

Current status and trends in private forests of Croatia

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ABSTRACT

Private forests account for about twenty percent of the total forested area in the Republic of Croatia. Private forest owners mainly belong to the older rural population. In view of the global situation, forests worldwide attract special attention. The Kyoto Protocol will prevent any neglectful attitude toward forests by the participating countries and oblige them to care for their health and apply sustainable management. Non-government sectors, such as associations, initiatives and various forms of non-institutional societies are becoming more and more powerful. The management of natural resources is a particularly sensitive area, and so is interference with human rights and the rights of private ownership. Former big forest owners in Croatia are demanding restitution of their forests in natural form. This paper deals with policy implications on rural development as a result of the changing nature of small-scale forestry and the external support of small-scale forestry.

Key words: forest policy, private forests, status, trends, management

1. INTRODUCTION

Private forests cover around twenty percent of the total forested area in the Republic of Croatia, amounting to approximately 500 thousand hectares. Half of these are on the littoral coast. Consisting of about 1.5 million land parts, these areas are managed by almost 600 thousand owners. The size of the average forestland property is 0.76 ha. The estimated wood mass in private forests is about 80m³/ha, with growing stock manifesting a

downward trend. This is considerably lower than the wood mass in national forests, which amounts to around 190m³/ha. Private forest owners mainly belong to the older rural population. Many of them do not manage their forest property, or they live a long distance away from their forests. There is almost no government support to private forestry, and neither is there any related scientific research. The majority of forestry experts are not specialized in the management of small forest estates. Younger forest owners do not show much interest in working and investing in forests. So far, not one single forest owner in Croatia has been reported to earn his living solely (or largely) from his forest, nor has any forest owner successfully managed his own forest.

Moreover, all public services (financed by forest owners), costs, taxes and forest financing are supplied by „Hrvatske šume“ Ltd., an enterprise whose primary function is national forest management. Private forest owners and the Croatian public receive very little information about forestry. There is no forest-related education and no communication between government bodies and forest owners. Management plans for private forests are not being renewed, while valid plans entail only 8% of the entire area. Logging is carried out within the limits of the allowed volume of the necessary assignment, without following any management guidelines and prescribed silvicultural activities. Such a situation does not stimulate forest owners to develop interest in their forest property; on the contrary, it leads to further devastation and decrease in the growing stock in private forests. Management is based on the principle of one-time consumption of the most

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valuable wood mass, while the remaining area is left to spontaneous development. In reality, uncontrolled and illegal logging on the black market is on the increase. The regulations of the valid Forest Law, however, prescribe equal obligations for both private forest owners and state forests.

2. CURRENT SITUATION

Globalization, computerization, increased knowledge and knowledge transfer are worldwide processes that lead to accelerated changes in the relations and philosophies of many countries. Like all the other transitional countries, Croatia is also strongly affected by these changes. In view of the global situation, special attention is paid to forests in the whole world. The Kyoto Protocol will prevent any neglectful attitude toward forests by the participating countries, obliging them to care for their health and apply sustainable management. Acting as carbon dioxide sinks, forests are increasingly becoming the key capital in greenhouse gas trade (a new trade branch) and a guarantee of general economic prosperity. Sustainable management, already applied in Croatian national forests, is rapidly gaining in value. The community wants to protect and conserve its forests for their generally beneficial functions. Efforts invested in joining the European Union also entail changes. Non-government sectors, such as associations, initiatives and various forms of non-institutional societies are becoming more and more powerful. The management of natural resources is a particularly sensitive area, and so is interference with human rights and the rights of private ownership. Former big forest owners in Croatia are demanding restitution of their forests in natural form.

In view of the above, the Government of the Republic of Croatia has accepted the proposal put forth by the Ministry of Agriculture, Forestry and Water Management to establish a separate Department of Private Forests. The basic goal of the Department is to provide specialist and financial support to private forest owners for the management of private forest areas on the principles of sustainability (sustainable development) and maintenance of their natural

properties. Additional tasks of the Department include monitoring the private forest status, proposing measures for the improvement of the present status, initiating support to private owners associations and establishing intermediate collaboration with the bodies of regional and local self-management units. Immediately before and at the time of establishing the Department within the Ministry, the private forest sector began to “wake up”. The regional management units, where the largest share of private forests in the forest area is concentrated, were the first to recognize the problem of private forest non-management in the course of their work on the development program. The absence of any data about the area, the growing stock and private forest owners hindered the establishment of strategic planning guidelines for sustainable development, particularly in rural areas.

In Zagreb County and the City of Zagreb, scientific projects in the field of private forests are being undertaken in collaboration with the Faculty of Forestry. In Varazin County, financing and feasibility studies on forest regeneration have been made for thirteen owners. Together with its Koprivnica branch, the Varazdin County monitors and supports their enforcement. The municipality of Matulji with the County of the Croatian Littoral and Gorski Kotar financed two programs for private forest management on their territory, which resulted in around three thousand hectares of managed private forests. Four private forest associations have been registered so far, of which two act as non-formal associations. Several others are being prepared. In the aftermath of several-month dialogues with the associations and forest owners, the following basic necessities and requirements have been set down:

- forest openings – decades of non-investment into forest roads have made many forests inaccessible;
- government support in terms of money incentives – particularly for the conversion and regeneration of forests;
- licensing forestry activities – owners do not want incompetent persons to enter their forests and work in them;
- specialist advice in management and education;

- certification of more valuable forests for the purpose of facilitating assortment sale (Gorski Kotar)

It is important to note that forest owners as the representatives of associations do not question sustainable management in their forests as the best management method, and that they highly respect forestry science in Croatia.

Table 1 shows statistical data about commercial timber production for state-owned and private-owned forest in the year 2005.

In 2004, privately owned forests participated in the total commercial production with just 3.33%. The figure for 2005 is the same – 3.33%. In view of the fact that state-owned forest have FSC certificate and that illegal logging activity is virtually non-existent, and that only 6% of private-owned forests are managed while the rest are not supervised, it is reasonable to presume that this percentage is even higher. Fuel wood is the main product of small-scale forest owners. Marketable timber, mainly round wood, accounts for only 35% of the annual cut, which may be explained by typical processes taking place in private forests. There is no forest management and no timber stand improvement. The owners harvest valuable wood on a one-time basis and leave the remaining trees to natural development. The majority of logging operations are uncontrolled.

There are no support programs for private forest owners. Hrvatske Sume Ltd. finances the preparation of management plans, the conversion

of forest stands and the construction of forest roads in private forests with 15-22.5% of timber sale collected from forest owners, which is a very low annual budget.

According to the analysis of the private forest status and management in Zagreb County (Cavlovic 2004), Figure 1 shows characteristic distributions for pedunculate oak and beech. Both these species, together with narrow-leaved ash and hornbeam, as well as conifers in the southwest of the country, are the most common commercial species in private forests.

Figure 1 shows the ratio between the number of trees measured on the example of one management unit and the normal tree number according to the growth-yield tables (GYT-Spiranec 1975). Although the best-represented trees are those in the developmental stages between age 50 and 60, there is evident absence of pedunculate trees in all the developmental stages. This is particularly conspicuous in developmental stages of mature trees, where the number of mature trees of pedunculate oak has been gradually reduced with selection cutting. Moreover, the serious shortage of trees in the first developmental stages indicates the total absence of stand regeneration in the last 50 or more years. The existing low number of thin pedunculate oak trees has no future, since they do not form coherent groups or stands; instead, they are scattered individually or in small groups.

Figure 2 shows the structure of an average beech stand. Such an uneven-aged structure of the

Table 1: Timber production in Croatia in 2005

COMMERCIAL TIMBER PRODUCTION – 2005.				
	Unit of measure	State-owned forests	Privately-owned forests	Total
Long coniferous wood	m ³	398 101	8 935	407 036
Cord coniferous wood	m ³	86 688	90	86 778
Long broad-leaved wood	m ³	1 069 419	27 646	1 097 065
Cord broad-leaved wood	m ³	583 285	12 249	595 534
Coniferous fuel wood	m ³	12 308	886	13 194
Broad-leaved fuel wood	m ³	602 252	41 621	643 873
Other roughly worked wood	m ³		71	71
Total	m ³	2 752 053	91498	2 843 551
Other forestry products				
Nursery forest trees	'000 p/st	5 026		

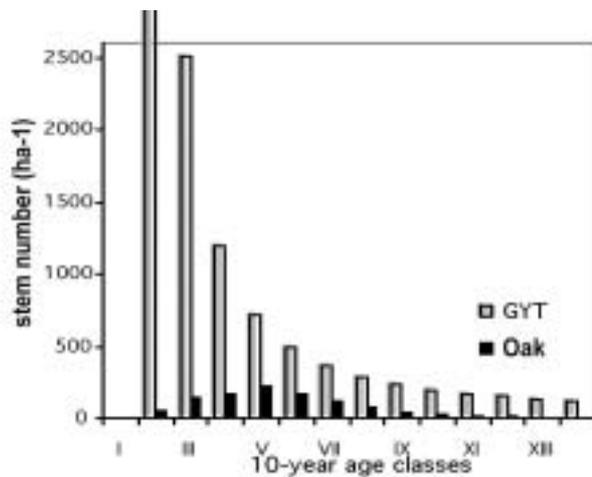


Figure 1: Stem number distribution per 10-year age classes (oak trees are grouped into age classes on the basis of tree diameter and growth yield table)

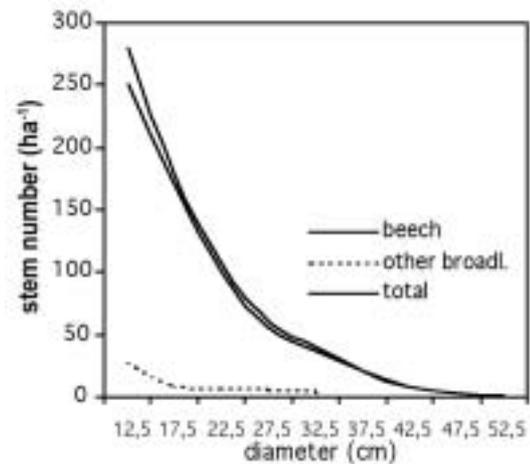


Figure 2: Stem number distribution per 5-cm diameter classes (Sipacki Breg site).

stand and the whole forest is based on groups of trees or smaller stand parts (plots) in different developmental stages on the one hand, and on stands with a developed vertical structure on the other, where thinner and thin trees are found underneath the thicker trees in small areas. Unlike pedunculate oak in the lowland region, there are no problems with regenerating parts of private forest stands. Accordingly, in terms of its properties, beech is highly tolerant of extensive and selection management method that is generally applied in small-scale private forests in Croatia.

Apart from detailed knowledge of the real condition of the forest resource, another particularly important feature in forest planning and management is the establishment and assessment of the potential status and possible productive capacities of a site. The basic prerequisite for an optimal use of site potentials is the existence of optimal (terminal) forest types in a stable balance with the normal composition of age classes (Cavlovic 2002).

Another problem is the non-existence of coherent stands with well-defined developmental stages. This is the result of selection and cutting individual trees of the principal species and the absence of regeneration. Site potentials are thus severely reduced.

3. THE FUTURE OF PRIVATE FORESTS IN CROATIA

In the course of 2005, the Ministry of Forestry prepared guidelines for the new Forest Law, which was accepted in November 2005. New regulations on plant protection and forest reproduction material will additionally be made, necessitating changes in legal acts relating to the whole forestry sector. The proposals for the improvement of the private forest status and management include:

- financing the overall private forestry sector from the funds for generally beneficial forest functions (GBFF), without putting financial strain upon the forest owners who wish to apply sustainable management in accordance with management programs;
- integrating the work of public authorities, conferences, education and the organization of forest work within the separately systemized Forestry Council Service;
- introducing support to capital investment into forestry and incentives for forest regeneration and conversion, as well as integrating forest property;
- in co-operation with regional and local self-management units, supported by the means from forest taxes, investing in projects of energy generation systems that use forest biomass; enlarging wood processing capacities

and the use of secondary forest products in small family firms and traditional crafts by using incentives from rural development funds

- providing permanent support to private forest owner associations;
- financing projects and forms of research projects in private forests – management with small forest properties via the Council for Agricultural Research;
- investing more effort in maximized use of resources from the EU-membership funds.

To put these proposals into practice, it is necessary to draw up enforceable legislative, introduce tax benefits for private forest owners, stimulate the management of private forests, settle property relations, make private forest management plans, and establish a separate service for better communication and achievement of the set targets. The new Forest Law has made several improvements with regard to private forests. The basic “guidelines” for private forests are:

- all forests, regardless of ownership type, must be managed according to management plans,
- should a private forest owner fail to implement measures set down in the forest management plan, “Hrvatske Sume” Ltd. are empowered to conduct those measures and charge their services on private forest owners,
- the expense of drawing up and revising forest management plans is covered by the Forest Counseling Service
- tree marking is conducted by the Forest Counseling Service, or a person certified by the Forest Chamber
- forest owners are entitled to use non-wood forest products according to management plans without the approval by the authorities
- Forest Counseling Service and Forest Chamber will be established
- private forest association will be subsidized
- private owners registry will be established

However, the regulations of the Forest Law do not reflect the reality. The Forest Counseling Service and the Forest Chamber have not been founded yet, forest associations or private forest owners are not being subsidized, no forest associations have been formed at the national level and neither has the registry of private owners (mostly because of unresolved legal ownership

rights). There are very few management plans. As for forest protection, “Hrvatske Sume” Ltd. carries out forest protection in all forests regardless of ownership and do not charge private forest owners for their work. Forest fires are another serious problem. There are very few forest roads in private forests. Some funds come from the taxes on commercial timber product sale by private forest owners. More abundant financial means are obtained from the European Union pre-accession funds. Although the Forest Law is ahead of the real situation, some alterations have to be made to further improve the private forest sector. Private forest management plans should be simpler (to make a difference between state and private forests), and should secure the source of their funding. As there is no clear line of decision making between the Ministry of Agriculture, Forestry and Water Management, the Ministry of Economy, Labor and Entrepreneurship, the Ministry of Environmental Protection, Physical Planning and Construction and “Hrvatske Sume” Ltd., there is much overlapping.

The National Forest Policy and Strategy (2003) is another important document containing priorities classified in three groups. The priorities relating to private forests are:

1. Direct priority 2003- 2006
 - Categorization, financing management, support and promotion of measures aimed at stimulating private entrepreneurship in the forest sector
 - Simplification of forest management plans for private forests, ensuring sources of their financing
 - Establishment of the Forest Chamber
 - Defining criteria for licensing contractors for forest activities
2. Mid-term priority 2006 – 2008
 - Forest inventory (GIS)
 - Preparations for large-scale biomass use
 - Establishment of the Forest Counseling Service
 - Construction of a system of licensing contractors for forest activities
3. Long-term priority
 - Support and promotion of measures that ensure sustainable management in private forests

The Forest Chamber, founded this year, consists of representatives of institutions interested in private forest management. One of the future tasks of the State Administration is to define criteria for forest work licensing with a view of alleviating the position and conditions of private forest management.

4. CONCLUSION

A private forest owner may choose between two management systems. If a forest owner is self-employed, he is entitled to assistance in the preparation of a simple management plan. He must ask for permission only if he intends to construct a forest road or clearcut more than half a hectare of land (a forest area of 10-20 ha is optimal). At the end of the year, the forest owner should report the quantity and quality of his cut to the local authorities.

The second alternative for a forest owner is to join the local forest management association. In doing this, he should be able to receive an annual profit from his forest. As a member of the forest association, the forest owner has the right to sell his part, leave the association and/or revert to private forest management. The person in charge of the association should be a professional forester. A forest management association should cover approximately 1500 ha.

It should be pointed out that the majority of Croatia's private forests are not severely degraded and that they satisfy all the conditions necessary to be declared ecosystems with rich biodiversity. In particular, this refers to coppices; however, if their structure is not improved and sustainable management is not applied, degradation will set in and forests will disappear. Their regeneration will be expensive and long lasting. The typical species used to recover strongly degraded areas will be conifers. Since conifers are not suitable for fuel wood, broad-leaved species must be favored as pioneer species in some places.

There are about 850 000 ha of forests in the Mediterranean area of Croatia, of which approximately 1% perishes in fires every year. The majority of forest fires occur in abandoned agricultural areas close to roads and towns. Such

areas should be converted to agricultural or forest use by means of legislative and subsidies. Fire lines must be constructed and fire surveillance introduced in larger private forests. A part of the financial burden of these measures will be undertaken by the state, but a list of duties for the owners of abandoned agricultural land must also be drawn up.

Forest management must be based on periodically renewable plans and programs at both the local and national level for individual units.

Regulations of the new Law will come in force when the political atmosphere allows the establishment of basic prerequisites through clear strategies of forestry policy strategies. The legally defined smallest surface area of a forest plot could reduce the problem of fragmented forest estates. Assuming that the minimal plot size is 1 ha, the number of forest owners could be halved. The state should provide programs and incentives for young people to stimulate them to buy land and enlarge their property. A part of private forest owners will invest in forests in order to achieve profit, which in turn directly contributes to the development of rural areas suffering from a high level of unemployment.

The interested owners should be educated and trained in forest management so that awareness is developed of the need to manage this renewable natural resource in a small private forest estate.

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