management programs should be elicited. Figure 2 shows as mentioned above.

**Figure 2. Ecological Alternative on the Border Region: H Type**



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## Benefits of Ecological Management

As we have seen, if we protect and manage the border region well as an ecological peace park, we can anticipate the following effects. First, if we set up the border region as an ecology protection district, we can promote peace between South and North Korea. According to McNeil and Shine, if we establish an ecological district like an international park, it will decrease political tensions and promote a peaceful state (McNeil, 1990; Shine, 1997). Creating a park in the area may lessen the chances of an armed conflict and diminish tensions among North and South military installations and activities, and provide a base for final solutions of border dispute. Since World War II, tensions between states have been released by making parks near the national border of Czechoslovakia, Poland, German, the Netherlands, Belgium, and Luxemburg.

Secondly, through designating jointly managed ecological park between South and North Korea, natural resources and the environment can be managed systematically and efficiently. Researchers and the scholars concerned on both sides can grope for management programs through collaboration.

Thirdly, by making eco-tourism for the western marsh lands, the Chulwon region, and the east coastal area, we can make international tourist resorts. In particular, in the case of the east coastal area, we can set up world eco-tourism areas linking Mt.Sorak and Mt.Kumgang.<sup>2)</sup> However in such a case harmonizing its function as an ecological tourist area with the function followed by the construction of a peace city is an important problem for the government to solve. But if we consider that we can complement economic loss and avoid slums in the local community with tourism income and give chances to learn the actual field of unification to foreigners and Korean alike,

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<sup>2)</sup> According to Ceballos-Lascurain (1988), ecotourism is defined as tourism that involves traveling to relatively undisturbed natural areas with the specific object of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects (both of the past or the present) found in these areas.

such can be a mutual complement to the area.

## **Conclusion**

It is true that the systematic study for the management programs of the border region have been insufficient. In particular, existing studies for the border region have restricted new possible alternatives by not jumping over the logic of development and protection. From this standpoint, this study is intended to include value by considering “development in the protection region accomplishing peace and a quality of life” through an ecological approach for Korea’s border region. In particular, this study poses the creation of programs accomplishing development, protection and peace between South and North Korea.

Korea’s border region is an area of tight military control and political tensions. The South and North Korea has dealt with this region thus far for the limited purpose of military installations and military activities. Therefore even though natural resources are destroyed because of the opening of military roads and the security of visual fields, nevertheless, the border region is worth protecting ecologically because it has maintained many natural features along with wild animals and plants. Therefore, if we designate and manage the region as a world nature culture heritage area, it can contribute to accomplishing peace and the quality of life between South and North Korea.<sup>3)</sup> A three stage proposal for protection and management of the border region is below

### *The First Stage:*

The South and North Korea should jointly request UNESCO to designate the area as a World Natural Heritage (Ecological Protection District), and establish systematic protection and management programs. Ecological experts and scholars, to begin with, should enforce ecological research for this region,

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<sup>3)</sup> And quite possibly be a model for peace building in other war-torn countries worldwide.

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and set up a systematic management plan with an official in charge. In particular, through establishing non-political and military activities like ecological research and peaceful management, then moving toward political and military concerns will result in a fast track to unification.

*The Second Stage:*

Military installations and military forces within the border region should withdraw 50Km backward from a designated point. We have to thoroughly remove military tensions by prohibiting any military forces and military activities in the area.

*The Third Stage:*

Through a peace city, a field of gradual exchange and cooperation by reducing cultural heterogeneity will result. We can seek the economical interests of both countries, and ultimately accomplish unification.

However, despite the above discussion, ecological management planning may be a difficult hypothesis because the interests of both countries are acutely involved. In particular, it is impossible to predict political change within North Korea. Nevertheless, we can expect that ecological management programs will make it possible to raise the understanding for protection, development, and the quality of life toward a unified nation.

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