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# Biodiversity protection in Romania: Financial resources

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# BIODIVERSITY PROTECTION IN ROMANIA - FINANCIAL RESOURCES

**CORINA - GEORGETA DINCULESCU[1], Mrs**

***Abstract*:** *This paper attempts to make an evaluation of the programs implemented or under implementation for the protection of biodiversity. Beyond the national interest, Romania must respect international agreements (Convention of Biological Diversity, Birds Directive, Habitats Directive, EU Biodiversity Strategy, EU Forest Strategy, CITIES) on the conservation and sustained exploitation of biodiversity and ensure a fair distribution of biodiversity costs and benefits. Both EU and international policies have as their main objectives to stop biodiversity loss by 2020, to strengthen the NATURA 2000 network and to compensate for the loss of biodiversity according to the NNL (No Net Loss) principle, in other words. : "Stopping global degradation of the environment". By evaluating public data sources, national concerns, results obtained, sources of funding for this field are highlighted. Also, the support measures for the environment and climate, respectively for biodiversity conservation, provided in the NRDP during the two programming periods, are analysed on comparative basis, in order to mark the objectives, the categories of measures and the financial allocations for each type of area in which they were applied.*

**Keywords:** *environment, financial resources, biodiversity conservation*

**JEL Classification**: *O13, P18, P48, Q57*

## INTRODUCTION

Biodiversity represents the natural capital of the world, being an integral part of sustainable development. Conceptually, biodiversity describes the entire life on earth and the interactions that exist between its different components (soil, air, water, etc.). Due to its geographical position, Romania has a high biodiversity, expressed both at the level of ecosystems and at the level of species. The natural and semi-natural ecosystems account for about 47% of our country's area, 45% being agricultural ecosystems, while the remaining 8% are buildings and infrastructure.

Biodiversity protection and conservation *represent one of the priorities of sustainable global development.* The United Nations has proposed that this decade be dedicated to the protection of biodiversity and has established as a vision for 2050 "the assessment, conservation, restoration and sustainable use of biodiversity, maintaining ecosystem services to support a healthy planet and ensuring the well-being of the population".

As foreseen in Romania's Development Strategy for the Next 20 Years, 2016 - 2035, *biodiversity influences the economic development process,* a causal link existing between the two: when development does not respect the environment, biodiversity will undergo negative transformations.

At EU level, the European Commission (EC) aims to monitor the spending on biodiversity and to highlight all the expenditures of member states against the adverse effects on biodiversity, as well as to provide financial support for biodiversity.

Having in view the objectives established at European level – stop biodiversity loss and degradation of ecosystem services by the year 2020, restore them as much as possible, as well as increase the contribution to fight against biodiversity loss worldwide – for Romania, biodiversity conservation represents an objective of national interest, which should be transposed into consistent policies.

## MATERIALS AND METHODS

One of the methods used to prepare the raw material for analysis was the personalized query of available official databases. Highlighting the financial resources necessary to protect biodiversity was based on the results published by the National Institute of Statistics (NIS), in Environmental Statistics Series, and by the public database Tempo Online queries, followed by own processing. In

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the present paper, data were also used from the national reports on monitoring the results of NRDP (National Rural Development Program) 2007 – 2013 and NRDP 2014-2020.

Therefore, the information source is mainly represented by NIS databases and EUROSTAT databases.

For documentation purposes, the *national and international literature* (treatises, monographs, research projects, scientific papers from well-established journals), various *studies and analyses* of well-known national and international institutions represented important milestones. Information from unofficial analyses, reports and studies was also used, as well as information from regional development strategies.

Another method used in the study was complementary information filtering, collection and analysis (internet, various publications), based on complex documentation of BigData type.

## RESULTS AND DISCUSSIONS

In Romania there is a large number of bio-geographical regions and a great variety of natural habitats and wild species of community interest, most of them in a favourable state of conservation. stage. The results of studies conducted under the project CORINE Biotopes identified and catalogued in a database 783 habitats of different types, 3700 plant species and 33800 animal species, including species of community interest and/or included under world heritage protection. However, according to the National Strategy and Plan of Action for Biodiversity Conservation in the period 2010-2020, the indicator "*biodiversity conservation*" for Romania has the lowest value (3.88), compared to the other EU member states. One of the causes would be the way in which funding in this field has been treated so far. "Biodiversity conservation was based on disparate funding from external sources, with no special allocations from the state budget, without any efforts made to develop domestic financial instruments that complement the external ones". Publicly available information is scarce and disparate. Data on expenditures and investments for environmental protection are provided by the National Institute of Statistics.

In the year 2017, the expenditures for environmental protection totalled 7194 thousand RON nationwide, accounting for 0.84% of GDP, while those for the protection of natural resources and biodiversity conservation totalled only 147 thousand RON, i.e. 0.02% of GDP. The latest data available (presented in the table below) reveal the decrease of expenditures for environmental protection by 36% in 2017, as against 2011 (when these accounted for 2.17% of GDP), while those for the protection of natural resources and biodiversity decreased by 13%.

As regards the investments for environmental protection, the data reveal their decrease by 54%, in the period 2011 - 2017, while the investments for the protection of natural resources and biodiversity decreased by 95%. Therefore, the very small amounts financial resources allocated to environmental protection and for natural resources and biodiversity have become increasingly small over time. In the year 2017, out of total expenditures for environmental protection, only 2% were used for the protection of natural resources and biodiversity conservation (the remainder being expenditures for other activities specific to environmental protection: pollution prevention and control – air and water protection, waste management, soil and groundwater protection, other activities, such as research& development, general environmental management, noise and vibration reduction, protection against radiations, education, training, information), as against 1.51% in 2011.

**Current domestic expenditures and investments for environmental protection, in the period 2011-2017**

| Environmental areas | thou. RON current prices | | | | | | |
|---|---|---|---|---|---|---|---|
| | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| **Expenditures for environmental protection** | 12095325 | 13142644 | 11561417 | 8176316 | 8695321 | 6018018 | 7194436 |
| out of which for: | 182419 | 120641 | 125889 | 128642 | 84750 | 169705 | 146587 |

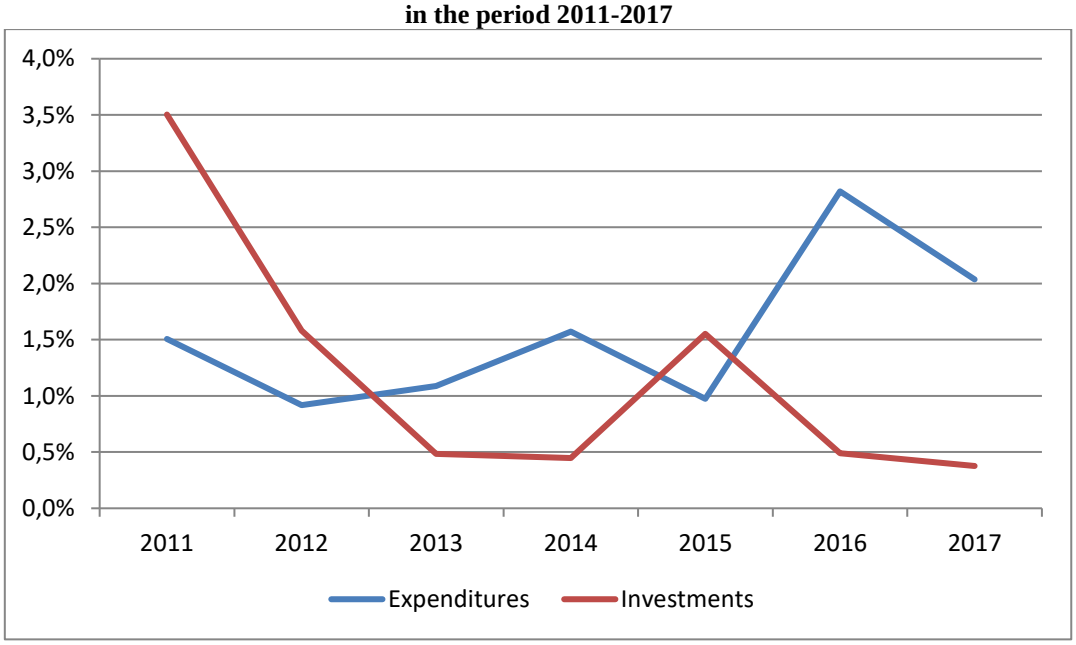
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Natural resources and biodiversity[2] | | | | | | | |
| **Investments for environmental protection** | 5414279 | 4116201 | 3920067 | 4254676 | 6745028 | 3004455 | 2306009 |
| out of which for: Natural resources and biodiversity | 189692 | 65078 | 19004 | 19033 | 104775 | 14736 | 8680 |

*Source: NIS, Environmental Statistics series*

As regards the investments for natural resources and biodiversity, these accounted for only 0.38% in total investments for environmental protection (as against 3.5% in the year 2011).

In the same period, the expenditures for environmental protection across the EU-28 increased by about 10%[3]. Compared to Romania, many EU member states allocate significant parts of their budgets for biodiversity conservation.

**Share of investments and current domestic expenditures for natural resources and biodiversity, in total investments and expenditures for environmental protection, in the period 2011-2017**




*Source: NIS, Environmental Statistics Series, NIS, author's own calculations*

One of the 9 general objectives of the future Common Agricultural Policy (CAP), which reflects the importance of policy in economic, social and environmental terms, for the period 2021-2027, is the contribution to biodiversity protection, improvement of ecosystem services and the conservation of habitats and landscapes. This objective is implemented in practice by different categories (and sources) of environmental and climate support measures, as follows:

- ***agri-environment climate schemes*** – compensatory payments for the actions implemented under the EU CAP. These have as objective to encourage the agricultural land users (farmers) do adopt agricultural practices on voluntary basis that should preserve the ecological value of areas where farming activities are performed (in order to maintain the habitats specific to agricultural land for priority wild species, to use natural resources in a sustainable manner and to preserve the natural landscapes);

[2] *Includes activities targeting the protection of species, of natural protected areas, ecological reconstruction, restoration of the aquatic environment, ecological prevention of dangerous natural phenomena.*

[3] *Calculations obtained from EUROSTAT estimated data, for the years 2011, 2017.*

- ***national grants, subsidies and investments through the National Rural Development Program (NRDP)***, which contribute to the improvement of farm economic efficiency or to local community development;
- ***legal protection through the EU Habitats and Birds Directive*** (92/43 / EEC and 2009/147 / EC) – areas included in Natura 2000 network and designated as SCI (site of Community importance), SAC (special areas of conservation) or SPA (special protection area);
- ***legal protection by national legislation*** for the protection of natural reserves;
- ***funding through projects under the Climate Policy Program*** (LIFE – of the European Environment Agency) ***and environmental*** (these projects need to be co-financed from other sources, such as EAFRD, ERDF or private).

Romania's agriculture has a huge potential that should be put into value according to the sustainable development principle, taking into account the application of biodiversity conservation measures. In this regard, we have the support measures provided in NRDP – Axis 2. Besides the expenditures with direct impact on biodiversity conservation, there are also expenditures related to the measures from Axes 1, 3 or 4 from NRDP, financing actions with indirect positive impact upon the environment.

Romania has one of the richest agricultural land resources that can be included in HNV category – 5.22 million hectares (about 39% of the utilized agricultural area), ranking 5$^{th}$ in EU-27. The concept of ***high natural value (HNV) of agricultural land*** is has been relatively recently used in Romania, since the first post-accession NRDP (NRDP 2007-2013) and starts from one of the definitions provided by the European Environment Agency: "semi-natural vegetation, mainly semi-natural grassland, generally associated with a high level of biodiversity", with great diversity of species and habitats.

Initially, in the year 2008, only the pastures were considered high natural value areas (which had a high biodiversity among other types of agricultural land); later on, since 2012, the high natural value land concept has been extended, to include other types of agricultural land as well (traditional orchards – permanent pastures, for mowing and/or grazing, mosaic landscapes – including meadows, trees and shrubs and small-sized agricultural land areas, extensively cultivated, in the proximity of forests, where biodiversity and wild fauna are present).

The next table presents the HNV agricultural land, on comparative basis, by each NRDP

**High natural value (HNV) agricultural land**

| | **PNDR 2007-2013** | **PNDR 2014 - 2020** |
|---|---|---|
| **Number of administrative-territorial units (ATU) with HNV grasslands** | 1038 | 958 |
| **Area of eligible pastures** (million hectares) | 2.4[4] | 2[5] |
| **Land eligibility conditions** | - minimum 1 ha (parcel size minimum 0.3 ha)[6]<br>- 449,000 holdings – excluded from any form of CAP support | - the same (except for ATUs partially or fully overlapping the most important Natura 2000 sites) |

*Source: Farm Structure Survey, 2013 and the Land Parcel Identification System (LPIS), 2013*

***NRDP 2007 - 2013***

The implementation of measures from Axis 2 aimed at maintaining and improving the quality of the rural space, by promoting a sustainable management of agricultural and forest land.

[4] *Farm Structure Survey - 2013*
[5] *Land Parcel Identification System (LPIS) - 2013*
[6] *Excludes a great number of small and medium-sized farms*

The main **NRDP** 2007-2013 measures meant to restore and protect biodiversity on agricultural land are the following:

- **Measure 211** – Support for the less-favoured mountain area has as specific objective to support the continuous utilization of agricultural land in the less-favoured mountain area, thus maintaining the viability of the rural space and maintaining and supporting sustainable farming activities. The measure has been implemented since 2007.
- **Measure 212** – Support for less-favoured areas, other than mountain areas, implemented since 2008, together with Measure 214. Its specific objective is to support the continuous utilization of agricultural land in the less-favoured areas, thus maintaining the viability of the rural space and maintaining and supporting sustainable farming activities.
- **Measure 214** – Agro-environmental payments – has as specific objective to support the sustainable development of rural areas by encouraging the land users to introduce or to continue farming methods compatible with the protection and improvement of the natural environment, of biodiversity, water, soil and natural landscape inclusively. This *brings direct benefits for biodiversity conservation* by a proper pasture management, through traditional farming practices and maintaining the high natural value grassland.

***The total financial allocation of Axis 2*** was 3.16 billion euros, i.e. about 23% of NRDP financial allocation (taking into consideration the total allocation), and about 25% respectively (in terms of allocations exclusively dedicated to NRDP measures), to reach 34% in the final version (version XVI, approved in November 2015). Under Axis 2, the main measure in terms of financial allocation was Measure 214 "Agro-environmental payments", which was constantly allocated more than 40% of the total budget of this Axis.

In the period 2008 – 2015, payments worth 3.47 billion euros were effected under the commitments made within the 3 measures, which accounted for about 42% of the entire NRDP 2007-2013 allocation and 98% of the allocations under the measures of Axis 2 (Environment and rural area – sustainable management of agricultural and forest land and protection and improvement of natural resources) addressed to the plant sector.

**Financial support for the environment and climate measures**

| Measure | Financial allocations (public expenditure) for the period 2007-2014 - mil. EUR - | Payments made - mil. EUR - | Beneficiaries | |
|---|---|---|---|---|
| | | | Number of holdings | Area - ha - |
| | **NRDP 2007 – 2013** | | | |
| **Measure 211** Support for the less-favoured mountain area | 769.6 | 771.2 | 360993 | 2112396 |
| **Measure 212** Support for the less-favoured areas (other than mountain areas) | 435.6 | 431.4 | 151524 | 2057535 |
| **Measure 214** Agro-environmental payments | 1428.4 | 1377.9 | 321544 | 2281383 |
| **Measure 215** Animal welfare | 526.4 | 457.5 | 898 | - |
| **Measure 221** First afforestation of agricultural land | 3.2 | 0.5 | 18 | 345 |
| | **NRDP 2014-2020** | | | |
| **Measure M10** Agro-environmental payments | 1069 | 253.6 | ... | 1381100 |
| **Measure M11** | 235.7 | 89.5 | ... | 225950 |

| | | | | |
|---|---|---|---|---|
| Organic farming | | | | |
| **Measure M13**<br>Areas facing natural constraints | 1317.6 | 965.9 | ... | 470000 |

*Source: Yearly Progress Report NRDP 2007-2013 and Implementation Stage of NRDP 2014 - 2020 – Situation of projects on 4.04.2019*

***NRDP 2014-2020***

The environmental protection objectives from NRDP 2007-2013 are continued under NRDP 2014-2020, the allocations for environmental and climate measures in the new programming period exceeding 30% of total EAFRD allocations.

The agro-environmental payment is the core element for environment protection, objective included in the Common Agricultural Policy. At the same time, these payments support the sustainable development of rural areas, biodiversity conservation (wild species and their habitats, local animal breeds), soil and water protection, diminution of greenhouse gas emissions, carbon sequestration in biomass, as well as the sustainable management of natural resources.

In order to strengthen the agricultural sector sustainability in ecological terms and to capitalize farmers' efforts, the European Commission, through CAP 2014-2020, has proposed that 30% of direct payments be granted for the adoption of practices that allow the optimum use of natural resources. These are ecologically effective practices, which can be implemented in a simple manner, such as: crop diversification, maintaining the permanent pastures, protection of ecological reserves and landscapes.

Thus, the following measures of **NRDP 2014-2020** were provided, implemented since 2015:

- **Measure 10** – *Agro-environmental and climate (M10)* – represents a key element necessary to integrate the environmental protection issues into the Common Agricultural Policy. In Romania, this measure must encourage farmers to adopt, on voluntary basis, agricultural practices, meant to maintain the environmental value of rural areas, to maintain the habitats specific to agricultural land that are important for the priority wildlife species, to use the natural resources in a sustainable manner and to preserve the traditional landscapes.
- **Measure 11** – *Organic farming (M11)* – organic farming promotes extensive agricultural practices, responding to the society's demand to use environment-friendly agricultural practices, as well as to consumers' increasing demand for organic products. The specific practices of organic farming contribute to biodiversity protection, to maintain soil fertility and functionality and to reduce water pollution.
- **Measure 13** – *Areas facing natural or other specific constraints (M13)* – the support provided under this measure is meant to compensate economically the disadvantages experienced by farmers in their farming activities, related to the low production capacity of agricultural land and the additional costs implied by maintaining the agricultural activities in these areas, thus lowering the abandonment risk of farmland (higher in these areas).

The allocations for these measures are consistent, farmers being able to access commitments in which amounts of about 2.623 billion euros are available (Measure 10 – 1069 million euros, Measure 11 – 235.72 million euros, Measure 13 – 1317.6 million euros).

***Other financial allocations***

The most important funding sources for biodiversity conservation in the next period, too, will remain the EU funds, LIFE + and the (national) Environmental Fund.

**LIOP (Large Infrastructure Operational Program) 2014 - 2020** is the operational program benefitting from the greatest financial allocation, i.e. about 12 billion euros; the program is funded both from the European Regional Development Fund and from the Cohesion Fund.

*The financial allocation for biodiversity conservation,* through the Large Infrastructure Operational Program *2014 - 2020 /LIOP/ is 350 million euros,* higher by about 130 million euros than in the previous programming period 2007-2013, according to the environmental organization World Wide Fund for Nature /WWF/, which specifies that the new program approved by the European

Commission /EC/ contains the WWF recommendations on integrating biodiversity as primordial objective.

Since 1992, the special EU instrument dedicated to funding the environmental activities is the program **LIFE+**, one of the most important financial instruments for the environment, and mainly for biodiversity conservation. Nature and biodiversity conservation have been included among the subprograms for the four stages already completed. The Commission manages the LIFE program, which provides support to projects in the member states and in third countries. The fifth stage of the LIFE program (introduced in the Regulation 1293/2013, which covers the period 2014-2020) consists of two sub-programs, one on the climate change and one for the environment. For nature and biodiversity, which are part of the environment sub-program, a total budget of *1155 million EUR was allocated.*

Another funding source is the **Environment Fund.** Yet at present, the value of the funding from this fund for projects for biodiversity conservation and management of natural protected areas is quite low. According to the Environment Fund Administration, 667 projects were approved in the period 2007-2011. The value of projects completed so far is 330.18 million RON (7 projects are still ongoing, with a financed value of 2.72 million RON). The beneficiaries of funding for this type of projects are the administrative-territorial units that can make eligible expenses consisting of: land and soil preparation for planting, purchase of seedlings and plants necessary to create green spaces, development of playgrounds; development of ecological alleys and borders; furniture necessary for the equipment of green spaces etc.

## CONCLUSIONS

Although many European states have allocated increasing financial resources each year for environmental protection, for biodiversity protection respectively, in Romania the expenditures in this area have diminished each year.

For the biodiversity protection projects, at present there are limited opportunities, as most applicants are state institutions or NGOs with limited financial possibilities.

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