
Nature Conservation Policies and Strategies

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Humans dependence on nature is beyond doubt one of the most powerful evidence that supports the thesis of environmental protection. This relation is manifold and it was approached in various frameworks. The paper focuses on the conservation of nature in its narrow sense, meaning natural ecosystems and biodiversity. Although this topic is among the top priorities in environmental policymaking, the progresses recorded to date are not reflecting this position. The analysis aims to highlight the main policies and strategies and the developments for new actions targeting improved effectiveness.

Keywords: biodiversity, multilateral agreements, Natura 2000, Athens message, action plans

Introduction

Increasing population and the accelerated economic growth in a number of developing countries are the main drivers of environmental degradation. One of its forms is biodiversity loss, meaning the depletion of genetic resources, species variety, and natural ecosystems coverage. These processes accompanied the entire human history and reached a point, which is considered to be critical for the safety of human society. Thus, 60% of the ecosystem services are used unsustainably and the path of extinction is comparable with the rates of historical mass extinctions [1]. Meanwhile,

biodiversity is a dependent variable of climate, and the current global concern on anthropogenic change justifies further threats to biodiversity [2]. Despite prolonged efforts invested in nature conservation going back as far as the XIXth century, biodiversity is still threatened.

These facts pushed biodiversity on the top of environmental priorities and fostered the policy making to seek for innovative approaches. We address these approaches by analyzing the most important nature conservation policies at two levels: global and European, in order to create the framework for identifying the relations between policy measures and biodiversity protection outcomes.

International agreements and conventions

Natural ecosystems and, generally, the variety of life forms that cohabitate with humans are inscribed in a complex network of interdependencies which has connections that are far from being identified and explained. Although scientific explanations, and even more economic information, are not always available, the conservation idea was applied from early times with the establishment of the first national park – the Yellowstone National Park (USA) in 1872. Along time, the nomination and objectives of protection categories changed in accordance with the legal and institutional framework from each country.

Since ecological interdependencies are related mostly with the physical patterns of space and less with their economic, social, and political “architecture” it became obvious the need of international collaboration that allows integrated approaches, global and regional action plans. This need was addressed by establishing in 1948 the International Union for Nature Conservation (IUCN) (Box 1).

Box 1: The International Union for Nature Conservation – IUCN

IUCN – The World Conservation Union

After an international conference organized at Fontainebleau (France), in 5 October 1948, it was established the International Union for Nature Protection (IUPN). In 1956, the organization changed its name, becoming the International Union for Nature Conservation and Natural Resources (IUCN), and since 1990, it is shortened to IUCN – The World Conservation Union.

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The union comprises member from 140 countries, representing 70 states, 100 governmental agencies, and 750 NGOs. In the six global commissions work together more than 10000 scientists from 180 countries. The members are involved in 500 projects, creating a genuine “green network”, that comprises:

- partnership network: among institutions and people for the surveillance of conservation and ecosystem restoration;
- innovation network: concentrates the economic incentives and the social power for conservation;
- action network: promote the equitable distribution of nature conservation costs and benefits among stakeholders.

Mission: to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

Vision: a just world that values and conserves nature.

Activity:

- policy consultancy and technical support for global secretariat and for partners of international conventions;
- assessment of new sites proposed by governmental partners for World Heritage;
- monitoring species at world level and publishing annually the “red list”
- technical assistance for the elaboration of National Biodiversity Strategies and Action Plans;
- collaboration with partners in forest ecosystem and watershed protection;
- technical support for national environmental law and natural resources management strategies;
- knowledge spreading and expertise.

Commissions:

Species Survival Commission (SSC): advises the Union on the technical aspects of species conservation and mobilizes action for those species that are threatened with extinction.

World Commission on Protected Areas (WCPA): promotes the establishment and effective management of a worldwide representative network of terrestrial and marine protected areas.

Commission on Environmental Law (CEL): advances environmental law by developing new legal concepts and instruments, and by building the capacity of societies to employ environmental law for conservation and sustainable development.

Commission on Education and Communication (CEC): drives change for the co-creation of sustainable solutions through leading communication, learning and knowledge management in IUCN and the wider conservation community.

Commission on Environmental, Economic and Social Policy (CEESP): provides expertise and policy advice on economic and social factors for the conservation and sustainable use of biological diversity.

Commission on Ecosystem Management (CEM): provides expert guidance on integrated ecosystem approaches to the management of natural and modified ecosystems.

Source: IUCN

Other organizations that had and continue to have important contributions in the elaboration and implementation of nature conservation strategies at global level are World Wide Fund for Nature (WWF), United Nations Environmental Program (UNEP), and also the permanent committees and secretariats of some international agreements and conventions (for instance, the permanent committee of Ramsar Convention). The work of these organizations in various assessments provided the input for a number of international conventions and agreements signed by numerous countries with different development levels. Initially these focused on certain species because scientific evidence indicated the imminent threat of extinction. This category is represented by the Convention on whale hunting (1946), the Convention of polar bears protection (1977), but also the Washington Convention regarding the international trade with endangered flora and fauna species (CITES, 1973 – Box 2).

Box 2: The CITES Convention

The convention pursues to reduce the contribution of international trade with specimens of wild plants and animals to biodiversity loss and it is ratified in 175 countries. The convention's structure comprises the Conference of the Parties, as periodical meeting, permanent committee, secretariat, which sustains the relations with the UNEP and two commissions, for animals and for plants.

The convention controls the international trade with wildlife (import, export, re-export and introduction of marine species). Species to be traded on international market should obtain authorization through a license system. Signatory states establish Management Authorities and Scientific Authorities. The regime of the convention covers 30000 species, which are divided in three categories: annex I- species threatened for which the permits are issued only in extraordinary cases; annex II – species that are not threatened, but for which the trade should be controlled in order to avoid uses that incompatible with their survival; and annex III – species that are protected at least in one of the signatory countries.

Subsequently, such agreements were completed for the protection of species environment (ecosystems). These agreements adopt regional approaches (the Alger Convention regarding nature conservation and natural resources in Africa, 1968; the Barcelona Convention regarding the ecosystems of the Mediterranean Sea, 1976; the Bern Convention regarding wildlife conservation and natural environment in Europe, 1979; the Salzburg Convention for the protection of Alps, 1991 etc.), but also ecologic ones, envisaging the protection of certain habitat types (the Ramsar Convention, 1971).

At global level the response to the issue of biodiversity loss is addressed by the Framework Convention on Biological Diversity (CBD), which was formulated at the Rio de Janeiro Earth Summit (1992) and signed by 168 countries at Nairobi (1994). The goal of this convention is threefold: the conservation of biological diversity; the sustainable use of the components of the biological diversity; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

Increasing interest for biodiversity protection could be noticed by considering the designation of the 2011-2020 period as the United Nations' Decade on Biodiversity, after the eventful 2010 year of biodiversity. This supports the implementation of the Strategic Plan for Biodiversity and the accomplishment of the Aichi Targets. These targets are grouped as follows:

- Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;

- Reduce the direct pressures on biodiversity and promote sustainable use;
- Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- Enhance the benefits to all from biodiversity and ecosystem services;
- Enhance implementation through participatory planning, knowledge management and capacity building.

These new targets are breakdowns of the CBD goals by considering the evolution of knowledge and social-economic framework. Major contributions in this respect were brought by the adoption of the Ecosystem approach principles in 2000 and the accomplishment of the Millennium Ecosystem Assessment project.

It is worth to notice that an increasing attention is given to the economic approach of biodiversity. Thus, the use of ecosystem service concept, which has a very short history starting around the early 2000s [3], became widespread. Moreover, there are already available the results of several assessments made at different levels. For instance, the carbon storage service of national parks in Canada was estimated to value between 11 billion and 2.2 trillion USD, depending on the evolution of the carbon market.

The protection of biodiversity is a complex issue, since many nations depend for basic needs on the health and size of natural ecosystems. Therefore, it was soon recognized the need to combine protection measures with development policies [4]. Meanwhile, uncertainty features many aspects of biodiversity protection. There is incomplete knowledge on basic elements such as the total number of species that inhabit the Earth and far less on the potential value of each species. Nevertheless, it is hardly questionable the necessity of biodiversity for humans wellbeing and even survival. Research could reduce uncertainties and its results found a number of applications in conservation policies.

Protecting biodiversity is eventually a question of balancing benefits and costs [5]. But, the degree of knowledge on benefits and costs is unbalanced. For instance, the benefits of development are well-known. Agricultural production, hydropower potential, and harvested wood have values that could be established in quite a great detail, while the benefits of

nature conservation are more difficult to compute and in most cases need long periods to take effect.

The European strategy of nature conservation

Nature conservation in the European Union (EU) is an important preoccupation characterized by continuity and improvement from one stage to another. Nevertheless, the co-ordination and coherence needed for a European strategy were met only in the 1990s. The first initiatives in this field were in legislation by the adoption of some directives and by the recommendations addressed to Member States (MS) regarding the participation in certain international conventions. Thus, after the Bern Convention (1979) it was adopted the so called Birds Directive and the European Commission recommended the adhesion to the Paris Convention on natural and human heritage protection and to the Ramsar Convention.

After the Earth Summit in 1992, the changes in ecosystem management were up taken at European level, and the focus moved from species to ecosystems and the social component of protection gained more weight. These changes are to be found in the European strategy on biological diversity and landscapes under the motto of “A Common Vision for Europe”. The goal of the strategy is to prevent and diminish the action of the factors that contribute to the significant reduction and loss of biodiversity. This goal will be achieved by the creation of a pan European ecological network that allows the free movement of species. The Bern, Bonn, Ramsar, Alpine Conventions and the diplomas granted by the European Council for natural sites of protected areas are the initiatives that contributed to the emergence of the pan European ecological network concept. This concept is already materialized initially as the EMERALD network, and currently as the Natura 2000 network.

The EMERALD network was developed by the application of Resolution nr. 3 of the Bern Convention. Today, its role is to prepare the implementation of the Natura 2000 network's principles, the definition of sites, the completion of forms, research, and encouragement of public participation. The monitoring is performed through the EUNIS codes that are organized in three systems: species, habitats, and sites.

The Natura 2000 network is a legal and administrative instrument based on bio-geographic regions and represents the juridical expression of the new nature conservation paradigms. The construction of the network adopts a bottom-up approach in which consulting the population is a key requirement in each stage. These stages are:

- preparation of national lists of candidate areas for Natura 2000 by the scientific assessment of habitats and species;
- selection of community interest sites that will be included in the network; and
- designation of Special Conservation Areas in six years after the selection of a site as being of community interest.

The management of Natura 2000 is performed in accordance with the provisions of two directives: Birds Directive (BD) and Habitat Directive (HD). The area protected under these directives represents 18% of EU’s surface, being of 778 thousands square kilometers. From one MS to other the proportion of protected areas under all designation types (EU and national) varies between 9% in Denmark and 36% in Slovenia (fig.1). In Romania, there were selected 273 sites of community importance (HD) and 108 special protection areas (BD), representing almost 18% of the country.

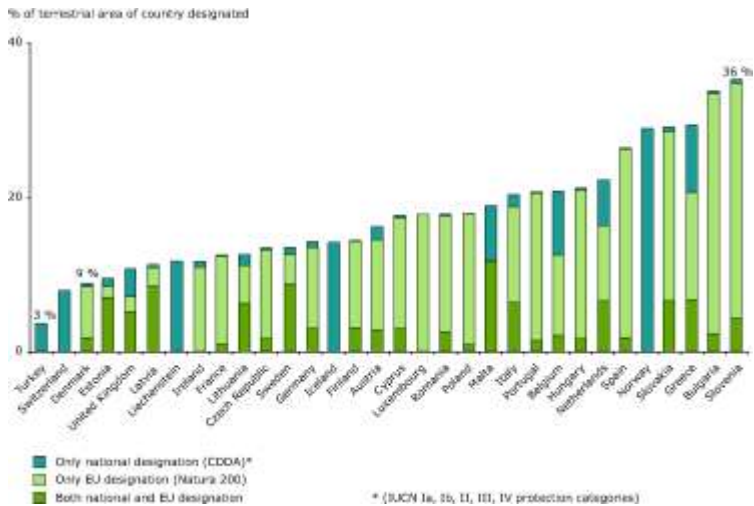


Figure 1: Proportion of protected areas in MS
Source: European Environmental Agency

Conservation means to maintain the favorable status of conservation and the application of a set of measures that satisfy the ecological requirements of species and habitats. Conservation measures could have different forms, which are usually divided in two categories: statutory, administrative or contractual measures and management plans. Priority is given to the first category, management plans being considered a supplementary measure then they are justified. It is the MS responsibility to establish these conservation measures.

The pan European biodiversity strategy is constructed as series of five year action plans since 1996. The latest action plan was adopted in 2006 and it envisages halting the loss of biodiversity by 2010 – and beyond. The action plan is supported by a fourfold argument for the importance of biodiversity: economic; ecologic; emotional; and ethical. The economic reason highlights the role of ecosystems in avoiding material damages with high financial impact due to natural hazards, while the emotional one stresses the contribution of nature to the cultural identity of Europeans.

The actions are grouped in several areas: biodiversity in EU; EU and global biodiversity; biodiversity and climate change; and knowledge base. The plan also provides a list of indicators that allow proper monitoring of progress. These report on the state and trends of biodiversity components, threats to biodiversity, state of ecosystems, and sustainable use.

In 2009 was held the Athens Conference in order to assess the progress made against the Biodiversity Action Plan (BAP). The confrontation of results with the experts' opinion resulted in the "Athens Message" that summarizes the main conclusions of the conference, also considered as priorities for action. These are grouped in several topics as follows:

- A common vision that answers the question of "Why is biodiversity important?";
- A better understanding of the present and of what is to be done further, with a special focus given to the need of improved accountability based on more comprehensive indicators;
- Accomplishment of a functional protected area network;
- Increased interest and effort for biodiversity protection outside protected areas;
- Integration of climate and biodiversity policies;

- Reduction of Europe's "biodiversity footprint";
- Integration of biodiversity protection in sector policies; and
- Enhance financial resources, especially by attracting private finance and removing subsidies that undermine biodiversity.

The conference revealed that the goal of BAP was not met, but this recognition created a window of opportunity for increased interest in this subject matter, which, eventually, will result in improved and more effective policies.

Conclusions

Nature conservation is a central focus in environmental policy making. The paper made a short overview of the main policies and strategies, providing also some indications on the linkages between global and European approaches.

Although the policy action in nature conservation dates back in the middle of the twentieth century, coherent approaches, in accordance with ecological needs were developed only after the 1992 Earth Summit. The CBD signed in this occasion remains the reference of policy action for both global and European strategies. The progress of knowledge brought by several global projects had an important impact on policy making, many new concepts being acquired and transformed in action frameworks. Economic approach of biodiversity and ecosystem services is amongst the most prominent innovations and important progress was made in performing such assessments at different locations.

The evolution of nature conservation policies and strategies in EU is mirroring the global developments. Although there were several initiatives in terms of legislation and recommendations on the behalf of the European Commission, the coherence and co-ordination needed for a strategy were met after 1992, following the participation in CBD. The implementation is made through legislative measures and action plans that are assessed periodically. The Birds Directive and the Habitat Directive are the main juridical instruments and on their basis in EU was established the first international network of protected areas – Natura 2000 – covering 18% of EU's surface. The policy making is engaged in a continuous improvement

cycle, periodical assessments of action plans providing valuable inputs for further development.

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