European Union
European Regional
Development Fund

PROGRESS

PROmoting the Governance of Regional Ecosystem ServiceS

ACTION PLAN

Improving Natura 2000 management plans by mapping and assessment of forest ecosystem services

University of Craiova
Romania
Project Partner 6

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PROGRESS
PROmoting the Governance of Regional Ecosystem ServiceS
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INTRODUCTION

Ecosystem services are all tangible and intangible benefits that natural or human-modified ecosystems provide and which are vital for human wellbeing. Preserving the integrity and functionality of ecosystems is vital for the long-term sustainability of the supply of ecosystem services, and eventually, for sustaining human life and wellbeing. With growing understanding of this connection, ecosystem services have recently become one of the most important topics in science and policy.

The overall objective of the PROGRESS project is to initiate a process of policy change in the partners' regions improving the implementation of the policy instruments under Structural Funds programmes and other regional strategies dedicated to the conservation of biodiversity and maintaining the nature's capacity to deliver the goods and services that we all need, through policy learning and capacity building activities.

The policy instruments tackled by the project are the ERDF OPs at regional or national level and other strategies dealing with the protection and valuing biodiversity and ecosystem services. The approach proposed by the PROGRESS project is firmly based on policy learning and capacity building of the partner organizations and relevant stakeholders of the concerned policy subsystems, as it stimulates a collective multidimensional and dynamic exchange of experience.

1. GENERAL INFORMATION

Project:	**PROGRESS PGI05955**
Partner organisation:	**University of Craiova**
Other partner organisations involved:	
Country:	Romania
NUTS2 region:	South-West Oltenia Region
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2. POLICY CONTEXT

POLICY CONTEXT	
The Action Plan aims to impact:	*[mark with a cross the valid option]* ☐Investment for Growth and Jobs programme ☐European Territorial Cooperation programme ☒Other regional development policy instrument (please insert the name):
Name of the Policy Instrument addressed:	The Large Infrastructure Operational Programme (LIOP) 2014-2020, Priority Axis 4, SO 4.1
Geographical coverage of the Policy Instrument:	Romania (national programme)
Responsible for the Policy Instrument:	Managing Authority for Large Infrastructure Operational Programme - Ministry of Regional development, Public Administration and European Funds
Main features of the Policy Instrument:	The Large Infrastructure Operational Programme (LIOP) aims at promoting sustainable economic growth as well as safe and efficient use of natural resources. It addresses the development challenges identified at national level in terms of transport infrastructure, sustainable urban transport, environment, energy and risk prevention. The programme will mainly invest in removing the main transport bottlenecks and developing sustainable, efficient and green transport modes in the country. Another strong focus lies on measures to increase energy efficiency and protect natural resources. It also invests in environment infrastructure and risk prevention. The Programme is focusing on eight priorities (axes): 1) Improving mobility through the development of the TEN-T and the metro network; 2) Development of a multimodal, high-quality, sustainable and efficient transport system; 3) Development of environmental infrastructure based on an efficient management of resources; **4) Environmental protection by taking measures to preserve biodiversity, air quality monitoring and de-contamination of historically contaminated sites;** 5) Promoting adaptation to climate change, risk prevention and management; 6) Clean energy and energy efficiency in order to support a low carbon economy; 7) Increased energy efficiency in centralised heating

	systems in selected cities; 8) Intelligent and sustainable transport systems for electricity and natural gas.
Feature of the Policy Instrument addressed by the Action Plan:	The present Action Plan is targeting on **Priority Axis 4** of this policy instrument, *Environmental protection by taking measures to preserve biodiversity, air quality monitoring and de-contamination of historically contaminated sites*, SO 4.1., *Increasing the degree of protection and conservation of biodiversity and restoring degraded ecosystems*. In brief, the types of funded activities are: • Implementation of management plans/sets of conservation measures / approved action plans for protected natural areas and species of community interest; • Measures to maintain and improve the conservation status of species and habitats of community importance, including ecological reconstruction of ecosystems on the surface of protected natural areas, including Natura 2000 sites; • Monitoring and evaluation of conservation status of the species and habitats of community importance; • Ecological reconstruction of forest habitats of community interest.
Why to improve this policy instrument:	Ecosystem services are increasingly integrated in land use planning. Many countries have already incorporated the process of evaluation of ecosystem services in their national assessments following the MAES (Mapping and Assessment of Ecosystems and their Services), process which requires countries to make national assessments of ecosystem services. Mapping and evaluation of ecosystem services in Natura 2000 sites can help to identify areas of high potential for ecosystem services delivery or for demand for ecosystem services, this information being essential as well for developing comprehensive and strategic development plans. In the guide for the elaboration of management plans of protected natural areas (including Natura 2000 areas) in Romania is not explicitly and mandatory provided a set of measures regarding the identification, assessment and mapping of ecosystem services at the level of these protected areas. Through this Action Plan we aim to bring an improvement of management plans of Natura 2000 areas in our region / country, by including as mandatory the identification, assessment and mapping of ecosystem services, an initiative acquired in the PROGRESS project learning

	process through the inter-regional exchange of good practices between the partners of different regions. The action presented in this Action Plan aims to strengthen the effectiveness of this policy instrument by encouraging and motivating the interested stakeholders to implement this action as a tool to improve the nature preservation and conservation in the region.
Link between our Action Plan and European and international strategy for biodiversity conservation:	The European Commission Biodiversity Strategy for 2030 specifically mentions its increased support for the IPBES (The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) process. It underlines the importance of conserving and restoring land rich in ecosystem services (European Commission, 2020). Also, the Biodiversity Strategy called on Member States to map and assess the state of ecosystems and their services in their national territory with the assistance of the European Commission. They must also assess the economic value of such services, and promote the integration of these values into accounting and reporting systems at the national level.

3. DETAILS OF THE ACTIONS ENVISAGED

Action 1:	*Name of the action:* ***Improving Natura 2000 management plans by mapping and assessment of forest ecosystem services***
Type of action:	Survey/assessment/modelling
Promoting region and the name of the good practice:	*PP6 University of Craiova has been inspired by the good practice presented by PP2 Riga Technical University from Latvia:* ***"Forest Ecosystem Services Mapping and Assessment Methodology (FESMAM)"*** *developed by the* ***Latvian*** *State Forest Research Institute "Silava"*
Stakeholder consultation:	Stakeholder meetings (face to face or online) and specifically with representatives at different levels have facilitated the analysis and proposal of this good practice as a valuable way for future management actions in Natura 2000 areas. From the discussions with the stakeholders, the following

	advantages of applying this good practice in Natura 2000 areas identified in the South-West Oltenia region / Romania have thus emerged: -beyond biodiversity protection, regional development, as well as implementation of other related policies, including water, climate, agriculture is strongly related with the process of mapping and assessment of ecosystem services; -ecosystem service mapping and assessment results can be applied in development of nature-based solutions, contribute to spatial planning as well as environmental education; - the link between the site managers on the one hand, and citizens, businesses, policy makers and governments on the other hand, can be accomplished more easily through ecosystem services approach. This could increase the appreciation and understanding of nature and its conservation; - ecosystem services can be strengthening arguments for funding of conservation and restoration measures; - an easy way to highlight the important benefits that ecosystems (natural, semi-natural, humanized) provide to human society. The concept of ecosystem services contributes to improving the knowledge of social actors on the multiple benefits resulting from the existence and conservation of natural areas. Mostly social actors have a superficial understanding that reduces the benefits of protected areas to material resources visible, which can be exploited directly and intensively. - the concept of ecosystem services incorporates an economic component that allows the establishment of the values of compensation of landowners who consent to the conservation of biodiversity instead of exploitation of resources; - through ecosystem services approach we can conduct an adequate assessment of the real impact that certain socio-economic interventions have on natural areas; - establishing the net impact of economic and social activity on the natural environment.

The action is expected to have a positive impact and leading to the implementation of this action by administrators of Natura 2000 sites, and finally to be accepted as a mandatory practice at national level.

3.1. DESCRIPTION OF THE ACTION

The action will be implemented through the following steps:

Sub-action 1	**Identification of ecosystem services at the level of six Natura 2000 areas in the region**
1. Background	The selection of ecosystem services and the indicators to measure them is a crucial step in any ecosystem services assessment. In order to ensure the uptake and use of its results, the research priorities of the ecosystem services assessment need to reflect what is regarded to be relevant in the study area. This is especially true if there are limited capacities available for the assessment, so that only a small number of ecosystem services can be mapped and assessed, and the most important ones need to be chosen. There are several major factors that we have to take into consideration during the selection of ES, such as: 1. Biophysical characteristics, dominant land use and economic activities of the area; 2. Policies, strategies, and plans that influence land use and the supply of ecosystem services; 3. Preference of local stakeholders; 4. Conceptual considerations and MAES recommendations; 5. Data and methodological limitations.
2. Action description	Forms will be drawn up on the basis of which, together with the local population in the vicinity of these areas, the most relevant ecosystem services will be selected. The first thing to consider is the imaginary 'production boundary' between the ecological and social systems. Ecosystem processes that reach this boundary and contributing to social benefits should be considered as (final) ecosystem services. Thus, the principle in selecting these services will be a trade-off between human needs and the interests of nature. The selected ecosystem services will be ranked according to the above reasoning and classified according to the Common International Classification of Ecosystem Services (CICES).
3. Stakeholders involved	Gaining knowledge about ecosystem services is a team effort in the broadest sense of the word. Nature's benefits are vital for us all, and in most cases multiple actors use the land in multiple ways at the same time. If we want to know what nature provides in a particular piece of land, knowledge of all these actors is relevant. The involvement of stakeholders in carrying out this sub-action will be vital, given that they are also the administrators of Natura 2000 sites. Through them we will get in touch much more easily with the local population living near these protected areas. The coordinator of this action will be the University of Craiova together with the administrators/local stakeholders of the natural areas selected for this purpose. -Dolj County Council

	-National Agency for Protected Natural Areas -Dolj County Environmental Protection Agency -Gorj County Environmental Protection Agency
4. Timeframe	(01 August 2022-31 July 2023)
5. Costs (if any)	- No costs will be applied
6. Funding (if any)	- No funding will be applied
7. Expected impacts	- Raising public awareness regarding the multiple (direct and indirect) benefits that we can get from nature; - Increasing the level of protection in the respective areas, starting from the simple idea that ecosystem services are a common good, provided with the maximum efficiency by unaltered ecosystems, the main beneficiaries being the people living near those areas.

Sub-action 2	**Mapping and assessment of ecosystem services at the level of six Natura 2000 areas in the region**
1. Background	According to EU Biodiversity Strategy 2020, there has been a concern since the last few years for the inclusion of ecosystem services in support of general management decisions in sectoral activities as well as in support of activities within protected areas, in which are mentioned the activities to be undertaken by the Member States: 1) Make maps of ecosystem services, 2) Assess the state of ecosystems and their services on national territories; and by 2020 must 3) Assess the economic value of these services and 4) Promote the integration of ecosystem values into their EU accounting and reporting systems. Unfortunately, in the South-West Oltenia region, as in most parts of Romania, these measures were not integrated in the management plans of protected areas, as mandatory activities. During the inter-regional exchange process of good practices of PROGRESS project, the **University of Craiova has been inspired by** and positively assessed the potential transferability of ***Forest Ecosystem Services Mapping and Assessment Methodology (FESMAM)*** good practice (from **Latvia**) to our region. One of the key aspects is that this good practice can be transferred in our region in order to be applied to all kind of ecosystem types identified in the protected areas, not only forests.
2. Action description	Mapping and assessment of forest ecosystem services in the six Natura 2000 areas in the region will be conducted according to **Latvian good practice protocol**. Through this action, we will spatially map and evaluate the various benefits provided by forests, as well as the changes in the provided ecosystem services over time and in the result of anthropogenic intervention, e.g. different forest management operations. For the spatial evaluation of the ecosystem services, the

	matrix model was applied, a model which enable both expert involvement and use of models and measurement data. It is a flexible approach which is able to deliver comparable results in various spatial scales, depending on the geospatial units used. The spatial units (rows of the matrix) will be represented by the forest land types (land cover classes), and the evaluation indicators for each ecosystem service class will form the columns of the matrix. Finally, according to an evaluation scale for each indicator, we will obtain the ecosystem service maps.
3. Stakeholders involved	The coordinator of this action will be the University of Craiova together with the administrators/local stakeholders of the natural areas selected for this purpose: -Dolj County Council -National Agency for Protected Natural Areas -Dolj County Environmental Protection Agency -Gorj County Environmental Protection Agency
4. Timeframe	(01 August 2022-31 July 2023)
5. Costs (if any)	- No costs will be applied
6. Funding (if any)	- No funding will be applied
7. Expected impacts	The elaboration of a flexible and easy model for mapping and assessment of ecosystem services at the level of the forests through this Action Plan will represent a starting point in its use in other categories of ecosystems, at regional / national level.

How will we succeed, through the application of this AP, to influence the modification of the guide for the elaboration of the management plans of the Natura 2000 areas, by incorporating as obligatory the process of mapping and assessment of forest ecosystem services at their level.	- we will first demonstrate, by carrying out this Action Plan, in collaboration with our stakeholders, its usefulness to increase the degree of protection of Natura 2000 sites; no further action should be taken in these areas without taking into account ecosystem services. - identifying and highlighting the main advantages of applying this practice in Natura 2000 areas, after the development of the Action Plan in our region; - drawing up a letter of intent to the managing authority of the policy instrument, in which will be recorded, in addition to the technical elements, the beneficial effects brought by the application of this practice; - updating the document by introducing this practice as mandatory, by the managing authority of the policy instrument, through public analysis.

4. MONITORING AND IMPACT OF THE ACTION PLAN

Action	Source	Method	Base	Ambition
Sub-action 1	● University of Craiova ● Dolj County Council ● National Agency for Protected Natural Areas ● Dolj County Environmental Protection Agency ● Gorj County Environmental Protection Agency	Survey	no local involved in the selection process of ecosystem services	Between 50% - 100% of locals involved in the selection process of ecosystem services
Sub-action 2	● University of Craiova ● Dolj County Council ● National Agency for Protected Natural Areas ● Dolj County Environmental Protection Agency ● Gorj County Environmental Protection Agency	Assessment / modelling	6 forest ecosystems (located in Natura 2000 areas) benefiting from support in biodiversity resources (with maps of ecosystem services)	implementation of this action to as many forest ecosystems as possible in the region
			Overall impact: Adoption of good practice at national level, as mandatory, in the process of establishing management plans for Natura 2000 areas	