

## Paris declaration on biodiversity

The scientists assembled in the International Conference *Biodiversity Science and Governance* held in Paris in January 2005 agreed on the following declaration:

### *1. Biodiversity is a natural heritage and a vital resource for all humankind*

The Earth is home to a tremendous biological diversity, which not only includes the millions of different species that inhabit our planet, but also the diversity of their genes, physiologies, and behaviours, the multitude of their ecological interactions with each other and with their physical environment, and the variety of the complex ecosystems they constitute. This biodiversity, which is the product of more than 3 billion years of evolution, is an irreplaceable natural heritage and a vital resource upon which humankind depends in many different ways:

- it is a source of aesthetic, spiritual, cultural, and recreational values;
- it provides goods that have direct use values, such as food, wood, textiles and pharmaceuticals;
- it supports and enhances ecosystem services on which human societies depend often indirectly, such as plant and animal production, crop pollination, maintenance of water quality and soil fertility, carbon sequestration, nutrient cycling, protection against pathogens and diseases, and resistance of ecosystems to disturbances and environmental changes;
- it provides opportunities for human societies to adapt to changing needs and circumstances, and discover new products and technologies.

### *2. Biodiversity is being destroyed irreversibly by human activities*

Human alteration of their environment is having unprecedented effects on the distribution and abundance of species, ecosystems, and the genetic variability of organisms.

Species are currently being lost globally at a rate that is about 100 times faster than the average natural rate, and tens of thousands of other species are already committed to future extinction because of the recent worldwide loss of their habitats.

The primary causes underlying the loss of biodiversity are demographic, economic, and institutional factors, including increasing demands for land and biological resources due to the growth in the human population, world production, consumption and trade, associated with a failure of people and markets to take into account the long-term consequences of environmental changes and the full array of biodiversity values.

These causes manifest themselves in the loss, fragmentation, and degradation of habitats; the overexploitation of biological resources; the introduction of non-native species; the pollution of soil, water, and atmosphere; and, more recently, signs of long-term climate change.

The loss of species and genetic biodiversity is essentially irreversible, and therefore poses serious threats to sustainable development and the quality of life of future generations.

### *3. A major effort is needed to discover, understand, conserve and sustainably use biodiversity*

Strong actions must be taken now to inventory, understand and protect biodiversity in order to meet the Millennium Development goals, and ensure food security, human health and the quality of life. If humankind fails to do this, we risk losing forever the ecosystem services supported by existing biodiversity as well as the opportunity of reaping its full potential benefits to humankind in the future.

Most of the biodiversity that surrounds us on our planet, its current changes, many of its impacts on ecological processes and services on which we depend, and many of its potential uses, are still unknown to science. The ecosystems in which most of the Earth's biodiversity is concentrated are still poorly understood because they constitute very complex assemblages of species and interactions with the physical environment. Extending the scientific knowledge of biodiversity requires a major co-ordinated effort internationally that mobilises scientists from all disciplines and geographical regions. The vision and effort that have been put into space exploration are now needed for exploring and understanding life on Earth. This objective can rely, among others, on technological advances that offer novel opportunities to discover and identify living organisms.

The conservation and sustainable use of biodiversity need to become an integral component of social and economic development by correcting past policy and market failures. Innovative social, economic, institutional and legal frameworks are needed to develop more ecologically based management systems that take into account the multiple values of biodiversity and to ensure that conservation and sustainable use of natural resources are integrated successfully into public and private decision making. New production and consumption technologies are essential so that economic development and poverty alleviation favour the long-term preservation of living resources and ecosystems.

The broad lines of the statements presented here were already known 13 years ago at the time of the Rio Summit, and the scientific knowledge accumulated since then has amply confirmed them. Yet, in spite of some protection efforts, the threats to biodiversity have clearly increased without a significant and effective response to them.

**Therefore we urge governments, policy makers, and citizens to take the necessary actions to support the development of the scientific knowledge, as well as the conservation and the sustainable and equitable use of biodiversity:**

- **Ambitious interdisciplinary research programmes must be set up to discover, understand and predict biodiversity, its status, trends, and the causes and consequences of its loss, and to develop effective science-based decision tools for its conservation, and sustainable use.**
- **Biodiversity must be integrated without delay, based on existing knowledge, into the criteria considered in all economic and policy decisions as well as environmental management.**

- **Education of citizens and public awareness programmes must be greatly strengthened and improved to reach these objectives.**
- **A major effort must be made to build the capacity, especially in developing countries, to undertake biodiversity research and implement biodiversity protection.**

**Lastly, we call for the establishment of an international mechanism that includes intergovernmental and non-governmental elements, and that builds on existing initiatives and institutions, with a view to:**

- **providing scientifically validated information on the status, trends, and services of biodiversity;**
- **identifying priorities and recommendations for biodiversity protection;**
- **informing the relevant international conventions, especially the Convention on Biological Diversity, and their parties.**

**This mechanism should enhance the effectiveness of existing organisations through the integration and coordination of shared and complementary efforts.**

*28 January 2005*