

FOREWORD

“Because of the items that satisfy his fleeting greed, he destroys large plants that protect the soil everywhere, quickly leading to the infertility of the soil he inhabits and causing springs to dry up, removing animals that relied on this nature for their food and resulting in large areas of the once very fertile earth that were largely inhabited in every respect, being now barren, infertile, uninhabitable, deserted. **One could say that he is destined, after making the earth uninhabitable, to destroy himself**” Jean Baptiste Lamarck (Zoological Philosophy, 1809).

Two centuries after Lamarck recorded these thoughts, it is as if we were only a step away from fulfilling his alarming prophecy. Today, unfortunately, it is possible to state that man's influence over the environment has never been as intensive, extensive or far-reaching. The explosive, exponential growth of the world's population, coupled with a rapid depletion of natural resources and incessant accumulation of various pollutants, provides a dramatic warning of the severity of the situation at the beginning of the third millennium. Essential conditions for the functioning of biogeochemical cycles, biological diversity, the composition of the atmosphere and the global climate are all changing at a tremendous rate.

The focus of our attention regarding man's multiple and diverse destructive influences over the environment should most certainly include the problem of disappearing species. Other forms of negative human influence can be even overcome in some ways, but the disappearance or extinction of organic species represents an irrevocable loss for our planet for ever. It is believed that man's negative influence on the environment increases the number of species that are irrevocably lost to a staggering 27,000 species annually, or 74 species lost per day. With 100 organic species becoming extinct within a single day, the extinction rate becomes 1,000 times higher than the estimated “normal” evolutionary extinction rate. If extinction continues at its current rate, 20% of today's species could disappear over the next 30 years. In terms of magnitude, this could be compared only to the disaster of 65 million years ago that saw the dinosaurs disappear from the face of the earth.

In this context, it is no coincidence that during the last twenty years we have increasingly heard mention – in the area of environmental protection, and more widely – of biological diversity, or biodiversity, and the necessity to protect it. The actual term ‘biodiversity’ is relatively young, having been born as BioDiversity at the National Forum on BioDiversity in Washington in September 1986, organised by the US National Academy of Sciences and the Smithsonian Institute. The Convention on Biological Diversity, which was officially adopted at the historic United Nations Conference on Environment and Development in Rio de Janeiro in 1992, saw the term biodiversity gain a central position not only in a more specific biological and ecological sense, but also in a wider social, economic and political sense.

The Rio Conference adopted the **Convention on Biological Diversity (Biodiversity)** and defined this term as: **the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.** The subject of regulation and objective of the Convention on Biodiversity is: (1) conservation of biological diversity (biodiversity); (2) sustainable use of its components (biological resources) and; (3) the fair and equitable sharing of benefits arising from the utilisation of genetic resources.

What is the importance of biodiversity conservation and protection? There are two main areas of importance: fundamental and applicative.

The fundamental importance of biodiversity lies in the fact that the sum of all forms of life on our planet is a considerably more complex phenomenon than the total sum of individual organic species. Biodiversity, as a phenomenon, includes diversity of ecological relations established in the years of evolution between different organic species that actually formed the basis of existence, complexity, stability and the functioning of each individual ecosystem, biome, that is, biosphere as a whole, as well as the survival, future and evolution of each species, including *Homo sapiens*. Without biodiversity there are no biogeochemical cycles or disintegration of organic matter. Conserved biodiversity contributes to climate regulation, reduces the greenhouse effect, maintains air and water quality, controls droughts and floods etc.