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## FULFILLING THE PLEDGE OF THE HEADS OF STATE TO REDUCE BY 2010 THE LOSS OF BIODIVERSITY ON OUR PLANET

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Biological diversity is the result of millions of years of evolution on Earth. It comprises the totality of life forms on Earth. Ecosystems provide the essential requirements for life, protection from natural disasters and diseases and the very basis for human culture. However, never since humans appeared on Earth have they destroyed the basis of their life as during the last fifty years.

The findings of the Millennium Ecosystem Assessment—a study conducted over four years by more than 1,395 experts from over 95 countries—are a wake-up call.

Pressure from human activities on the natural functioning of the planet has reached such an extent that the ability of ecosystems to meet the needs of future generations is now seriously—perhaps irreversibly—jeopardized. Never since human beings first appeared on Earth has anthropogenic change to our planet's natural functioning been so destructive as it has been over the last half-century, resulting in an unparalleled extinction of biodiversity on Earth.

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It is well known that ecosystems underpin human well-being. Unfortunately, of the 24 ecosystem services recently studied by the Millennium Ecosystem Assessment, 15 are in decline.

The extinction of animal and plant species seems to be 30 per cent higher than the natural rate. Over the last century, species extinction rates rose by a factor of 1,000. Over the last 500 years, the annual rate of extinction of species was about 1,000 a year. Today, between 15,000 and 50,000 species will disappear annually. Twenty per cent of known bird species have already disappeared. Forty-one per cent of mammals are in decline and 28 per cent are under direct threat.

Until recently, forests covered 47 per cent of the Earth's land surface. Since then, they have totally disappeared in 25 countries and, in a further 29 countries, 90 per cent of forest cover has been lost. Every year, 10 million hectares of forest—an area four times the size of Belgium—are being lost. According to the Food and Agriculture Organization of the United Nations (FAO), Africa lost 4 million hectares of forests between 2000 and 2005.

In the Caribbean, the average hard-coral cover has fallen from 50 to 10 per cent over the last three decades.

Some 35 per cent of mangroves have been destroyed in the last twenty years.

Since the dawn of history, humans have used more than 7,000 plant species to satisfy their needs. Today, only 150 plants are used, and most of us use only 12 species. Thus, of the 8,000 species of apple that could be found in the United States of America up to the last century, 95 per cent no longer exist.

Since the end of the Second World War, more land has been converted to agricultural use than in the two previous centuries.

The "ecological footprint" of humankind now extends 20 per cent beyond the biological capacity of the planet. We are consuming more natural resources than can be regenerated. Humankind is living beyond the means and capacities of our planet. Thus, if everyone was to have the same standard of living as the United Kingdom, we would need three and a half planets. If we all wanted to enjoy the same consumption patterns as American citizens, we would need five planets.

Since 1950, we have seen a sixfold increase in global wealth. The world economy is still growing steadily. In 2004, international trade grew by 9 per cent and, according to the World Trade Organization, global exports of goods passed the 10,000-billion dollar level. While the rich countries are enjoyed a level of prosperity unequalled in human history, more than two billion human beings are suffering the agony of absolute poverty.

While, on average, half a hectare of productive ecosystems is necessary to sustain the needs of a resident of a developing country, more than five hectares are needed to satisfy the ever-growing consumption requirements of citizens of the world's richest countries. On average, a national of a developed country consumes twice as much cereals, three times more animal meat, nine times more paper and eleven times more oil than someone from a developing country. In 1970, American citizens consumed on average 679 kilogrammes of sheepmeat; now, they are

consuming 805 kilogrammes. The daily consumption of water by a developed-country national is about 35 litres, whereas Africans get by with an average of 10 litres a day. The United States of America, with only 5 per cent of the world's population, consumes 25 per cent of the planet's resources and produces 25 per cent of global waste. In 22 weeks, a citizen of the United Kingdom will produce as much carbon dioxide as a Tanzanian citizen will produce in their entire life.

According to the Organisation for Economic Co-operation and Development (OECD), municipal waste generation in its member countries increased by 40 per cent between 1980 and 1997. It is predicted that, by 2020, waste generation will increase from 500 to 640 kilogrammes a year. Over the same period, world-wide generation of waste will be more the two billion tonnes, compared to the current level of 770 million.

Over the last fifty years, two thirds of croplands have been degraded in one way or another. Drylands now cover 40 per cent of the Earth's land surface and affect more than 80 countries, or one sixth of the world's population, directly threatening the lives of 250 million of the poorest people on the planet. More than 6 million hectares of arable land are swallowed up every year by this phenomenon, which threatens the world food security of a population with ever-growing needs.

Today, four out of every ten people live in countries with a serious shortage of drinking water. In 2025, two thirds of mankind—more than 5.5 billion human beings—will be in a similar situation. Daily consumption of drinking water is 135 litres per person in the developed countries, but only 14 litres in Africa. More than a billion people do not have close access to drinking water, and 2.6 billion have no sewerage. Every year, 8 million people die of waterborne diseases, such as cholera, diarrhea or typhoid. Most are children under the age of five. In 20 years, available water reserves will be three times less per inhabitant than in 1950; global per capita water reserves fell from 16,800m³ in 1950 to 7,300m³ in 2000 and will be barely 4,800m³ in 2025.

Climate change threatens to exacerbate the situation, which the CIA considers to be a potential source of international tension and conflict. According to its report, more than 30 countries obtain more than one third of their drinking water from beyond their borders. The 268 international river basins are, in fact, shared by 145 countries that account for 40 per cent of the world's population.

Global warming is one of the major challenges threatening life on Earth. Atmospheric concentrations of carbon dioxide ( $CO_2$ ) have increased by some 30 per cent since 1750. Annual carbon-dioxide emissions are reported to be about 6 billion tonnes. Experts predict a temperature increase of between 1.4°C and 5.8°C by the end of the twenty-first century.

According to the experts, the temperature of our planet has been consistently increasing since the industrial revolution. The 1990s saw nine of the ten hottest years since meteorological records were kepte. According to WMO, 2005 was the hottest year on record.

According to some estimates, the number of climate-related natural disasters has quadrupled since 1960. Of the 700 natural disasters recorded in 2002, 593 were climate-related.

Global warming seems also to be at the root of increased risks to human health. Some experts contend that environmental changes are the cause of the huge rise in the number of new infectious diseases. Since 1960, more than 35 infectious diseases have been recorded. The number of deaths from new or old infectious diseases is said to have double since 1980. Malaria now kills between 1.5 and 2.7 million people a year, mainly in Africa. Every thirty seconds, a child's life is taken by malaria. Scientific studies have shown the strong link between the spread of cases of cholera and temperature increases in the affected regions.

Global warming and the associated melting of snow and glaciers caused a 10-20 cm rise in sea levels in the twentieth century. Global warming is threatening the very existence of the world's 160,000 glaciers. September 2003 saw the break-up of the largest ice-shelf—Ward Hunt in the Arctic, which had been in place for more than 3,000 years. The melting of snow in the Himalayas is behind the proliferation of hig-altitude lakes. There are estimated to be 2,323 in Nepal, and 20 per cent of them pose a threat to the lives of neighbouring populations because of the risks of water overflow.

Some experts believe that, by the end of the century, global warming might lead to sealevel rises of up to 88 cm. Since 50 per cent of the world's largest cities are located in coastal areas and more than three billion people live within 100 km of the cost, the rise in water levels will have disasterous consequences.

The very existence of some island States, such as Tuvalu and Kiribati, will be threatened. In November 2001, after being rebuffed by Australia, the Tuvalu authorities requested New Zealand to take in their 11,000 citizens in fear that their country would soon be submerged. History will recall that Tuvalu was the first country to try to evacuate its entire population because of rising water levels. It certainly will not be the last. Sixty-five per cent of the land in the Maldives is less than one metre above sea level. In October 1987, speaking before the General Assembly of the United Nations, the President of the Maldives said that his country was threatened by sea-level rise. He described his country's 311,000 inhabitants as an "endangered nation".

So, for the first time in human history, sea-level rise opens the possibility of the disappearance of many sovereign nations from the Earth's surface, in a way that no army in the world, however sophisticated it might be, would be able to prevent.

It is therefore not surprising that a 2004 study by the Pentagon came to the conclusion that climate change "would challenge United States national security in ways that should be considered immediately". The study predicts outbreaks of famine in Europe and threats of the use of nuclear weapons to secure the remaining natural resources.

A different type of "bomb" threatens the human race and its civilization. The relationship between climate change and biodiversity may be well established, but the same goes for the relationship between the biodiversity loss and the loss of cultural diversity. WWF has shown the dynamics that exist between biological and cultural wealth, particularly in terms of languages. Of today's 6,000 recorded languages, more than a half are in danger of disappearing by the end of the century. The loss of a language has been compared to a bomb exploding at a museum of ancient art.

The loss of the basis of our life, including our cultural and spiritual life and our civilization, seems to be met with silence, ignorance and indifference. A study has shown that 97% of the population, 87% of governments and media representatives, as well as 58% of people working in education are not aware of the loss of biodiversity and its consequences for the survival of the human race.

It is this situation that caused the President of the French Republic, Mr. Jacques Chirac, to say in his address to the World Summit on Sustainable Development, held in Johannesburg in September 2002: "Our house is burning down and we're blind to it.... It is time to open our eyes."

Opening our eyes means restoring the issue of environmental protection to what always should have been its rightful place. This requires a new vision that puts basic human values at the heart of sustainable development. It means redefining the relationship between people and between people and their environment. It means rediscovering the ethic and the sense of sacred values that have from time immemorial been the hallmarks of those ancient civilizations that prospered in solidarity, imbued with a high sense of respect for each individual and for all forms of life on Earth as part of the realm of the divine. It therefore means recognizing that the current unsustainable patterns of consumption and production, together with abject poverty, are at the same time the causes and consequences of the decline in the relationship between people and between people and their environment. The time has come to re-think our relationship with Mother Nature, for the benefit of present and future generations.

Opening our eyes also requires us to implement without further delay the commitment made by the Heads of State or Government at the Earth Summit in Johannesburg to achieve a significant reduction in the rate of biodiversity loss by 2010. This pledge, reiterated by 154 Heads of State or Government at the New York Summit in September 2005, has to be addressed today and requires from every one of us a commitment to breaking the status quo. Putting off until tomorrow decisions that are needed today is no longer a viable option, neither for Governments nor for the present generations and, even less so, for our children and the generations to come.

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