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## Towards a more effective biodiversity protection in Spain

**ELENA ESPINOSA** 

This article attempts to show how concern for climate change and loss of biodiversity is at the heart of the environmental policies and the political action of the national governments and the international organizations. The purpose of these policies is to develop a more responsible natural resources management, protecting and recovering habitats and natural ecosystems and slowing down the loss of biodiversity. Spain is committed to these aims and will adopt measures regarding these issues during the Spanish presidency of the European Union, in the first semester of 2010.

# Spanish flora: first class biodiversity richness still in exploration. The Flora Ibérica project

SANTIAGO CASTROVIEJO

Flora Ibérica is a project based on international scientific collaboration of botanists from seven countries. Its purpose is to examine the taxonomy of the flora in the Iberian Peninsula and the Canary Islands, and compare it with other countries in the Mediterranean area. This review comes to the conclusion that the Spanish flora is highly diverse, even though its description is still incomplete. The Flora in the Iberian Peninsula and the Balearic Islands includes 7500 species and the one from the Canary Islands 2500 species. The Spanish flora is the richest in the European Union and the Mediterranean basin.

#### The animal diversity in Spain

MIGUEL LIZANA Y JOSÉ LUIS VIEJO

This paper outlines the animal diversity in Spain. The animal species are listed differentiating between the Iberian Peninsula, the Balearic Islands, the Canary Islands and the North African territories. The authors analyze the taxonomic classification of invertebrates, fishes, amphibians, birds and mammals, stressing on endemic and endangered species. The level of taxonomic knowledge is uneven in Spain, therefore an important number of species is likely to be discovered in the future.

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#### The arthropod diversity in Spain

JOSÉ LUIS VIEIO

This paper describes the arthropod diversity in Spain. The arthropods represent the 80% of the described animal species up to now and the most successful animal phylum in the history of evolution. The authors analyze the diversity of arthropods in the planet, listing the species of this phylum in Spain. The study differentiates between crustaceans, arachnids, myriapods and insects. Areas and ecosystems of special interest for arthropods are emphasized.

#### **Spanish Natural Systems**

JUAN CARLOS SIMÓN ZARZOSO

The following article focuses on biological biodiversity in ecosystems, that is to say, all the species that can be found in a territory, how they interact among themselves and with the environment in which they evolve. The analytical structure considers the composition, the structure and the function of ecosystems and biodiversity of an area. Habitats of common interest in Spain, floristic richness and Spanish natural systems are analyzed. Earth environment, aquatic continental environment and coast and marine environment are also treated.

## A marine environment of which to be proud (for the time being)

JOSÉ TEMPLADO Y JAVIER PANTOJA

The marine biodiversity of Spain consists approximately of 8.000 coastal kilometres and of different multicellular marine species that are in danger of increasing destruction due to the aggressive use that the man exercises on the marine natural resources, in spite of many benefits that the marine environment brings us. In this article are analyzed the characteristics of the marine Spanish biodiversity, which divides in: pelegica biodiversity, bentonica biodiversity, submarine prairies, forests of laminarias, communities of cystoseira, calcareous bioconstructions, coraligenos funds and funds of white deep corals.

### Biodiversity and survival of the humanity

MIGUEL DELIBES DE CASTRO

The human being is a part of the biodiversity and therefore the quality of life, the well-being and the survival of the humanity depend directly

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on the conservation and protection that is exercised on the biosphere and on all the natural resources that could be extracted from it.

At present the biodiversity is suffering the devastating action of the man. In this study in the first part is explicated the meaning of the biodiversity and in the second part are enumerated the dangers that the biodiversity suffers through the fault of the humanity.

### What happens if habitats and species are disappearing?

MIGUEL AYMERICH HUYGUES-DESPOINTES

The activity of the man, the indiscriminate hunting, the industrial development, the contamination, the climatic change, the destruction of natural habitats, etc., has been making to disappear in a definitive way to many animals and vegetables species in the whole world. In this article are analyzed the costs of the loss of the biodiversity to planetary scale, doing special emphasis in the disappearance of species of the fishing sector.

"TEEB: the economy of the ecosystems and the biodiversity". A global study about the economic implications of the environmental deterioration and what can we do about this topic?

PAVAN SUKHDEV

The report Economy of the Ecosystems and the Biodiversity for National and International Legislators 2009 (Teeb for its acronym in English and also available in French) treats of high responsibility of the governments to try to value economically the natural resources of the ecosystem. This article analyzes in depth the results obtained in the first phase (2008) and in the second phase of the Report TEEB (2010): deterioration of the biodiversity and decisions in environmental topics.

## Genetic resources, intellectual property, benefit-sharing

ASHA SUCKHWANI

First of all it is analyzed the industry sectors that use biodiversity and countries that protect their biodiversity through the patent system, then, this article focuses on the Convention on Biological Diversity (CBD), whose objectives are the Biological Biodiversity conservation, the sustainable development of its components and the equitable sharing of benefits arising from the use of Genetic resources. It also explores the link between this Convention and intellectual property rights, their concessions, patents and trademarks, bearing in mind the practice of industrialized countries of protecting patent technologies for new processes and products.

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The purpose of this article is to evaluate the effects of the climate change in order to reduce its impact on biodiversity. After some initial methodological considerations regarding the climate change policies, the biodiversity protection and the fight against the desertification, the authors devote part of the article to analyze the risks that the biodiversity is at risk for, its interaction with the climate and the threat that supposes the climate change on the ecosystems, affecting their structures and functions. It is also presented the main objectives of both work programmes of the National Adaptation Programme of Action on Climate Change.

### Nature, knowledge and politics: Promising synthesis in the Natura 2000 **Networking Programme**

MIGUEL CASTROVIEJO

The following article takes as the starting point the Biological Diversity protection in the European Union and the main available instruments in terms of Nature protection, legislation and the control of its implementation/application, the process of the Biodiversity integration in other policies and its funding. Within the European Union law attention is paid to Birds and Habitats directives which are the main pillars of Biodiversity policy of the European Union and the most important and recognized one. Within the Habitats Directive, the results of the Natura 2000 Networking Programme establishment are shown.

### Once upon a time in the East: Biodiversity conservation Challenges at economic dawn of a post-communist country

LADISLAV MIKO V JAN PLESNIK

This article reviews the Nature conservation policies of a postcommunist country such as Czech Republic, which is a Member of the European Union since 2004. It analyzes the political, economic and social developments in the formerly known as Czechoslovakia in 1989, which paid attention to the Environmental protection and management. The authors raise, issues such as Environmental conservation planning, and Biodiversity assessment and analysis, for either on Nature conservation legislation, created by the Agency for Nature Conservation and Landscape Protection of the Czech Republic, or the implementation of Natura 2000 Networking Programme.

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# Synergies among international mechanisms for biodiversity protection TERESA MOLINA SCHMID

The following article focuses on the interaction between instruments of international institutions, European institutions and other international actors to protect biodiversity. Interaction is achieved by signing agreements, protocols and bringing together International Law, European Law and Environmental Law. Cooperation between these actors allows the progressive elimination of overlaps and the better of environmental governance.

# The protection of the biodiversity in the practice: intervention of the local Administration. The case of Tenerife, the Canary Islands VÍCTOR M. GARCÍA DÍAZ

The progressive increase of the different classes of high and dangerous contamination in the Environment against the biodiversity, has led to the local Administration to establishing a strategic plan of pursuit and evaluation based on the study of a series of beginnings, which keep relation with the natural resources of the ecosystem: tripled sustainability, functional organization of the environmental area and administrative management of the natural resources. In this study the beginnings are analyzed and administrative resources are advised to solve three basic problems against an unavoidable depletion of the natural resources; for example the case of the environmental area of the Insular Council of Tenerife: unpunished emission of poisonous residues, overcrowding of urban developments and infrastructures, overflowing of the technologies, between others.

# Biodiversity in crisis days. A few proposals for Europe

The following article presents the main challenges and proposals to protect biodiversity.

The economic crisis has promoted the consideration of the value of energetic saving and environmental protection, but the resources to implement measures are more limited. It is necessary to keep on fighting climate change and to integrate biodiversity in sectorial policies (agriculture, transport, energy or urbanism). The article also underlines the implementation of restoring policies in protected zones, the protection of species and the danger of invasive species. A global pact for oceans is proposed. The article underlines the necessity of limiting construction and orientating it to a more sustainable system.

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#### Protecting biodiversity: beyond Law

CRISTINA NARBONA

This paper focuses on the protection of biodiversity and the main ways of assuring it. It analyzes which are the necessary economic instruments to achieve this goal and underlines the great relevance of democratic institutions and citizen participation. Added to scientific progress and Law, it is necessary to change the pattern, that is to say, to modify consumption and production through major transparency and better communication.