

## **A DMZ TRANSFRONTIER RESERVE AS THE HIDDEN KEY TO KOREAN COLLABORATION \***

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### **Synopsis**

*On the one hand, it is pointed out that pursuit over the decades by the two Koreas of a formal peace treaty, of political rapprochement, of economic collaboration, and of ultimate re-unification seems once again to have become hopelessly stalled in diplomatic mire. And on the other, the Korean peninsula's environmental status is in desperate need of achieving a solution to sustained conservation. This leads to the under-appreciated notion of an inextricable linkage between a region's environmental health and its social (societal) health – and the central role here of the Korean DMZ in fostering and cementing this inexorable relationship for the peninsula and to some extent beyond. The concluding lessons to be learned from transfrontier reserves throughout the world, both existing and proposed, bring out the diplomatic challenges associated with such bilateral endeavors and requisites for their success.*

**NB:** Appended is a brief list of key sources that permit those interested in locating the basis for most of the information provided in the text, at the same time permitting them to delve more deeply into the subject. Also appended is a brief annotated list of key multilateral treaties of importance to the subject at hand.

### **Political background**

The Korean War of 1950-1953 ended over half a century ago with an Armistice Agreement – and with both the Democratic People's Republic of Korea (**North Korea**) and the Republic of Korea (**South Korea**) avowedly looking forward, in good time, to achieving a Peace Treaty, thence to ultimate re-unification. The Demarcation Line established at the time to separate the two Koreas was 246 kilometers (153 miles) long, bisecting a Demilitarized Zone 4 kilometers (2.5 miles) wide – the established DMZ thus covering an area of 98,400 hectares (243,150 acres = 380 square miles). An informal Civilian Control Zone (CCZ) was additionally established immediately to the south of

the DMZ that averaged 5.4 kilometers (3.4 miles) in width, and a CCZ of similar width is said to exist immediately to the north of the DMZ. Thus the combined area of the DMZ plus its two associated CCZs is perhaps 364,000 hectares (900,000 acres = 1,400 square miles) in size. The DMZ was placed (and remains) under the control of a Military Armistice Commission consisting of China, North Korea, and the United Nations Command as represented by the United States (thus not directly including South Korea).

The diplomatic relations between North and South Korea have waxed and waned markedly over the years since 1953, however, reaching a highpoint of cooperation during the 1990s, as manifested especially by their 1991 *Agreement of Reconciliation, Non-aggression, Exchanges, and Cooperation*. Among a host of other pledges, the two Koreas thereby committed themselves to working together to carry out peaceful uses of the DMZ, and also to cooperate in diverse fields including the environment. Indeed, in early 1991 North Korea approached the United Nations to explore the possibility of a DMZ-centered bio-sanctuary, a request soon thereafter repeated by South Korea. The action agency here became the United Nations Environment Programme (UNEP), and I in turn was asked to direct the project.

Regrettably, North Korea drew back from its initial interest within about a year (in 1992), although subsequently reiterating its commitment to preserving the biota and ecology of the DMZ, at the same time pointing to political problems preventing this. South Korea nonetheless maintained its commitment, dealing not only with UNEP, but subsequently also with the United Nations Development Programme (UNDP). In 1997, the then President of South Korea (Kim Young-sam), in addressing the United Nations General Assembly, specifically expressed his hope that the two Koreas would cooperate to protect and preserve the DMZ, turning it into a zone of peace and ecological integrity.

Also in 1997, the Military Armistice Commission for the first time invited South Korea to participate directly in its negotiations. In 2000, the then heads of state of the two countries (North Korea's Kim Jong-il and South Korea's Kim Dae Jung) met for the first time ever; and it was also in 2000 that the then President of South Korea (Kim Dae Jong) was awarded the Nobel Peace Prize for his burgeoning "sunshine policy" toward North Korea. However, North-South diplomatic relations are currently once again at a low ebb, prompted primarily by nuclear-weapon issues.

Nonetheless, earlier this year a rather encouraging secret meeting of scientists from the two Koreas was held in Pyongyang in order to facilitate North/South scientific cooperation on various fronts, among them the environment (*Science* 312:172-173, 12 Apr 06). Among the proposals made at this meeting was to carry out an ecological survey of the DMZ. The session (subsequently made public) must certainly have had the approval of the two heads of state (North Korea's Kim Jong-il and South Korea's Roh Moo-hyun).

### **Environmental status of the Korean peninsula**

It is widely recommended by ecologists that, at minimum, some 10% to 12% of the global biosphere must be protected in perpetuity on behalf of nature, appropriately distributed among all of the world's diverse major eco-regions or habitat types (and at the same time encompassing the world's major remaining species high-diversity sites, the so-called biodiversity hot-spots). In fact, this level of protection has now been accomplished by some three dozen countries. However, neither of the two Koreas has as yet attained this worthy goal. North Korea has to date set aside 19 protected natural areas that total 315,000 hectares (778,000 acres = 1,200 square miles), representing but 3% of its surface area. South Korea has to date achieved a somewhat more favorable record, with 26 protected areas that total 682,000 hectares (1,685,000 acres = 2,600 square miles), representing 7% of its surface area. Thus, considering the overall Korean peninsula as the appropriate eco-region, barely 5% has by now been set aside for nature. Sadly enough, of the biota native to the Korean peninsula, 11 or more higher (vascular) plant species are threatened with extinction, as are also at least 7 mammal species and 22 or more bird species.

Most of the land area in the two Koreas is now heavily utilized (in part over-utilized) for human purposes - agriculture, industry, transportation, homes, and so forth - so finding appropriate areas to preserve becomes a major challenge. Here is where the DMZ, together with its two associated CCZs, become an ideal - not to say, obvious - choice for expanding the peninsula's still meager protected natural areas. Having been relatively undisturbed for over half a century, most of the 364,000 hectares (900,000 acres = 1,400 square miles) now represent a *de facto* bio-sanctuary. Indeed, of those biota in danger of extinction alluded to earlier, roughly one-third of the

plants, one-half of the mammals, and one-fifth of the birds live in the DMZ.

### **The link between environmental and social security**

The obligation for a country to protect its borders from outside intrusion – the traditional definition of national security – has evolved considerably in recent decades. Thus the notion of national security has increasingly come to encompass such additional national obligations as rights to health and to an environment of a quality permitting a life of well-being and dignity. It was concomitantly recognized ever more fully that those expanded national obligations in turn required a respect for nature.

Recognition of a respect for nature was seen to translate on the one hand into sensitively (sustainably) managed agricultural, forest, wetland, and other rural areas, and on the other to the setting aside of some modest fraction of the world for the plants and animals making up the biosphere. Soon additionally recognized was the incongruity between eco-region boundaries and national boundaries, leading to the realization that here was yet one more reason that the countries of the world had to eschew at least some level of isolationism to achieve their expanding security obligations.

So it is that social (societal) security is dependent on environmental security – and, in turn, that environmental security cannot be achieved without social awareness of the link between the two, and the necessary actions that follow from such linkage.

### **A proposal for protection**

It would certainly be a boon to both the land and people of the Korean peninsula if the entire DMZ plus associated CCZs were to be set aside in perpetuity for peace and nature. However, tremendous competing interests from both north and south exist for the development of those 364,000 hectares (900,000 acres = 1,400 square miles) once the two Koreas re-unite and the DMZ dissolves. So I would suggest the establishment, as soon as possible (that is, well prior to re-unification), of at least two major bio-sanctuaries, each perhaps 50,000 hectares (ca 124,000 acres = ca 193 square miles) in size – and thus each extending about 34 kilometers (21 miles) along the Demarcation Line, unless they were to bulge out a bit beyond either of the two associated CCZs. (Should both of the recommended reserves become a reality, then the fraction of the Korean peninsula protected in perpetuity would rise by a modest 0.5%.)

The **first** of these transfrontier reserves I propose would be a largely low wetland toward the western end of the DMZ, about 60 kilometers (97 miles) northeast of Panmunjom. This westerly reserve would be of extreme importance as a wintering ground for migratory birds utilizing the northeastern Asian flyway (involving primarily China, Russia, and the two Koreas). Moreover, the area provides a home for various endangered animal species, among them the musk deer (*Moschus moschiferus*), red-crowned crane (*Grus japonensis*), white-naped crane (*Grus vipio*), Chinese egret (*Egretta eulophotes*), black-footed spoonbill (*Platalea minor*), oriental stork (*Ciconia boyciana*), swan goose (*Anser cygnoides*), Nordmann's greenshank (*Tringa guttifer*), Steller's sea eagle (*Haliaeetus pelagicus*), and crested ibis (*Nipponia nippon*), assuming any of the ibises remain there.

The **second** of these transfrontier reserves I propose would be a largely mountainous temperate-forest upland about 50 kilometers (31 miles) southwest of the eastern terminus of the DMZ. This easterly reserve would be of great importance to large mammals and other wildlife. Moreover, the area provides a home for various endangered animal species, among them the red-crowned crane (*Grus japonensis*), Asiatic black bear (*Ursus thibetanus*), and tiger (*Panthera tigris*), assuming any of the tigers remain there. I should add that this proposed bio-sanctuary lies to the south of North Korea's Mount Kumgang (Mount Diamond) National Park (60,000 hectares [148,000 acres = 230 square miles]), and to the north of South Korea's Sorak Mountain National Park (37,300 hectares [92,200 acres = 140 square miles]). Establishing connecting protected corridors would be especially beneficial to the involved wildlife.

Both of the transfrontier reserves I am proposing here would clearly have some potential for eco-tourism. Moreover, they would leave about three-quarters (ca 73%) of the DMZ plus associated CCZs for the development so ardently desired both to the north and south of the Demarcation Line. And the two would by no means exclude the establishment of additional smaller bio-sanctuaries along the DMZ.

### **Towards establishment of the DMZ reserves**

The notion of transfrontier parks for peace and nature is by no means a new one. As far back as 1924 representatives of Poland and the former Czechoslovakia set in motion the establishment of two pairs of cooperating contiguous nature reserves (in the Tatra Mountains straddling the now Polish/Slovakian border) for the express purpose of rebuilding bilateral trust as an approach to settling a World War I border dispute. As another example, in 1999 Ecuador and Peru established a demilitarized transfrontier peace park (the Cordillera del Condor Peace Park) to celebrate the post-war settlement of a boundary dispute and to commemorate the soldiers of both sides who had fallen in their protracted border war. In fact, more than two dozen formal bilateral transfrontier reserves for peace and nature now exist around the world.

Although not involving nature protection, an agreement in 1988 between the then two Yemens is of interest here because the two countries were able to establish a demilitarized condominium for joint commercial exploitation in a contested border area (El Jannah), but with this confidence-building measure becoming moot a few years later (in 1990) when the two countries, in fact, united.

As I have already noted, both North and South Korea have long expressed their interest in protecting at least some fraction of the DMZ. Facilitating such bilateral action are a number of important international legal instruments to which both of the Koreas are already states parties. Thus, the 1992 Biodiversity Convention commits the two Koreas to cooperate in establishing protected natural areas; the 1977 Protocol on International Armed Conflicts provides them the opportunity to create demilitarized zones; the 1972 World Heritage Convention gives them the opportunity to establish outstanding natural heritage sites; and membership in UNESCO permits them to

establish Biosphere Reserves. Among several further apropos multilateral treaties, the 1971 Wetland Convention (to which South Korea belongs, but not as yet North Korea) would provide for the two Koreas to consult on their transfrontier wetlands. Thus, based on these (and several other) instruments, I would urge the two Koreas to begin by establishing along the Demarcation Line, as appropriate, contiguous bio-sanctuaries, World Heritage Sites, Wetlands of International Importance, and Biosphere Reserves.

A number of intergovernmental agencies and nongovernmental organizations (NGOs) can readily be turned to by the two Koreas for technical advice in establishing a transfrontier reserve. I have already mentioned the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP). Also of highest value in this regard would be the World Conservation Union (IUCN), the World Wide Fund for Nature (WWF), Conservation International, the International Crane Foundation, Fauna and Flora International (FFI), and the International Committee of the Red Cross (ICRC). Indeed, the International Crane Foundation is already deeply interested in protecting involved wetlands, and, in fact, has been the catalyst in the establishment of a bio-sanctuary in the Han River estuary near the western terminus of the DMZ. Finally, it is most interesting to note that China and North Korea are currently negotiating to establish a transfrontier nature reserve encompassing the spectacular and ecologically important Changbai Mountain region which straddles their mutual border (*Science* 313:1379-1380, 8 Sep 06).

### **What next?**

With the need to nurture amicable relations between the two Koreas almost as great as ever, with the threat to biodiversity, both regional and global, becoming increasingly serious, and with the ability to establish the necessary nature reserves becoming ever more elusive, it seems obvious to me that the now *de facto* bio-sanctuary that has been created by the DMZ and its two associated CCZs offers a golden opportunity to address all three of these issues simultaneously. I might add here that it is a pity that, according to recent news reports, our current Administration has been opposed to the current tentative steps towards North/South rapprochement and collaboration (e.g., *New York Times*, 18 Jul 06, p. 3) - something that could, of course, change following our recent election.

Each of the two Koreas might find it useful to develop and adopt an environmental code of conduct in recognition of the inexorable link between environmental health and societal health. And experience from other transfrontier reserves shows us that it will be enormously useful to work with the moral support, guidance, and technical assistance of the intergovernmental agencies and NGOs to which I have already alluded. With their help, each of the two countries should at this time certainly begin to establish, where ecologically appropriate, *de jure* bio-sanctuaries along the Demarcation Line.

It has also been found from past experience that to do this, it would be extremely useful if the bilaterally contiguous reserves could, to begin with, be pursued with informal, politically low-level cross-border cooperation between the respective reserve managers and technicians (for example, in such mutually advantageous areas as fire suppression, pest control, and emergency rescue operations). The environmental actions and associated informal technical transfrontier cooperation I am suggesting would certainly seem to me to be sufficiently non-controversial and mutually beneficial to be acceptable to both sides. In diplomatic parlance, they would be serving as modest political confidence-building measures. And as these steps I have outlined move ahead, they should be cemented, little by little, with memoranda of understanding and similar instruments (a number of precedents and other models for which are available). Thus, the benign and socially favorable DMZ-related environmental transfrontier actions being recommended here might well at this politically sensitive juncture serve as the hidden key to Korean collaboration.

And then, at some future time when the two Koreas actually re-unite, and the DMZ and associated CCZs thereby become history, the necessary bio-sanctuaries would already be firmly in place.

## Appendix 1: Key sources

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- Westing, A.H. 2001. A Korean DMZ park for peace and nature: towards a code of conduct. In: Chan-han Kim (ed.). *The Korean DMZ: reverting beyond division*. Seoul: Sowha Publishing Company, 359 pp: pp 157-191. [Originally published in a Korean edition in 2000.]

## **Appendix 2: Key relevant multilateral treaties**

**1971 Wetland Convention:** Convention on Wetlands of International Importance Especially as Waterfowl Habitat. Ramsar, Iran, 1971. In force 1975. Depositary, UNESCO. Secretariat, World Conservation Union (IUCN). UNTS 14583. Article 5 commits the states parties to consultation with respect to a transfrontier wetland or water system. States parties include **South Korea** (but **not** as yet North Korea), as well as neighbors China and Russia.

**1972 World Heritage Convention:** Convention Concerning the Protection of the World Cultural and Natural Heritage. Paris, 1972. In force 1975. Depositary, UNESCO. Secretariat, UNESCO, for natural heritages utilizing the technical services of the World Conservation Union (IUCN). UNTS 15511. Article 6 commits the states parties not to take any deliberate measures which might damage, directly or indirectly, the natural heritage of outstanding universal value situated on the territory of other states parties. States parties include **North Korea** and **South Korea**, as well as neighbors China and Russia.

**1977 Protocol I on International Armed Conflicts:** Protocol Additional to the Geneva Conventions of 1949 and Relating to the Protection of Victims of International Armed Conflicts. Bern, 1977. In force 1978. Depositary, Switzerland. Secretariat, Switzerland, with support from the International Committee of the Red Cross. UNTS 17512. Article 60 provides to the states parties the opportunity to create demilitarized zones. States parties include **North Korea** and **South Korea**, as well as neighbors China and Russia.

**1979 Migratory Species Convention:** Convention on the Conservation of Migratory Species of Wild Animals. Bonn, 1979. In force 1983. Depositary, Germany. Secretariat, United Nations Environment Programme. UNTS 28395. The treaty provides for the protection of wild animals that migrate across or outside national boundaries. (States parties do **not** as yet include either North Korea or South Korea, neither do they include neighbors China or Russia.)

**1992 Biodiversity Convention:** Convention on Biological Diversity. Rio de Janeiro, 1992. In force 1993. Depositary, United Nations. Secretariat, United Nations Environment Programme. UNTS 30619. Article 8a commits the states parties to

establishing a system of protected natural areas; Article 5 to cooperating among themselves; and Article 3 to ensuring that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction. States parties include **North Korea** and **South Korea**, as well as neighbors China and Russia.

**1997 Anti-personnel Mine Convention:** Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-personnel Mines and on their Destruction. Ottawa, 1997. In force 1999. Depositary, United Nations. Secretariat, United Nations. UNTS 35597. Article 1 commits the states parties never under any circumstance to use anti-personnel mines and to ensure the destruction of all anti-personnel mines. (States parties do **not** as yet include either North Korea or South Korea, neither do they include neighbors China or Russia.)

**\* Title note**

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*Arthur H. Westing's undergraduate training was in botany (Columbia, AB, 1950). After two years in the United States Marine Corps (serving as an artillery officer in the Korean War) he became a forest ecologist (Yale, MF, 1954; PhD, 1959). He has been a Research Forester with the United States Forest Service and has taught forestry, ecology, and conservation at various colleges and universities. For eight years he directed the United Nations Environment Programme project on 'Peace, Security, and the Environment', a position which took him to South Korea and many other countries throughout the world; and is the author of numerous articles and several books in that subject area. He has been awarded an honorary doctorate (DSc, Windham, 1973) and a medal from the New York Academy of Sciences (1983); he was named a 'Peace Messenger' by the United Nations Secretary-General (1987), and he is one of the 500 individuals worldwide to have been appointed to the United Nations 'Global 500 Roll of Honour' (1990). He has been a Consultant in Environmental Security to*

several branches of the United Nations (UNEP, UNESCO, UNIDIR, etc.), to the International Committee of the Red Cross, to the Government of Eritrea, to the World Bank, and to various other national and international agencies. He has been on the faculty of the European Peace University, a member of the World Conservation Union (IUCN) World Commission on Protected Areas, on the Advisory Board of the DMZ Forum, a consultant to the International Boundaries Research Unit, and also a member of or advisor to a number of other international environmental nongovernmental organizations and scholarly journals.

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