STATEMENT BY

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ON THE OCCASION OF

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Life in harmony, into the future
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Ladies and Gentlemen,

Japan's first Nobel laureate, the physicist Hideki Yukawa, said "Nature creates curved lines while humans create straight lines." Our disconnect with Nature is nowhere more obvious than when it comes to biodiversity loss. In May the third edition of Global Biodiversity Outlook confirmed that because of human activities species worldwide continue to disappear at up to 1,000 times the natural background rate of extinction. The report further warns that without concerted action massive further loss of biodiversity is projected to occur before the end of the century and that ecosystems are approaching tipping points beyond which they will be irreversibly degraded, with dire consequences for human wellbeing.

I am glad to say that less than two months ago in Nagoya, we humans took an important step toward thinking more like Nature. At the Convention on Biological Diversity's tenth Conference of the Parties, over 18,000 participants representing our 193 Parties and their partners agreed on a package of measures that, if implemented, will ensure that the ecosystems of the planet will continue to sustain human well-being into the future.

The meeting adopted the 2011-2020 Strategic Plan of the CBD, or "Aichi Target", which includes 20 headline targets organized under five strategic goals that address the underlying causes of biodiversity loss, reduce the pressures on biodiversity, safeguard biodiversity at all levels, enhance the benefits provided by biodiversity, and provide for capacity-building. Among the targets, Parties agreed to at least halve and where feasible bring close to zero the rate of loss of natural habitats including forests; protect 17 per cent of terrestrial and inland water areas and 10 per cent of marine and coastal areas; restore at least 15 percent of degraded areas; and make special efforts to reduce the pressures faced by coral reefs.

Several key outcomes of the conference will help us to achieve these targets. Parties endorsed a plan of action on cities and biodiversity adopted by the Nagoya Biodiversity City summit attended by more than 200 mayors. 122 legislators from around the world attending the GLOBE meeting on parliamentarians and biodiversity declared their support for the implementation of the new Strategic Plan. Representatives of 34 bilateral and multilateral donor agencies agreed to translate the Plan into their respective development cooperation priorities. In addition, a Multi-Year Plan of Action on South-South Cooperation on Biodiversity for Development was adopted by the G77 and China.

The meeting also adopted the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization. Eighteen years after the Rio Earth Summit, the third objective of the CBD has finally been operationalized. The Nagoya Protocol creates a framework that balances access to genetic resources on the basis of prior informed consent and mutually agreed terms with the fair and equitable sharing of benefits while taking into account the important role of traditional knowledge. The Protocol also proposes the creation of a global multilateral mechanism that will operate in transboundary areas or situations where prior informed consent cannot be obtained.

As recommended by the Secretary-General of the United Nations, Mr Ban Ki-moon, the new Strategic Plan was adopted as the overarching global coordinated framework on biodiversity of the whole biodiversity family. The heads of agencies, including the heads of the biodiversity-related conventions as well as the heads of NGOs attending the meeting endorsed this recommendation. Therefore the whole United Nations system with the support of civil society will assist the 193 Parties in translating the Aichi Target into national biodiversity and action plans within two years.

Going forward, a key constituency that must be fully engaged in the achieving the Aichi Target is the scientific community. Scientists have played a key role in the many meetings of the CBD over the years, including the Nagoya Biodiversity this October. Increased scientific knowledge, along with an increased ability to effectively communicate that knowledge, will be central to integrating biodiversity preservation into more and more sectors of our global society. As Louis Pasteur said, "Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world."

Climate change is a case in point. At the Copenhagen Climate Conference last December, the CBB launched a scientific synthesis of the impacts of ocean acidification on marine biodiversity. The synthesis shows that the absorption of atmospheric CO_2 has caused ocean acidity to increase by 30% since the beginning of the Industrial Revolution 250 years ago. It is predicted that by 2050 ocean acidity could

increase by 150%, 100 times faster than any change in acidity experienced in the marine environment over the last 20 million years, giving little time for evolutionary adaptation within biological systems.

Also at the Copenhagen Climate Conference last December, the CBD's Ad Hoc Technical Expert Group (AHTEG) on Climate Change and Biodiversity released a major report which shows that the degradation of many ecosystems is significantly reducing their carbon storage and sequestration capacity, leading to increases in emissions of greenhouse gases.

For example, deforestation is currently estimated to be responsible for 20 per cent of annual human-induced CO_2 emissions, as forests account for as much as 80 per cent of the total above-ground terrestrial carbon. Further, peatlands, which cover only 3 per cent of the world's terrestrial surface, store 30 per cent of the carbon contained in both terrestrial vegetation and soils. Hence, as forest and peatland loss continues, a much greater proportion of global carbon ends up in the atmosphere and not in terrestrial biomass. Likewise, intensive agricultural practices that destroy ground cover and increase soil erosion decrease the retention time of carbon in the soil.

Moreover, the AHTEG report shows that the relationship between biodiversity and climate change goes both ways: approximately 10 per cent of species assessed so far have an increasingly high risk of extinction for every 1^oC rise in global mean surface temperature, a trend that is expected to hold true up to at least a 5^oC increase.

Indeed, observed changes in climate have already adversely affected biodiversity at the species and ecosystem level, with further changes in biodiversity being inevitable with further changes in climate. For example, changes in the climate have produced alterations in species distribution and population size, timing of reproduction or migration events, and an increased frequency of pest and disease outbreaks. Climate change has also been implicated in widespread coral bleaching, wetland salinization and salt-water intrusion, the expansion of arid and semi-arid lands at the expense of grasslands and acacia, poleward and upward shifts in habitats, replacement of tropical forests with savannah, and the shifting of desert dunes.

Overall, 89 per cent of the most recent national reports received by the Convention indicate that climate change is either currently driving biodiversity loss or will drive it in the relatively near future.

The fact that biodiversity loss can worsen the effects of climate change is also well known, and is nowhere more obvious than when it comes to natural disasters. Mangroves and coral reefs are a prime example. When intact, they can absorb 70-90 per cent of the energy in wind-generated waves, thus protecting shorelines from storms and hurricanes. The benefits of preserving these natural barriers are very clearly seen in a case study from Viet Nam, a country where extreme weather events such as typhoons often cause considerable damage. Since 1994, the Viet Nam National Chapter of the Red Cross has been working with local communities to rehabilitate mangroves. Activities have included the planting and protection of mangroves and upland trees, disaster preparedness training and general awareness-raising about the value of mangroves. Around 12,000 hectares of mangroves have been planted. During the devastating Typhoon Wukong in 2000, project areas remained unharmed while neighbouring provinces suffered severe casualties and property damage. Overall, the Viet Nam Red Cross estimates that about 7,750 families benefited from mangrove rehabilitation. The Viet Nam experience was also borne out in Thailand during the catastrophic 2004 Asian tsunami. A study showed that communities protected by mangroves and other coastal plants escaped with little damage, while neighbouring villages without such protection were completely destroyed.

Fortunately, the strong links between biodiversity loss and climate change make land management one of the most cost-effective ways of reducing emissions. Mechanisms to achieve emissions reductions through land use change are also consistent with mechanisms to conserve and sustainably use biodiversity. These include improved crop and grazing land management to increase soil carbon storage; restoration of cultivated peaty soils and degraded lands; afforestation; reforestation; reduced deforestation; and mapping land use change. Overall, the potential for sustainable land management practices to reduce emissions and increase sequestration of carbon is estimated at between 1 to 6 billion tons of CO_2 per year.

Moreover, as alluded to earlier healthy ecosystems can also provide natural buffers to the impacts of climate change. For example, the sustainable management of river basins, aquifers, flood plains and

their associated vegetation can improve water storage and flood regulation. The sustainable management of grasslands and rangelands can reduce soil erosion and desertification and enhance pastoral livelihoods. Indigenous knowledge can be used to maintain the genetic diversity of crops and livestock, conserving diverse agricultural landscapes and securing food provisioning under changing local climatic conditions.

Several practical reasons make ecosystem-based approaches to biodiversity conservation and management a particularly effective method of adapting to climate change. First, they can be applied at regional, national and local levels, and benefits can be realized over short and long time scales. Second, they may be more cost-effective and more accessible to rural or poor communities than measures based on hard infrastructure and engineering. And third, they can integrate and maintain traditional and local knowledge and cultural values.

All of this is why addressing climate change and biodiversity loss synergistically played a large role in the CBD's new strategic plan. It is also why the three Rio Conventions are increasingly collaborating as we work toward such important events such as the UN Conference on Sustainable Development in Brazil in 2012 (Rio +20) and the Millennium Development Goals Review in 2015. For example, the Rio Conventions have together launched an Ecosystems and Climate Change Pavilion to allow Parties and organisations to profile activities linking biodiversity conservation, sustainable land management and climate change mitigation and adaptation, especially at national and sub-national levels. This year the Pavilion was held during CBD COP10 in Nagoya and will also be held at UNFCCC COP16 in Cancun. It is also anticipated that the Pavilion will take place in 2011 at UNCCD COP 10 in the Republic of Korea and at the UNFCCC COP 17 in South Africa, with its momentum carrying through to Rio +20.

In order to facilitate the efforts of the Rio Conventions and successfully implement the international community's 2011-2020 biodiversity strategy, we will need to establish stronger link between scientists and policy makers. A recent in-depth review on biodiversity and climate change allowed national policy makers to express their needs with regards to scientific information on biodiversity–climate change linkages. These needs included more information on the relationship between biodiversity, land systems and climate change; models combining climate data with bio-geographic information; baseline information on status and trends of biodiversity; the ability to differentiate between multiple drivers of loss in order to isolate the causal relationship with climate change; maps of the most vulnerable areas or components of biodiversity, especially in developing countries; economic estimates of climate change impacts on biodiversity and adaptation options; and outreach tools to enhance public awareness on the links between biodiversity loss and climate change.

There are several additional areas where future research needs to be focused. The first is in the development and strengthening of biodiversity indicators: having a clear sense of exactly where and how quickly biodiversity is being lost is absolutely integral to preserving it. Of course, being able to track changes in biodiversity levels requires having sound taxonomic knowledge. By some estimates there are over 13 million species on Earth – and yet classified species number less than two million. Finally, the social and economic costs of biodiversity loss are also a research priority, since hard data and case studies in this area will allow us to draw more constituencies into our preservation efforts.

I hope that over the course of the conference you will be able to build on what we know to date to discuss new solutions to the problems of biodiversity loss compounded by climate change. You must do this with a deep sense of urgency. The head of the Intergovernmental Panel on Climate Change Rajendra Pachauri has stated: "We are confronted by a range of environmental threats, from soil degradation and water and air pollution to deforestation and loss of biodiversity. All of these are being affected by climate change on an increasing scale. This set of impacts will affect every segment of our economy and of our population."

And indeed for the billions of people who depend directly on biodiversity for the everyday livelihoods, there is no time to wait.

Thank you for your kind attention.