

OPTIONS FOR SUSTAINABLE RESOURCE STRATEGIES IN THE EU: THE CASE OF FOREST POLICY

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Abstract

This article has been developed in response to current society's concerns about resource management at European and national level and to take into account the new threats and opportunities that have emerged lately. The working methodology was based on a case study of the resource situation within Europe, focusing on future management strategies in order to establish their sustainable development. The main result of the research is the identification of the current forestry fund, but also the future requirements with the rigorous demands in the context of globalization and, last but not least, the creation of sustainable strategies. The document should therefore contribute to optimizing forest management in sites to achieve the objective of an appropriate conservation status of habitats and forest species, which will be an essential contribution to attain the Europe 2020 objectives of halting and reversing the decline of biodiversity in EU.

Keywords

Strategy, Sustainable Development, Resources, Management

JEL Classification

Q23, Q28, Q56

Introduction

The environment, as a whole of the forest, is increasingly claiming a coherent, flexible and capacitive management, a wide variety of intervention tools, as well as ongoing communication with socio-economic actors, with a view to integrated public governance natural resources.

Given the evolution of human society, public opinion has perceived the degradation and regression of environmental components (forests, waters, air), giving them due importance, thus obliging political and socio-economic actors to participate effectively in conservation and development in a manner durable of everything that surrounds us. In fact, opinion polls at European level demonstrate this, and in the previous years the issue of environmental protection is ranked second in terms of importance, after social problems (unemployment, monetary stability, possession of a home, personal security, etc.). As a result of the worsening of living conditions by deteriorating the quality of environmental factors,

international and national bodies have proposed amendments to improve the state of affairs, with the risk of generating social convulsions.

The various concepts launched and universally accepted in the world are likely to influence decision makers in reconsideration and reassessment of the "factorial characteristics" taken into account in order to rethink development strategies both on the whole as well as on the fields and branches of activity.

Setting up forestry on the sustainable basis of ecological bases only strengthens the pro-nature of this area, mirroring the principles of forest planning outlined since the last century, but reeducated in a modern form.

2. Materials and methods

In order to develop this article based on a research study aiming at the economic and ecological analysis of the strategies for the sustainable development of natural and forest resources at European level, a number of necessary methods and materials were used. In this respect, the research was carried out in two phases, as follows: in the initial phase, the main European directives on the sustainable development of forests, as well as the theoretical information related to their role and impact in the environment and society were studied. In the next step, on the basis of data provided by them, thematic charts were created with the help of software applications that were introduced in the text. At this stage was used the method of comparison, taking into account a series of data starting from 2010 until now regarding the situation of the forestry resource fund within the European Union. At the same time, the priority areas of the forest sustainability strategies have been delineated together with the related objectives.

3. Building and evaluating a working environment on the management of natural resources

In this part of the paper, we will discuss the ways in which an effective framework for resource management and the improvement of economic and ecological externalities can be achieved at global level. In order to go into detail, we will start on the road using the concept of co-management as a collective management mechanism of the available natural resources. Co-management has had a profound impact on the management of natural resources and the recent efforts to integrate ecology, the economy and society (Bown N, 2013).

Adaptive co-management offers considerable input in the light of complex systems. The theory of complex systems considers that nature is an evolutionary process that is distinguished by the adaptive cycles that are built on increasing scales as a size order, leading to uncertainty, nonlinearity and self-organization (Bown N, 2013).

The value of systematic integration of assessment in adaptive co-management is high as it is an essential part of the approach. Assessment is fundamental to identifying change, supporting an adaptive approach that is flexible enough to respond to the challenge of change and that enables progressive learning at individual, community, institutional and political levels.

However, the assessment of the natural resource management policy has been neglected and there is a substantial gap between theory and practice (Jenkins V, 2018).

The central point of an adaptive co-management evaluation is the ability to document the results and respond to critical questions raised by both supporters and opponents.

The demand for assessment of natural resource management has coincided with this period of time and has grown considerably in the 1980s. Documentation has been made of the growing increase in natural resource assessment studies of this period, and it is explained that the assessment process enterprise offers a practical value to resource analysts because it

identifies deficiencies in policies, programs or resource projects and can justify or interrogate both decisions and actions. (Antony J.R, 2013).

Trends in resource management and cooperative governance underline the need for evaluation to also be based on complex thinking (Ollikainen M. 2014.). This important statement was largely developed by Judith Innes, who produced a series of works that set a framework for evaluating collaborative planning using complex adaptive systems (Pülzl H., 2013). In response to these principles and to overcome the many challenging issues they identify in natural resource management assessment (eg criteria, multidimensional impact, intangible results, causal ambiguity, multiple prospects of success), Bellamy et al. (2001) develops a system-based assessment framework.

The instrumental reasoning of adaptive co-management is sustainability, as it aims to solve resource problems through a collaborative process that encourages environmentally sustainable livelihoods (Sotirov M, 2013). It has also been emphasized that progress towards sustainability / sustainability necessarily implies an understanding of the dynamics of the related social / economic-ecological systems.

Adaptive co-management is a process by which institutional arrangements and ecological knowledge are tested and reviewed in a dynamic, continuous and self-organized process of test and error "(Kishor N., 2012.). mentioned at the beginning of the section, is to address collaborative resource issues, while encouraging environmentally sustainable livelihoods.

The elements offered in Table 1 also allow for account to be taken of contextual factors (both problematic and social) derived from the cooperation literature (including partnerships, collaboration and co-management) and, in turn, evidence of which cases of cooperation can be differentiated. The power element (ability to exert influence) is illustrative because it details eight considerations (see Table 1) that should be considered to understand the nature of the arrangement. While the evaluation framework is consistent with the comments describing co-management as a formal or structural agreement, it neglects the functional part of co-management (Carlsson L., 2005).

Table no.1 Framework for use and management of natural resources

Elements	Main considerations
Context	Description of the operational environment; property rights; management systems; scales
Conditions	Perceived interdependence; recognition of mutual benefit; counseling; Managing existing networks opportunities in negotiation
Representation	Scope; organizational vision; diversity; size
Power	Legislation and regulation; policies and guides; democratic procedures; administrative structures; financial arrangements; structures and political processes; historical values and procedures; costs and benefits
Process	Situational issues; vision problems; structuring; outputs

Source: author starting for Plummer, R., FitzGibbon, J., 2004b

4. Strategic options for capitalizing on natural resources and forest ecosystems

Forest ecosystems are threatened by current developments created in the desire to obtain profit at any cost. Net grubbing-up rates (deforestation minus afforestation) are alarming. The Food and Agriculture Organization (FAO) estimates global net annual deforestation rates of about 9 million hectares in the 1990s, or 0.23% of the total forest area, this rate

rising by 15% in the 2000s and decreasing significantly for the current period, but still at alarming rates. The World Institute of Resources has questioned this figure, noting that FAO data includes poor biodiversity plantations as being considered as afforestation processes, preventing natural loss of forests.

4.1 Options for the future

There is a value of the option chosen if someone is willing to pay for the preservation of an asset he is not currently using, but he can use it in the future. A value of existence refers to the desire to pay for preservation without reference to the current use or any intended use. The relevance of these variants is that they can be empowered through mechanisms such as debt-for-nature swaps, official aid, donations to conservation agencies, and pricing mechanisms.

As with environmental goods and services, the overall conclusions are as follows:

- Existing values can be substantial in contexts where the forests in question are themselves unique in a certain sense or contain a highly appreciated form of biodiversity;
- Aggregates in all OECD sectors and between forests in general have the values of existence at a modest level when expressed per hectare of forest.

The normal rule of reference for conservation is that the economic value of conservation must exceed the economic value of the conversion. Surprisingly, little is known about conversion values.

Despite the non-updated specialist literature suggesting that the benefits for the non-timber industry could well outperform massive deforestation and burning and cutting for anthropogenic development, the sustainable use of forest land is difficult considerably in competition with alternative commercial uses, such as conventional mining and agriculture. In view of the competition difficulties, the importance of maintaining and preserving the other advantages of forests, in particular carbon sequestration and sequestration and, where appropriate, tourism, river basin protection and the sale of genetic material, must be emphasized.

One of the features that underlie comparisons between land use is the role of the discount rate. The higher the rate, the more likely it is that sustainable land use is favored. This is because high rates favor early land use. Conventional exploitation will tend to be favored in terms of sustainable wood management in such circumstances.

The problem, therefore, is to know how large the discount rates are in such contexts. Although there is little research on this issue, suggesting that local communities often have discount rates of over 10% and up to 30% or 40%, reflecting their urgent need to address subsistence and security needs today and not in the future (Reviron M.P, 2010).

Although this conclusion should not be exaggerated - there are many examples of poor communities investing in conservation practices - the available evidence supports the traditional idea that many have high discount rates and that they contribute to the exploitation of resources.

While empirical information is far from adequate, it is well known about the value of forest ecosystems in order to provide some tentative political conclusions:

- It is known that carbon storage values are extremely important. An important political conclusion follows. Those who have spoken in international climate agreements against the inclusion of forest carbon in marketable permits and compensation schemes are the promoters of forest clearing by eliminating a major economic argument for their conservation.
- Early optimism about the role of forests as a treasure that supports the existence of other treasures, based on the idea that there is genetic material for drugs and cultures, show that they did not have that optimism backed by economic studies so far. This may change, but much more work is needed.

- while baseline hydrographic assessment studies have not produced large figures so far, there is a rapid emergence of "negotiations" between downstream water users and upstream forest owners as the economic value may be low in the report with other values, this does not necessarily mean that they can not form the basis of a conservation barrage because the values attached to the benefits of deforestation may be small.
- Those who place their faith in sustainable forestry without attempting to "cash in" non-commercial benefits could support the wrong advantage. Supporting sustainable forestry mechanisms and unsustainable forestry provide far more generous financial benefits.
- Actions to reduce discount rates for agricultural settlers, for example by providing low-cost credit, would do much to encourage sustainable farming practices based on agriculture and forestry.
- with great but unknown potential, is the value of forest stock as a volume of scientific information, which can be gradually lost if irreversible deforestation continues to occur repeatedly.

Analysis of forest economic values supports broader concerns of the ecosystem health literature. Such values indicate how to use efficient economic instruments for forest conservation. Loss of forests is associated with damage to human health, climate, river basins and hence coastal waters and balanced water changes, biodiversity and the well-being of indigenous peoples.

However, more attention should be paid to economic assessment procedures that explicitly take into account the irreversibility of decisions that lead to forest loss (Matta R, 2015).

5. The EU's political context for forests

Despite the absence of a common policy for forests, other EU policies such as rural development, employment, climate change, energy, water and biodiversity influence the Member States' forestry decisions. This is the reason why a first EU forest strategy was adopted in 1998. Based on the principle of subsidiarity and the notion of joint responsibility, it established a framework for forestry related actions in support of sustainable forest management. The Forest Action Plan for 2007-2011 was the main tool for implementing the strategy.

Since its adoption 15 years ago, significant social and political changes have affected forests, as well as a growing number of forestry policies that have helped together to create a more sophisticated forest policy environment. To respond to these new challenges, the European Commission adopted a new EU forest policy on 20 September 2013.

In addition to the EAFRD, Member States and their regions can also benefit from support from the European Regional Development Fund (ERDF) and the European Social Fund (ESF) ERDF co-finances programs and projects that may be directly or indirectly linked to forests and the forestry sector, as part of measures aimed at territorial development. Some examples that may be related to forests and forestry are: ERDF investments in Natura 2000 and the promotion of biodiversity and ecosystem services, as well as support for small and medium-sized enterprises and for innovation.

Projects may include the following areas of intervention: forestry monitoring and information systems and networks, sustainable land management, information sharing on climate change adaptation, carbon capture and mitigation, biodiversity, anti-depopulation policies mountain areas, promoting the use of bioenergy, cooperation on the use of renewable energy sources and energy efficiency and the sustainable development of regions through SMEs.

Another important source of forest financing comes from the EU's LIFE instrument, which has so far remained the only EU instrument devoted exclusively to the financing of environmental and climate projects. About 50% of the budget is specifically dedicated to

nature and biodiversity. Since the start of the program in 1992, over 300 projects have been funded for forest management and the restoration of forest habitats and species in Natura 2000 sites with a total budget of several tens of millions of EUR. A LIFE brochure is specifically dedicated to forests. Typical actions under the ongoing LIFE + Nature and Biodiversity projects include: eliminating invasive alien species, developing management plans, and agreeing appropriate forest management habitat arrangements with local stakeholders, the financing of recovery projects to improve structural forest diversity, and the launch of RDF schemes under RDF through demonstration projects and best practices. The LIFE instrument has also helped to develop guides and tools to promote forest management that promotes biodiversity.

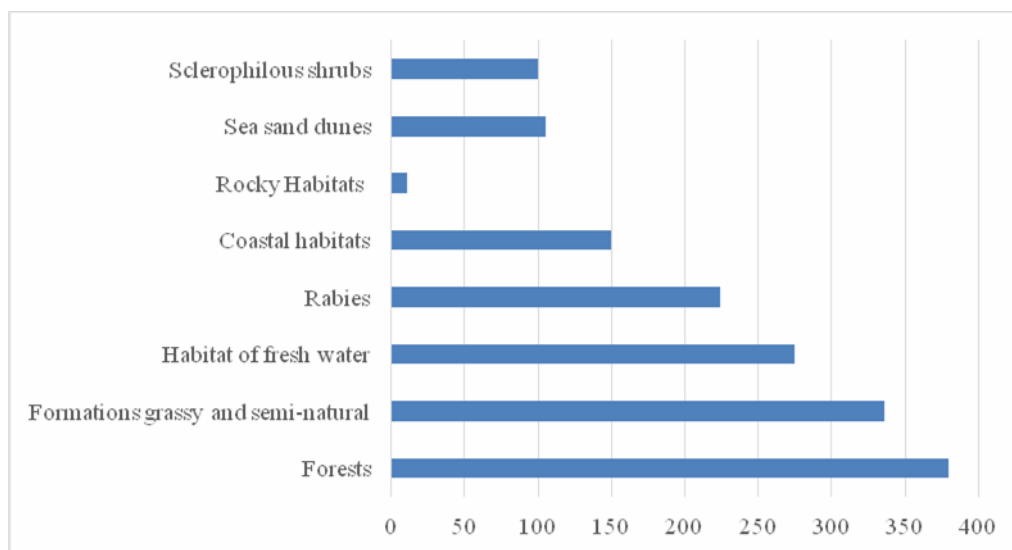


Fig no. 1. Types of habitats covered by LIFE projects (number of projects 1992-2017)

Source: LIFE project database

Conclusions

A forest and forestry strategy is necessary because there is no EU common forestry policy or a reference framework for forest related issues. As a growing number of EU policies foresee growing forest requirements, it is necessary to coordinate sectoral policies. It is also necessary to reach a global strategic vision on forestry issues and to take full account of related EU policies within national forestry policies. This will strengthen the capacity of forests and the forestry sector to cope with developments in different policy areas.

While violations of forest resource protection can be widespread around the world, the analysis and experiences summarized in this paper suggest that concerted efforts by governments, communities and international organizations could begin to employ on a wider basis a large number of promising approaches. While there is great variation among the problems, tools and approaches, a number of themes dominate and deserve emphasis. Most important is the extent to which enforcement of forest laws depends upon and must be integral to ongoing science-based programs for natural resource management.

Forest protection needs to be considered as a specific dimension of resource management, one that may need to rise to be on a par with more traditional aspects such as silviculture, harvest planning and wildlife management. While less well documented, there is a body of professional experience and practice that can form the model for development and application. A related conclusion is that the need is not so much for more forest resource

protection, as it is for better forest law and policy and for better and more effectively targeted forest resource protection. Moreover, the forest protection effort is not simply measured by infractions, or actions taken against unwanted activities, but by the state of forest resources for which protection is desired.

The present strategy aims to place forests and the forestry sector at the heart of the green economy and to highlight the advantages that forests can offer in a sustainable way, while ensuring their protection. For this, a strong commitment and political support from all the parties involved is needed. In order to set benchmarks for meeting the 2020 forest targets and to address the strategic priorities of forest policy and forest related policies, the Commission will work with the Forestry Standing Committee to strengthen ties with related policies of the EU. When necessary, the Commission will work with other committees and courts. Given the importance of EU funds for forests and the forestry sector, it is necessary to improve the quality of EU-wide discussions to identify other areas where Member States should make progress, such as preventing forest fires, pest and disease control, promoting the exploitation sustainable timber and regional / interregional cooperation.

References

- Anderies J.M., Walker B.H., Kinzig A.P., 2006. Fifteen weddings and a funeral: case studies and resilience-based management. *Ecology and Society*, 11(1), p.21 .
- Bown N., Gray T., Stead S.M., 2013. *Contested forms of governance in marine protected areas: a study of co-management and adaptive co-management*. Oxon: Routledge.
- Carlsson L., Berkes F., 2005. Co-management: concepts and methodological implications. *Journal of Environmental Management*, 75, pp.65–76.
- Estreguil C., Caudullo G., San Miguel, J., 2013. Connectivity of Natura 2000 Forest Sites - Executive report, Raport EUR 26087 EN. Luxembourg: Oficiul pentru Publicații al Uniunii Europene.
- Reviron M.P., Schelhaas M.J., Schuck, A., Spielmann, M. and Usbeck, T., 2010. *Destructive Storms in European Forests: Past and Forthcoming Impacts*. S.I: European Forest Institute, Atlantic European Regional Office
- Antony J.R., Lal S.B. 2013. *Forestry Principles And Applications*. p. 166.
- Matta R, 2015. *Towards effective national forest funds*, FAO Forestry Paper174
- Ollikainen M. 2014. Forestry in bioeconomy – smart green growth for the humankind. *Scandinavian Journal of Forest Research*, 29(4), p. 360-336
- Pülzl H., Hogl K., Kleinschmit D., Wydra D., Arts, B., 2013. *European Forest Governance: Issues at Stake and the Way Forward What Science Can Tell Us*. European Forest Institute, Joensuu
- Sotirov M., Cappelmann L., Riemer A., Eriksson O. 2013. *Implementing the vision of sustainable forestry through integrated forest management? INTEGRAL 1st Policy Brief*.
- Kishor N., Rosenbaum, K., 2012. *Assessing and Monitoring Forest Governance: A user's guide to a diagnostic tool*. Program on Forests (PROFOR) (Hg.), Washington, D.C., USA.
- Jenkins V., 2018. Sustainable Management of Natural Resources: Lessons from Wales , *Journal of Environmental Law*, Volume 30, Issue 3, Pages 399–423