

Preface

Forest multifunctionality and social demand over forests - multiple views in the context of global changes

Multifunctional forestry paradigm recognizes that forests are managed for a wide variety of ecological, economic, and social benefits, and involves the manifestation of multiple private and public demands over forests, often contradictory (Cubbage et al. 2007, Wiersum and Elands 2000, Schmithüsen 2007). The multifunctional forest management and the sustainable development of forest sector “that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report 1987) face nowadays many challenges. The need to adapt forest management to the global changes as well as the new social and economic demands (carbon sequestration, timber for bio-energy, forest-related tourism, real estate pressure) requires an analysis of the multifunctional forest management as implemented today.

In the latest decade, significant advances in scientific and technological research tools, including forest management planning tools, have enriched our knowledge about forest ecosystems. On the other hand, negotiation of forest utilization amongst multiple forest users benefited from the advances of socio-economic research applied to the forest sector. Thus, the goals of forest management can be assigned/evaluated nowadays in different ways

as compared to a decade or more ago. These ideas were back to the organization of an international conference “Forest multifunctionality and social demand over forests - multiple views in the context of global changes”, held in September 18th, 2009 at the Faculty of Forestry, University Ștefan cel Mare Suceava - Romania.

The current issue of the Annals of Forest Research results from the discussions and communications presented at this conference and put together articles from various fields related to the management of forest resources by both forest science researchers and socio-economics researchers, involving often multidisciplinary approaches. Better knowledge of forest ecosystem allows better choice of forest management strategies. Paper from Rodriguez-Campos et al. contributes in the field of autecology. The analysis of *Quercus petraea* and *Q. robur* emphasizes differences in continentality and site conditions (precipitation, soil variability and humidification) with the aim to choose appropriate measures for the sustainable and multifunctional management of the *Quercus*-based forest (Rodriguez-Campos et al.). The distribution of mistletoe infection in silver fir stands according to site parameters such elevation, exposure and crown closure

References: Brundtland Report, 1987. Report of the Brundtland Commission, Our Common Future, at <http://www.world-inbalance.net/intagreements/1987-brundtland.php>; Cubbage, F., Harou, P., Sills, E., 2007. Policy instruments to enhance multi-functional forest management. *Forest Policy and Economics* 9(7): 833-851; Schmithüsen, F., 2007. Multifunctional forestry practices as a land use strategy to meet increasing private and public demands in modern societies. *Journal of Forest Science* 53(6): 290-298; Wiersum, K.F., Elands, B.H.M., 2000. Multifunctional Forestry and Rural Development; Towards Specification of Region-Specific Relations. In Proceedings of a Symposium on New Opportunities for Forest-Related Rural Development. IUFRO Group 6.11.02 : New opportunities for Forest-Related Rural Development, Aberdeen, August 1999 / B. Slee & I. Hughes. - Aberdeen, Scotland : University of Aberdeen, 2000. - ISBN 0-85281-0148 - pp. 47 - 64.

was assessed by Barbu. Mistletoe represents a major problem in the silver fir stands located on the Eastern border of natural area in Romania, since almost one fourth of the overstocked trees were infected by the parasite. Barbu concludes that there is a significant negative correlation between the elevation and mistletoe incidence and that plots with overstocked and sparsely closed stands have showed a high level of infection compared with plots with closed stands.

While the first two papers presented address punctual (specific) problems of forest management, the following papers deal with more systematic issues. The accounting of forest services and goods produced by forest, the compensation for forest services provided by private forests, participatory procedures of forest management planning and the regulation of private forestry are in the center of the policy debate all over the Europe.

In the idea of pricing the non-timber benefits from forests, Elsasser et al. describes the results of a choice experiment aimed at valuing landscape benefits of different kinds of forests in NE Germany. For the summer aspect of forests, preferences for broadleaved/mixed forests over conifers amount to 40-85 € per year and household, and additional visual diversity has a monetary value of about 20 €/a. The same experiment conducted with winter images reveals no general preference for broadleaves, whereas visual diversity is valued even higher under winter conditions.

Forest accounting is analyzed in the perspective of multi-functional forestry management in an interesting paper from Grege-Staltmane in the Latvian case. The author stressed out the fact that forest has a long production cycle therefore forest bookkeeping has specific characteristics amongst which the difficulty to account timber at fixed assets or at current assets. Despite the attempt of the International Accounting Standard Board to improve the accounting for biological assets, much enhancement in forest accounting is still needed. Taking into account practices from international companies and the current bookkeeping in Latvia, Grege-Staltmane concludes that land value and standing timber value should be recorded separately.

Private forest owners are in the center of two papers: Milijic et al. and Nichiforel. The authors of the first article have shown that large area of private forests along with entrepreneurial initiatives of forest owners lead to development of forest owners associations in Timok area, Serbia and that initiatives from Timok forest area animated the owners from other parts of the country and lead to foundation of Serbian Federation of Forest Owners' Associations. Nichiforel explores in his paper the importance of the culturally path depended institutions in setting behaviours of private owners. Using a qualitative approach, the study succeeds to identify realities of attitudes and motivations expressed by forest owners towards multi-purpose forest management principles. The commonalities and differences between owners' attitudes and motivations resulted in several patterns of behaviours that are discussed in respect to relevant forest owners' typologies. The study concludes that, given the institutional changes occurring in Romanian forestry, the policy outputs are likely to be more successful if financial, regulatory and informational instruments are adapted to the diversity of behavioural patterns in respect to multi-functional forest management. Positive externalities provided by forest ecosystems are the topic of paper authored by Drăgoi. The issue is extremely important for implementing the provisions of the Romanian Forest Act, which states that forest owners shall be compensated for the opportunity costs of giving up harvesting operations due to various conservation purposes. The multiple regression function produced by the statistical analysis was turned into a simple formula allowing for a straightforward set up of the average compensation worth being paid per year and hectare. The algorithm was further improved in order to account for the differences in stumpage residual value and to differentiate the average compensation onto five categories of hauling distances. The method that Drăgoi proposed is based on the local average timber price and it is able to calculate compensation close to the real value of the revenue decrease caused by environmental restrictions on forest management.

The seven papers from the present volume

bring into front various problems regarding forest management strategies and regulation for multi-functional, sustainable managed forests. The information about *Quercus* is valuable in the context of large scale introduction of exotic/rapid growing species in Galicia, Spain; information about mistletoe distribution can influence decision about harvesting age in Carpathian Mountains; information about landscape value help the foresters to better understand the role of forest in the rural landscape planning. The shift from ecology to economy however put in evidence real difficulties, sometime of conceptual nature, to implement sustainable forest management. Economic value of forests requires still standardization in accounting biological assets and instruments for compensating income losses due to implementation of environmental-related restrictions. Value of landscape can be estimated, yet the implementation of different approaches to obtain greater variety of landscape requires good policy instruments and good knowledge of private forest owners' typology. The two papers focusing on private

forest owners suggest that there is still room to improve the policies aiming at obtaining multi-functional, sustainable managed private forests.

It has to be noticed as well that the contributions from this issue cover different forest areas, from North-West Spain to Germany, Serbia, Latvia and Romania. Based on the background idea of the multifunctional forestry debate, each author has contributed to the topic with worthwhile information and research results. Pertinent policy or practical-oriented recommendations are found as well, giving to the whole volume a particular interest for those readers familiar with the ecological and economical meaning of sustainable forest management as defined by the Ministerial Conference on the Protection of Forest in Europe.

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