

Indicadores de Sostenibilidad y Gestión del Desarrollo Rural

Marta Cardín Pedrosa y Carlos J. Álvarez



Recursos Rurais

Serie Cursos - Instituto de Biodiversidade Agraria e Desenvolvemento Rural (IBADER)

nº 5 Decembro 2009 ISSN 1698-5427

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Curso realizado polo IBADER, Instituto de Biodiversidade Agraria e Desenvolvemento Rural, ca colaboración da Viceritoría de Extensión Cultural e Servizos á Comunidade Universitaria, o Concello de Lugo e a Deputación de Lugo.

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A efectos bibliográficos a obra debe citarse:

Cardín Pedrosa, M.; Álvarez, C.J. (2009). Indicadores de sostenibilidad y gestión del desarrollo rural. Recursos Rurais Serie Cursos numero 5.

Diseño e Maquetación: GI-1934 TTB - IBADER

ISSN: 1698-5427

Depósito Legal: C 2188-2004

Edita: IBADER. Instituto de de Biodiversidade Agraria e Desenvolvemento Rural. Universidade de Santiago de Compostela, Campus Universitario s/n. E-27002 Lugo, Galicia.

ibader@usc.es

<http://www.ibader.org>

Edición electrónica: Unha edición electrónica desta revista está dispoñíbel en <http://www.ibader.org>

Imprime: LITONOR

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DIPUTACIÓN PROVINCIAL DE LUGO
I N L U D E S



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El Grupo de Investigación, 1716 Proyectos y Planificación del Departamento de Ingeniería Agroforestal de la Universidad de Santiago de Compostela, gracias a la colaboración del Instituto de Biodiversidad Agraria y Desarrollo Rural (IBADER), llevó a cabo en el mes de septiembre de 2008 el curso de verano titulado "Indicadores de sostenibilidad y gestión del desarrollo rural".

Hoy en día los sistemas de indicadores son la manera más operativa y flexible de estudiar situaciones complejas, como son la sostenibilidad de las actividades y el grado de desarrollo de determinadas áreas geográficas.

En la actualidad, cuando se piensa en el futuro, se toma como referencia una nueva lógica, la lógica de la sostenibilidad del desarrollo, que pretende atender simultáneamente a la mejora de las tres dimensiones del desarrollo para lograr una mejora de la calidad de vida tanto de las generaciones actuales como de las futuras. Lo cual reviste una singular importancia cuando nos enfrentamos con el desarrollo del medio rural donde existen grandes problemas a solucionar como el despoblamiento, la degradación del territorio, la pérdida de biodiversidad, o los impactos de los modelos de producción. Problemas a los que nos tenemos que enfrentar a través de políticas que tengan en cuenta a la vez las implicaciones sociales, económicas y ecológicas.

Pero para que la sostenibilidad del desarrollo sea un concepto operativo y se pueda concretar en decisiones políticas y prácticas socioeconómicas bien orientadas, son precisos informes basados fundamentalmente en indicadores de sostenibilidad capaces de informarnos sobre si nos estamos moviendo hacia el objetivo deseado y en qué condiciones. Es necesario disponer de información objetiva, fiable, relevante para la toma informada de decisiones a todos los niveles.

El curso buscaba una aproximación a los conceptos de sostenibilidad y a la utilización de indicadores para su gestión desde multitud de ópticas diferenciadas, y con planteamientos prácticos basados en casos reales y líneas de investigación. Se incluyen experiencias de otros países y de organismos internacionales.

Este número de la serie técnica de la revista del IBADER, Recursos Rurales, contiene las diferentes ponencias presentadas en el curso. Es necesario advertir al lector que fruto de la heterogeneidad de las ópticas de los participantes contienen conferencias con un amplio abanico de criterios, desde documentos y trabajos científicos, a enumeración de resultados o actividades, así como exposición de propuestas. Lo cual lo convierte en un documento adecuado para reflexionar sobre el futuro del uso de indicadores de sostenibilidad en el medio rural.

Consideramos que la publicación de estos trabajos resultará de especial interés para todos los agentes del medio rural, entendiendo como tales a todas las personas físicas o jurídicas relacionadas directa o indirectamente con el desarrollo rural, agricultores y silvicultores, asociaciones de los mismos, empresas, cooperativas, transformadoras, la Administración Pública, y por supuesto los Centros de Investigación.

Agradecer a todos los participantes en el curso, su apoyo interés y entusiasmo, señalando especialmente a aquellos ponentes que aceptaron y cumplieron el compromiso de trasladar sus conferencias a este documento.

Marta Cardín Pedrosa y Carlos J. Álvarez

Directores del Curso, septiembre de 2008

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Forestry certification: an overview about forest owners in Galicia region (Nw Spain)

Recibido: Setembro 2008 / Aceptado: Outubro 2008
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Abstract The significant depletion and current state of the world-wide forest resources have generated important discussion with regard to sharing and developing knowledge in sustainable forest management by numerous research groups, at diverse disciplines and at different levels. Nowadays, the range of possibilities related to forest sustainability is diverse and have taken shape in standard patterns of forest certification and systems of *Criteria & Indicators* (C&I) at different work scales. Nevertheless, sustainability patterns have been mainly developed in public forests or private forests of important industries, with a clear wood-production approach. On individual private forests, forest certification, as standard to follow, it supposes an important obstacle to overcome given some social and structural constraints to multifunctional management. Under these circumstances, it is not surprising that forest certification approaches more a barrier than an opportunity for small landowners. On communal private forests, the remarkable decline of traditional agroforestry practices and certain mistrust of Forest Public Administration - sometimes vindicated - have caused the loss of community forest culture and therefore, a non-sustainable management. Those factors have created a kind of *tragedy of commons*, abandoning the communal management and hindering the forest certification. Given the solid link between farming and forestry activities, current policy measures and research lines have to improve the economic profitability for motivating sustainable forest practices as focal point on the *rural development* strategy.

Key words *comuneiros*, criteria and indicators, communal lands, forest certification, individual landowners, Monte Veciñal en Man Común (MVMC).

Introduction

During the last century, the increase of the world-wide population has taken parallel an increase of their necessities and therefore, an increase in the pressure on the natural resources. Specifically, forests are important natural resources, not only because of their environmental services and values, but also because they supply direct products and services to rural groups and communities. As a result, phenomena like the forest fragmentation, the pollution at different levels, forest diseases and fires, the increasing demand of timber and the agrarian expansion are some of the factors that have determined and determine the progressive depletion and degradation of world-wide forestlands in a ratio of 9-10 million of annual forest hectares (FAO, 2001).

With the integration of environmental topics into forest decision-making, new *constraints* arise for forest management at different scales, because it is necessary to observe certain social demands of environmental conservation or improvement. Nowadays, consumers demand that production and market activities are compatible with the environment, promoting and improving sustainable practices. Thus, world-wide society asked for knowing the origin of their forest products and the guarantee of sustainable forest practices. Under these circumstances, forest management also faces a series of challenges related to the improper use and inefficient management of forest resources from the last half of the 20th. In this current framework, forest management has to provide products and services in amount and quality adapted to the necessities of an increasing population (Eid *et al.*, 2001).

Parallel to this world-wide social mobilization, important efforts on the part of numerous groups of research at diverse disciplines and at different levels, have been generated in

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view of this considerable reduction and conditions of the world-wide forests. These groups try to share and develop knowledge in sustainable forest management (SFM) to explore new strategies to ensure the continued health and productivity of forests (Murray and Abt 2001; Hezri and Hasan 2004).

The Earth Summit (1992) has been the most important turning point in this matter, with the statement of the *Rio Declaration*. This conference produced a set of *Forest Principles* like criteria for the management harmony, maintenance and sustainable development of the world-wide forest resources (Siry *et al.*, 2005) and that they settled down the political recognition to the multiple values of forests as key resource to world-wide sustainable development.

Other international initiatives would follow it with the objective of reaching a framework of definition, valuation, monitoring and communication of sustainable forest practices. These patterns of sustainability have taken shape in standard patterns of forest certification (ATFS, 1941; SFI, 1994; CSA, 1996; ITTO, 1998; FSC, 1999; PEFC, 1999) and systems of Criteria & Indicators (C&I) at different work scales, where the acquired experience has demonstrated its relevance in the development of sustainable forest practices. Exactly, the PEFC initiative (Pan-European Forest Certification) arose in 1998 as a voluntary private approach to forest certification in the European region, given its particular forest framework. This initiative, supported on more than 12 millions of private forest landowners, would be based on the criteria and indicators stemmed from the Helsinki's and Lisbon's Ministerial Conferences (1993, 1998).

Nevertheless, although the literature relative to the application of SFM tools is extensive, its monitoring and verification- especially as far as C&I - still is in research phase (Mendoza and Prabhu, 2005). Therefore, since the 1990s, numerous countries have adapted these standards tools to their forest reality. Nowadays there are 124 million forest hectares certified in the world, that is, 3,2% of forests (UNECE, 2002), particularly forest plantations with criteria of sustainable wood production (Atyi and Simula, 2002). In fact, temperate forests suppose the greater registered area (93%), in spite of being the deforestation ratio greater in tropical regions (Siry *et al.*, 2005).

Given the relationship between forest cover and regional development opportunities, forest resources have become an important factor for the regional employment and income in many less favoured regions (Hytinen *et al.*, 1999). In this sense, on the basis of the forest particularities of each country and/or region, the PEFC-scheme has adapted its certification process to three main levels of application: *individual certification*, *regional certification* and *certification in group*.

Under this variability of certification schemes, the characterization the current state of forest resources by ownership is an important issue to assess this last practice and requires an analysis of different sources of information and statistics. Therefore, we will have a better knowledge about the past situation and the future perspectives of

sustainable forest practices by legal form of property (Ericsson *et al.*, 2000). As conclusion, the development and report of theoretical and practical schemes to involve the forest sustainability must try to resolve questions like how and which style of forestry generates the best bundle of benefits by means of land use decision-making amongst diverse stakeholders (Slee and Wiersum, 2001). Considering the variety of rural landscapes and traditions or cultures, the lines to develop have to adapt to the perceptions, values and perspectives of the involved social groups (Colfor and Byron, 2001).

Is it possible to promote sustainable forestry for private forest owners?

Sustainability patterns mainly have been developed in public forests or private forests of important industries with a clear wood-production approach, forest managers with the sufficient extension and resources to carry out this programme. The reason for this is based on that larger forests are easier to certify and better able to bear risks and costs; they allow to decline the costs of new technology, expertise and management and, in short, to decline the total cost of forest certification. In other words, and according to Ramesteiner and Simula (2003), large forests usually have the networks and resources required to understand certification and access markets for Certified Forest Products.

Under this statement, forest certification might seem a discriminatory tool against individual private forest landowners. This problem worsens in those regions where individual ownership is majority and contributes to rural economy, welfare and development. As Bliss (2003) exposed for individual owner in Oregon, *forest management by family owners is a critical component of rural environment of many regions on the three basic axis of the forest sustainability*.

Issues like the *environmental restrictions and scarce functionality of determined sustainability indicators* (Higman and Nussbaum, 2002); *lack of information and formation*; *scale-sized problems*; *high production and maintenance costs* (Cashore *et al.*, 2003); *competitive market and scarce market involvement* (Ramesteiner and Simula, 2003) and, *decreases in the harvesting possibility and forestry profitability* (Eid *et al.*, 2001) are the classical concerns in individual forest management.

The fact is that, within the forest certification, individual forest owners present certain constraints to strictly involve in and fulfil sustainable forest practices so that, their forest management does not allow to generate products and services in the amount and quality demanded by the sustainable forest management. Under this circumstance exactly supposes an important *challenge* for the public Administration, education and research centres to recognize sustainable practices in this type of land property. In this way, Egan *et al.* (2001) or Nieuwenhuis and Tiernan (2005) expose that forest certification is an effective tool to motivate sustainable forest practices by individual landowners, to *accede to international markets offering quality products and*

to improve their economic benefits. Therefore, payment schemes for environmental services have rapidly been developed across the globe as the forest certification has been spread, with the aim of providing compensation to individuals, firms and governments for the opportunity cost of conservation and thereby inspire the creation of new protected areas or strategies for ecosystem restoration (Guilison, 2003).

Nevertheless, on the one hand, echo-certified forestry by means of some form of public or private assistance would suppose scarce and variable changes on the current individual private management depending of the final sum (Murray and Abt, 2001). On the other hand, as Rametsteiner and Simula (2003) exposed, sustainable forest management has to fulfill the level and combination of economic, social values and environmental individuals of a region. In short, these new patterns might particularly be complex for individual landowners due to their balance into forest productivity, management and profitability is more unstable and unforeseeable.

With this premise, public participation in forestry is a key factor to promote the application and effectiveness of sustainable forest management practices (Mendoza and Prabhu, 2005; Purnomo *et al.*, 2005), especially as regards outlining efficient policy tools that motivate these practices by individual landowners. As Karjala *et al.* (2004) pointed, the *target population* allows to know the values, resources and viable alternatives of management, planning the forestry as a joint strategy of local well-being (Leskinen, 2004).

Rural forest landowners, both non-industrial and industrial, necessitate to be supported on gaining access to expertise and training on how to develop and attain certification

standards. They also necessitate to be supported on improving their forest practices and profiting by their forests. So that, *understanding the individual forestry decisions and practices is a key determinant for the socioeconomic development of these areas and implementing the sustainable forest patterns*. In this context, regional certification shows to be the sustainable model, *less discriminatory, simpler and economic system* to motivate to small landowners towards a sustainable forest management.

Situation of Galicia to forest owners

Galicia lies to the Northern of Spain (figure 1) with an area over 29,500 km² and a density population of about 92.8 inhabitants per km² (INE, 2005). The local administration system in Galicia consists of a three-level hierarchical structure with 4 provinces, 315 municipalities and about 3,793 parishes. Average province size is 7,390 km² and the average number of municipalities per province is about 78, although provinces vary considerably in size. The provincial and municipal boundaries of Galicia are also included in figure 1.

The 32.4% of the Galicia population lives in rural areas and draws its income especially from agriculture. The 28.5% of its land area is used as arable land, meanwhile a 69% are forests and woodlands suppose 43.2% of the total land area (Xunta de Galicia, 2001). The remaining land is used for other land-uses as unproductive and wetland. Within the Spanish framework, Galician forests suppose 8% of Spanish forestland and produce almost half of the state timber (MMA, 1998), being the autonomous region that has the highest standing volume and growing stock of timber in the country.

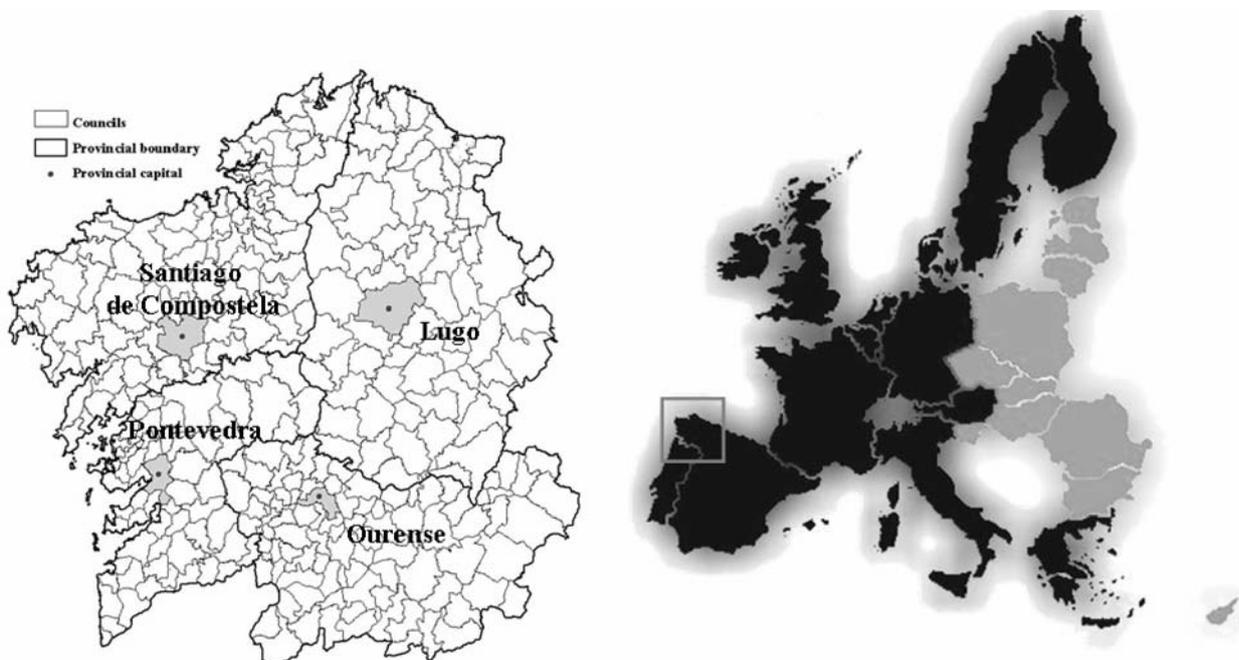


Figure 1.- Location of Galicia in Europe and its administrative distribution

The great majority of forestlands in Galicia is managed by private owners (97,8%), being restricted the public management to less of a 3% (Xunta de Galicia, 2001). Specifically, about 70% of its private forests belong to more than 600 thousand private landowners (Marey, 2003). The remaining private forests are communal lands named Montes Veciñais en Man Común (MVMC), legal classification of communal forestlands in Galicia, central element in its natural patrimony, cultural heritage and singular communal ownership in the Spanish framework (Marey *et al.*, 2004). In 2001, there were 661,183 ha of MVMC in Galicia (over 30% of Galician forestland) belonging to 2,878 communities, with an average area of 230 ha (Marey, 2003).

The MVMC's ownership has fallen to the neighbours surrounding to one or more villages, usually parishes, where the legal regime does not establish different quotas among co-owners, the place of residence or neighbourhood determines the access - egalitarian and free for the neighbours - and it is not possible to inherit or sell of its use right (Marey, 2003). Galician rural parishes have controlled and currently control an important fraction of these communal forest resources, both forested and non-forested. In short, and independently of the different theories about their origin, Galician MVMCs are shared by a group of people according to agreed rules, as other forest communities in the European context (Merlo, 1995; Glück, 2002). All natural persons who live in a Galician parish with MVMC are communal owners, that is, comuneiros, and hence also enjoy right of use, in spite of there are not duty to participate in joint forest management.

Background of Galician communal forestlands

Forest management in MVMC has been linked with agrarian activities, being a significant support in the traditional agrarian system (Bouhier, 1979). Forest function, understood this one like the timber production, has not been the one of greater relevance in Galician forests (Bouhier, 1979; Balboa, 1990; Marey *et al.*, 2004). To point out that forests in Galicia are mainly are uncultivated areas, independently of their origin, dedicated to agrarian and livestock activities. The scarce existing wooded lands, compensated only by natural regeneration, were destined to producing firewood and obtaining forest products for household, enclosing therefore forms of association between agriculture and forestry and seeking to ensure land capitalization, as Rapey *et al.* (2001) mentioned in French rural areas.

Taking into account the demographic evolution and their relationship with the forest uses and the land tenure, population increment of the middle of the 18th century, along with the smaller land availability for crops, would cause that local population increases their farmlands at cost of these forestlands, reducing the wooded lands to the bare minimum. From the 1950s, significant masses of rural population move to urban areas considering the entrance in

a competitive agricultural sector come back to change land uses - extensive agrarian areas are abandon and gradually pass to scrub and forestlands.

In the middle of the 19th century, the Spanish State assumes the regulation of this type of property, assimilating it to public property, *state* and mainly *municipal*. The Government began to exercise an authentic work of MVMC administration through the organism named *Patrimonio Forestal del Estado* (PFE) and by means of agreements, named *consortium*, signed with the legal responsible of the MVMC- the councils. Communal forestlands are re-orientated towards forest production by means of their reforestation with fast-growing species (Groome, 1990; Mercer and Underwood, 2002). An economic business is consolidated to save the national deficit in forest production and to form a self-sufficient forest country.

Faced these socioeconomic patterns, traditional uses on communal lands change and Galician rural system begin to unbalance. Conflicting interests between economic development- Administration- and traditional uses- neighbourhood- arise like answer to the alteration of the traditional *modus vivendi* and radical changes in rural landscapes, conflicts also observed in other forest regions (Clinch *et al.*, 2000; O'Leary *et al.*, 2000). The gap between rural population and agrarian system would definitively cause the evolution of the traditional uses on MVMCs towards the ones existing nowadays.

In 1968, with the State promulgation of a specific MVMC Law 52/68, the neighbours' property is settled down on these lands that began to be considered *indivisible, inalienable, imprescriptible and free of tributes*, establishing the special treatment of Galician communal forestlands. Subsequently since the 1980 decade, with the Spanish administrative organization in Autonomous regions, the Galician Government will be the responsible for legislating and negotiating these properties in a subsidiary way, considering a specific Galician Law of MVMC- Law 13/89- where it is defines the MVMC as this:

'...with independence of their origin, of their productive possibilities, of their current use and of their agrarian vocation, they belong to local groups in their quality of social groups and not like administrative entities, and they have been used communally as a neighbours' regime'.

Status of mvmc for forest certification

Faced the traditional and family (neighbourhood) practices on MVMC - agriculture, livestock and forestry - these lands were considered as *sustainable agroforestry systems*, diversification sign of the familiar farm-forestry holding, as other authors mentioned in other world-wide regions (Buckman, 1999; Sibbald *et al.*, 2001).

Galician parish population engaged - nowadays with less frequency - collective actions to sustainable manage these communal lands and to obtain complementary resources for the family economy. Consequently, these forestlands acquire an important weight in matter of rural sustainable

revitalization, representing the local management of communal resources to meet the population needs, like other world-wide communal lands (Glück, 2000; Short, 2000). In agreement with Konijnendijk (2000) and adapting their words, *MVMCs in Galicia became sense to the social, rural and/or community forestry as a key factor on rural areas*.

Under their particularities, Montes Veciñais en Man Común constitute an influential and strategic land ownership to arise the patterns of the forest certification in Galicia. In these forestlands, the certification's effectiveness would have a real success, given that many of the environmental and social services demanded by world-wide sustainable forest management are more feasible at large-scale, not at the forest management unit (FMU) level, as the individual holdings. Therefore, *comuneiros* are strategic groups of landowners and/or producers that, working together, allow to provide, on the one hand, suitable volume and quality of forest products, great environmental benefits and strong rural well-being and, on the other hand, to profit forest management and reduce costs. Nevertheless, the main barrier to these landowners is currently the lack of social capital in rural areas and, as Skutsch (2000) pointed out, internal and external community conflicts - different opinions and different interests.

Future of forest certification in Galicia

Considering the Karppinen (1998) words, forest management - like all voluntary action - is mainly addressed by the own owner motivations, objectives and perspectives. Therefore, *which are the key issues and research prospects for sustainable forest management?*

Public measures, both legal, political and economic, can have a strong constructive or unconstructive influence on sustainable forest practices, depending on their support on long-term investments as forestry. They have the real and powerful influence on forest certification, as well as the main barrier to this aim, despite the voluntary nature of the forest certification.

In this sense, public Administration is a significant framework to create suitable and sound arguments that promote, support and motivate the certification issues, both at individual scale and at rural community. In fact, the most successful experiences of sustainable forest management have arisen in countries where forest policies and government are coordinated and balanced. Certification processes that are not initiated where these pre-conditions exist have a higher risk to face different levels of stakeholder conflicts (Segura, 2004). Nevertheless, a high-quality and responsible public framework is not usually enough to ensure sustainable forestry practices by rural landowners.

Contributing to public discussion about the certification prospects, we expose that the forest profit is the first and key principle to reach the social and environmental requests of the current forest sustainability. Only whether landowners know and understand the potentiality and constraint of their resources, they will professionally involve in their

management and therefore, they will be able to be economic, social and environmental responsible. In this context, forest certification would effectively constitute an important step towards sustainable forest management. Regional or group forest certification would allow to fulfill these expectations by means of *public participation*: improve the owner capacity for organizing themselves in professional bodies with sustainable prospects. *Owners who exchange management experiences with other managers will enhance their managing benefits from a scale more than individual ownership: rural development*.

Given the solid link between farming and forestry activities, current policy measures and research lines have to improve the economic profitability for motivating sustainable forest practices as focal point on the *rural development* strategy: objectives of forest sustainability would be a utopian bet if they did not generate economic benefits. Thus, we again point out the need to *make profitable the forest management and develop practical tools of support* to allow forest managers to fulfil the global sustainable prospects more effectively.

Without economic profitability, individual owners do not motivate for making forest practices (Lillandt, 2001).

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