



Secretariat of the Convention on Biological Diversity

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Biodiversity and Climate Change

Statement

Delivered by

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Ladies and gentlemen,

By awarding in 2004 for the first time in its history the Nobel Peace Prize to Prof. Wangari Maathai, a well-know Kenyan environmental activist, the Nobel Committee has recognized the security component of the environment. At this historical occasion Mr Ole Danholt Mojs, the chairman of this prestigious institution stated that “it was the first time environment has set the agenda for the prize. We have added a new dimension to the peace”. In accepting the Nobel Peace Prize, Prof Wangari Maathai stated that “There can be no peace without equitable development and there can be no development without sustainable management of the environment in a democratic and peaceful space. I hope that this prize will help many people see the link between peace, development and environment”.

Three years later, the hope of Prof. Wangari Maathai has been fulfilled. This week on 17-18th April at the initiative of its President, the United Kingdom of Great Britain and Northern Ireland, the United Nations Security Council has for the first time in its history debated the question of climate change. By doing so the fifteen members of the Security Council have recognized the relevance of the climate change to the implementation of Chapter relating to acts of aggression against world peace. Climate change is one of the main drivers of the unprecedented loss of biodiversity which constitute a major security threat on life on Earth. Indeed sustainable development is the new name for peace and security.

According to IPCC, global warming could lead, towards the end of the present century, to an increase in the level of the seas of approximately 88 cm. Since more than 50 per cent of the major cities of the world are situated in coastal areas and because more than 3 billion people live less than 100 Km from the coast, the rise in the water level will have disastrous consequences on the world population.

The very existence of several island countries such as Tuvalu or Kiribati is under threat. In November 2001, after having been refused by Australia, the authorities of Tuvalu requested New Zealand to provide shelter to 11,000 of its citizens out of fear that the country would soon be submerged. It will be recalled that Tuvalu was the first country to endeavour to evacuate its population because of rising waters. It will certainly not be the last. Some 65 per cent of the Maldives land mass is barely a metre above sea level. In a statement delivered in October 1987 before the United Nations General Assembly, the President of the Maldives stated that his country was under threat from the rising sea waters. He described his country of 311,000 people as “a nation in danger”.

Thus, for the first time in the history of mankind, the rise in sea level is threatening to cause the disappearance from the surface of the earth of a number of sovereign nations which no army in the world, however sophisticated, can stop.

It is therefore not surprising that a study commissioned by the US Defence department, published in 2004 concluded that Climate change would change United States national security in a way that should be considered immediately. According to this study of the Pentagon the plausible consequences includes famine in Europe and possible showdowns over who controls what's left of world water.

Today 4 out of 10 people in the world live in countries with a severe shortage of drinking water. In 2025, two thirds of humanity, i.e. more than 5.5 billion people will experience a similar situation. The scarcity of drinking water will have disastrous consequences on the acceleration of desertification particularly in Africa where it has attained alarming proportions. Today, more than 1.2 billion people living in 110 countries are affected by desertification. It is threatening the lives of more than 135 million people. According to some estimates more than 6 million hectares of arable land are

covered by this phenomenon which affects the poorest of the poorest.

In its report, *The State of the World's Refugees* published in 1993, the United Nations High Commissioner for Refugees (UNHCR) had identified environmental degradation as one of the four major causes of the flow of refugees and displaced persons in the world. According to UNHCR the number of these people totalled 25 million in 1995. Today they are estimated at more than 50 million, half of whom are in Africa. According to some experts, environmental refugees have today become the largest category of displaced persons in the world. According to the latest report of IPCC, more than 100 million people in Africa alone will be become climate change refugees. According to Mr John Ashton, the special advisor on Climate Change of Mr Tony Blair, the Prime Minister of the United Kingdom, the Darfur conflict is one of the consequences of climate change. Durant the last four years, 200,000 persons have been killed and 2.2 million displaced in Darfur.

As a result this week a report by top retired American military leaders concluded that climate change poses “serious threat to America’s national security and the US will likely be dragged into fights over water and other shortages.” The report warned that in the next 40 to 50 years there will be wars over water, increased hunger instability from worsening disease and rising sea levels and global warming-induced refugees. The report concluded that “chaos that results can be an incubator of civil strife, genocide and the growth of terrorism.”

Indeed the environment degradation including the loss of biodiversity is the new threat to peace and human security. Climate change is a major as well as a major consequence of the unprecedented loss of biodiversity of our planet.

The message of the Millennium Ecosystem Assessment, the first ever global study on the health of the ecosystem of our planet prepared during four years by more than 1,395 experts from 95 countries, is crystal clear. The pressures on the planet's natural functions caused by human activity have reached such a high level that the ability of ecosystems to satisfy the needs of future generations is seriously, and perhaps irreversibly, compromised. Impacts on the natural functions of our planet have never been as destructive as in the last 500 years, leading to an unprecedented extinction of biological diversity on earth. During the last century, the extinction rate of species increased a thousand times. Every hour, three species, or in other words the result of thousands of years of evolution, disappear for ever. Each day, 150 species perish. Each year, between 18 and 55 thousand species become extinct. This poses a significant barrier to the achievement of the Millennium Development Goals.

The findings of another report published early this year by the Intergovernmental Panel on Climate Change (IPCC), prepared by 2,500 experts from 130 countries, sounds like another warning bell. The current concentration of greenhouse gases in the atmosphere is greater than has ever been observed in the last 650,000 years. Climate change is real and human activity is its main factor.

The report on IPCC on Climate Change, adaptation and vulnerability, prepared by more than 1000 experts, issued early this month in Brussels demonstrates that recent warming is strongly affecting biological systems, including changes such as earlier timing of spring events and upward shifts in ranges in plant and animal species. Observational evidence from all continents and most oceans shows that many natural systems are being affected by climate change, particularly temperature increases. Approximately 20-30% of plant and animal species assessed so far are likely to be

at increased risk of extinction if increases in global average temperature exceed 1.5-2.5°C. The progressive acidification of oceans due to increasing atmospheric carbon dioxide is expected to have negative impacts on marine shell forming organisms (e.g., corals) and their dependent species. By 2020, between 75 and 250 million people in Africa are projected to be exposed to increased water stress due to climate change.

Agricultural ecosystems are endangered as climate change may affect plant growth and production by promoting the spread of pests and diseases, increase exposure to heat stress and change rainfall patterns. The large-scale decline of oak trees observed since 2003 in central France appears to be caused by a microscopic fungus that thrives as a result of the warming climate. Since 1970, in France, maize has been sown a month earlier and apple trees blossom ten days in advance. Climate change may also result in reduced agricultural yields, in particular in warmer regions. Global warming is likely to alter the production of rice, wheat, maize, beans and potatoes, which are major crops in Africa and a basic food for millions of people. Approximately 35% of world crops depend on pollinators such as bees. However, their populations have already decreased by 30% in the last twenty years. Climate change is likely to give a new dimension to the question of food security, an issue we already have troubles finding a solution. In 2080, 200-600 million people are likely to join the endless list of people affected by hunger and malnutrition.

Water ecosystems are under threat as changing rainfall and melt patterns will result in changing flow regimes in many rivers and lakes. This will affect the spawning and feeding habits of many species. More than 20% of the world's freshwater fish species have already become extinct, threatened or endangered in recent decades. Moreover, freshwater availability is threatened as warmer climate is likely to increase human demand on fresh water which will exacerbate the negative impact on many wetlands.

Forest ecosystems are threatened as an increase in 1 degree Celsius in the temperatures can modify their functioning and composition. Climate change may force species to migrate or shift their range of habitat far faster than they are able to. For example, in Canada, it is unlikely that the white spruce population will be able to migrate at a rate matching the pace of climate change. Half of the large primate and 9% of all known tree species are already at some risk of extinction.

During the last fifteen years, ornithologists have observed profound changes in the behaviour of migratory species. Ducks, geese and cranes from Nordic countries which used to migrate to France in September and October now prefer to stay in the south of Sweden, Denmark and Holland. Similarly, swallows, storks and many black-tailed godwits prefer to spend winter in France rather than flying south. The distance of migratory travels have been reduced due to temperatures changes.

Island ecosystems are under threat due to observed and projected sea rise levels which jeopardize key ecosystems and economic activities. In the Seychelles 51% of GDP is derived from biodiversity-based tourism and most of the rest is derived from fisheries. Therefore, climate change represents a great development challenge for some countries. The “bleaching” of coral ecosystems has been recognized as one of the most visible impacts of global warming. Higher sea temperatures upset the delicate balance of the coral organisms and the algae on which they depend and the colorful variety of these “rainforests of the ocean” can give way to a virtual desert, with devastating impacts on seafood resources and income from tourism. Mainly because of global warming, the Great Barrier Reef may loose up to 95% of its living coral by 2050.

Marine and coastal ecosystems, the largest habitat on Earth, are also vulnerable to climate change as they already face myriad

stresses, including over-harvesting and habitat destruction from commercial fisheries, pollution and coastal development. Phytoplankton, the basis of the ocean food chain, is very sensitive to increased water temperatures which may eventually jeopardize the whole web of marine species. Must we be reminded that more than 3 billion people depend on sea and ocean products for their livelihood?

Finally, the Arctic, which represent the environmental barometer of our planet, gives us a clear indication of the impacts of climate change. Satellite data show that the summer Arctic ice canopy has lost 15% of its surface area and more that 40% of its thickness since 1978. In the last twenty five years, the ice cap has shrunk from 7.5 million to 5.5 million km². It could disappear completely by 2070. The snow and permafrost melt is affecting the livelihood of local populations and fauna. The marked reduction of the Arctic ice canopy is forcing polar bears to fast for increasingly longer periods of time. In the course of the last 25 years, the average weight of female bears has dropped by 20%, thereby endangering their reproductive capacity. Last year, the polar bear was added to the IUCN list of vulnerable species. It is sad to observe, in this International Polar Year, that the population of polar bears, which symbolizes the great white open spaces, is likely to decrease by 30% during the next 45 years. The willow warbler, the boreal tit and other titmice, the Eurasian bullfinch and the swamp sparrow are likely to know the same fate.

The work of the IPCC and the Millennium Ecosystem Assessment has made us all aware of two of the most pressing environmental issues facing our planet. Moreover, while climate change spares no species or ecosystems, the most vulnerable one, in particular in African countries and small developing island States, will be predominantly damaged. Thus, those who contribute the least to climate change in terms of greenhouse gas emissions will suffer disproportionately from its consequences.

If climate change is a cause of loss of biodiversity, a healthy ecosystem can be a major contributor to addressing climate changes challenges. For example:

- A third of the planet's CO₂ emissions is absorbed by oceans.
- A recent study has revealed that a one millimetre long earthworm called *Scottnema Lindsayaeh* is living in the permafrost soil of the Antarctic and acts as a real carbon sequestration factory. However, since 1993, its population has decreased by more than 65%.
- Forests contain 80% of all the carbon stored in terrestrial vegetation. Ten million hectares of forest continue to disappear each year, the equivalent of an area four times the size of Belgium. Each year, about 1.7 billion metric tons of CO₂ are released into the atmosphere due to deforestation and land-clearing.
- Although they only represent 3% of the Earth's surface, peat bogs sequester twice as much carbon dioxide as all the world's forests. Unfortunately, Western Europe has already lost 90% of its original peat bogs. In South-West Asia, the draining of peat bogs is responsible for at least 632 million tonnes of carbon dioxide emissions annually.

These examples show that the conservation and sustainable use of biodiversity can contribute to both climate change mitigation and adaptation activities. Therefore, the loss of biodiversity is a major challenge that needs to be urgently and seriously addressed, both in terms of action on the ground and of legislation.

To this end, enhancing the synergies among the three Rio Conventions, namely the CBD, the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD), is of strategic importance in addressing the challenge of reducing the emission of greenhouse gases and in ensuring that biodiversity is given the best chance possible to adapt to climate and be an integral part of the climate solution. For that reason, in 2001, the Joint Liaison Group bringing together the Executive Secretaries and chairs of the subsidiary bodies of the three Conventions was established to explore opportunities for synergistic activities and increase coordination. As agreed at the fifth meeting of the Joint Liaison Group in Bonn, Germany, in January 2004, a paper on options for enhanced cooperation among the three Rio Conventions was prepared jointly by the three convention secretariats. These options have been welcomed by the CBD at the eighth meeting of the Conference of the Parties, by the UNFCCC Subsidiary Body for Scientific and Technological Advice at both its twenty-third and twenty-fourth meetings, and by the UNCCD at the seventh meeting of its Conference of the Parties.

Partnership between the biodiversity-related conventions has also been undertaken with the creation of the Biodiversity Liaison Group, grouping together the CBD, the Convention on Conservation of Migratory Species (CMS), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Ramsar Convention on Wetlands, the World Heritage Convention and more recently the International Treaty on Plant Genetic Resources for Food and Agriculture. The Biodiversity Liaison Group meets regularly to explore opportunities for synergistic activities and increased coordination, and to exchange information.

Environmental decision-making on the domestic as well as on the international level reveals that there is no easy choices to be made as options and risks are usually surrounded by this scientific uncertainty. This is why the role played by the Intergovernmental Panel on Climate Change (IPCC) in assessing uncertainty and gathering the best scientific knowledge is of crucial importance. The CBD promoted partnership with the IPCC through a roundtable on the further strengthening of the interlinkages between Biodiversity and Climate Change that was held on 19-20 March, in Montreal, Canada. For the first time, members and past chairs of the bureau of SBSTTA and experts from the Intergovernmental Panel on Climate Change (IPCC) met to discuss commonalities and opportunities for enhanced cooperation between the two bodies. This kind of partnership between International convention and international scientific panel is a direct response to the necessary interface between science and policy.

Coherent implementation of the relevant international obligations and commitments under the different regimes is a crucial but challenging task for states. In doing such, incorporating biodiversity and climatic interactions in programmes and policies at the national level is essential. As an example, the programme of work on Protected Areas suggests to Parties to integrate climate change adaptation measures in protected area planning, management strategies, and in the design of protected area systems. As governments around the world develop their environmental laws and policies, failure to appreciate the importance of biodiversity can potentially lead to counterproductive measures.

Under the Convention on Biological Diversity, the international community as a whole agreed to the very challenging target of reducing substantially the unprecedented loss of biodiversity by 2010. The time has come to recognize that meeting

this target is an strategic for preserving life on earth and ensuring that our children and their environment ate able to adapt to the consequences of a warmer and unstable climate they will unfortunately inherit. It is for this reason, that Germany which will host in Bonn in May 2008 the next assembly of the Convention has decided as a Chair of the G8 to put on the agenda of the Summit of Heidigendamn to be held on 6-8 June 2007,climate change and biodiversity. With a of establishing a global partnership between the richest countries in terms of finance and technology and the richest countries in term of biodiversity, Germany decided to convene an historical meeting in Potsdam 15-16th March 2007 between the ministers of the environment of the G8 and their colleagues from five mega-diverse countries. The G8+5 adopted the Potsdam Initiative- Biodiversity 2010 that revolves around ten concrete activities to help achieve by 2010 a significant reduction of the loss of biodiversity. They also agreed that “biodiversity and climate change are intertwined and more efforts are needed to coherently address biodiversity and climate change together”. To achieve such objective future environmental law research has a major contribution to make. We in the secretariat of the convention on Life on Earth stand ready to enter into a global alliance with IUCN Academy of Environmental Law Research for achieving such a strategic objective.

I would like to offer my best wishes to this research workshop and I hope that outcomes will direct future environmental law research in a direction that will elevate the biodiversity as a major tool for promoting peace and sustainable development.

Thank you for your kind attention.