

## MANAGING PROTECTED AREAS

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**Abstract:** *The protected areas aim to protect biodiversity against the anthropic impact, which affects it constantly. There are a serial of threats on the protected areas like: demographic expansion, air, water and soil pollution caused by human activity, extinction of some species of plants and animals, etc. In the paper, we analyzed protected areas in relation with flora, fauna and increasing the quality of human life, as well. Thus, the presence of protected areas fetches advantages on several domains: special protection on endangered species of plants and animals, preserving the habitats, offering leisure spots in nature, increasing of local economy through ecotourism practiced in protected areas.*

**Keywords:** *protected areas, biodiversity, flora, fauna*

### INTRODUCTION

A protected area is a land or water area established according to legal stipulations and having a special regime of conservation and protection with different flora and fauna species. A protected natural area can also cover elements of particular value culturally, scientifically or ecologically such as landscapes, biogeographical features, speleological features, or other [1, 5, 9, 11].

An environment covers the ensemble of elements with self-regulation but the factor that most disturbs it is fabricated pollution. Greenhouse effect gas emissions cause most environmental issues followed by chemical pollution by substances discharged intentionally or accidentally into the air, water or soil, as well as storing wastes in illegal places [2,6,7].

However, fabricated pollution started with the use of fire by the humans, thousands of years ago, it increased after the industrial revolution in Great Britain at the middle of the 18<sup>th</sup> century. Humans have benefited from the great scientific progress but they had to face increasing pollution [8,10,12].

Because humans rely on the environment and on what it has to offer, increasingly polluted environment comes with human life degradation: extinction of some plant and animal species, increase of waste amounts, water, soil, and air pollution. This added to increasing demographic rate (400 years ago, the population of the Earth was 10 times smaller than nowadays: 7.2 billion people), which asks for larger natural resources.

Though nature is self-regulating, this occurs in close dependence with the factor time as well as with the intensity of human activities. If population becomes more and more numerous, the demand for foods and space is also increasing and do not allow ecosystems to regenerate, hence the increasing degradation of the Earth. Thus, we can see alterations of the microclimate of an area from one decade to another.

Nowadays, the Earth, besides the demographic, food, and fossil fuel crisis, also faces another crisis: that of health state of the ecosphere that is alarming at planetary system – the result of an ensemble of interdependences between the elements mentioned above [3,4,13,14,15].

## MATERIAL AND METHOD

To achieve this scientific project, we carried out research regarding the areas covered by protected areas at both national and international levels and the identification of the types of protected areas in Romania.

## RESULTS AND DISCUSSION

Because certain natural resources are not renewable and their excessive use in time has led to the consumption of a significant amount of underground reserves. According to the estimations of the National Agency for Mineral Resources, Romania's natural resources are decreasing and they estimate that they will last for another 9 years in natural gas, 19 years in crude oil, and 9 years in coal.

Thus, the alteration of the environment caused by fabricated actions has the effect of a boomerang with immediate or remote irreversible consequences on humans and ecosystems.

This is why a sustainable use of resources is essential for the matching of human-nature relationships so that next generations benefit from current natural reserves.

This aspect is closely related to the existence of a large number of protected areas whose mission is to conserve water or land habitats.

At world level, the area covered by protected areas represents over 8% of the total land areas.

After Romania's accession to the European Union, its Directives also asked for an increase of protected areas. Thus, over 22% of the country's land is covered by Natura 2000 sites.

The types of protected areas in Romania are as follows:

1. Scientific reserves that aim at protecting water or land habitats containing elements of scientific interest faunistically, floristically, speleologically, geologically, or other. In these protected areas, they allow only scientific activities. According to the International Union for Conservation of Nature, (IUCN) scientific reserves belong to the category "Strict Nature Reserve – protected areas managed for scientific goals".
2. National parks aim at conserving and protecting some species representative faunistically, geologically, floristically, palaeontologically, etc., that can be seen for educational, scientific or tourism purposes, without allowing activities that are not regulated in the management plan of each park. This protected area corresponds to the IUCN category "National park – protected area managed for ecosystem protection and recreation".
3. Nature monuments aim at protecting natural elements significant from a scientific, ecological, or landscape point of view such as secular trees, gorges, waterfalls, threatened plant or animal species or elements valuable for their rarity or uniqueness. According to the IUCN classification, nature monuments belong to the category "Nature monuments – protected area managed particularly for the conservation of their natural, specific elements".
4. Nature reserves that aim at protecting and conserving species that are important faunistically, floristically, speleologically, hydrologically, geologically, sylviculturally, or pedologically. Unlike the categories mentioned above, nature reserves allow scientific activities and sylvicultural or pedological activities. Nature reserves belong to the IUCN category "Area for the management of

- habitats and species: protected area managed particularly for the conservation through management interventions”.
5. Natural parks that aim at protecting and conserving landscape ensembles of distinct value due to the prolonged interaction of humans with nature, significant from the point of view of the landscape. These parks encourage educational or scientific activities and, according to the management plan of each natural park, one can carry out tourism or recreational activities. They belong to the IUCN category “Protected landscape: protected area managed mainly for the conservation of the landscape and recreation”.
  6. Biosphere reserves aim at conserving and protecting areas with natural habitat and biological diversity. They cover considerable areas and consist of complex ecosystems that are both land and water areas, lakes, floristic ensembles, faunistic ensembles, special landscapes and human communities based on the sustainable valorisation of the resources in the area. The only biosphere reserve in Romania is the Danube Delta Biosphere Reserve.
  7. Wet areas of international importance (RAMSAR sites) aim at protecting and conserving sites of biological diversity typical to wet areas.
  8. Natural sites of world heritage that aim at protecting habitat areas covering internationally acknowledged elements and meet the requirements of UNESCO (Convention regarding the protection of world cultural and natural heritage).
  9. Special conservation areas aim at conserving habitats, plant and animal species or the rehabilitation of habitats and species.
  10. Avifaunistic protection areas aim at conserving or maintaining in a favourable state (from the point of view of the numbers) wild migratory bird species.

## CONCLUSIONS

The Natural Park of the Muresului Flooding Plain, due to certain protected areas, they estimate that, compared to 2000-2005, the number of bird species increased significantly due to the inclusion of the protected area in the RAMSAR List of Wet Areas of international importance (2006), in the Natura 2000 network (2008), in the network of community important areas for the protection of certain species (European ground squirrel, European otter, white-tailed eagle), RO SCI 0108, of avifaunistic protection areas, RO SPA 006, as well as of habitats, with 41 bird species being protected currently in the protected area.

We can also see that the existence of protected areas in both Romania and worldwide ensures the conservation of different plant, animal species or of different habitats, or even to the increase of already wildlife threatened.

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