Chapter 7 Regional Security: The Case of the Korean Demilitarized Zone (DMZ)

7.1 Three Nations Cut in Two

One of the momentous outcomes of World War II was that the German *Reich* was in 1945 cut in two, with about one-third of its territory and population forming East Germany (the German Democratic Republic), and the remainder becoming West Germany (the Federal Republic of Germany). As we all know, for the subsequent 35 years the two States went their remarkably separate ways politically, socially, and economically. And it is important for me to stress that right up to the 11th hour essentially no one foresaw the rapid collapse of both the physical and psychological barriers that had so firmly separated the two German States for so long. And I am pleased to be able to note that one outcome of reunification has been that there now exists a movement to convert the former fortified strip of land between the two Germanys into a nature-protected green belt.

I mention next (but for present purposes only in passing) that 1990 also witnessed the reunification of the two Yemens—and that merger occurring despite two decades of serious bilateral hostility, as well as of ideological and economic disparities comparable to those of the two Germanys. Thus, here again there occurred an unanticipated reunion, one that once initiated, progressed with

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lightning speed. So, as with Germany, it must have been some mix of ethnic, linguistic, cultural, and geographical ties that in the end overcame the huge existing asymmetries.

I now come to the remarkably similar story—the basis of this presentation—of yet another national division that occurred half way around the world only a few years after Germany's unfortunate dissection. Thus, one of the momentous outcomes of World War II plus the Korean War was that the Korean State was in 1953 also cut in two, with about one-half of its territory and one-third of its population forming North Korea (the Democratic People's Republic of Korea), and the remainder becoming South Korea (the Republic of Korea) [Sequence of relevant international conferences: Cairo, December 1943; Yalta, April 1945; Moscow, September 1945; New York, November 1947; New York, June 1950; Panmunjom, July 1953]. Once again, the two States went their remarkably separate ways politically, socially, and economically. But here the two stories diverge, inasmuch as the Korean separation has for 57 long years now remained (with minor fluctuations) about as firm as ever, and thus with no credible inkling as yet of reunification. Indeed, the two sides (formally, North Korea until recently plus China versus the UN Command in the firm hands of the USA, now informally plus South Korea) continue to function separately within the framework of what in 1953 was meant to be a temporary Armistice Agreement, but as yet with no Peace Treaty in sight.¹

7.2 The Korean Situation Today

My hope for the future of the Korean peninsula and its two still antagonistic States depends on progress in two main areas: *First*, to be able at last to witness a peaceful and mutually beneficial formal end to the war in which I myself had fought more than half a century ago while serving as a US Marine under United Nations command. And *second*, to be able to help insure the environmental integrity of that peninsula, without which the long-term health and well-being of its people and wildlife would be in certain jeopardy. Fortunately, those two areas of concern could in my view be fruitfully linked, in that progress with the latter one (i.e., progress with environmental conservation) could facilitate success with the former one (i.e., progress with political *rapprochement*).

¹ The temporary North/South relationship established by the 1953 Armistice Agreement (Panmunjom, 27 July 1953) consisted of the Democratic Republic of [North] Korea plus China *versus* the United Nations Command (UNC) under the leadership of the USA. With most of the UNC member states (ca 16 in number, although not including South Korea) having over the years withdrawn, on 7 November 1978 the USA established the Republic of [South] Korea/USA Combined Forces Command (ROK/USA CFC) under US command. The UNC continues to exist, but apparently essentially in name only. On 11 March 2013 North Korea unilaterally declared the 1953 Armistice Agreement to be 'invalid'. The significance and ramifications of that declaration are as yet obscure.

For a region such as the Korean peninsula to offer an appropriate home both for its human inhabitants (with their necessary crops, livestock, and civil infrastructure) and for as many as possible of the remaining native plants and animals, requires a combination of (1) the sensitive use of all those lands sequestered for agriculture, industry, transportation, and so forth, and (2) the setting aside of some fraction of the peninsula as protected areas for the native flora and fauna. The first of those two requirements—the sensitive use of all lands—is now only inadequately met in both the North and South, and will thus require substantial educational efforts, legislation, and enforcement, but is not the subject of this presentation. The second of those two concerns—the *de jure* protection of some areas as nature reserves (bio-sanctuaries)—is even more seriously deficient in both the North and South, and leads me to what is to follow.

The present paucity of protected habitats on the Korean peninsula has deprived the peoples of the region of the many subtle continuing benefits deriving from adequate expanses of natural areas, the so-called ecosystem services. Among those often overlooked benefits of natural areas I might especially mention: purification of water and air, amelioration of local climate, limiting of erosion and protection of watersheds, making available wild medicinal plants, offering tranquility and inspiration, providing opportunities both for scientific research and eco-tourism, and offering somewhat of a counter-balance to the escalating environmental adversities to be expected as global warming continues. This substantial Korean paucity of bio-sanctuaries has also inexorably led to at least some extinctions and to the likelihood that others will follow suit. Indeed, listed among the wildlife currently known to be in danger of extinction on the Korean peninsular, primarily for lack of adequate habitat, are at least 29 species of birds, 6 of mammals, and even 1 each of a salamander and a dragonfly (cf. Appendix 7.1).

The 1953 Armistice Agreement that ended the North/South hostilities established a Military Demarcation Line (MDL) between the two States (which, as it happens, I helped to survey in 1952) flanked by a Demilitarized Zone—the DMZ—a roughly east-west green belt that traverses a full range of habitats (saltwater and freshwater, lowland and wetland, upland and highland, grassland and woodland). The DMZ is 4 km [2.5 mile] wide and approximately 248 km [154 miles] long, thus occupying an area of about 992 km² [383 miles²]. Found in the DMZ are about one-third of the peninsula's higher (vascular) plants, one-half of its terrestrial mammals, and at least one-fifth of its birds. Its ecological importance derives in significant part from traversing that wonderfully representative sample of most of the peninsula's diverse ecosystems, most of them in the DMZ now largely unmolested by human action for over half a century. This has permitted those diverse ecosystems to be well on their way to recovering naturally from their extraordinarily serious wartime and other prior human disruptions (cf. Fig. 7.1). And the wetlands among them provide crucial wintering grounds for such charismatic and imperilled birds as the cranes, egrets, ibises, spoonbills, and storks that annually migrate between the Korean peninsula and China, Russia, or Japan (cf. Appendix 7.1.1)—the basis for a recent proposal to establish a so-called Northeast Asian Biodiversity Corridor (cf. Appendix 7.2, *Nautilus*).



Fig. 7.1 White-naped Cranes (*Grus vipio*; IUCN Vulnerable) in the Central Highland's Cheorwon Basin, within the Civilian Control Zone (CCZ), with the adjacent Korean Demilitarized Zone (DMZ) wilderness in the background, taken by George W. Archibald on 15 December 2012 © International Crane Foundation, by permission, 22 March 2013

Thus the DMZ could become the centerpiece of any effort to work toward environmental sustainability for the peninsula. If the DMZ (or at least substantial portions of it; and perhaps together with some adjacent areas) were to be conserved in perpetuity it would serve the crucial function of helping to conserve the Korean peninsula's environment, at the same time serving as an inspiring memorial tribute to the many soldiers and civilians of both sides who had lost their lives during the hostilities. And, as is to be developed next, it is my hope that it could additionally represent a magnificent apolitical avenue and ultimate monument to peace between two presently most uneasy neighbors—and conceivably in time even to their reunification (an aim, I might add, that the two Koreas actually proclaimed in a joint communiqué of 4 July 1972 and reaffirmed on 13 December 1992 and once again on 4 October 2007).

7.3 Protecting the DMZ as a Confidence- and Security-Building Measure

The first governmental indication of interest in a DMZ-centered nature reserve occurred in early 1991 when North Korea approached the UN Secretary-General (Kofi A. Annan) to explore such a possibility, a like step that was taken very soon

thereafter by South Korea. The task was given over to the Executive Director of the UN Environment Programme (Mostafa K. Tolba), a job that in turn was assigned to me. However, in short order I was to discover that whereas South Korea was maintaining its interest in this investigation, most regrettably North Korea soon (in 1992) drew back from it. The next relevant official statement came in December 1997 when the President of South Korea (Kim Young Sam), in addressing the UN General Assembly, specifically expressed his hope that the two Koreas would cooperate with each other to protect and preserve the DMZ in order to turn it into a zone of peace and ecological integrity. By contrast, North Korea's response to that initiative came about a year later (in August 1999) with the abrupt statement that existing political problems continued to prevent such a possibility. Gentle nudges from time to time from the *UN Environment Programme*, the *UN Development Programme*, and a number of nongovernmental organizations (most recently, from IUCN) could not break the stalemate (cf. Appendix 7.2).

A serious problem being faced here is that the DMZ had been created at war's end largely (ca 85 %) by 'temporarily' expropriating (confiscating) privately owned lands. Thus, as soon as the 1953 Korean Armistice Agreement gives way to a Peace Treaty, the DMZ will cease to exist and those private lands will have to revert to their rightful owners. And that problem is exacerbated by national expropriations of abutting northern and southern buffer zones, also kept largely undeveloped over the years. In fact, the so-called Civilian Control Zone (CCZ) to the south averages fully 5.4 km [3.4 miles] in width, for an area of ca 1,339 km² [ca 517 miles²]. Another significant problem is the strongly competing interests to make use of the sequestered lands for immediate human demands such as agricultural and industrial expansion. So, unless provision is made for the establishment of substantial state-owned bio-sanctuaries in all or parts of the DMZ plus some of its abutting northern and southern buffer zones prior to the consummation of the as yet unanticipated Korean Peace Treaty, that opportunity might well be lost forever.

And that, of course, is why the completely unanticipated actions that occurred two decades ago in Germany (and in Yemen) are so disquieting in the present context.

Diplomatic relations between the two Koreas have vacillated over the years between uneasy and dismal. Any of the occasional potentially promising initiatives by one side or the other—whether in the arena of high politics or low—have not to date led to anything fruitful in the present context. Even South Korean President Kim Dae Jong's 'sunshine policy' toward North Korea in the 1990s (for which he was honored with the Nobel Peace Prize for 2000) led to no tangible environmental cooperation. Thus it is my conviction that now is the time for North and South Korea to take diplomatic advantage of the ever more urgent necessity to conserve the peninsula's environment. They would thus be doing so in a thoroughly non-provocative, apolitical, and mutually beneficial fashion. Such parallel actions would in total constitute a so-called confidence- and security-building measure serving to ease the existing tensions and animosities between the two.

Fortunately, a solid legal basis for cross-border environmental cooperation is already in place for the two Koreas in that both are states parties especially to four enabling multilateral treaties: the 1945 Charter of the United Nations (UNTS unlisted); the 1972 World Heritage Convention (UNTS 15511); the 1977 Protocol I on International Armed Conflicts (UNTS 17512); and the 1992 Biological Diversity Convention (UNTS 30619). Details of the specific relevance of those four universal legal instruments (as well as of two additional ones) are appended (cf. Appendix 7.3.1). Additionally appended are specific details pertaining to a number of further quite instructive universal, regional, and bilateral legal instruments of indirect relevance to such cooperation (cf. Appendix 7.3.2), of which the existing bilateral ones might well be of particular interest as models (cf. Appendix 7.3.2.3). And compilations are also provided of intergovernmental agencies and nongovernmental organizations that could be turned to for assistance in this matter (cf. Appendix 7.2), as well as of relevant publications (cf. Appendix 7.4).

7.4 The Next Steps

It should be clear by now that there is an urgent need for the two Koreas to initiate steps, both individually and in time jointly, to set in motion conversion of the present *de facto* DMZ nature reserve (or at least substantial portions of it—perhaps together with some relevant contiguous areas) into the *de jure* transfrontier reserve for peace and nature so important to the future environmental and societal security of the Korean Peninsula. As already suggested, an adequate number of the fundamental legal foundations is already in place (cf. Appendix 7.3.1). Thus it has become my strong conviction that now is the time for the two Koreas to consummate a *Memorandum of Understanding* (MoU) that would commit them to forthwith setting in motion steps to *unilaterally* establishing abutting protected areas on their respective sides of the Military Demarcation Line (MDL), with the notion in mind of ultimately joining them as transfrontier protected areas. To this end, I have prepared the draft of a very permissive and non-threatening model MoU for the two Koreas to consider and, of course, for them to revise as felt necessary (cf. Appendix 7.5).

In unilaterally establishing their protected areas within and adjacent to the DMZ, consideration should be given by the two Koreas that various of them could in time be nominated—as ecologically appropriate—to become joint border-straddling 'World Natural Heritages', 'UNESCO/MAB Biosphere Reserves', a 'UNEP Regional Yellow/West Sea' (this perhaps together with China), and 'Wetlands of International Importance' (although for this last possibility, both would have to become states parties to the 1971 Wetland [Ramsar] Convention (UNTS 14583) (cf. Appendix 7.3.1).

As already suggested, the two Koreas are fortunate in being able to make use of a number of publications of direct relevance to the DMZ (cf. Appendix 7.4.1), and a further number exists that provide theoretical background and rather detailed

guidance for the establishment of transfrontier reserves for peace and nature (cf. Appendix 7.4.2). And, as also noted earlier, they are additionally fortunate in being able to turn to a number of international agencies and nongovernmental organizations for guidance and support. On the one hand, these include especially UNEP, UNESCO, UNDP, FAO, UN-REDD, and GEF; and on the other, IUCN, WWF, the *International Crane Foundation*, the *Peace Parks Foundation*, and the *DMZ Forum* (cf. Appendix 7.2).

It should also be useful for the two Koreas to be reminded that 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 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 (cf. Appendix 7.3.2.3).

So, let us hope and trust that the herein suggested diplomatic confidence-building approach to ameliorating the half-century of fear and distrust between the two Koreas will in time lead to their reconciliation—and, thereby, also to a world with one less wall.

Appendix 7.1 Known Imperilled DMZ Wildlife

Appendix 7.1.1 Birds

Crane, Hooded (Grus monacha)—IUCN Vulnerable

Crane, Red-crowned (or Manchurian) (Grus japonensis)—IUCN Endangered

Crane, White-naped (or Grey) (Grus vipio)—IUCN Vulnerable (cf. Fig. 7.1)

Eagle, Imperial (Aquila heliaca)—IUCN Vulnerable

Eagle, Steller's sea (Haliaeetus pelagicus)—IUCN Vulnerable

Egret, Chinese (Egretta eulophotes)—IUCN Vulnerable

Goose, Swan (Anser cygnoides)—IUCN Vulnerable

Grassbird, Marsh (Locustella pryeri = Megalurus pryeri)—IUCN Near Threatened

Grasshopper-warbler, Pleske's (Locustella pleskei)—IUCN Vulnerable

Greenshank, Nordmann's (Tringa guttifer)—IUCN Endangered

Gull, Chinese black-headed (Larus saundersi)—IUCN Vulnerable

Ibis, Crested (Nipponia nippon), if any in the DMZ—IUCN Endangered

Sandpiper, Spoon-billed (Eurynorhynchus pygmeus)—IUCN Critically Endangered

Spoonbill, Black-faced (Platalea minor)—IUCN Endangered

Stork, Oriental (Ciconia boyciana)—IUCN Endangered

[These **14** or **15** birds represent 48 % or 52 % of the 29 known imperilled bird species on the Korean peninsula.]

Appendix 7.1.2 Mammals

Bear, Himalayan black (Ursus thibetanus), if any in the DMZ—IUCN Vulnerable

Deer, Chinese water (Hydropotes enermis)—IUCN Vulnerable

Deer, Siberian musk (Moschus moschiferus)—IUCN Vulnerable

Tiger (Panthera tigris), if any in the DMZ—IUCN Endangered

[These **2–4** mammals represent 33–67 % of the 6 known imperilled mammal species on the Korean peninsula.]

Notes:

(a) Imperilled species on the Korean peninsula, not known to inhabit the DMZ, include: 14 birds, 2 terrestrial mammals, 1 salamander, 1 dragonfly, 4 marine fish, 6 marine mammals, and 1 net coral (but no plants):

For a grand total of 19 DMZ + 18 other terrestrial + 11 marine = 48

- (b) IUCN 2009 threat data used (Extinct, Extinct in the Wild, Critically Endangered, Endangered, Vulnerable, Near Threatened, Least Concern, [and unlisted]) from: www.iucnredlist.org [as here revised to March 2013].
- (c) Presence in DMZ primarily from: Kim, K.-G. & Cho, D.-G. 2005. Status and ecological resource value of the Republic of Korea's De-militarized Zone. *Landscape & Ecological Engineering* (Tokyo) 1(1):3–15. (cf. p. 12.)

Appendix 7.2 Agencies and Organizations Mentioned in this Chapter

DMZ Forum

1471 Wilson Rd, East Meadow, NY 11554, USA. www.dmzforum.org

A nongovernmental organization (NGO), its origin dating to 1994, and formally established in 1997 for the purpose of transforming the Korean Demilitarized Zone (DMZ) from a symbol of war to a place of peace among humans and between humans and nature, with its biological and cultural resources preserved in perpetuity, thereby enriching current and future generations of all Koreans.

FAO: Food and Agriculture Organization of the United Nations

Viale delle Terme di Caracalla, I-00153 Rome, Italy. www.fao.org

An international agency, established in 1945, *inter alia*, to help developing countries modernize and improve agriculture, forestry, and fishery practices and ensure good nutrition for all.

GEF: Global Environment Facility

1818 H St, NW, Washington, DC 20433, USA. www.gefweb.org

A partnership of UNDP, UNEP, and the International Bank for Reconstruction & Development (World Bank), established in 1991 for the purpose of helping developing countries fund projects and programs that protect the global environment.

International Crane Foundation

PO Box 447, Baraboo, WI 53913, USA. www.savingcranes.org

A nongovernmental organization (NGO) established in 1973 for the purpose of committing to a future where all cranes are secure, a future where people cooperate to protect and restore wild populations and their ecosystems. It established a Korean DMZ Task Force in 2010.

IUCN: International Union for Conservation of Nature

Rue Mauverney 28, CH-1196 Gland, Switzerland. www.iucn.org

A nongovernmental organization (NGO) established in 1948, its membership open to individuals, nongovernmental organizations (NGOs), intergovernmental agencies, and governments, for the purpose of protecting and sustainably using the Earth's resources. IUCN's **Regional Office for Asia**: 63 Sukhumvit Rd Soi 39, Bangkok 10110, Thailand. The *IUCN Red List* can be accessed at: www.iucnredlist.org.

Korea Maritime Institute

Mapogu, Sangam Dong 1652, Seoul, Republic of Korea. www.kmi.re.kr/english A nongovernmental organization (NGO) established in 1984 that specializes in shipping economics, marine policy and affairs, and fisheries. It has since 2005 supported a transfrontier Marine Peace Park that would include the western terminus of the DMZ.

Nautilus Institute for Security and Sustainability

2130 Fulton St, San Francisco, CA 94117, USA. www.nautilus.org

A nongovernmental organization (NGO) established in 1992 for the purpose of making it possible to build peace, create security, and restore sustainability for all people in our time. In 2010 it presented a detailed proposal for the establishment of a Northeast Asian Biodiversity Corridor, so important for the birds that overwinter especially in the DMZ and migrate to China, Russia, and Japan for the summer.

Peace Parks Foundation

PO Box 12743, Stellenbosch 7613, South Africa. www.peaceparks.org

A nongovernmental organization (NGO) established in 1997 for the purpose of facilitating the establishment of transfrontier conservation areas (peace parks), thereby supporting sustainable economic development, the conservation of biodiversity, and regional peace and stability.

UNDP: United Nations Development Programme

1 UN Plaza, New York, NY 10017, USA. www.undp.org

An intergovernmental agency established in 1965, as a program of the United Nations for the purpose of being the United Nations's global development network, advocating for change and connecting countries to knowledge, experience, and resources to help build a better life.

UNEP: United Nations Environment Programme

PO Box 30552, Nairobi 00100, Kenya. www.unep.org

An intergovernmental agency established in 1972, as a subsidiary organ of the UN General Assembly for the purpose of providing leadership and encouraging partnerships in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. UNEP's **Regional Seas Programme** information at: www.unep.org/regionalseas.

UNESCO: United Nations Educational, Scientific and Cultural Organization

7, Place de Fontenoy, F-75352 Paris 07SP, France. www.unesco.org

An intergovernmental agency established in 1945, as a program of the United Nations for the purpose of constructing the defenses of peace in the minds of men, contributing to peace and security by promoting collaboration between peoples through education, science, culture, and communication, this mission rooted in recognition of the fundamental unity of all members of the human family, based on the values of universal respect for justice, the rule of law, human rights, and fundamental freedoms. UNESCO's **Man and the Biosphere Programme** information at: www.unesco.org/mab.

UN-REDD: United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

11–13 Chemin des Anémones, CH-1219 Châtelaine, Geneva, Switzerland. www.un-redd.org

A partnership of FAO, UNDP, and UNEP, established in 2008 for the purpose of helping developing countries to reduce emissions from deforestation and forest degradation, thus contributing to the global fight against climate change for a healthier, greener tomorrow.

WWF: World Wide Fund for Nature

Ave du Mont-Blanc 27, CH-1196 Gland, Switzerland. www.panda.org

A nongovernmental organization (NGO) established in 1961 for the purpose of stopping the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, doing so by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

Appendix 7.3 Legal Foundations

Appendix 7.3.1 Universal Legal Instruments of Greatest Relevance

Charter of the United Nations and Statute of the International Court of Justice.

San Francisco, 26 June **1945**; in force 24 October 1945; depositary, United States (Washington); secretariat, UN Secretary-General (New York); UNTS unlisted; states parties as of October 2010, 192 (98 %) of all 195.

→ Article 1 commits the states parties to maintain international peace, develop friendly relations among nations, achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and be a center for harmonizing the actions of nations in the attainment of these common ends. DPR of [North] Korea: A state party since 1991.

Rep of [South] Korea: A state party since 1991.

China: A state party since 1945. Russia: A state party since 1945. Japan: A state party since 1956.

Convention on Wetlands of International Importance especially as Waterfowl Habitat.

Ramsar, Iran, 2 February **1971**; in force, 21 December 1975; depositary, UNE-SCO (Paris); secretariat ('bureau'), *International Union for Conservation of Nature [IUCN]* (Gland, Switzerland); UNTS 14583; states parties as of October 2010, 160 (82 %) of all 195.

→ Article 5 commits the states parties to consultation with respect to a transfrontier wetland or water system. Article 2 provides for the establishment of Wetlands of International Importance.

DPR of [North] Korea: **Not** a state party [through to May 2013].

Rep of [South] Korea: A state party since 1997.

China: A state party since 1992. Russia: A state party since 1977. Japan: A state party since 1980.

Convention concerning the Protection of the World Cultural and Natural Heritage.

Paris, 23 November **1972**; in force, 17 December 1975; depositary, UNESCO (Paris); secretariat UNESCO (Paris), utilizing the technical services of the *International Union for Conservation of Nature [IUCN]* (Gland, Switzerland) in reference to World Natural Heritages; UNTS 15511; states parties as of October 2010, 187 (96 %) of all 195.

→ Article 6 commits the states parties not to take any deliberate measures which might damage, directly or indirectly, a World Natural Heritage of outstanding universal value situated on the territory of other states parties, recognizing that such heritage constitutes a World Heritage for whose protection it is the duty of the international community as a whole to cooperate. Article 3 (in conjunction with Article 2) provides for the establishment of World Natural Heritages. DPR of [North] Korea: A state party since 1998.

Rep of [South] Korea: A state party since 1988.

China: A state party since 1995. Russia: A state party since 1988. Japan: A state party since 1992.

Protocol [I] Additional to the 1949 Geneva Conventions and Relating to the Protection of Victims of International Armed Conflicts.

Bern, 12 December **1977**; in force, 7 December 1978; depositary, Switzerland (Bern); secretariat, *International Committee of the Red Cross* (Geneva); UNTS 17512; states parties as of October 2010, 170 (87 %) of all 195.

→ Article 60 provides to the states parties the opportunity to create demilitarized zones.

DPR of [North] Korea: A state party since 1988.

Rep of [South] Korea: A state party since 1982.

China: A state party since 1983. Russia: A state party since 1989. Japan: A state party since 2004.

Convention on Biological Diversity.

Rio de Janeiro, 5 June **1992**; in force, 29 December 1993; depositary, UN Secretary-General (New York); secretariat, UN Environment Programme (Montreal); UNTS 30619; states parties as of October 2010, 193 (99 %) of all 195.

→ Article 8.a 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. DPR of [North] Korea: A state party since 1994.

Rep of [South] Korea: A state party since 1994.

China: A state party since 1993.

Russia: A state party since 1995.

Japan: A state party since 1993.

Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on their Destruction.

Ottawa, 3 December **1997**; in force, 1 March 1999; depositary, UN Secretary-General (New York); secretariat, Implementation Support Unit (Geneva); UNTS 35597; states parties as of October 2010, 156 (80 %) of all 195.

→ 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.

DPR of [North] Korea: **Not** a state party [through to May 2013].

Rep of [South] Korea: **Not** a state party [through to May 2013].

China: Not a state party [through to May 2013].

Russia: Not a state party [through to May 2013].

Japan: A state party since 1998.

[It should be noted here that Article 2 of the 27 July 1953 Korean Armistice Agreement requires the removal by both sides of any known mine fields and other hazards in the DMZ.]

[As a point of interest, a major reason stated by the USA for being alone among its NATO allies to not become a state party to this *Convention* is its felt need to use land mines in impeding a feared attack by North Korea on South Korea, a reason that would presumably evaporate at such time that reunification occurs.]

Appendix 7.3.2 Various Legal Instruments of Indirect Relevance

Appendix 7.3.2.1 Universal Supportive Instruments

Convention relative to the Preservation of Flora and Fauna in their Natural State.

London, 8 November **1933**; in force, 14 January 1936; depositary (and secretariat), the United Kingdom (London); LNTS 3995; states parties as of October 2010, 11 (6 %) of all 195.

→ Article 6 commits the states parties to cooperation with respect to contiguous protected natural areas.

DPR of [North] Korea: Not a state party. Rep of [South] Korea: Not a state party.

China: Not a state party. Russia: Not a state party. Japan: Not a state party.

Convention on the Conservation of Migratory Species of Wild Animals.

Bonn, 23 June **1979**; in force, 1 November 1983; depositary, Germany (Bonn); secretariat, UN Environment Programme (Bonn); UNTS 28395; states parties as of October 2010, 114 (58 %) of all 195.

→ The treaty provides for the protection of wild animals that migrate across or outside national boundaries.

DPR of [North] Korea: Not a state party.

Rep of [South] Korea: Not a state party.

China: Not a state party. Russia: Not a state party. Japan: Not a state party.

Appendix 7.3.2.2 Regional Supportive Instruments

Scandinavian Convention on the Protection of the Environment.

Stockholm, 19 February **1974**; in force, 5 October 1976; depositary (and secretariat), Sweden (Stockholm); UNTS 16770; states parties as of October 2010, 4 (100 %) of 4.

→ The treaty commits the states parties to cooperate in the mitigation of environmentally harmful transfrontier activities, in essence as if their national boundaries did not exist.

European Convention on the Conservation of Wildlife and Natural Habitats.

Bern, 19 September **1979**; in force, 1 June 1982; depositary (and secretariat), Council of Europe (Strasbourg, France); UNTS 21159; states parties as of October 2010, 47 (92 %) of Europe's 51 (plus 4 African states parties).

→ Article 4.4 commits the states parties to coordination in protecting natural habitats in frontier areas.

European Convention on Transfrontier Co-operation.

Madrid, 21 May **1980**; in force, 22 December 1981; depositary (and secretariat), Council of Europe (Strasbourg, France); UNTS 20967; states parties as of October 2010, 36 (71 %) of Europe's 51.

→ The treaty commits the states parties to facilitate and foster cooperation across their national frontiers.

Mediterranean Protocol concerning Specially Protected Areas.

Geneva, 3 April **1982**; in force, 23 March 1986; depositary, Spain (Madrid); secretariat, UN Environment Programme (Athens); UNTS 24079; states parties as of October 2010, 21 (100 %) of 21.

[This instrument is a protocol to the 1976 Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (UNTS 16908).]

→ Article 6 commits the states parties to consult each other regarding a frontier protected area, and to examine the possibility of establishing a corresponding area.

Benelux Convention on Nature Conservation and Landscape Protection.

Brussels, 8 June **1982**; in force, 1 October 1983; depositary, Benelux Economic Union (Brussels); UNTS unlisted; states parties as of October 2010, 3 (100 %) of 3.

→ Article 3 commits the states parties to develop a concept of transboundary natural areas and landscapes, to inventory them, to establish coordinate programs for their management and protection, and to seek their establishment.

European Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

Helsinki, 17 March **1992**; in force, 6 October 1996; depositary, UN Secretary-General (New York); secretariat, UN Economic Commission for Europe (Geneva); UNTS 33207; states parties as of October 2010, 38 (75 %) of Europe's 51.

→ Article 2 commits the states parties to ensure that transboundary waters are used with the aim of ecologically sound, rational, and equitable management, and to take measures for the prevention, control, and reduction of water pollution.

Convention on the Protection of the Marine Environment of the Baltic Sea Area.

Helsinki, 9 April **1992**; in force, 17 January 2000; depositary, Finland (Helsinki); secretariat, Finland via the 'Helsinki Commission' or HELCOM (Helsinki);

UNTS 36495; states parties as of October 2010, 9 (100 %) of the 9 littoral states (plus the European Economic Community).

[This instrument supercedes the 1974 Convention of same name (UNTS 25986).]

→ The treaty provides a most useful model for establishing a UNEP Regional Sea.

Appendix 7.3.2.3 Bilateral Supportive Instruments

Agreement between Canada and the United States of America relating to the Establishment of the Roosevelt Campobello International Park.

Washington, 22 January **1964**; in force, 14 August 1964; UNTS 7674; states parties as of October 2010, 2 (100 %) of 2.

→ The treaty commits the states parties to establishing an international memorial park under the control of a Joint Canadian-United States International Park Commission, i.e., functioning as a true bilateral entity under the legal control of a bilateral commission.

Treaty between Germany and Luxembourg for the Establishment of a Joint Nature Park.

Clervaux (Clerf), Luxembourg, 17 April 1964; in force, 15 October 1965; UNTS unlisted; states parties as of October 2010, 2 (100 %) of 2.

→ The treaty commits the states parties to establish mutually designated contiguous reserves enjoying equivalent levels of protection, as well as a Joint Advisory Commission.

Agreement between Belgium and Germany regarding Cooperation for the Establishment and Development of a Nature Park.

Gemünd, Germany, 3 February **1971**; in force, 3 February 1971; UNTS unlisted; states parties as of October 2010, 2 (100 %) of 2.

→ The treaty commits the states parties to establish mutually designated contiguous reserves enjoying equivalent levels of protection, as well as a Joint Advisory Commission.

Agreement between Germany and the Netherlands for Cooperation on the Establishment of a Nature Park.

Düsseldorf, Germany, 30 March **1976**; in force, 26 January 1977; UNTS unlisted; states parties as of October 2010, 2 (100 %) of 2.

→ The treaty commits the states parties to establish mutually designated contiguous reserves enjoying equivalent levels of protection, as well as a Joint Advisory Commission.

[Joint Declaration (between Costa Rica and Panama) over La Amistad Park] (In Spanish).

Guabito, Panama, 3 March **1979**; in force, 6 September 1988; UNTS unlisted; states parties as of October 2010, 2 (100 %) of 2.

→ The treaty commits the states parties to establish contiguous national reserves, and to cooperating via a Bi-national Technical Commission.

[This transfrontier endeavor has a convoluted history. Respective Executive decrees in May 1982 created *La Amistad* [= Friendship] International Park. The Costa Rican and Panamanian portions together became a UNESCO/MAB Biosphere Reserve in 1982 (the Panamanian portion confirmed in 2000). The two national portions together became a transboundary World Natural Heritage in 1983. The original Agreement of 3 March 1979 was confirmed by Costa Rica in February 1982, but could not enter into force until Panama did so as well, on 6 September 1988. Subsequently, the Presidents of Costa Rica and Panama met in Sixaola, Costa Rica on 3 May 1992 to sign an Agreement for generalized cooperation in frontier development. The originally called for La Amistad Bi-national Technical Commission was finally created by a joint Agreement on 23 January 1996, which then functioned for some years before becoming inactive.]

Agreement between Finland and Russia on the Friendship Nature Conservation Area.

Helsinki, 26 October **1989**; in force, 14 November 1990; UNTS unlisted; states parties as of October 2010, 2 (100 %) of 2.

→ The treaty commits the states parties to establish contiguous 'Friendship Parks', as well as a Joint Commission to provide cooperation via exchange of information, joint research programs, and other coordination, but with protection, maintenance, and financing to remain separate.

[Global and Definitive Peace Agreement between Ecuador and Peru] (in Spanish). **Brasilia**, 26 October **1998**; in force, 26 October 1998; UNTS unlisted; states parties as of October 2010, 2 (100 %) of 2 (plus 4 guarantor states).

→ Article 7 commits the states parties to create two contiguous environmental protection areas, but which remain under the sovereignty and jurisdiction of the two respective states.

[These two protection areas are to be together known as the *Cordillera del Condor Peace Park* and to serve to commemorate the soldiers on both sides who had fallen in the war.]

Appendix 7.4 Select Bibliography (References)

Appendix 7.4.1 Of Direct Relevance to the DMZ

Archibald, G.W. 1975. Cranes over Panmunjom: how Korea's demilitarized zone became a lush wildlife sanctuary. *International Wildlife* (Reston, VA) 5(5):18–21.

Brady, L.M. 2008. Life in the DMZ: turning a diplomatic failure into an environmental success. *Diplomatic History* (Malden, MA) 32(4):585–611.

- Healy, H. 2007. Korean demilitarized zone: peace and nature park. *International Journal on World Peace* (St Paul, MN) 24(4):61–83.
- Higuchi, H. & Minton, J. 2000. The importance of the Korean DMZ to threatened crane species in northeast Asia. *Global Environmental Research* (Tokyo) 4(2):123–132.
- Kim, K.C. 1997. Preserving biodiversity in Korea's demilitarized zone. *Science* (Washington) 278(5336):242–243.
- Kim, K.C. 2007. Preserving Korea's demilitarized corridor for conservation: a green approach to conflict resolution. In: Ali, S.H. (ed.). *Peace parks: conservation and conflict resolution*. Cambridge, MA: MIT Press, 406 pp: pp 239–259 + *passim* 343–377.
- Kim, K.-G. & Cho, D.-G. 2005. Status and ecological resource value of the Republic of Korea's De-militarized Zone. *Landscape & Ecological Engineering* (Tokyo) 1(1):3–15.
- Shore, W.B. 2004. Sanctuary for nature and the dead: preserving the Korean Demilitarized Zone. *World Watch* (Washington) 17(6):32–35.
- Westing, A.H. 1998–1999. A transfrontier reserve for peace and nature on the Korean peninsula. *International Environmental Affairs* (Hanover, NH) 10(1):8–17.
 - [Similar in: Environmental Awareness (Vadodara, India) 23(3):85–99. 2000.]
- Westing, A.H. 2001. A Korean DMZ park for peace and nature: towards a code of conduct. In: Kim, C.–H. (ed.). *The Korean DMZ: reverting beyond division*. Seoul: Sowha Publishing Company, 359 pp: pp 157–191.
- Westing, A.H. 2010. Toward environmental sustainability and reduced tensions on the Korean peninsula. *Environment* (Philadelphia, PA) 52(1):20–23.

Appendix 7.4.2 Of Assistance in Establishing a Transfrontier Reserve

- Ali, S. (ed.). 2007. *Peace Parks: Conservation and Conflict Resolution*. Cambridge, MA: MIT Press, 406 pp.
 - [Primarily useful for conceptual background. Chapter 13, by K.C. Kim, provides an analysis of conserving the Korean DMZ as a 'green' approach to conflict resolution.]
- Alsdirawi, F. & Faraj, M. 2004. Establishing a transboundary peace park in the demilitarised zone (DMZ) on the Kuwaiti/Iraqi borders. *Parks* (Gland, Switzerland) 14(1):48–55.
 - [Interesting parallel to the Korean situation.]
- Oszlanyi, J. et al. 2000. Recommendations for the Establishment and Functioning of Transboundary Biosphere Reserves. Paris: UNESCO, MAB Report Series No. 69, 192 pp. pp 55–57.
 - [Useful for specific guidelines.]

Sandwith, T. et al. 2001. Transboundary Protected Areas for Peace and Co-operation. Gland, Switzerland: International Union for Conservation of Nature [IUCN], 111 pp.

[Useful for both theory and specific guidelines.]

United Nations. 1982. *World Charter for Nature*. New York: UN General Assembly Resolution No. 37/7, 28 October 1982, 5 pp.

[Useful as an overall conceptual and operational framework, and with Article 21 offering some specific guidance. 111 of the 156 UN members of the time (including China, Russia, and Japan) voted in favor; and at least 3 further states later formally advised the UN that they too supported the Charter. Neither Korea was a UN member at that time, but could now, of course, also endorse this epochal document.]

Westing, A.H. (ed.). 1993. *Transfrontier Reserves for Peace and Nature: a Contribution to Human Security*. Nairobi: UN Environment Programme [UNEP], 127 pp.

[Useful for both theory and specific guidelines.]

Appendix 7.5 The Memorandum of Understanding (MoU)

MEMORANDUM OF UNDERSTANDING (MoU) BETWEEN THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA (DPRK) AND THE REPUBLIC OF KOREA (ROK) REGARDING FUTURE PROTECTION OF BOTH NATURE AND CULTURE IN THE DEMILITARIZED ZONE (DMZ) PLUS ITS CONTIGUOUS NORTHERN BUFFER ZONE (NBZ) AND SOUTHERN BUFFER (CIVILIAN CONTROL) ZONE (SBZ)

PREAMBLE

- I. Recalling our commitment via Article 1 of the 1945 *Charter of the United Nations and Statute of the International Court of Justice* to maintain international peace, develop friendly relations among nations, and achieve international cooperation; and furthermore
- II. Mindful of our commitment via Article 8.a of the 1992 *Convention on Biological Diversity* (UNTS 30619) to establish a system of protected natural areas; and via Article 5 to cooperate with other nations to that end; and furthermore
- III. Recognizing the commitment by at least one of us (ROK) via Article 2 of the 1971 *Convention on Wetlands of International Importance especially as Waterfowl Habitat* (UNTS 14583) to establish wetlands of international importance; and via Article 5 to consultation with respect to a transfrontier wetland or water system; and furthermore

- IV. Noting our affinity with the 1982 *World Charter for Nature* (UNGA Res 37/7) in providing an overall conceptual framework for our relationship with the natural world; and in particular with the general guidelines for cooperation offered by Article 21; and furthermore
- V. Understanding the obligation of all nations not only to respect the whole of nature within and beyond their national domains, but more specifically to also protect in perpetuity some fraction of their own flora, fauna, and associated habitats—doing so both on behalf of the biota *per se* and in order to ensure the long-term survival and well-being of their own human inhabitants; and, moreover, realizing that such obligation to protect nature should in principle be independent of any unrelated political considerations; and furthermore
- VI. Knowing that the DMZ and its contiguous NBZ and SBZ have to a major extent recovered their ecological integrity on a *de facto* basis over the past half-century or so, thereby providing a priceless *de jure* opportunity for us to add to our as yet modest amounts of necessary habitat allocated in perpetuity for nature; in the additional recognition that they hold irreplaceable natural habitats flourishing with native species of plants and animals already lost elsewhere on the peninsula, thus providing a critical resource for the peninsula's nature restoration and conservation; and also aware of the archeological, historical, spiritual, recreational, and similar cultural inclusions that would be simultaneously protected; and furthermore
- VII. Recalling our long-term concerns over the environmental and cultural future of the DMZ, as exemplified, *inter alia*, by the individual approaches we each made in 1991 to the Secretary General of the United Nations to explore the possibility of a DMZ-centered reserve for peace and nature; and furthermore
- VIII. In sympathy with the 2008 United Nations Collaborative Programme of FAO, UNDP, and UNEP on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD), as well with the 2009 United Nations Framework Convention on Climate Change (UNTS 30822) draft policy approaches and positive incentives for that Programme (REDD +), which, inter alia, emphasize the role of conservation and enhancement of forest carbon stocks; and furthermore
- IX. In the knowledge that encouragement, support, and technical assistance in this endeavor would be available from UNEP, UNDP, FAO, UN-REDD, UNESCO, IUCN, the *International Crane Foundation*, the *Peace Parks Foundation*, the *DMZ Forum*, and other international agencies and nongovernmental organizations; and in the further knowledge of a number of precedents elsewhere in the world; we now therefore enter into the following bilateral understanding:

OUR UNDERSTANDING

Article 1. We express our firm desire to protect in perpetuity as much as possible of the DMZ, its contiguous NBZ and SBZ, and its two associated coastal sea areas

as a so-called green belt across our peninsula, expressing this desire on behalf of both nature and our citizenry, the latter owing to the several crucial so-called ecosystem services provided as well as to the protection of archeological, historical, spiritual, recreational, and similar cultural inclusions variously supportive, *inter alia*, of science, education, and tourism; and, moreover, for such green belt to serve as an inspiring permanent living memorial to all those who lost their lives in the Korean War of 1950–1953.

Article 2. We express our intention at some early date to unilaterally identify one or more sites within our half of the DMZ and its contiguous NBZ or SBZ, each of perhaps ten-thousand (10,000) ha or more in size, and each consisting of a natural, or natural plus cultural, area worthy of protecting in perpetuity as a reserve. It is our intention to choose each site on the basis of its value in protecting some special habitat (upland, wetland, grassland, woodland, mountain, plain, coastal sea, etc.) as well as of the richness or uniqueness of the biological diversity (biodiversity) of its indigenous flora and fauna, including the number of supported biota threatened with extinction, among the latter, e.g., the red-crowned crane (*Grus japonensis*; IUCN Endangered), so widely revered on the Korean peninsula as a symbol of peace, prosperity, and long life; and also, as appropriate, to protect any archeological, historical, spiritual, recreational, or similar cultural inclusions of lasting importance. Some of the potential sites it is our intention to consider are presented in *Annex 1* [Appendix 7.5.1].

Article 3. We express our intention to designate each such site described in Article 2 as a protected area enjoying a level of protection equal to one or another of the various IUCN Protected Area Management Categories, as described in *Annex 2* [Appendix 7.5.2]. It is our intention to forthwith set in motion establishment of any portion of the site falling within our own NBZ or SBZ, and to similarly provide forthwith for the establishment of any portion falling within our half of the DMZ as soon as that becomes legally possible.

Article 4. We express our intention that to the extent that a site chosen by the DPRK is contiguous with a site chosen by the ROK along the boundary between the two Koreas (along the Military Demarcation Line), both the DPRK and the ROK agree in time to a direct exchange of information between the contiguous two local protected area authorities on purely technical matters, e.g., on transboundary wildfire control, transboundary movement of wildlife, and transboundary floral or faunal disease or pest control.

Article 5. We express our intention at an early date to consider to set in motion—as ecologically appropriate—the necessary steps to designate any protected area we unilaterally establish within our half of the DMZ and its contiguous NBZ or SBZ as one or more of the following: (a) a 'World Natural (or Natural plus Cultural) Heritage', as provided for by Articles 3 and 2 of the 1972 *Convention concerning the Protection of the World Cultural and Natural Heritage* (UNTS 15511); (b) a 'Biosphere Reserve', as provided for by the UNESCO Man and the Biosphere (MAB) Program; (c) a 'Wetland of International Importance', as provided for or suggested by Article 2 of the 1971 *Convention on Wetlands of*

International Importance especially as Waterfowl Habitat (UNTS 14583); and (d) a 'Regional Sea', as provided for by the UNEP Regional Seas Program.

Article 6. We express our intention of considering the possibility of acting jointly in working toward any special-area designation described in Article 5.

Article 7. We express our intention to permanently demilitarize any protected areas we establish within our half of the DMZ and its contiguous NBZ or SBZ, doing so within the framework of Article 60 of the 1977 Protocol [I] Additional to the 1949 Geneva Conventions and Relating to the Protection of Victims of International Armed Conflicts (UNTS 17512).

Article 8. We express our intention to remove any known mine fields and other hazards from any protected areas we establish within our half of the DMZ and its contiguous NBZ or SBZ in an environmentally sensitive manner, doing so within the framework of Article 2 of the 1953 Korean Armistice Agreement; and also in the spirit of Article 1 of the 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction (UNTS 35597). [A subsequent addition: And similarly of the 2008 Convention on Cluster Munitions (UNTS 47663).]

Article 9. We express our intention to have at least semi-annual consultative meetings on the progress of this **MoU** between the Ministers of the Environment of the DPRK and ROK or their respective designees, the venue of such meetings to be at a mutually acceptable neutral site, or else to alternate between Pyongyang and Seoul; and to which, at our joint discretion, observers may be invited to represent the *International Crane Foundation*, *DMZ Forum*, IUCN, UNEP, or other relevant intergovernmental agency or nongovernmental organization of our joint choosing.

Article 10. We express our intention that our long-term goal, in principle, is to consummate one or more formal agreements between the DPRK and ROK that would establish one or more transboundary protected areas for peace and nature in those instances where our unilaterally established contiguous protected areas coincide with a cross-border habitat that would most sensibly be managed as a joint endeavor. Such transboundary protected area(s) would thus be managed on a day-to-day basis by its own bilateral commission that enjoys a certain level of autonomy in its routine technical operations.

FINAL PROVISIONS

Article 11. There shall be two identical authentic copies of this **MoU** prepared in the Korean language, each to be signed by both states parties, one each for retention by the DPRK and ROK.

Article 12. The Annexes to this **MoU** form an integral part of this **MoU**.

Article 13. Once signed, this **MoU** shall remain valid until replaced by a formal bilateral treaty of comparable intent; or until either the DPRK or the ROK formally withdraws from it in writing.

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SIGNED:

On behalf of the Democra	atic People's Republic of Korea (DPR	():
Signature:		
Name:	Title:	
At:	On:	
On behalf of the Republic	c of Korea (ROK):	
Signature:		
Name:	Title:	
At:	On:	
At:	On:	

Appendix 7.5.1 Annex 1 Potential Sites Under Consideration

1.a. The DPRK Lowland Protected Area in Kangwon Province

2.a. The ROK Lowland Protected Area in Gyeonggi Province

These two contiguous largely low wetland areas under consideration for protection are situated ca 60 km northeast of Panmunjom. They are important as a migratory staging area or wintering ground for a number of migratory waterfowl following the Northeast Asian Flyway (thereby primarily involving the DPRK, ROK, China, and Russia). Indeed, these two areas are crucial to the survival of the red-crowned crane (Grus japonensis; IUCN Endangered) and the white-naped crane (Grus vipio; IUCN Vulnerable). Other threatened bird species that benefit from these two areas are the Chinese egret (Egretta eulophotes; IUCN Vulnerable), the black-faced spoonbill (*Platalea minor*; IUCN Endangered), and possibly also the hooded crane (Grus monacha; IUCN Vulnerable). Mammals threatened with extinction in these two areas include the Siberian musk deer (Moschus moschiferus; IUCN Vulnerable). The two areas support numerous species of indigenous fish, the latter providing a highly valuable source of fish where needed elsewhere in the DPRK and ROK for restocking in waters from which they have become extirpated. These two contiguous protected areas under consideration, which might each be 50,000 ha or more in size, have potential for both ecotourism and cultural tourism; and could perhaps fall within IUCN Category II or IV (cf. *Annex* 2) [Appendix 7.5.2].

2.a. The DPRK Mountain Protected Area in Kumgansan Province

2.b. The ROK Mountain Protected Area in Gangwon Province

These two contiguous largely temperate-forest upland areas under consideration for protection are situated ca 50 km southwest of the eastern terminus of the DMZ. They are important for the survival of a number of threatened mammalian species, including the Himalayan black bear (Ursus thibetanus; IUCN Vulnerable) and the Siberian musk deer (Moschus moschiferus; IUCN Vulnerable). Birds threatened with extinction that make use of these two areas include especially the redcrowned crane (Grus japonensis; IUCN Endangered). The area under consideration here by the DPRK already includes the Mount Kumgang National Park (60,000 ha; IUCN Category II), ca 30 km northwest of the Military Demarcation Line. The area under consideration here by the ROK already includes the Seoraksan National Park (39,800 ha; IUCN Category II), ca 40 km southeast of the Military Demarcation Line. Both of these existing protected areas are currently under consideration as World Heritage Sites. These two contiguous protected areas under consideration would in effect functionally connect those two existing national protected areas, thereby constituting a generally north-south mountainous ridge-line wildlife corridor especially beneficial to large mammals and other wildlife. These two contiguous protected areas under consideration, which might each add 20,000 ha or more to the two already existing protected areas, have potential for both eco-tourism and cultural tourism; and could perhaps fall within IUCN Category II or IV (cf. Annex 2) [Appendix 7.5.2].

Appendix 7.5.2 Annex 2 IUCN Protected Area Categories

All IUCN categories: Protected areas of land and/or sea dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources.

IUCN Category Ia: 'Strict Nature Reserve', being a protected area managed mainly for science. This is an area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features, and/or species, available primarily for scientific research and/or environmental monitoring.

IUCN Category Ib: 'Wilderness Area', being a protected area managed mainly for wilderness protection. This is a large area of unmodified or slightly modified land and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

IUCN Category II: 'National Park', being a protected area managed mainly for ecosystem protection and recreation. This is a natural area of land and/or sea, designated to (1) protect the ecological integrity of one or more

ecosystems for present and future generations, (2) exclude exploitation or occupation inimical to the purposes of designation of the area, and (3) provide a foundation for spiritual, scientific, educational, recreational, and visitor opportunities, all of which must be environmentally and culturally compatible.

IUCN Category III: 'Natural Monument', being a protected area managed mainly for conservation of specific natural features. This is an area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities, or cultural significance.

IUCN Category IV: 'Habitat/Species Management Area', being a protected area managed mainly for conservation through management intervention. This is an area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

IUCN Category V: 'Protected Landscape/Seascape', being a protected area managed mainly for landscape/seascape conservation and recreation. This is an area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological, and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance, and evolution of such an area.

IUCN Category VI: 'Managed Resource Protection Area', being a protected area managed mainly for the sustainable use of natural ecosystems. This is an area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

Note: For more detailed IUCN definitions and guidelines, cf.: www.unep-wcmc.org/protected_areas/categories/index.html