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Research Group 6.13.00: Forest Law and Environmental Legislation**

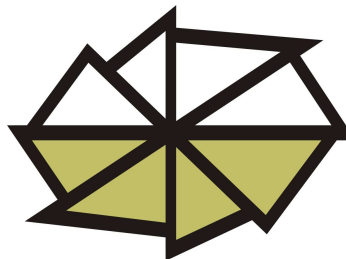


**Legal Aspects of European Forest  
Sustainable Development**

**Proceedings of the 11<sup>th</sup> International Symposium  
Zvolen, Slovakia**

**Editors**

**Rastislav Šulek, Peter Herbst and Franz Schmithüsen**



Faculty of Forestry, Department of Forest Economics and Management  
Technical University in Zvolen 2010

## **IMPRESSUM**

Rastislav Šulek, Peter Herbst, Franz Schmithüsen (Editors)  
Legal Aspects of European Forest Sustainable Development  
Proceedings of the 11<sup>th</sup> International Symposium, Zvolen, Slovakia

The authors are fully responsible for the content of their articles included in the proceedings

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## PREFACE

6.13.00 - the forest law and environmental legislation research group in IUFRO (International Union of Forest Research Organizations (cf. [www.iufro.org](http://www.iufro.org))) has been operating world-wide over decades now. Main emphasis has been on documentation, dissemination and critical analysis of developments in forest law and environmental legislation, foremost in Central and Eastern European countries, not only, but in particular such with economies in transition. This within the unit's general and foremost objective, i. e. to foster exchange of information amongst researchers and practitioners active in the domain of forest law and environmental legislation, and to permanently review the state of the subject, thereby setting priorities concerning research and practice. A number of publications have been produced, proving how this unit meets its high standards. (cf. <http://www.iufro.org/science/divisions/division-6/60000/61300/publications/>). Thanks to the many lawyers amongst that group, it has also been highly successful in accomplishing the scientific transfer between traditional forestry communities and legal circles. The group's work distinctively contributed to ease long-standing deadlocks, by connecting policy and law in research and in real life as well as in policy and law design and foremost in policy and law implementation.

Starting from 1998, IUFRO 6.13.00 has regularly been organising workshops to discuss legal aspects of European forest sustainable development. The 1<sup>st</sup> International Symposium on (then) "Experiences with new forest and environmental laws in European countries with economies in transition" was held in Ossiach, Austria in June, 1998. This meeting was followed by the 2<sup>nd</sup> symposium on the same topic, again in Ossiach, Austria in October 1999 (with presentation of its main results during the XXI<sup>st</sup> IUFRO World Congress in Kuala Lumpur, Malaysia, in 2000). The 3<sup>rd</sup> International Symposium was held in Jundola, Bulgaria in June, 2001, followed by meetings in Jaunmokas, Latvia in August, 2002, then in Zidlochovice, Czech Republic (May 2003), and after that follow-up symposia took place in Poiana Brasov, Romania, in June 2004, in Zlatibor Mt., Serbia, in May 2005, in Istanbul, Turkey, in May 2006, in Zikatar, Armenia, in June 2007, in Sarajevo, Bosnia-Herzegovina, in May 2008, as well as in Zvolen (Slovakia) in May 2009. In May/June 2010 the group met for the 12<sup>th</sup> International Symposium on "Legal Aspects of European Forest Sustainable Development" in Lemesos (Cyprus). This meeting will be followed by the 13<sup>th</sup> Symposium, in May 2011 in Kaunas (Lithuania).

On the occasion of their 11<sup>th</sup> International Symposium on "Legal Aspects of European Forest Sustainable Development", IUFRO 6.13.00 returned to the heart of Europe, this time Slovakia. Twenty-four researchers and practitioners originating from sixteen different countries met in Zvolen (May 13 - 15, 2009) and used this opportunity to get acquainted, involved and familiar with the new legal situation not only in European forests, but, profiting from the presence of participants from across the world, including Canada, Japan and Iran.

Slovakia, with its rich history in forestry education, research and practice, not unexpectedly happened to be the very right place for that meeting of experts active in forest law and environmental legislation eager to review the state of the subject, thereby setting priorities concerning further research and practice.

Under that umbrella, the focus was on two main issues, one of them being the process of development of modern forest legislation and implementation of forest policy tools in different countries with special emphasis on West Balkan countries. Another important point of interest was in the sphere of balance between forestry and nature conservation at public and/or private property level including collisions between regulations in forest laws and environment related legislation. Special attention was devoted to the problems of forest

management in protected areas, considering actual threats as that of bark beetle calamities induced by biotope protection forests, and the processes of harmonization of activities that “have to be done“ and those that “are not allowed to be done” under such regimes.

Nowadays, forestry has achieved recognition as a global issue and sustainable multi-purpose forestry has become the government’s policy in many countries. Forests are considered as one of the essential and most important components of the environment. However, in many countries, there is still conflict that originates from different objectives of different interest groups. On one hand, there are forest owners who want to utilize their forests in the sense of their legitimate property rights, originating from the general constitutional rights, on the other hand, there is an interest of the whole society which wants to care for ecological balance and effective environmental policy, including nature protection. In order to solve such conflicts, it is necessary to use different tools of forest and environmental policy and legislation. The consideration of diverse values and interests of various stakeholders by means of multi-professional teamwork of experts, inter-agency co-operation, public participation, and settlement of controversies concerning land-use alternatives through negotiation seem to be the future for research in this field.

The symposium was kindly hosted by the Technical University in Zvolen, Faculty of Forestry and supported by the host organisation as well as the Swiss Federal Institute of Technology, Switzerland. The meeting was organized by Assoc. Prof. Dr. Rastislav Šulek and his staff at the Technical University in Zvolen, including Mariana Krivošíkova and Jan Lichy, as well as Peter Herbst (IUFRO 6.13.00). The high relevance of this meeting was emphasised by the continued active participation of the rector of the Technical University in Zvolen, Prof. Dr. Jan Tuček.

Interested in IUFRO 6.13.00? Please visit [www.iufro.org/iufro/iufro.net/d6/hp61300.htm](http://www.iufro.org/iufro/iufro.net/d6/hp61300.htm) for more information, or directly contact the coordinator via email, <[HP@net4you.at](mailto:HP@net4you.at)>.

Peter Herbst, Coordinator IUFRO 6.13.00

## TABLE OF CONTENTS

Expert experiences in development of recent forest legislation of selected countries of the West Balkans <i>Franc Ferlin, Peter Herbst, Aleksander Golob and Peter Kampen</i> .....	7
Effects of hunting legislation on wildlife management: A comparison of Austria and Serbia <i>Vukan Lavadinović</i> .....	24
Comparative analysis of forest law developments in selected European countries <i>Liubov Poliakova</i> .....	29
Between sustainability and bioenergetic use: Legal and technical aspects of enhancing the use of woody biomass in Albania <i>Gazmend Zeneli, Abdulla Diku, Genti Cupi and Haki Kola</i> .....	36
Czech National Forestry Programme in brief - Last development of forestry and environmental policy and their practical impacts <i>Karel Vančura</i> .....	44
Economic information system (EIS) as a tool for the solution of conflicts between forest owners and nature conservation authorities in the Czech Republic <i>Jaromír Vašíček</i> .....	55
Czech forest and water related legislation after the 5 <sup>th</sup> Ministerial Conference on the Protection of Forests in Europe 2007 <i>Karel Vančura</i> .....	63
Compensatory damages for restricting owner's property rights in favour of environment protection as seen in the example of the acts on forests and on nature and landscape protection in the Czech Republic <i>Michal Hříb</i> .....	72
Different management for different protected areas in Iran <i>M. Masoud Ghelichkhani</i> .....	79
Japan's national forest programme and its implications <i>Ikuo Ota</i> .....	82
Development of the private forestry sector in Serbia and its role in NFS/NFP processes <i>Dragan Nonić, Vojislav Milijić and Aleksandar Radosavljević</i> .....	90
Review of forest law in Serbia – Tendencies and Needs <i>Natasa M. Tomić</i> .....	102
Principles of new forest legislation and policy in the Slovak Republic <i>Rastislav Šulek</i> .....	106
Financing biodiversity measures in Slovenian forests <i>Gregor Danev, Jurij Gulić, Darij Krajcic</i> .....	111

Forestry legislation in Sweden <i>Jan-Erik Nylund</i> .....	121
Collision between regulations in forest law and environment related legislations in Turkey <i>Devrim Elvan and Üstüner Birben</i> .....	144
Legal and organizational aspects of forest policy of Ukraine <i>Artem Torosov</i> .....	154
Annex 1: Agenda of the International Symposium 2008 of the IUFRO Group 6.13.00 ....	158
Annex 2: List of Participants attending the IUFRO Symposium 6.13.00 in Zvolen .....	160
Annex 3: Research Publications and State of Knowledge Reports of the IUFRO Research Group 6.13.00 Forest Law and Environmental Legislation .....	161

# Expert Experiences in Development of Recent Forest Legislation of Selected Countries of the West Balkans

*Ferlin Franc<sup>1</sup>, Herbst Peter<sup>2</sup>, Golob Aleksander<sup>3</sup> and Kampen Peter<sup>4</sup>*

## ABSTRACT

This paper presents and discusses the recent (from 1999 onwards) experiences and results in development of forest legislation reforms of selected West Balkans' countries in which authors of the paper had worked or are still working as international experts or advisors. The countries are Bosnia and Herzegovina (with its two entities), Serbia, Montenegro, Macedonia and Albania. Apart from presenting an assessment of the countries' general reform developments and results the following key forest legislation issues have been presented and discussed more in detail: forestry planning systems, forestry organisational models, public forestry service systems, operational forestry-technical and administrative procedures, forest and forestry public financing systems and private forest sector support schemes. One of the main conclusions is that the countries have, apart from similar forest legislation tradition, very similar system of forest planning and forest administrative procedures. Quite similar is also the public financing system collecting various contributions to forests in a kind of forest fond(s). Tax for ecosystem services, although not in all the countries, is one of the most important ones. In opposite, the forestry organisation and functioning systems are quite different. In terms of reforms, most difficult and demanding was and still is the reform related to public forest enterprises.

*Key words:* forest law, forest policy and legislation, expert experiences, West Balkans

## TABLE OF CONTENTS

1. ) INTRODUCTION .....	8
1.1. ) Aim of the Paper, Countries and Forest Legislation Reform Issues Selected .....	8
1.2. ) Forest Legislation Histories of Selected West Balkan Countries .....	9
2. ) FOREST LEGISLATION REFORM PROCESSES, MAIN RESULTS AND EXPERT EXPERIENCES BY COUNTRIES .....	9
2.1. ) Bosnia and Herzegovina - Federation.....	9
2.2. ) Bosnia and Herzegovina - Republic of Srpska .....	10
2.3. ) Serbia .....	11
2.4. ) Montenegro.....	12
2.5. ) Macedonia .....	13
2.6. ) Albania.....	14
3. ) KEY FOREST LEGISLATION ISSUES AND EXPERT EXPERIENCES IN THEIR DEVELOPMENT .....	15
3.1. ) Forestry Planning Systems .....	15
3.2. ) Forestry Organisational Models .....	16
3.3. ) Public Forestry Service System.....	17
3.4. ) Operational Forest-Technical and Administrative Procedures .....	18
3.5. ) Forest and Forestry Public Financing and Support Schemes.....	19
4. ) FINAL CONSIDERATIONS AND CONCLUSSIONS .....	20
5. ) REFERENCES AND OTHER SOURCES.....	22

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## 1.) INTRODUCTION

### *1.1.) Aim of the Paper, Countries and Forest Legislation Reform Issues Selected*

The main aim of the paper is to present recent, i.e. last ten years results and experiences in the development of forest legislation reforms within the West Balkan countries where authors of this paper had been or still are involved, as international consultants or advisors, through certain projects and/or institutions, under the umbrella of national or adequate forest programmes. Thus, the countries selected for that review are Bosnia and Herzegovina (with its two entities), Serbia, Montenegro, Macedonia and Albania.

Main emphasis is on general outcomes of the legislative reforms, the reform processes and their stakeholders' participation aspects on a country level. Key forest legislation issues, common to the majority of the countries or specific to a certain country, which are presented and discussed in the paper more in detail, include forestry planning systems, forestry organisational models, public forestry service systems, operational forestry-technical and administrative procedures, forest and forestry public financing systems and private forest sector support schemes.

Development of contemporary forest legislation and our expert support lasted in selected countries as follows:

- Bosnia and Herzegovina from 1999 – 2001 (supported by WB and EU PHARE) - Republic of Srpska<sup>5</sup> in case of forest policy and legislation and the Federation<sup>6</sup> in case of legislation only; Republic of Srpska and Federation from 2005 - 2006<sup>7</sup> (supported by WB), Republic of Srpska 2007 - 2008<sup>8</sup> in case of legislation and from 2008<sup>9</sup> (supported by WB and Netherlands development organization (SNV)) in case of forestry strategy; Federation from 2009<sup>10</sup> in case of forestry programme and new forest legislation;
- Serbia from 2004 - 2005 in case of forest policy / strategy and from 2005 - 2008<sup>11</sup> of new forest legislation (supported by FAO);
- Macedonia from 2005 - 2007<sup>12</sup> in case of forest strategy (supported by FAO) and from 2008 - 2009<sup>13</sup> in case of new forest legislation (supported by SNV);
- Montenegro from 2006 – 2008 in case of forest policy and in from 2008<sup>14</sup> in case of new forest legislation (supported by Lux-Development and SNV);
- Albania from 2001 – 2006<sup>15</sup> in case of forest strategy and legislation (supported by WB, SIDA and SNV).

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<sup>5</sup> Ferlin, as international forest policy and legislation expert for Republic of Srpska and coordinator of whole Bosnia and Herzegovina forest sector reform involved on long-term basis.

<sup>6</sup> Golob, as forest legislation expert for Federation of BiH involved on long-term basis.

<sup>7</sup> Herbst, as international forest legislation consultant involved on short-term basis.

<sup>8</sup> Ferlin indirectly contributed to legislation development through an FAO forest sector development project in Serbia.

<sup>9</sup> Ferlin involved on short-term basis as international consultant for forest strategies / programmes.

<sup>10</sup> Ferlin involved on short-term basis as international advisor for forest strategies / programmes.

<sup>11</sup> Ferlin as manager of the FAO Forest sector development project (2005 – 2008) and expert for forest legislation and national forest action programmes involved on long-term basis; Golob and Herbst, as international forest legislation consultants involved on short-term basis.

<sup>12</sup> Kampen involved and still working as international forestry advisor.

<sup>13</sup> Herbst as international forest legislation consultant involved on short-term basis.

<sup>14</sup> Ferlin involved and still working as international forestry advisor.

<sup>15</sup> Kampen involved as international forestry advisor (long-term); Herbst, as international forest legislation consultant (short-term).



### ***1.2.) Forest Legislation Histories of Selected West Balkan Countries***

The selected four Former Yugoslavian countries share a quite similar history of forest legislation under the former Federal Socialist Republic of Yugoslavia. Roots for that socialist legislation arise from the General Forest Law of the Federal Peoples' Republic of Yugoslavia from 1947 and 1961, under which framework the individual republics' laws had been developed. Although that legislation was not based on democratic and market economy principles, it was positive for protection and sustainability of forests (as goods of public interests) introducing, among others, prohibition of clear cuts and pasture of goats in forests (already in 1947), establishing forest management regions and appurtenant planning, obligations for forest management planning and professional marking of trees before felling, establishing of (institutionalized) public forest funds for collecting the public financial contributions to forests, providing particular public financial support to degraded karst and Mediterranean forests etc..

Prior to that socialist forest legislation, the Forest Law of the Kingdom of Yugoslavia from 1929 had been in force and important for later legislation developments. This law was mainly based on the Austrian-Hungarian Monarchy Forest Law from 1852 (in force until 1929) which, among others, introduced strong state forestry authority and state forest management functions, as well as state and non-state ownership of forests as goods of common interests. Turkish Empire's laws on forests from 1858 and 1869 which, among others, introduced private and communal/municipal forest ownership were also important underlying legislation.

The Albanian forest legislation history, on the other hand, is based on the traditional Law of Leke Dukagjini and the Turkish laws on forests from 1858 and 1869. The 1869 Forest Law was in use until 1922. In 1923, a Forest Law of the Republic of Albania was endorsed, identifying among others, private, communal and state forest ownership. In 1945, this law was affected regarding forest ownership when based on the 1945 Law on Agrarian Reform all forests were declared state property. In 1961, a new forest law was adopted where all forests were declared property of the people of the Republic of Albania.

Albanian as well as Former Yugoslavian forest laws had a similar focus on protection and management planning as well as public finance in forestry.

## **2.) FOREST LEGISLATION REFORM PROCESSES, MAIN RESULTS AND EXPERT EXPERIENCES BY COUNTRIES**

### ***2.1.) Bosnia and Herzegovina - Federation***

In the Federation of BiH (F-BiH), following the Dayton agreement (in 1995), there was an urgent need for a new forest law. Certain provisions from the now outdated socialist forest law (from 1978) and from last wartime forest legislation (from 1993) served as only sectoral regulatory framework (until 2002). Two independent processes for development of a new forest law had been initiated by that time, one by the Office of the High Representative (in 1999), and the other by the Ministry of Agriculture and Forestry (in 2000). The main difference between both processes was that the first one was primarily aiming at an (internationally open) system of concessions for utilisation of state forests (and therefore not acceptable for local state forestry actors), whereas the second one focused at sustainable management of state forests by existent forest enterprises. Our expert support (by Golob) was devoted to the second one. The group for development of that (ministry's) law (appointed in 2000) consisted of five local members only. During its work time, the group consulted other relevant ministries, the cantonal administrations and all existing forestry enterprises. Several workshops were organised for special topics, such as environment, organisation of forestry,

restructuring of forestry companies and forest related international agreements and processes as well as relevant EU legislation. The process was not fully participatory, mainly because of political reasons and also because certain stakeholders' groups, e.g. private forest owners did not have a proper representation, yet. As a result, the new draft Forest Law was developed (Golob 2001) and with some changes also adopted by the Federation Parliament (in 2002).

By that law, the Federal forest administration as well as (10) decentralised cantonal forest administrations have been established. With respect to management of state forests, the law granted the management right to cantonal forestry administrations and the utilisation rights to cantonal forestry enterprises (one per canton). By this, the former two centralised public forest holdings, one integrating the state enterprises controlled by Bosniacs and one by Croats, lost their state forest management rights. On the other hand, the law provided an excellent bases for sustainable forest management and forestry in ecological, economic and social terms and had also succeeded to assure significant internal (from utilisation of forests) and external (from so called ecosystem services) sources for financing biological forest reproduction, enhancement of general welfare forest functions as well as functioning of public forestry administration / service institutions. However, because of the demanding and politically sensitive decentralisation system and lack of political will as well as forestry human capacities, the start of implementation of the law was very much delayed (Avdibegovic 2004) and also later on that law never could be fully implemented. Positive outcomes of the new system include certain cantonal forestry enterprises which have developed into productive commercial companies (Gerey 2009, personal communication).

In 2008, a new forest sector reform process was launched in order to develop a comprehensive strategic planning document, called F-BiH Forestry programme as well as to revise the 2002 Forest law.

## ***2.2.) Bosnia and Herzegovina - Republic of Srpska***

In the Republic of Srpska entity of Bosnia and Herzegovina (RS-BiH) a new forest law, based on former socialist forest law from 1978 and the Serbian forest law from 1991, was adopted in 1994. A moderately centralised public enterprise for state forest management and professionally-technical services for private forests was established by that law. The process of the first forests sector reform was very difficult and particularly closed, similarly to F-BiH. Wider involvement of stakeholders in the reform process, particularly from local levels was not enabled. In the case of public enterprise related reforms, international experts were not supported in their attempt to apply a bottom-up participation approach, i.e. to involve forestry people from the base. To overcome this situation, a one year human capacity building, introduction of international experiences and professional exchange as well as forestry reform awareness building was needed. As a result of it, a reform group composed of four members only - heads of three state and non-governmental forestry institutions - was formed in the last stage of the project. The group started to work on preparation of joint backgrounds for the sector reform under our facilitation (by Ferlin). However, the group was only partly reform oriented with a main aim to conserve the current situation. Thus, the group prepared also its own forestry reform vision (Delic 2001). Finally, a comprehensive forest legislation, institutional development and policy study, including also the before mentioned vision, had been elaborated (Ferlin 2001).

After the project completion (in 2001), a new working group had prepared appurtenant draft law changes, partly based on our reform study recommendations. Few expert-level and wider public discussions have been organised before adoption of the forest law amendments (in 2002). The adopted law changes encompassed only some less demanding recommendations

from our study, e.g. introduction of forest health monitoring and the protection of forest natural values, obligation on elaboration of a forestry development programme, obligation for tendering of state forest operations, redefinition of financial support to local communities from state forest income and some others. The changes did not include the recommended key reform issues yet, like the re-arranging of forest owner-user relations between the state and the public enterprise, restructuring and commercialisation of the enterprise, establishing a new Service for private forest forests (within the forestry department at the ministry), nor the reform of the forestry public financing system including establishment of a forest fund.

In 2005 an additional forest law change, related to restructuring and commercialisation of the public enterprise and arrangement of contractual relations for utilisation of state forests (between the responsible ministry and the enterprise) took place. An expert proposal for adaptation of the legal framework was prepared by Herbst (2005) and the law amended quickly after that.

In 2007, preparation of a completely new forest law was launched. Apart from our - still valid - study recommendations and their own experiences, a new Serbian FAO pre-draft forest law version served as a basic framework for its preparation. The new forest law has been developed very quickly by a working group composed of all key stakeholders' professionals (Djorojevic 2008, personal communication). The draft law had then been endorsed in 2008. It has brought into force an almost optimally advanced forestry organisational model with the ministry's forestry department and inspection, a new forestry agency as independent legal entity (for coordinating and performing the public forest service activities) and a relatively demopolized public shareholding company (for utilisation of state forests and performing professionally-technical services for private forests). This organisation model was supported also by an optimum internal and external (public) financing system.

In 2008, the forest sector strategy development process has been launched with an objective to elaborate a comprehensive strategy document, mainly by using Serbian forestry strategy (from 2006) as a platform. Preparation of terms of reference for development of the Republic of Srpska Forestry strategy document has been supported by Ferlin (2008).

One of the most interesting follow-up experiences was that results of our forestry reform study from 2001 have been used and gradually implemented over the next seven years (Maksimovic 2008, personal communication).

### **2.3.) Serbia**

In Serbia, the legal framework is still based on an outdated Forest Law (from 1991) establishing, among others, a strongly centralised public forestry enterprise. In 2004, a separate public enterprise was established for the Vojvodina forests. The forest sector reform process, under the umbrella of the national forest programme, started in 2004 by development of a national forestry policy. The participatory process was broad and quite lengthy, combining top-down and bottom-up approaches. Public discussions mainly followed in the form of participatory workshops using contemporary facilitation and communication approaches. The policy was adopted in 2006, as a strategy paper. In parallel to the policy process, development of a new forest law started under FAO technical assistance, based on the forestry strategy.

In order to develop that new forest law, an expert working group, composed of professionals from key forestry institutions, was nominated. Private forest owners were not organised by that time yet, and therefore not represented in this group. During the initial phase, the working group made a big progress on development of a draft law, under our expert facilitation (Ferlin

and Golob, in 2005). Their work resulted in a first framework proposal of all key legal solutions elaborated (Golob 2005, Ferlin & Jovic 2005). After that, the working group continued to work on the draft forest law more or less independently from our expert support, also not in its complete composition, with the positions between members starting to differ and sometimes also taking regressive ways. Standing political changes and uncertainty in the country, as well as the absence of a real reform oriented forest sector leader, caused that the draft law, in spite of our standing expert support and recommendations (e.g. Ferlin 2007) could not be finalised until the project end (2008). A number of non-formal participatory public debates on these draft law solutions had been performed during the process. The final FAO supported draft offered a balance between (two) public enterprises and a newly proposed public forest service agency. Also a new forestry financing system with innovative public sources, particularly from payments for forest ecosystem services (in the amount of 0.05% of annual incomes of all enterprises on Serbian territory), had been included into it. That lengthy and highly in-efficient development procedure of the new forest law also occurred due to the fact that the results of public debates on key forestry reform recommendations (e.g. on reform of extension service as well as restructuring of public enterprises) were mainly not supported by the public enterprise(s).

In 2008, after conclusion of the FAO project, another version of a draft forest law, based on the one proposed by the FAO, was drafted, which left much more responsibilities with the public forest enterprises and consequently avoided proposing the establishing of a new agency. However, that draft had not managed to obtain the support of other key actors representing public interests in forests (P. Jovic 2009, personal communication). In such a stalemate position and because of the urgent need to enable forest reprivatisation (to church / monasteries) and management by the new owners, even the valid forest law was amended first instead of putting the new draft forest law into the adoption procedure. Thus, the search for finally acceptable legal solutions continued (in 2009).

#### **2.4.) Montenegro**

In Montenegro, the legal framework currently under adaptation is based on the Forest Law from 2000. That law established a completely new system of state forest management, the responsibilities for which had been, by that time, transferred from the declining public enterprise(s) to the newly established state forest directorate. That directorate took over all responsibilities of former public enterprises, including its employees and assets needed. In 2004, the directorate was transformed “back” to a pure administration type of state forest institution. Amongst the new approaches introduced by the 2000 Forest Law was privatisation of utilisation of state forests, through some sort of concession system which, however, was not operational for implementation before 2007. The system had partly been based on Slovenian experiences, and now still finds itself under development in the new draft forest law context. Concessions are granted for short (7 years), medium (15 years) and long-term (30 years) periods. Concessionaires have to fulfil specific (professional, technical and technological) qualifications. Directing of all state forest revenues and other money flows through state budget was a one of consequences of the system.

In 2006, Montenegro has launched a new forest sector reform process under national forest programme principles. A result and first step of that was a new forest policy document, developed in a broad participatory process and adopted in 2008. In parallel to that process also a first attempt for revision of the forest law was made (in 2007). Complex recommendations for development of that new law, based on the adopted policy, had been prepared a year later by international experts (Stritih 2008a, Ferlin 2008). In addition to that,

the leading role of international experts in facilitation of the forest law development had been accepted from our side (by Ferlin).

The new law development process evolved as a combination of top-down and bottom-up approaches. A legal commission and five thematic working groups were established for that purpose in second half of 2008. Thematic working groups started their work in autumn 2008, supported by international experts' co-facilitation, based on a detailed concept of the new law, also prepared by Ferlin (2008b). After two months of work and a first expert-level consultation, further law drafting was taken over by the legal commission which relatively quickly (i.e., in three months) had elaborated possible legal solutions for all main forest law chapters. The commission enjoyed continuous international expert support (by Ferlin), at the very beginning even by two additional international short-term consultants who provided their inputs (Golob 2008, Stritih 2008b). A more or less complete first pre-draft law had been prepared (in spring 2009) with our significant support. After that, the pre-draft was distributed amongst all forest sector institutions for comments and based on that, an improved version was drafted.

The pre-draft legal solutions included almost all of our expert proposals, for example: defining forestry measures which are in public interests; defining the public forest service activities; defining the framework for a new forest management planning system (for all types of forests); introduction of stakeholders' participation in forestry planning and decision making processes; new organisation of public forestry / extension services including the possibility of privatisation of certain activities through licensed private forestry institutions or persons; partly deliberation of technical and administrative procedures for felling of timber for private forest owners; transferring the responsibilities for issuing certificates and proving legality of felled timber from state administration to private forest owners; transfer of part of financial compensations for commercial use of non-wood products (related to private forests) to private forest owners' organisation(s); introduction of compensation for ecosystem services (in the amount of 0.1% of gross income of all commercial enterprises in the country which are using or burdening the ecological and social forest functions) and defining a public support scheme for private forest owners / sector based on the EU rural development instruments.

The pre-draft forest law development process under our facilitation was characterised by its highly constructive and collaborative procedure and atmosphere amongst all stakeholders. The above mentioned solutions turned out to be acceptable for all forestry stakeholders, almost entirely by consensus.

## **2.5.) *Macedonia***

The 1997 Forest Law, the previous legal framework in Macedonian forestry, had, amongst others, established a strongly centralised public enterprise including forestry and primary wood processing. Development of a new forest law started in 2007, based on the 2006 Forest Strategy and the corresponding Forest Action Plan. A ministerial working group for development of a new law was established in 2007 and a broader stakeholder working group in early 2008. Our expert input to the law development has been provided in the same year (Herbst & Sulek, 2008). Although that stakeholder group had been appointed, real participatory processes in its preparation and adoption had been almost absent when the draft law was prepared by the ministry's working group with just limited additional input of few externals and without previous public consultations been put into Governmental and Parliamentary adoption procedures. However, continuous lobbying for improved forest legislation from private forest owners' associations has enabled also inclusion of certain private sector interests into it. The draft was placed on ministry's website for comments.

Under our organization and facilitation (by Kampen and Petrovski), a national debate was organized just before parliamentary sessions. Intensive lobbying and advocacy from mainly private forest owners' associations facilitated the approval of almost all important amendments in favor of private forestry. The new law was endorsed in 2009.

The 2009 Forest Law clarifies definitions on forest and forest management. One of the main innovations was the introduction of licensed entities for provision of originally public forests services, including tree marking, transport documents, harvest approval, advice and vocational services. The forest financing remains mainly similar as under the previous law. The new law provides limited subsidy support to private forest owners from the reproduction fund, for forestation and pre-commercial silvicultural measures. The law could be assessed as a detailed and prescriptive one with focus on state administration, regulation, control and implementation, and limiting others to manage and operate. Necessary links to environmental protection, rural economic development and local level administration, however, are almost missing. Therefore, the forest law seems to offer a rather limited perspective towards future EU integration developments.

## **2.6.) Albania**

In Albania, before 2003, 70% of all state forests had been of communal origin having been denationalised after the Second World War. The legal framework, after democratic changes, had been based on the 1992 Forest Law which still did not provide for recognition of communal forest and land property. In 2005, a new forest law was adopted, which had to be amended in 2007, already, mainly to incorporate the legal category of "communal forest". However, no specific ownerships rights were defined with respect to communal forests. The law regulates management and control for all types of forests including communal and private ones. It also defines the role of the forest service. In general, it is a descriptive forest law with a specific focus on control (Muharremaj 2008). In 2003, a new forestry strategy - albeit without corresponding forest action plan - was adopted. It indicated the continuation of communal forestry development which had started in 1996, through utilization of nationalized forests by Communal Forests and Pastures Associations (CFPUA). The public forest and land property denationalisation or decentralisation was enabled by the 2001 Law on "Transfer of Immovable Property from State to Local Governments". Until 2008, however, that law could not be implemented with respect to execution of the property transfer to local governments, mainly due to low awareness of communities, difficult administrative procedures and lack of political commitment. In order to foster the process, a number of by-laws and regulations as well as separations and clarifications of responsibilities amongst local governments, CFPUA, state forest service and Ministry of Environment had to be implemented.

Currently, over 65% of the nationalized communal forest land ownership has already been transferred from the state to the local governments. Communal forests recognise traditional user rights at village, clan and individual (family) level. Tendency and advocacy is now ongoing for continuation of the reform and transfer to individual forest property. This could lead to a private forest ownership up to 40 - 50% of total forest area in the future.

The core characteristic of that transfer of forest land to local communities was that forests and forest lands which got transferred are in public use. Such areas in general are poor or degraded forests and forest lands in close vicinity of villages. Due to the poor state of transferred forests and forest lands, such transfers are likely to create heavy burdens to local communities because of their maintenance needs and ecological requirements. This in particular as establishment of a system of environmental and rural subsidies for communal and private forest owners - in order to support protection, maintenance and sustainable

development of the transferred forest lands - has not followed in that process, yet. The only support provided so far has been *via* forestry projects which supported certain forest operations. Individual forest land users still have not achieved legal ownership of their areas, only their user rights have been legally defined. However, in most cases traditional ownership structures are very strong. Mainly because of that, most privately used forests have been protected and regenerated in the last 10 - 15 years. Many of these forests gradually are growing into productive forests now, benefiting their users commercially. Both the common use and individual use of forests are managed within the communal forest systems based on CFPUAs and within local government ownership. Sustainability of such structures will depend on sufficient financial sources to be derived from forest use compensation fees. However, users will only do so if service provision is sufficient for their benefits. This situation seems to be slowly but steadily improving but still needs to be addressed.

### **3.) KEY FOREST LEGISLATION ISSUES AND EXPERT EXPERIENCES IN THEIR DEVELOPMENT**

#### ***3.1.) Forestry Planning Systems***

In line with the traditional approach during the pre-transition period, in all analysed countries forest management plans had been accepted as a necessary precondition for sustainable forest management. In the majority of cases, the typical hierarchical structure of the planning system included (1) national forest strategy / plan, (2) regional forest development plan, (3) forest management plan, (4) execution project (or, operational plan). This structure also required corresponding reforms of the old territorial planning organisation, particularly formation of larger forest regions by merging existent smaller ones (districts), comprising state and private forests, for the purposes of the new forest development planning. Our experiences from these countries showed that these reforms turned out to be quite problematic, mainly because the regions were also used for internal organisation of state forest enterprises. Thus, the enterprises usually strongly opposed such territorial reorganisation attempts.

National forest strategies/plans (NFS/Ps) in BiH forestry legislation were regarded as documents, where after adoption of the forest law general strategies and measures are defined. In other cases, however, NFS/Ps preceded new forest laws, providing general forest management goals and basic principles for formulation of the forest legislation. Cross-sectoral cooperation and stakeholders' involvement are major requirements of this general forest planning level, based on UNFF or MCPFE requirements. In most of the cases elaboration of NFS/Ps is connected with national forest inventories, which provide data for that national planning as well as national and international reporting.

The basic role of regional forest development plans as a rather new concept for the countries concerned was to identify, evaluate and plan forest functions and their development on the landscape level. Another important role of these plans was to ascertain areas of forests and define forestry in relation to other sectors and local communities. According to the purpose of these plans, participation and collaboration of all stakeholders is one of the basic requirements stipulated in the laws for adopting that development plans. The role for drafting these plans was dedicated to a governmental organisation, usually the forest administration.

Forest laws of all analysed countries require forest management plans as a basis of forest management, in both state and private forests. In the absence of a valid (i.e. formally adopted) forest management plan, basically no forest use is permitted. Forest management units are formed, this separately for state and private forests. A different approach has been proposed for Montenegro, where based on Slovenian practice all forest property categories are to be

treated jointly. Most of the laws stipulate that governmental forest service (within public enterprise or state administration) prepares forest management plans for all forests. This activity could in most of the countries also be performed by private institutions or individuals, possessing corresponding licenses. In special cases, larger forest owners would be responsible for elaboration of such plans.

Execution projects (or, operational plans) are mainly within the responsibility of the state forest enterprises or administrations, only rarely of the bigger private forest owners. Such projects are made for certain sub-compartment or holding / parcels before or after felling approval and marking of trees is done. As these projects have execution character only, there is no need for them to be defined as obligatory instruments, which actually seems to be common practice.

A main problem of forest management plans as well as the execution projects is their still too bureaucratic contents and their lack of the necessary economic background for implementation.

### ***3.2.) Forestry Organisational Models***

The forestry sector organisational models of the selected countries which have been retained, introduced or developed in the (draft) forest laws, grouped by their key organisational aspects, include: (a) centralised public forestry enterprise model (cases of Serbia and Macedonia); (b) centralised state forest administration model (case of Montenegro); (c) centralised public forest enterprise and state forestry agency model (case of RS-BiH); (d) decentralised cantonal forestry administrations and enterprises model (case of F-BiH); and, (e) centralised state and decentralised communal forestry administrations' model (case of Albania).

It is obvious that almost each country or even its lower entity has its own forestry organisational model, by that reflecting the situation in the CEE countries (Ferlin 2004). Centralised public forest enterprises integrate all the forestry organisational functions, including commercial ones. The centralised state forest administration model presents a kind of opposite, non-profit way of development of state forestry organisations - after privatisation of forest operations or enterprises is done. It includes integration of all organisational functions, except of forestry inspection and state forest utilisation (which is privatised). The centralised public forest enterprise and state forestry agency model is a new one introducing a balance between state forest users and public interests. Thus, the public forest service function and the state forest management (commercial) functions are separated in it. The model with decentralised cantonal forestry administrations enterprises is based on both, separation of authority levels (between the state and cantons) as well as separation of forestry administration and management / commercial functions. The model with state and decentralised communal forestry administrations is a newly developing one, emerging as one of the results of the state forest decentralisation process including property reforms and the main forestry organisational functions.

In these models, highest state authorities in the forest sector usually are vested with the Ministry of Agriculture, Forestry and Water Management or in exceptional cases with the Ministry of Environment (as in the case of Albania). In the case of F-BiH, within the cantonal ministries, separate forestry administrations have been established. Forestry inspection services in most cases are organized separately from the state forest enterprise or even state forest administration / service institutions, as relatively independent units or organs within the ministries. The private forest sector is organised through the forest owners (cases of BiH, Serbia, Montenegro and Macedonia) or forest users (case of Albania) associations with their representation at national, regional (cases of Albania and Macedonia only) and local levels.



The forestry organisational models could additionally be characterised particularly by the:

- legal status of state forest enterprises, i.e. classical (cases of Serbia and Macedonia) or restructured public enterprise (case of BiH);
- status of privatisation of state forest enterprises, i.e. non-privatised (cases of BiH, Serbia and Macedonia) and privatised enterprises (case of Montenegro);
- status of performing forestry operations, i.e. mainly by the enterprises them self (cases of F-BiH and Vojvodina in Serbia) or mainly outsourced (cases of RS-BiH, Serbia without Vojvodina and Macedonia);
- type of state forest management right, i.e. the management right granted by forest laws to existent public enterprises directly (cases of Serbia and Macedonia) or through special management contract (case of RS-BiH), and the concession right granted through free competition to private companies (case of Montenegro) while the forest management responsibilities (planning, monitoring, control and decision making) remain at the forest administration side;
- status of (remaining) administrative functions of public enterprises, with respect to private forests, i.e. administrative function is integrated (cases of RS-BiH, Serbia and Macedonia) or separated from the commercial function (case of F-BiH);
- status of performing the operational forestry service activities (professional, technical and advisory) for private forest owners from the public institutions' side, i.e. as regular activities of the state forest enterprise (case of Macedonia), the state forest administration (case of Montenegro) or lower level of forestry administrations (cases of F-BiH and Albania), or as potential activities based on special service contracts with the responsible ministry (cases of RS-BiH and Serbia).

Decentralisation of forest and forestry organisation systems, until now, has turned out to be more or less the exception among countries under consideration, as almost all of the public forests still are in state ownership, are centrally administered and managed (by state institutions) with responsibilities of forestry administration, including financial support functions, at national level. However, certain new trends in decentralisation influencing forest legislation, based on corresponding EU policies and trends, have been initiated now also in the other countries, too, particularly related to benefits (e.g. financial gains from state forests' revenues).

### ***3.3.) Public Forestry Service System***

Forests in general are considered to be goods in public interest. Consequently, the concept of a public forestry service function including administrative, professional, technical and advisory activities, for all forests, was suggested from our side (by Ferlin), based on Slovenian experiences (in cases of BiH-RS, Serbia and Montenegro). Two levels of public forest service were taken into consideration: the general, and the operational one. The general level was rather new and the operational one partly already existing, e.g. through provision of professionally-technical services for private forest owners. However, the extension / advisory services' part was almost everywhere missing in practice.

The public forestry service function at general level was institutionalised in form of a public forestry agency (case of RS-BiH) or state forest administration institution (case of Montenegro). Such an organisational and functional model of public forestry service (for all forests) would be considered as the optimal and most sustainable one. However, the model employing an agency has not been easily accepted by the public enterprise actors (case of RS-BiH) or has even been refused (case of Serbia), because of fears that the agency would take

over certain functions and powers of the enterprises and would also present an additional supervisory institution.

Public forestry service function at operational level has been further developed, particularly in terms of forestry advisory activities, through functions of public enterprises (cases of RS-BiH, Serbia and Macedonia) or state forest administrations (cases of F-BiH, Montenegro and Albania). The authorisation to perform extension service activities was granted also to private forestry institutions or individuals holding licences (cases of Macedonia, Montenegro and Serbia). The last option is of high importance for the private forest sector which actually, in long term, could take over a part of the public service activities.

In addition to the public forest service, the state forest management function has also been defined (cases of RS-BiH and Montenegro) and considered separately from the first one.

### ***3.4.) Operational Forest-Technical and Administrative Procedures***

The general silvicultural approach in the countries studied, as a rule, is not based on clear-cutting, but on sustainable silvicultural systems, where trees need to be individually selected for felling, based on certain forest ecological, economic and social function criteria. Such selection forest management approaches are demanding in terms of the need for professional foresters as well as corresponding knowledge and experiences of forest owners and users. It is therefore a traditional requirement in all the countries that trees are marked individually by a qualified and authorised forester before cutting, in line with the guidelines provided in forest management plans. Obligatory marking of trees, without or with a few possible exceptions will be required in future, too.

Further on, a formal request for every felling in private forests (by forest owners) is required in each country. Harvesting is permitted only after the felling permit has been issued by the authorised service (within public forest enterprises or state forest administrations), based on the respective Law on Administrative Procedures. In most of the countries the permits are accompanied by the obligation to pay taxes on felled timber or alternative compensations for tree marking and other services provided by the public / state forestry institutions. These requirements represent quite considerable administrative burdens, which especially in small scale private forests not always seem to be proportional to a possible damage to the forest if such permissions would not be obligatory. However, there is a broad consensus that in most of the countries - taking into account the forestry tradition, economic and social situation and developments, as well as people's mentality - such permissions for felling combined with obligatory marking of trees are still key mechanisms to assure conservation and sustainable development of forests and prevent illegal logging, if possibly used in a more appropriate and flexible way.

Two systems of forestry-technical and administrative procedures are actually (proposed to be) in place in the studied countries, the first and still dominant one with full state / public control (the existent), and the second one with partial state / public control only (the new). The full control system anticipates marking of trees, measuring and labelling (stamping) of all assortments at every felling site by an authorised forester before moving the assortments from the stump. At the road side, another measuring of assortments and appurtenant certificate of origin needs to be issued by that forester. Such systems require an authorised forester visiting certain forest owners even three times. Full implementation of such procedures is not rational neither really possible, particularly not in the case of private forests with many small owners. However, such a system is still of quite strong, often subjective interest for the majority of state foresters. This constitutes a serious administrative burden which has not very much in common with the underlying goal, i.e. assuring sustainability in forest.

The partial control system, until now proposed only within two draft forest laws (case of Montenegro and partly of Serbia), provides certain deliberation of the administrative technical procedures. Thus, marking of trees for felling by authorised foresters will, under certain conditions, not be necessary any more for every private forest owner - if fuelwood harvesting is in question (case of Montenegro only). Further, responsibility for labelling (stamping) of trees as well as issuing of certificates of timber origin will partly or even entirely be transferred to private forest owners (cases of Serbia and Montenegro) or to concessionaires in state<sup>16</sup> forests (case of Montenegro). In addition to that, introduction of a barcode system of timber tracing from the stump to the market place is anticipated (case of Montenegro). This is a more realistic system for assuring legality of harvesting. Such a system also rationalises necessary visits of authorised forester to certain forest owners. It is also in line with the intention of a decision of the European Parliament (from 2008) when voting on the Regulation on the "Obligation of operators placing timber and timber products on the market", by which every timber product when placed on the EU market, must be accompanied by corresponding documentation that proves legality of that timber, monitoring of which is in non-state responsibility.

### ***3.5.) Forest and Forestry Public Financing and Support Schemes***

Public financing of forests and forestry in the countries studied, i.e. financing and co-financing of corresponding forest and forestry activities and measures which are in the public interest, consists of both, internal and external sources. Internal sources in particular include:

- obligatory allocations of public forest enterprises to a so called basic forest reproduction fund, e.g. 10 - 15% of their annual income (cases of F-BiH and Macedonia);
- obligatory payments of private forests owners for the basic forest reproduction, e.g. 10 % of value of timber assortments at the road side (case of F-BiH only), paid into public budgets;
- obligatory payments of public forest enterprises for the so called expanded forest reproduction, e.g. 3 % of their annual income (case of F-BiH) paid into public budget;
- compensation for professionally-technical services provided by the forest service, paid by private forest owners into the state budget (cases of RS-BiH, Serbia, Macedonia and Montenegro), or by concessionaires (case of Montenegro);
- compensation for the transfer of state forest use rights, e.g. in the form of a certain percentage of value of timber assortments at the road side (10% in RS-BIH, 3% in F-BiH, 3% in Serbia), or concession fees (in Montenegro), paid into public budgets;
- obligatory payment based on the forest production value from communal forests into the public budget and full production value from state forests by forest service into the budget (case of Albania);
- compensation for NTFP collection or use rights (almost all the countries), paid into public budgets.

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<sup>16</sup> *Public enterprises in other countries, as state forest users, had already held this responsibility from previous times/systems.*

External sources - particularly two:

- Tax for ecosystem services in form of a small tax on gross annual income of all commercial enterprises in the countries, e.g. 0.1 % (cases of F-BiH and Montenegro) or 0.07 % (cases of RS-BiH) or 0.05% (case of Serbia) and
- Integral state / public budget sources (all the countries).

In organisational terms, financial sources from the tax for ecosystem services are collected in form of a special public forest fund or a state budget sub-account (cases of BiH, Serbia and Albania) or state budgets directly (cases of Montenegro and Macedonia) based on corresponding forestry strategies and plans. An optimum public forest financing system with a high public financial contribution to forests, based on the ecosystem tax, was adopted in BiH (both entities). However, actual utilisation of these funds, particularly for private forests was low (Mekic 2007, personal communication; Djorojevic 2008, personal communication). A good and operable national programming and implementation system which has not been in place yet, as well as much better private forest owners' absorption capacity and forest service institutions' support would be needed for successful utilisation of these funds.

Public financing support to private forest owners includes the following measures, in the public interest:

- financing professional-technical service activities for private forest owners (in all the countries);
- financial support to functioning of private forest owners associations (in some of the countries);
- subsidies to private forest owners for forest reproduction measures including silviculture, forest protection and forest roads (in all countries, except Albania);
- compensations to private forest owners for any eventual loss of income caused by designation of their forests for special purposes (in majority of the countries);
- subsidies to private forest owners for forestry measures under (national) rural development programmes (case of Montenegro).

Rather extensive private forest owners/sector support schemes have been established or are proposed to be endorsed in some of the countries (cases of RS-BiH, Serbia and Montenegro).

#### **4.) FINAL CONSIDERATIONS AND CONCLUSIONS**

Our main experiences and opinions regarding development of forest legislation in countries, in which we have worked or are still working could be summarised as follows:

- 1) Legally-technical concepts of current forest laws of these countries are mainly based on Central European (i.e. Austrian / German) forest legislation concepts and practice with quite detailed and prescriptive legal solutions, regularly also including a significant number of by-laws. Detailed and extensive (draft) forest law concepts are amongst the main characteristics within all the countries. These legal concepts distinctively differ from the so called framework concept with only general solutions provided in the laws valid for many decades, e.g. in cases of Switzerland and Sweden. We could more or less agree that the first concept, taking into account the peoples mentality, stage of democracy and general development of societies and economies (in transition), is more appropriate at that stage of transition than the second one, as long as the legislation focuses towards an enabling environment for sustainable forests management.
- 2) Another main legal-technical characteristic of the countries' forest (draft) laws is that they are more protective and restrictive in terms of the state regulation and control than

promotional in terms of the state enforcing and service role. There are cases where that practice is misused, for example for protectionism of the state forest sector positions and monopolies, instead of creation of a more responsible and enabling environment for private forest owners and sector.

- 3) Most of the new forestry legal solutions already contain significant (direct and indirect) support provisions for the private forest sector, based on the “stick and carrot” principle which also mitigates the mentioned restrictiveness of laws.
- 4) Most of the forest legislation systems are based on centralized principles whenever administration and management of state forests is in question. On the other hand, local communities are receiving certain financial support from state forest management institutions, to compensate for that centralisation. Our experiences from, and observations of decentralisation processes show that decentralisation of forest administration and management is very demanding, particularly when at the same time forest property transfers are performed, this because of non-existing tradition, political sensitivity and lack of human and financing capacities. If the process is too fast, it easily endangers forest sustainability. However, some experiences from these countries indicate that decentralisation in the case of the state forest management (use) function would show good results only when being implemented without any unnecessary delays.
- 5) Transformation of the status and restructuring of the public forest enterprises through forestry or other related legislation was and still is one of the biggest challenges in the countries having such organisation model. Resistance of public enterprises against their restructuring, as well as other forestry sector reforms was and still is a serious problem in development and adoption of the new contemporary forest laws. Because of this, we usually recommended separation of matters regulating the demanding (state) forest enterprises from the forest laws, in order to make the laws more general and also politically neutral.
- 6) A major problem regarding adoption and implementation of forest legislation, in some countries, is the lack or inability to assure appropriate public financial sources. Many legal requirements which were not harmonized with human and financing capacities, particularly from the state forest authorities or service sides, could be found in the laws. However, in some cases we also found deficiencies to make use of available amounts of already collected public financial sources, particularly for private forests, mainly because of the lack of forestry technical and extension support and low absorption capacity.
- 7) Specific forest and forestry-related rural development measures in most cases had not been included in the countries’ (draft) forest legislations and financing sources to support that measures have also not been planned through rural development programmes. Thus, forestry there still is considered as an independent and self-sufficient sector within responsible ministries; this, however, is not in line with EU rural development policy and regulations.
- 8) Forest sectors of the majority of countries lack forestry human capacities for law enforcement, this in quantitative as well as qualitative terms. This is the case at ministries’ level (forestry departments and inspections) just like at operational level (private forests). On the other hand, state forest management organizations in most cases are well or even over-capacitated with employees. Corresponding human capacity building needs in all cases are very high but unluckily usually overlooked in the legislation provisions.

- 9) Our experiences suggest that starting the implementation of certain, demanding forest policy or law making processes, e.g. regarding forestry reorganisation or public financing reform, would require several years in which the conditions would develop towards maturity and where implementation would follow on step-by-step basis.
- 10) The forest legislation reform processes were quite different by countries and issues, developmental stages and time periods. In general, the legal processes were and still are considerably less participatory than policy / strategy processes. Basically, this is a consequence of higher political sensitivity and seriousness of the legislation impacts. On the other hand, latest developments turned out to be much more open / democratic in contrast to procedures which were prevalent during initial legal reforms, which also had been supported by us. This has been a promising step towards further development activities towards an inclusive forest policy and legislation.

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# Effects of hunting legislation on wildlife management: A comparison of Austria and Serbia

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## Abstract

Hunting systems in Europe vary greatly due to a large variation in hunting culture and tradition. Consequently, wildlife management strategies in Europe are diverse, resulting in difficulties to find European-wide rules and laws for hunting and game management. There is a need to understand the cultural hunting history in each EU member state and to analyse the impact of legislation on wildlife management. The aim of this paper is to stress the impact of hunting legislation on hunting systems and wildlife management in two countries of similar size and game composition but different hunting legislation: Austria and Serbia. The effects of different hunting legislation were analysed in both countries regarding densities of hunters and various game species, especially economically important ones like ungulates. The results are discussed in the light of future scenarios and consequences for legislation.

## Introduction

European countries have long hunting tradition, which is a corner stone for variation between its hunting systems. In the second half of the XX century, two major hunting systems could be distinguished in Europe – the West and the East European one. The main difference between these two systems was the ownership right on the game. In the West - European hunting system there was no ownership on game (*res nullius*). The dead animals belong to the person who hunts or finds them, and the right on hunting is related to land ownership. This hunting system is called a domicile one. The regal hunting system, which was common in communistic countries of Eastern Europe, was based on State owned property.

After collapse of communistic regimes, many East European countries started transition processes, changing their hunting system from regal to domicile ones. The Republic of Serbia, as successor of the Socialistic Federative Republic of Yugoslavia is in same process of transition which started with democratic changes in year 2000. The desire for the possible accession to the European Union (EU) has led to the accelerated development of the regulations in all segments of society. This led to the need for transformation of the national forest legislation. The changes in forest legislation brought the transformation of hunting legislation being one branch of economy.

The Republic of Austria is member of EU which includes nine federal states with a variety of hunting legislatives and systems. The Austrian hunting system is a domicile one based on long hunting tradition inherited from Austrian monarchy. Austrian hunting tradition influenced northern regions of Serbia, and was used in the past as a model for Serbian hunting development.

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## General conditions

The Republic of Austria and Serbia are suitable for comparison of hunting systems due to their similarities in size, population number, climate, forestry types and biodiversity of hunting species. Apart from these general conditions which are similar hunting systems in the two countries are totally different providing us with a base for comparison.

Similar in size, both countries have four defined seasons while precipitation and average temperature vary with altitude ([www.fao.org](http://www.fao.org)). Plain and mountainous regions are present in each country, except that Austria has much higher altitude in general and more steep mountains.

Table 1: – Comparison of general characteristics between Republics of Austria and Serbia

	Austria	Serbia
Country size (km <sup>2</sup> )	83,870	88,361
Forest coverage	47.5%	26,7%
<i>Conifers</i>	79%	6%
<i>Broadleaves</i>	21%	91%
<i>Mixed forests</i>	-	3%
Share of private forests (%)	85	≈ 50
Average size of private forest holding (ha)	15	1
Total size of hunting area (km <sup>2</sup> )	82,164	88,285
Number of hunting grounds	11 780	323
Country population	8,210,281	10,159,046
Number of hunters	≈ 100,000	≈ 80,000

(Source: [www.cia.gov](http://www.cia.gov); [www.fao.org](http://www.fao.org); [www.ecolss.com](http://www.ecolss.com); [www.ljv.at](http://www.ljv.at); <http://www.fao.org>; Forestry Development Strategy of the Republic of Serbia; Statistics Austria: Hunting statistics 2008)

Despite similar general conditions, sometimes even in favour of Serbia, game numbers vary a lot between the two countries.

Table 2. – Differences in game number between Austria and Serbia

Game species	Shooting in Austria	Game number in Serbia
Red deer ( <i>Cervus elaphus</i> )	40,000	4,934
Roe deer ( <i>Capreolus capreolus</i> )	240,000	103,000
Chamois ( <i>Rupicapra rupicapra</i> )	25,000	402
Wild boar ( <i>Sus scrofa</i> )	25,000	20,970
Wolf ( <i>Canis lupus</i> )	-	700-800
Bear ( <i>Ursus arctos</i> )	-	50-80

(Source: Lavadinovic V. 2007; [www.ljv.at](http://www.ljv.at))

Comparing game numbers between the two countries it is obvious that despite similar general conditions differences in game population are caused by differences in game management and hunting systems. Considering that the Austro-Hungarian Empire influenced the Serbian hunting system and its management, it can be assumed that legislation is the core of differences between these two countries. It is been already mentioned that Austria belongs to the domicile hunting system while Serbia belongs to the regal system in transition. Another important aspect of hunting systems is participation of stakeholders. In Serbia, the hunting

grounds are, by advertisement or directly, rented for management to the following users: Hunting Association of Serbia – 229; State Enterprises “Srbijašume” and “Vojvodinašume” – 67; National Parks – 5; Serbian Army – 3; Fisheries - 16 while rest 3 are given to other users (Lavadinović 2007). All users are State representatives except Hunting Association of Serbia which is by definition a non-governmental organisation ([www.ecolss.com](http://www.ecolss.com)). The number of stakeholders in Austria is much higher due to participation of the private sector.

## Legislation

The current hunting legislation in Serbia is from 1993. Despite all stakeholders are criticising it, the law is in effect for 16 years (since Republic of Yugoslavia and Union of Serbia and Montenegro until nowadays in Republic of Serbia). The version of a new law is still in process of preparation but it is sure that conceptual changes will be made ranging from the exclusively economic orientation to the ever increasing role of biodiversity protection. The Law on Environmental Protection which is important for wildlife management is in process of preparation since 2004 (Cirelli 2006).

Despite the main purpose of the Law which is to regulate “protection, breeding, hunting and utilization of game” it is not mentioned to whom the game does belong. In practice it is well known that game belongs to the State which can be understood from the old Constitution from 1990, where it is regulated that the natural resources belong to the State or are to be “social property” (Cirelli 2006). It is obvious that in the New Law the property on the game will not be changed because it is not in interest of any stakeholder. Preservation of the regal hunting system is causing losses to private forest owners because the Law does not recognize subsidies for the usage of private properties. Despite, the Law defines the obligation of private forest owners (article 33.) to allow hunting on their ground. By excluding private forest owners from hunting activities, the Law reduces the number of stakeholders. Despite by the Law anyone, who provides professional management and game keeping, can manage the hunting ground, only the State Enterprises or the Hunting Association of Serbia (article 7. and article 20.) can get it for usage. By this regulation, the Law is contradictive, even in the same article. The State can take away the usage right from the user, if the hunting ground is not managed on a proper way (article 25.), but due to article 20., the same user will get it again. Another contradiction is that the Law mentions hunting regions but they do not exist in practice (article 26.), which for the result have two-level hunting system, instead of the three level one. Beside all above mentioned pretermissions, the Law does not define the minimal and maximal size of the hunting grounds. If the hunting ground size is not defined, than this important criterion is affecting the establishment of future hunting grounds and participation of the private sector. All mentioned derelictions are presented in Table 3.

Table 3. – Lacks of Serbian hunting legislation

	<b>Serbia</b>
Property right on game	Not defined; in practise owned by the State
Subsidies for usage of private areas	No
Minimal size of hunting ground	Not defined
Stakeholders diversity	Low
Management system	Two-level one
Public participation	None
Definition of hunting	No

## Conclusion

Despite the similar general conditions, Austrian hunting is much more developed than Serbian one. Higher number of ungulates is providing better incomes in the hunting branch which is directly supporting country development. The main reason for this difference can be found in Serbian hunting legislation which still has not been changed, despite that the country is in a process of transition. Participation of the private sector is crucial for proper wildlife management and development of the hunting system. A draft version of the New Law is developed which will define and solve the most contradictions of the current Law. Still, the problem is that the New Law will not bring radical changes regarding property on game and subsidies for the usage of private property. The Draft Law on game and hunting of the Republic of Serbia spells out that wild game shall be owned by the State and that hunting rights will be given by the State only to users which fulfil the conditions regulated by the Law (professional and game warden service). This means that the New Law will also not change the most crucial factor – property on game. Analysing the solutions applied in the management systems of the countries in transition, their promptness in harmonisation with the European standards, dealing with the interests of the stakeholders and hunting traditions, it can be concluded that the process of changing the regal management system to domicile ones can not be avoided. It means that the Serbian hunting system cannot be developed without radical changes in ownership rights.

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# Comparative analysis of forest law development in selected European countries

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## Introduction

Forest legislation of European countries is generally based on one basic law (code or act) regulating forest relations at the national level. The process of law making is a permanent one. Even countries with a high level of economic development amend forest legislation according to changing development trends and international agreements.

It should be recognized that until present there is no single approach to the formation of the forest law. Its content, structure and scope are determined by historical developments and traditions of law making in each particular country. In 2003 an attempt of a brief comparative analysis of the forest codes of 7 countries was made: Czech Republic, Hungary, Slovak Republic, Latvia, Lithuania, Estonia, and Poland. Since this study 6 years have passed. The analyzed post soviet countries passed an adaptation period to EU legislation and have received the official formal status of EU Member States.

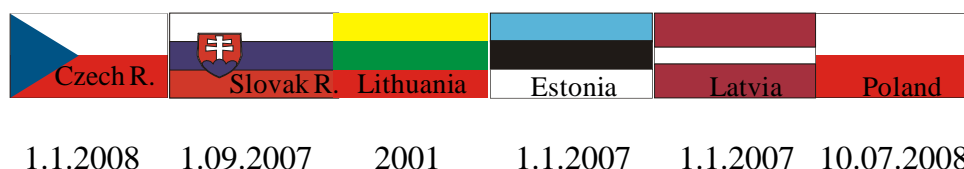
It is worth mentioning that the strategy of the European Union and the forest action plan, adopted in 2006 and valid till 2011, have sufficient influence on the country's main normative documents. The EU forest action plan sets four main objectives:

- Improving long-term competitiveness;
- Improving and protecting the environment;
- Contributing to the quality of life;
- Fostering coordination and communication.

The forest action plan underlines once again the necessity of ensuring implementation of all component of sustainable forestry development – economic, ecologic and social - and the need of taking measures directed to encouragement of use of wood as a renewable resource.

Important influences have as well the decisions of the Ministerial Conferences on protection of forests in Europe and other international processes. What changes were made in the main forest laws of countries under analysis?

Entered into force/the last amended under analysis



In Slovakia a new forest law was adopted in 2005 and some amendments made in 2007. A lot of changes since 2003 occurred in Estonian forest act. Fewer changes are to be noted in the forest laws of Poland and Latvia. Few changes are to be found in the forest law of the Czech Republic. In the forest code of Lithuania there have been no amendments. The forest

\* State Forestry Committee of Ukraine

legislation of Hungary could not be considered in the analysis due to lack of reference material. The structure of forest codes analyses does not show changes with a division in four main parts which are declarative, regulatory, normative and procedural.

### **Declarative Aspects**

This part specifies basic notions of forest relations, principles and objectives related to forest management.

*Aim of the law:* Aim of the law was changed or amended in Slovakia, Latvia and Estonia. In Estonia the meaning the forest as an ecosystem has been underlined, in the law of Slovakia it is pointed at the value of economical components, and in Latvia reference is made to other environmental laws.

*Main definitions:* Of considerable legislative interest is the interpretation respectively the definition of “forest” and “forest lands”. The definition of forest lands has been changed in Estonia – decreased minimal area of forest lands to 0,1 ha – but it is pointed that the forest act applies to forest land bigger than 0,5 ha. The forest act also underlines that to forest land are belonging areas that entered in the cadastral register as forest land. Besides it is said that land of yards, parks, cemeteries, green areas, berry gardens, orchards, forest nurseries, gardening centers, arboreta, and plantations of trees and shrubs shall not be deemed as forest land. In Slovakia are added to the category of forest lands areas without forest cover but used for hunting needs and recreation, forest depots, lands around settlements which were under forest beforehand and were cut illegally. The new forest law provides that the assignment of lands to the category of forestry lands is made by the forest administration with approval from the forest owner. Besides, in new Slovak law as distinct from old one there is given a classification of forestry by target use (protection, special purpose and commercial forest). In Latvia the definition of forest land now excludes subdivision zones of roads and railways at the width specified in regulatory enactments if the road or railway crosses the territory of a forest. A similar regulations refers to existing electrical network and electronic communication networks overhead line routes.

*Principles and aim of forest management:* In Poland protection of surface and groundwater are added to objectives of forest management.

### **Regulatory Aspects**

This part defines competences and regulates activities of different state authorities in the sphere of forest management as well as rights and obligations of forest owners and users. It describes principles of economic regulation of forest relations by the state and determines an order of access to the forest. What exactly has been changed in this part of laws?

*Competence and regulation activities of different state authorities in the sphere of forest management:* In the Czech Republic an article has been added on competences of regional state authorities. In the new Slovak law there are described in detail the competences and activities of different levels of forest administration; competences of forest protection service and forest guards and the order of providing state control are addressed. In the Estonian act there is a substantially enlarged competence of the relevant ministry in relation to approval of different normative documents, articles about competence of the Centre of Forest Protection and Silviculture and the Private Forest Center have been added. From the state competence the necessity of elaboration of forest policy has been deleted and the necessity of ensuring of protection of biological diversity been added. Significant changes are in the articles connected to the State Forest Management Centre and its competence (changes in scope of work; added

management of forest areas under Ministry of Defense responsibility), changed competence of the Supervisory Board and the Management Board; Possession, Use and Disposal of Assets of State Forest Management Centers etc. In Latvia some changes have been made in Government competences. In Poland like in Estonia there are enlarged competences of the relevant ministry and an amended scope of activities (responsibility for NATURA 2000 objects, estimation of the state of all forest, etc) and competence of the National Forest Holding “The state forests” in general and its structural parts, as well as 5 added separate articles connected to disposal of company’s assets and immovable’s. Besides, in the Polish act there are enhanced competences of local authorities and amended competences of forest guards.

*Forest property rights:* In Slovakia there it is defined who can manage state forests (including defense forest) and on which grounds. Principles exist on disposal of state forests particularly according to ownership changes and prohibition of its pledge. The question of property rights protection through providing compensations is addressed. In Estonia regulations refer to the role of the Ministry of Environment in defining the area of state forests in each county and the right of use in state forest. Significant changes are made in defining state property of forests in Latvia. There are clearly defined cases when alienation or privatization of state property is permitted with approval of Government. Defined are the stocks of a state forest company; it is a joint stock company may not be privatized or alienated. The State Forest Company shall buy or alienate forest land only on the basis of a Government order issued each time. It is added that the rights for management of state forest lands are under the responsibility of the Ministry of Environment which has a specially protected nature territory administration. Besides, in Latvia there are introduced the notion of communal forests (forest lands under the jurisdiction of local governments) and rules of its disposal. It is pointed out that economic independence of a person may be restricted. In Poland provisions are added according to which management of forest may be under jurisdiction of Agricultural Property Agency.

*Rights and obligations of subjects of forest relations:* In the new Slovak law a separate chapter provides requirements to forest owner and forest manager which are operating by forest owner permission, particularly about registration, availability of special knowledge and practice of work, area of forest management, etc. In addition a separate article addresses rights and obligations of forest owners and the consequences in meeting their responsibilities. Also some obligations are given in particular articles defining different aspects of forest management. Changes in the Estonian act relate to owner’s obligations in compliance with requirements of forest management plans, providing measures towards prevention of risks of forest fire, and rights of forest owners related to preparation of forest management plan and compensation on restriction of forest management. In addition strengthened regulations exist for questions of transferring of cutting right and of delivery of timber. Changes in the Polish act with regard to the above mentioned questions concern obligations on forest protection and afforestation if lands are given in ownership according to the program of increasing the level of forest cover.

*Access to forest is free in all countries:* In the new forest law of Slovakia appears an article regulating the order of access to forest. In the Estonian act provisions are added about availability of restriction of access to forest by the environmental authority of the location on the base of expert analysis or owner requirements keeping in mind the available damage of forest during recreational use. In addition cases are defined when forests are used for national defense purposes. In the Latvian law the right on unrestricted access to forest besides state officers is granted to persons responsible for forest inventory and forest monitoring work. In

the Polish law provisions are added on availability to put apiaries in a state forest free of charge and for permission to cross mounted roads defined by the head of state forest districts.

*Issuance of Confirmation / Notification:* Special attention to this question is given in the Baltic countries. In the Estonian act the regulation changed significantly since 2003. It is declared that forest notification should be submitted to the environmental authority of the location before it is communicated to the forestry board, and that the notification concerning cutting rights or timber sold and purchased be prepared according to the format established by the Minister of the Environment and be forwarded to the Tax and Customs Board. In addition an explanation is added on the meaning of “damaged forest”, “delivered notification” and of the requirements for reforestation deposit and relevant expert analyses. In Latvian law it is pointed that a confirmation shall not be required if there were no changes in Land register regarding the forest owner. In addition no inventory listing is needed if trees are felled or withdrawn due to windfall, windbreak and snow brake.

*Economical regulation of forest relations by the state:* A general change for Slovak, Poland, Estonian and Latvian laws is the reference for availability of financial support from the EU for different types of work. The Slovak law contains a separate chapter concerning financial questions which give directions of financing and main sources of its covering. Besides special financial provisions other articles address financial issues as well, for example for preparation of forest management plans. A separate article regulates compensation for restriction of property rights. In the Estonian act significant changes are made in an article regulating support to private forest owners among other things through creation and partly financing of a private forest centre. A new provision is the definition of deposit payments for reforestation for private forest owners and for the possibility to demand compensation for restriction of forest use in protection forests, and regulation of payment for reforestation expert analysis. In Latvia a new article regulates submission of a state fee for certain operation (issuance of confirmation, certificate of origin for basic material, State Forest Service sanitary opinion, forest land transformation permit, etc.) It also gives possibility to receive EU support for stabilization of sustainable forest functions and development of the forest sector, and for providing forest monitoring and compensation by local government for tree felling outside forests. Significant changes are made in the Polish law. It declares additional sources for covering costs (local governor allocate funds for supervision of non state forests, inventory of agrarian forests provided for by Agricultural Property Agency means). There is a significantly increased list of forest operations by National Forest Holding the implementation of which is covered from the state budget (inventory, maintenance of data base, implementation afforestation plans for private forest owners, etc.). The law underlines that the Director General of the National Forest Holding could regulate the size of the basic allowances to the Forest Fund for regional directorates (previously the Minister of Environmental Protection). In addition the order of regulation means of the Forest Fund has been changed and it has been underlined that Director General of the National Forest Holding can create a Stabilization Fund from part of Forest Fund means aiming at the overcoming of extraordinary events. The chapter regulating forest tax payments has been deleted from the forest law.



## **Normative Aspects**

This section regulates implementation of forest operations. It establishes requirements on forest regeneration, felling, quality and origin of reproductive material, protection of forests against pests and diseases. Norms may be given in different manners– in more detail or generally. What exactly has changed in this part of the laws?

*Forest management planning:* In the new Slovak law there is separate chapter which are determines for what purposes, what, who and how forest management plans and amendments toto them should be elaborated. Significant changes have been made in the Estonian act. On the one side there is no special reference in the forest act that all forest of the country are subject of forest management planning but on the other side it is underlined that forest management plans should be elaborated for all forest estates larger than 2 ha. The act defines requirements to organizations which are performing forest management planning and requirements for license issuing / revocation (previously only the forestry board had been competent). There are some changes in addressing this question in the Polish law. Simplified forest management plans now may be elaborated for agrarian forests, for fragmented non state forests with an area of less than 10 ha. The tasks for forest management is given by the local governor on the basis of forest inventory information, for fragmented agrarian forest with area less than 10 ha tasks is given by the head of a forest district. In addition requirements are specified to the organization performing forest management planning work, and for defined types of work, which are to be undertaken by Bureau of forest management and geodesy. In the forest management plan a chapter has been added on a program of environment protection and for procedures approving simplified forest management plans.

*National forest inventory and forest monitoring:* In Slovakia provisions on national forest inventory and forest monitoring have been added in the chapter dealing with forestry informational systems. In Poland it is now provided for that inventory activities are under the responsibility of the National Forest Holding.

*Fellings:* In the new Slovak law general provisions are made on forest management, providing for forest reconstruction and for requirements concerning harvesting, logging, and staking, and for creating forest paths. Significant changes have been made in the Estonian act. A special article now provides regulations addressing different types of fellings and the cases when seed trees shall not be left, entered changes into clear cuttings (given restrictions on area and width of land plots, increased age range of species, etc.) and shelter-wood cutting (restriction on area and distance between land plots, restriction on age). The characteristics and indexes for thinning schedules have been transferred into by-laws. In Latvia restriction have been established on final felling after lawful transaction forests land on two and more parts during 7 years and it has been underlined that provisions on forest regeneration and forest felling are not applicable to forest tree seed orchards.

*Afforestation and forest regeneration:* In the new Slovak law provisions are made concerning the main types of forest regeneration, energy plantings and forest plantations, the term “forest tending”. In the Czech law it is declared that forest owners must know the origin of reproductive material. In the Estonian act a significantly changed article defines owner obligations on forest reforestation and in particular decreased area necessary for application on reforestation, given cases when this application is unnecessary, newly introduced definition of reforestation expert analysis, present responsibility for violation legislation on this question). In Latvia it is pointed out that Government may specify various time periods for forest regeneration for different forest site types. In Poland there is an increased period for

obligatory reforestation up to 5 years and underlined that volumes of afforestation are to be defined by regional programs for increasing the forest cover.

*Forest protection:* Changes for defining this question have been made in Estonia. According to amendments to the forest act the term forest protection has been introduced based on expert analysis and the responsibility requirements of environmental authority, and added requirements for cleaning of cutting areas. Pesticides may be used in forests only in special cases; quantities of un-dried and un-barked coniferous wood exceeding ten solid cubic meters per hectare shall be transported out of the forests. There is a provision about the necessity of classifying counties with high, medium or low risk of forest fires by a regulation of the Minister of Environment.

*Maintenance of relevant databases and information systems in forestry:* Requirements on maintenance of databases/state registers are now present in Slovak, Polish and Estonian laws. In the new Slovak law a separate article regulates questions of the informational system in forestry. The law addresses forest melioration and protection of water streams in forest. In the Estonian act changes refer to key biotopes, additional provisions on forest management in protection forest, designation processes of protection forest and exclusion from protection forests. In addition it deals with preserving of biodiversity and cultural heritage, measurement of timber and determination of volume. In the Polish law provisions have been made on marking received wood in forest and provisions on creating promotional activities.

### **Procedural Aspects**

This section is part of the closing part of forest laws of all countries and determines procedures for resolving disputed issues as well as responsibilities of the subjects of forest relations in case of violation of the forest law. The amount of fines has been increased in Estonia and Slovakia. It is also worth to mention that in the new Slovak act the responsibility on violation of provisions of forest legislation is given in the relevant articles of the law. In Estonia fines and types of responsibility are defined in a more detail. In addition the responsibility for illegal cutting has been underlined.

The laws contain *transitional provisions* regulating measures of subjects of forest relation in the transitional period before entering onto force. There are changes in Slovak and Estonian laws. In the Slovakia law there are references to current legislation and annexes, in Estonia there are amendments to different legislative acts that have come into force after the adoption of the forest act.

We can see that in general changes in society and requirements of international agreements are increasingly influencing forestry legislation. And this is made not only keeping in mind the availability of EU financial support but also for improvement of the environment. In addition the analysed points indicate positive tendency of changing legislation. This is truly pleasing keeping in mind availability of possible conducting legally binding agreement on forest in Europe which is now under consideration of the working group of the Ministerial Conference on Protection of Forest in Europe.

## List of Laws in the Internet, visited July 26 2010

Forest Code of Czech Republic -

[http://portal.gov.cz/wps/portal/\\_s.155/701/.cmd/ad/.c/313/.ce/10821/.p/8411/\\_s.155/701?PC\\_8411\\_l=289/1995&PC\\_8411\\_pi=0&PC\\_8411\\_ps=50&](http://portal.gov.cz/wps/portal/_s.155/701/.cmd/ad/.c/313/.ce/10821/.p/8411/_s.155/701?PC_8411_l=289/1995&PC_8411_pi=0&PC_8411_ps=50&)

Forest Act of Estonia -

[http://www.legaltext.ee/en/andmebaas/ava.asp?tyyp=SITE\\_ALL&ptyyp=I&m=000&query=forest&nups.x=0&nups.y=0](http://www.legaltext.ee/en/andmebaas/ava.asp?tyyp=SITE_ALL&ptyyp=I&m=000&query=forest&nups.x=0&nups.y=0)

Forest Law of Latvia - <http://www.likumi.lv/doc.php?id=2825>

Forest Law of Lithuania -

[http://www3.lrs.lt/pls/inter3/dokpaieska.rezult\\_e?p\\_nr=&p\\_nuo=&p\\_iki=&p\\_org=&p\\_drus=&p\\_kalb\\_id=2&p\\_title=forest&p\\_text=&p\\_pub=&p\\_met=&p\\_lnr=&p\\_denr=&p\\_es=0&p\\_rus=1&p\\_tid=&p\\_tkid=&p\\_t=0&p\\_tr1=2&p\\_tr2=2&p\\_gal=](http://www3.lrs.lt/pls/inter3/dokpaieska.rezult_e?p_nr=&p_nuo=&p_iki=&p_org=&p_drus=&p_kalb_id=2&p_title=forest&p_text=&p_pub=&p_met=&p_lnr=&p_denr=&p_es=0&p_rus=1&p_tid=&p_tkid=&p_t=0&p_tr1=2&p_tr2=2&p_gal=)

Forest Law of Poland - [http://www.przetargi.pl/prawo/ustawa\\_o\\_lasach/](http://www.przetargi.pl/prawo/ustawa_o_lasach/)

Forest Act of Slovakia -

<http://www.zbierka.sk/zz/predpisy/default.aspx?Text=Z%u00c1KON+o+lesoch&rr=&Stemming=True&Thezaurus=False&FuzzyDia=False&Operator=AND&SearchTitles=False>

# **Between sustainability and bioenergetic use: Legal and technical aspects of enhancing the use of woody biomass in Albania**

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## **Abstract**

Albanian energy demand has been strongly increasing over the past years and the country's energy supply is dominated by hydro powers providing more than 95% of total electricity supply. The national policy makers have recognized the necessity and urgency to diversify the energetic sources and are seeking for new and renewable, locally available alternative sources. With increasing concern about energy security and greenhouse gas emissions, growing attention has been drawn to biomass as a renewable and carbon-neutral energy resource. One of the most promising energetic resources in Albania derives from the forestry sector. This is not only because of the fact that its amount is abundant but as well because energy utilization of woody biomass is expected to contribute to revitalizing the forest and forest products industries which have been depressed for a long time. Another argument is that it maintains the relevant ecological (including biological diversity), economic, and social functions of man-made forests which are behind in tending. To formulate sustainable energy solutions based on the forest sector, it is indispensable to make reliable estimates of the locally available biomass sources. This paper reviews the current situation of woody biomass energy development in Albania, particularly its relationship to sustainable development. The work includes an assessment of biomass available in Albanian forests and discusses the legal and technical aspects of enhancing the bioenergetic use of woody biomass in the country. Improvements in technical, legal, institutional and policy-related support for further development are some of the possible roads to boost woody biomass energy in Albania.

*Keywords:* Albania, Biomass, Bioenergy, Forest Policy, Short Rotation Plantations, Sustainability.

## **Introduction**

Climate change, energy and food security are undoubtedly the central themes of the present and of the future. Therefore it is important to develop common strategies to combat climate change, safeguard food and energy supply and conserve biological diversity. A significant advantage of renewable resources lies in their contribution to the conservation of finite fossil resources. The use of renewable resources is largely CO<sub>2</sub>-neutral: there is no additional greenhouse effect, and life cycles are closed. A plant used for biomass energy grows by removing carbon dioxide from the air through photosynthesis. Using that plant as biomass energy returns the carbon dioxide to the atmosphere with no net change in the amount of carbon in the atmosphere, plants, or soils (Canadell and Raupach, 2008). Biomass energy sources have real potential to heighten energy security in regions without abundant fossil fuel reserves, to increase supplies of liquid transportation fuels and to decrease net emissions of carbon into the atmosphere per unit of energy delivered (Field et al. 2008). One of the potential bioenergy sources is woody biomass from either conventional forests or energy

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plantations. Despite its relatively high production cost (Hoffmann and Weih, 2005), bioenergy produced from woody biomass has several advantages over fossil fuels. The production of woody biomass energy can generate jobs and income and stimulate rural economic development (Hall, 2002).

Forest resources are relatively large in Albania (ca. 941 690 ha) (GDFP, 2004), providing a good basis for the development of bioenergy systems. This figure which refers to forests with a canopy cover of more than 10 per cent and an area of more than 0.5 ha (FAO, 2006), includes all types of forest from primary, undisturbed forest, through natural and semi-natural forests which have been modified by human activity to plantations. Other wooded land (FAO, 2006) cover an area of 557 260 ha or 19% of the Albanian territory (GDFP, 2004). The low intensity of forest management practices in Albania has resulted in relatively dense forest stands that can yield large volumes of forest fuel (e.g. firewood, logging residues, etc). At present, the forest fuel is often handled in the same way as e.g. pulpwood, while logging residues such as tops and branches are left behind. There are, therefore, good reasons to evaluate the possibility of using the existing forest residues more efficiently. In addition, land degradation has been identified as a major issue for Albania (Jansen et al. 2006) and a large area (ca. 130 000 hectares) (Dida, 2003) of arable land area has remained undistributed to farmers or private owners. The refused, unused for crops cultivation or abandoned land is spread over all districts of the country and is available for the establishment of Short Rotation Forest plantation with poplar, eucalyptus and willow.

In recent years, the Albanian government has made its commitment on bioenergy development, mainly focusing on electricity generation as part of the clean power development strategy (METE, 2008). The focus is on the utilization of the large quantities of so-called surplus agriculture residues, and on the potential of using of forest biomass resources. This move, both as government policy and industrial involvement, is being supported by most energy experts and environmental economists.

This paper reviews the legal and technical aspects that affect the current utilization of woody biomass for energy in Albania, focusing on its importance to sustainable development. Attempts are made on shedding light on necessary improvements in technical, legal, institutional and policy-related support for further development to meet the challenge of sustainable energy development in Albania.

### **Forest biomass and bioenergy**

According to the last National Forest Inventory, forest (high forest, coppices and shrubs) cover over 941 690 ha (GDFP, 2004), whilst other wooded lands (FAO, 2006) cover an area of 557 260 ha or 19% of the Albanian territory (GDFP, 2004). But measuring the capability of the forest estate has less to do with the size of forest area, i. e. the proportion of the land's surface under forest, or with the figure of forest area per head. Rather, we need to consider how the county can meet demand for forest goods and services (Dano, 2005). Although in terms of area, forest and wooded land cover almost 45% of the total area, the importance of the forest sector (including forest industries) in the GDP is relatively low.

The total growing stock volume of Albanian forest is calculated to be ca. 74 million m<sup>3</sup> (GDFP, 2004), while to ensure a sustainable forest management, the total potential of Albanian forest is ca. 864 000 m<sup>3</sup>/year with almost half of it (414 000 m<sup>3</sup>) comprising fuelwood (GDFP, 2004). Total forest biomass is estimated to be ca. 53 million ton of which 84% is provided from high forest and ca. 16% from the coppices (Table 1).

Table 1: Forest biomass production according to the management regime (Source: GDFP, 2004)

Management Regime	t/ha	Total (million t)	%
High Forest	96.1	45.0	84.0
Coppice	13.0	8.1	15.8
Schrubs	0.3	0.1	0.2
<b>Total</b>	34.2	53.2	100.0

As seen from these data, the long-term bioenergy resource potential in Albania is relatively large, providing a good basis for the development of bioenergy systems. Assuming 3 m<sup>3</sup>/ha net growth, 500 kg dry substance per m<sup>3</sup>, and 16 GJ/ton (Nilsson et al. 2004), the energy stored annually in the 0.94 Mha of forests is in the order of 50 PJ. Some earlier reports calculated the energy potential of Albanian forest to be ca. 450 millions of GJ or 450 PJ (AEA, 2006), but this estimation might be too exaggerated. This potential can be in the form of forest residues after logging, biomass resulting from thinning of dense stands and biomass from short rotation forestry plantations.

Forest harvesting is a major source of biomass for energy (Mitchell, 1983). Harvesting operations usually remove about 25-45% of the volume, leaving the residues available as biomass for energy (Perry, 1998; Fung et al. 2002). When forests are harvested in Albania, the great majority of forest managers rely on advanced natural “regeneration,” meaning that there are the young tree seedlings that will comprise the future forest. At present, forest fuel is often handled in the same way as e.g. pulpwood while logging residues such as tops and branches are left behind. Although it is difficult to get a full picture of the recent development in forest harvesting in Albania, as the quality of statistics is precarious and time series for forest logging are not totally reliable, in using data from different sources and considering a current harvest rate of 350 000 m<sup>3</sup> per year one can assume that approximately 5-6 TJ may be available as forest residues in the long term while additional volumes could be available as wood waste from the wood industry (Zeneli, 2009).

Thinning stands to promote the growth of the remaining trees or to reduce losses from fire, insects, or disease can provide biomass from tree boles, some crown material, and occasionally understory shrubs. The low intensity of forest management practices in Albania has resulted in relatively dense forest stands that can yield large volumes of forest fuel (e.g. firewood, logging residues, etc). Potential young stands for energy wood procurement cover a substantial area in Albania. Using the information from the National Forest Inventory data (GDFP, 2004), the pre-commercial thinning combined with first thinning could provide as much as 25 GWh energy annually in Albania (Zeneli, 2009). However, the overall economics of biomass harvesting should be evaluated in view of its long-term impact on the forest stand.

Although described since late-1960s and early 1970s, first as a mean of rapidly producing lingo-cellulosic fibre for use in the wood products industry (Brown, 1976), short-rotation forest (SRF) plantations supply systems only recently are growing on fertile land for the production of bio-fuels at commercial scale in several countries (Weih, 2009). In the future, short rotation forest plantations are likely to become increasingly important also in Albania because both, the above-ground and the below-ground portion of SRF plantations provide inherent environmental benefits (Hall and Richardson, 2001; Weih, 2009), although the

large-scale economic and environmental potential awaits further demonstration (Weih, 2004; Weih, 2009).

### **Legal framework and policies**

A primary goal of an energy market is to deliver goods at the lowest economically sustainable and competitive prices. Given the unsustainably low prices in Albania, energy tariffs in all areas of the energy sector have risen to reflect cost and ensure efficient cost recovery (Deitz et al, 2009). While the Memorandum of Understanding (2007) on social issues addresses affordability, universal access to energy systems, and job loss, Albania is still struggling to cope with corruption in governance and self-interested behavior that decreases the effectiveness of legislation and donor programs. Despite that, the Albanian government is providing some political incentives associated with an increased share of bioenergy in the energy sector. Albania has taken concrete measures to implement the EC Directive 2001/77/EC (Tugu, 2009).

A number of mechanisms have been put in place to support the development of the renewable energy sector and the involvement of the private sector. The legislative framework includes (Ballard-Tremeer and Diku, 2009):

- • Law No. 9663, date 18.12.2006, “On Concession”. Based on this law, the Council of Ministers issues concessions for the construction or rehabilitation of small hydropower plants. The Council of Ministers also issues permits for the construction of new generation capacities not subject to concession law based on the Power Sector Law No 9072/2003 (ref: article 34/1).
- Council of Ministers Decision No.27, date 10.01.2007 “For approval of assessment and concession awards rules “ includes feed-in tariff mechanisms and a guarantee of electricity retail market for electricity produced from small hydropower plans in concession.
- Law No. 8987, dated 24.12.2002, “On the creation of facilitating conditions for the construction of new sources of production of energy”, constitutes a key element of the investment environment. According to this Law; each legal person, native or foreigner, that invests in renewable electricity production of “not less than 5 MW per source and that use liquid or solid fuels, without restriction for other renewable sources of production, is excluded from customs taxes for the machinery and equipment that are part of the object of the production of energy” (Tugu, 2009).

The National Energy Strategy (METE, 2008) addresses the creation of “sustainable institutions and with the necessary professional capacity, as well as a legal framework which shall make possible the involvement of the private, local or foreign sector, bringing not just new investment resources, but also an advanced technology”. The strategy contains both a “Passive Scenario” and an “Active Scenario”. The active scenario which is being advocated in the National Energy Strategy relies on the active intervention of the Albanian Government with stimulating policies for the energy sector, providing for and undertaking effective interventions, and improving the organizational and legal frameworks (METE, 2008; Ballard-Tremeer and Diku, 2009; Tugu, 2009).

Existing legislation focuses on power production and reasonably (for biomass) large-scale projects (5MW<sub>e</sub>). While, given the power crises experienced in recent years, this is understandable, it may be significantly more cost effective for support to be extended to renewable sources of energy which can reduce the demand for electricity and maximize the

efficient use of local resources. Biomass energy can do both of these by reducing demand for electricity and LPG for heating (Ballard-Tremeer and Diku, 2009).

With reference to the level of insufficient incomes of household consumers on one hand and the need for increasing the average price of sale of electricity on the other hand, the so-called schema of two blocks consumptions having different tariffs for each block has been implemented in Albania (METE, 2008). The blocks have been divided taking into account the most indispensable needs of an Albanian family for energy and the possibility of offering the energy resources available in Albania. The application of differentiated prices for the blocks is seen to serve as an instrument to incite the efficient use of the electricity by the households and to encourage them to abide by the modern code of efficiency of the energy in the house (METE, 2008).

### **Restriction and prospects for further development**

Biomass for energy production is often promoted on its environmental benefits but a blanket endorsement of the sustainability credentials of bioenergy is not possible. A comprehensive assessment of the sustainability of bioenergy development requires a balancing of benefits and disbenefits of specific instances (Hall, 2002). It is important that innovative development and dissemination of sustainable energy technologies occur in a socially and culturally acceptable manner while cost effectiveness of different technological options must be considered when critical policy choices are made. Considering the technological difficulties, legal framework and government policies, the use of woody biomass for energy production faces several obstacles in Albania.

*Legal, policy and regulatory obstacles:* Albania, along with other South East European countries, has a low quality of governance (Deitz et al. 2009). Modern biomass energy falls under various ministries, agencies and institutions, making good coordination between them a necessity if efficient use of limited human and financial resources in an area is to be achieved. This co-ordination does not currently appear to be taking place (Ballard-Tremeer and Diku, 2009).

The National strategy for the development of the forestry sector (GDFP, 2005) aims at (amongst other): (1) Ensurance of forests territorial, ecologic and biodiversity integrity; (2) Stimulation and support for sustainable management of forests; (3) Building and strengthening connections with market economy; (4) Stakeholders and local users involvement in forests protection and development. However, the strategy fails to see the sustainable tree biomass production in the condition of climate change and era of biomass for bioenergy. Thus, i.e. (i) the management plans are short of estimation of energy wood potentials in young stands; (ii) the guidelines for preparation of forest management plans lack such estimation; and (iii) Finding the financially viable stands for energy wood are based on individual experiences of the field personnel rather than on “best practices”.

There is an absence of an integrated policy and regulatory framework in Albania that would encourage the use of biomass for energy. While some legislation is in place it focuses exclusively on electricity and some apply only to relatively large-scale (for biomass) installations, and this is not where the immediate opportunities lie for biomass energy (Ballard-Tremeer and Diku, 2009).

There is political support for renewable electricity but the quota obligation has not been enforced and it does not support fuel-switching the heating sector. Grants, soft-loans, and Joint Implementation projects are likely to stimulate continued investments but on a rather modest level. The absence of integrated policy and regulatory framework for example, is a



general barrier related to policies and regulation in all sectors, including energy and business operations. In essence, the continued development of bioenergy depends on the political will and determination to pursue this option through financial incentives.

*Technical and financial barriers:* Bioenergy must be economically competitive to increase market shares. That is, the end use price of bioenergy must be lower or equal to the alternatives (Trømborg, 2008). In the short-term, however, lack of well-functioning markets, may hamper the development. The high up-front capital cost of some biomass energy systems is a major barrier to the increased use of these systems despite significantly lower operating costs, and rapid investment payback. Economies of scale and technology learning have not yet been realized, supply chains for products and services are not yet developed (Ballard - Tremeer and Diku, 2009).

There is a need for new investment in the electricity system. In particular there is a requirement for new generation capacity, capable of meeting environmental targets set by the EU, and the upgrading of transmission and distribution networks (Pollitt, 2009). Such investment needs to be substantially foreign in order to embody the latest technology and operational efficiencies. The attraction of such investment requires security of property rights both via the judicial system and regulatory process but also in terms of physical security. Investment and quality of supply can only be ensured if they are capable of being sustainably financed by customers (Pollitt, 2009).

There are significant other priorities for public and private funds such as employment, food security, poverty, and local financial resources are consequently scarce. This means that investment decisions favor minimizing investment costs at the expense of operating costs.. In addition, technology to support biomass energy markets does not exist locally for the entire biomass chain and there is a lack of experience in the implementation and operation of modern biomass energy projects. On the first sight, the bioenergy might not be as competitive as anticipated with other energy sources (Schneider and Kaltschmitt, 2000). Despite the technological, financial, legal and regulatory barriers faced, the potential of woody biomass either from forest or from fastgrowing plantations as a feedstock source for bioenergy facilities in Albania is still large.

Pre-commercial thinning is primarily performed to improve conditions for tree growth but may generate a profit if aimed at fuel production. Due to better resource management, part of the cost for handling the traditional industrial assortment is switched to forest fuel production and the total productivity increases (Silveira et al. 2006, Ahtikoski et al. 2008). Thus, the stands of soft broadleaves with dense under-storeys are promising for forest fuel production in Albania. In addition, the harvesting of forest fuels can be a driving force for improved forest management, and thus an enhancement of the overall economy of forest industries.

The use of logging residues coming from forest harvesting is one of the main opportunities providing biomass for bioenergetic use and an opportunity which remains to be explored in Albania. The full supply potential resulting from logging residues has not been estimated but, based on developed country practices (Hoffmann and Weih, 2005; Thornley and Cooper, 2008), it is plausible to expect that up to half of a million m<sup>3</sup> solid volume of chips could be added to the market annually if integrated technology were used. Last but not least, the abandoned or unused land, which in Albania encompasses ca. 130 000 ha, offers great opportunity in establishing Short Rotation Forest Plantations. Although most of this land encompasses mountain fields, remote from villages and sometimes poor quality soils which have been degraded by erosion (Dida, 2004), this land remains available for SRF plantations.

Taken together, the forest area, wooded land area and the abandoned land that can be used for SRF plantation establishment provide a good basis to predict that forest-based bioenergy may play a significant role in the Albanian energy market in the coming decades. Forestry can play a vital role in bringing additional benefits via land care and rural investment which would help the establishment of new regional industries based on new plantations.

In the future, the government, the municipalities, and the private sector are expected to become promoters of the woody bioenergy utilization. Then it is important not only to assess the available woody biomass resources according to their harvesting and transportation costs but also to establish energy-conversion systems that can use various types of waste biomass together.

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# **Czech National Forestry Programme in brief - Last development of forestry and environmental policy and their practical impacts**

*Karel Vančura \**

## **Abstract**

The paper informs on the new version of NFP for the period to 2013 and gives the summary of last changes in forestry and environmental policy and legislation since the last IUFRO Research Group 6.13 symposium in Sarajevo 2008. The National Forest Programme (II) has been prepared through a “bottom-up” approach during the last two years. In the beginning of this year the Coordinating Council has been nominated as a body responsible for a step-by-step implementation, improvement and assessment. As usually it seems that game management and hunting issues will represent the worst problems.

The paper contains an overview of problems rising from various viewpoints on current forestry and nature protection practices as seen by different stakeholders. Particularly, problems of forest owners with compensations of their detriment through provisions of nature protection are mentioned. In spite of the fact that an amendment of the respective law and applying public notice was declared in 2006, the methodological instructions of the Ministry of Environment depreciates the declared forest owner right for financial compensation in case of ownership restrictions.

## **Introduction**

The second National Forest Programme (here-in-after NFP II) for the period until 2013 was adopted by the Government Resolution No. 1221 of 1st October 2008. The Resolution imposes on the Minister of Agriculture and the Minister of the Environment to take into account the provisions of the Programme in preparing draft material objectives of the Act on Forests and the Act on State Forests. The Ministry for Regional Development, the Ministry of the Environment, the Ministry of Industry and Trade, the Ministry of Agriculture, the Ministry of Education, Youth and Sports and the Ministry of Defence are entrusted with taking into account the objectives of the NFP II in implementing medium-term policies in their departments and in the preparation of related legal regulations. The regional governors and the Mayor of the City of Prague are informed about the NFP II through the Ministry of Agriculture and invited to include the NFP II objectives in the policies of regions and to draw up regional forest development programmes.

It was recommended to the Minister of Agriculture to update the Programme in cooperation with the Minister of the Environment according to actual development of the state of forests and forestry after the year 2013; a similar recommendation was given to regional governors and the Mayor of Prague.

## **Content of the new NFP (II)**

NFP II is presented in its first part as a concept designed for the implementation of sustainable forest management and long-term enhancement of forestry competitiveness in a manner respecting national sovereignty. The NFP forms part of the national forest policy (in spite of the fact that some statements exist for which currently there is no Czech forestry policy) and concurrently serves as a platform for the fulfilment of the European Union Forestry Strategy.

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NFP II amends and complements the first National Forest Program passed by Resolution of the Government of the Czech Republic No. 53 of 13 January 2003 and respects relevant international treaties, agreements, conventions and directives of the EU. It should be mentioned that in spite of the fact that NFP I was adopted only in 2003, it had been prepared by the Forest Research Institute since 1997. The first proposal of the NFP was presented on the CSCE Seminar on Sustainable Management of Boreal and Temperate Zone Forests (Montreal 1993) as a foresters' professional response to challenges of the UNCD Rio 1992 and the 2<sup>nd</sup> MCPFE in Helsinki.

During preparations for implementation of the measures of the 2003 NFP I a number of expert opinions had been formulated providing a detailed analysis of the factual and forest policy context examining prerequisites for the solution of forestry-related issues and proposing necessary steps towards amendments to legal regulations, economic measures, research programmes, and educational and awareness raising activities that would bring improvements in the state of the forests and increase the potential for rational and multi-purpose utilisation. Unfortunately these proposals had neither undergone an interdepartmental debate, nor had they been subject to a wider stakeholder discussion. Thus most of the proposals were implemented only to a limited extent – also due to the relatively short time available. But one of the main circumstances delaying the potential realisation of the decisive changes is postponing of the new (or originally supposed potential amendment to) Forest Act elaboration from which a series of necessary steps might followed.

All results and opinions of the first NFP were at the disposal to the NFP II authors to be incorporated into the current updated version of NFP II. It includes following chapters:

1. International treaties, agreements, conventions and directives of the EU;
2. External factors affecting the current Czech forest policy (economic, environmental and social spheres)
3. Present state of forests and forest sector in the Czech Republic (basic information);
4. Key terms and principles of NFP;
  - Sustainable forest management with administrative interventions of the state reduced to an inevitable minimum,
  - Motivation incentives on the part of the government forest policy to support public interests and the increasing,
  - Responsibility of forest owners for their properties.
5. SWOT Analysis;
  - (Analyses are related to economic, environmental and social pillars, it includes also challenges and possible threats.)
6. Objectives, key actions and measures;
  - The structure of measures is based on four basic objectives defined in the EU Forest Action Plan.
7. Management, monitoring and assessment of NFP implementation in the period until 2013.

## Objectives and key actions

### I. Enhancement of long-term competitiveness – economic pillar

- 1. To increase economic viability and competitiveness of sustainable forest management.
- 2. To promote research and technology development with a view of increasing forest sector competitiveness.
- 3. To enhance valuation and marketing of forest non-wood benefits and services.
- 4. To promote and foster the use of forest biomass for energy generation
- 5. To support collaboration of forest owners.

### II. Environment enhancement and protection – environmental pillar

- 6. To alleviate impacts of expected global climate change and extreme meteorological phenomena.
- 7. Preservation and enhancement of biodiversity in forests.
- 8. To enhance forest monitoring.
- 9. Enhancement of the health and protection of forests.
- 10. To alleviate the impact of previous and current environmental loads.
- 11. Achievement of a good balance between the forest and game.

### III. Enhancing the quality of life – social pillar

- 12. To support enhancement of the social situation of forest workers.
- 13. To increase the contribution of forests and forestry (forest products and services) to rural development.

### IV. Enhancing coordination and communication – communication pillar

- 14. To improve the weak position of forestry within public administration.
- 15. To enhance public awareness about the actual condition of forests and forestry needs.
- 16. To resolve the institutional relation of the state to forests and forestry.
- 17. State forests.

Above-mentioned key-actions include 109 proposed measures. The structure of particular measures is based on four basic objectives defined in the EU Forest Action Plan. And these measures respond to the most important problems of Czech forestry that were identified in the analytical section of the NFP. The measures proposed in the main frameworks respect the primary objectives of the European Community Forest Strategy and the national specificities of the hitherto development of forestry in the Czech Republic. At least the following measures should be mentioned in particular (being of relevance to our topic, e.g. forestry and environmental legislation) which should be considered as ticklish issues:

- Overpopulated hoofed game adversely affects forest management and forestry economics;
- Improper hoofed game management in most hunting grounds;

- Insufficient attention is paid to the economic context of more natural management;
- Imperfect system of compensations awarded to forest owners for restrictions in forest management due to nature conservation reasons.

Other important points are:

- Protection of forest land;
- Categorisation of forests, forest management and level of forest management planning, forest protection, fellings, forest production record keeping;
- Subsidies in forestry, offences and fines;
- Common usage of forests, licences, supervision in forestry activities;
- Institutions connected with the state civil service: Forest Management Institute (UHUL) and Czech Inspection of Environment (CIZP), professional forest manager (OLH).

### Following steps and implementation

Steering the implementation of the NFP II is a common task to the Ministry of Agriculture and Ministry of the Environment. The Head of the Forestry Policy and Economy Department as a responsible person of the Ministry of Agriculture has established the NFP II Coordination Board as his advisory body - Ministry of Agriculture have nominated one member of the Board and the Ministry of the Environment the reciprocal second one. Members of a Board are representatives of concerned departments, and delegated representatives of major administrative, technical and professional organizations/institutions, regional authorities, forest owners, entrepreneurs in forestry, academic communities, scientific and research communities, non-governmental forest and environmental organizations and timber processing businesses. Organizational and technical coordination of activities connected with the implementation of NFP measures are entrusted to the Forest Management Institute (FMI).

Organizations, which delegates were nominated by both ministries as members of the Coordinating Board:

<i>Ministry of Environment</i>	<i>Ministry of Agriculture</i>
Administration of Giant Mts. (Krkonoše) National Park	Association of Czech Republic Regions
Czech Bio Platform	Association of Forestry Entrepreneurs
Czech Inspection of the Environment (ČIŽP)	Association of Municipal and Private Forest Owners (SVOL)
Czech Society for Ecology	Bohemian-Moravian Game-keeping and Hunting Union
FSC Czech Republic, c. s.	Czech Agricultural Academy, Forestry Dept.
Green Circle – association of ecological organizations	Czech Association of Entrepreneurs in Forestry (ČAPLH)
Institute of Forest Ecology Research, Ltd. (IFER)	Czech Forestry Society (ČLS)
Nature and Landscape Protection Agency (AOPK)	Forests of the Czech Republic, S. E. (LČR)
Research Institute for Landscape and Ornamental Gardening (VÚKOZ)	Forestry and Wood-processing Faculty, Czech University of Agriculture, Prague

Statement of Scientific and Skilled Experts on Protection of the Czech Forests	Forestry and Wood-processing Faculty, Mendel Agro- and Forestry University, Brno
	Military Forests and Farms, S. E. (VLS)
Union of Towns and Municipalities of the Czech Republic	

It is assumed that the following steps will be:

- Particular measures will be grouped according the matter-of-fact nature into realisation projects.
- Coordinators or reporters will be nominated for these projects.
- Narrow consultation working groups or expert committees from the Coordination Board will be created.
- Projects will be worked out according the unified methodology adopted by the Board, it means: - clarifying of matter-of-fact substance of the problem, its causes, description of desirable status, proposal of targets and quantitative indicators; - introductory proposal of recommended operational measures; - introductory proposal of concrete forest policy measures, which will contribute to reach set targets.
- Detailed report on results of particular projects solution to the plenary session of the Board including presentation and justifying proposals prepared.
- Critical discussion on all introductory proposals by the Board and preparation of the final statement or recommendation to respective topic.
- Conveying of Board recommendation to the Ministry of Agriculture and Ministry of Environment in terms fixed.

When preparing specific steps towards the implementation of the most important NFP intents and measures, the Ministry of Agriculture, in cooperation with the Ministry of the Environment, will commission the elaboration of its technical bases. The assignment will be entrusted to interdisciplinary expert groups with members to be nominated by the Ministry of Agriculture, again in agreement with the Ministry of the Environment. The goal will be to determine the NFP provisions that are conceived, as a rule, in general terms into the form of 1) Detailed material recommendations for the forest practice and 2) Concrete measures of forest policy, namely in the field of legislation, economics and research.

The principal (ordering institution) and the contractor shall be specified for individual measures as well as the schedule of the implementation. Implementation of the National Forest Programme will be monitored by using a set of quantitative indicators based on the nomenclature of the European indicators for sustainable forest management complemented with some national indicators or specific indicators for individual measures which enable to follow the fulfilment of main set-up objectives. Indicator values will be published in the Report on the State of Forests and Forestry in the Czech Republic. Information on the fulfilment of the National Forest Plan will be regularly published in the Reports on the State of Forests and Forestry in the Czech Republic. The Ministry of Agriculture will elaborate and publish on websites, in cooperation with the Ministry of the Environment, a detailed interim report on the NFP implementation in 2010. Unfortunately the NFP II, originally for 2007 – 2013, now ‘for the period up to 2013’ has been delayed. A possible reason is i. a. higher pressure of “green initiatives” from one side and various “entrepreneurs” from the second one.



As the NFP II is considered as a base for long time expected change of the Forest Act, some items referring specifically to forestry legislation should be mentioned in brief. They are the following ones:

- The legal regulations will put greater emphasis on forests owned by the state and/or on municipal forests as to the fulfilment of their social and environmental functions including more natural management practices at the same level of competitiveness.
- The state needs to formulate its contracts with forest owners and entities managing state forests in order to accentuate long-term multifunctional requirements of society based on public interest and to resolve the compensation measures individually according to the respective types of ownership.
- To create legislative conditions for natural regeneration of sites in air-polluted areas with low reforestation potential.
- To draw up a system solution, including a draft legal regulation, for the compensation of damages due to air pollution incurred to forest owners so that particularly the polluters are financially involved in such solution.
- To make use of all legal possibilities of the owners of hunting grounds to rearrange their hunting grounds in case that their shape and size do not respect the natural migration pathways of game and thus impede game management in the owners' interest.
- In line with the above-mentioned facts it is necessary to amend Decree No. 553/2004 Coll. on the conditions, model and detailed instructions for the elaboration of game management plan in the hunting ground, so that the stock reduction is determined exclusively according to the rate of negative impacts on the forest ecosystem, i.e. mainly impeding damage to natural regeneration and damage to plantations from deer barking.

### **Czech forestry legislation - changes since 2008**

Nothing too substantive happened in forestry legislation since the last symposium of the IUFRO Research Group 6.13.00 in Sarajevo 2008. There were only two novelle of Forest Act adopted in 2008 and amended this law:

1) *Updating Act No. 124/2008 Coll.*, which is changing the Act No. 269/1994 Coll. on Record of Punishments. It includes amendment of §38 and §41 of the Forest Act; it means provisions dealing with Forest Wardens (guards) and administration of licenses. The law mentioned amended in the Article 19 the Act on disposing of forest-tree species reproductive material. Furthermore this law in the Article 20 amended game management and hunting law in relation with hunting guards and acquisition of Record of Punishments statement summary.

2) *Act No. 167/2008 Coll.* on prevention of ecological detriment and on its remedy and about changes of some laws. This law switched provision § 58 of Forest Act and accede new § 4, which sounds: „Measures according to § 51/1 of Forest Act will not be imposed, as far as there was imposed improving measures for improvement of the ecological detriment according to the Act No. 167/2008 Coll. on Prevention of Ecological Detriment and on its Remedy. It is because of this law has precedence in comparing with the Forest Act.

There are still problems with practical application of Act No. 149/2003 Coll. on Reproductive Material of Forest Tree Species Introduction. There are organised respective seminars re. supervising if the law and quality of seed and plant material is adhered. The government also

agreed the amendment of the law on conditions of agricultural and forest lots assignment on February 9, 2009. It brings some new possibilities to unite small lots (*arondation*) of forests but it does not mean the beginning of forest privatisation. The size of lots which can be assigned to municipalities, was increased from 10 ha to 50 ha.

### **Environment and forest related policy**

Council directive on the environment was implemented in the Czech legal order through the Act No. 114/1992 Coll. on Nature and Landscape protection and through Law No. 123/1998 Coll. on right to the access to environmental information. Parts of forests placed in specially protected areas (SPAs) are allotted in harmony with provisions of the law No. 114/1992 Coll. Total forest area in specially protected areas with various degrees of protection is approximately 750,000 ha presenting ca. 28.4 % of total forested area of the country. The surface of protected area related to the territory of the state and of number tree species and birds, slightly exceeds the European average.

The grid of small- and large-scale territories has been created thanks to the long -termed tradition. Introduction of the NATURA 2000 programme led to a multiplication of protective regimes in some locations which does not contribute to the lucidity and unambiguous care on these naturally valuable localities. The principle of contracting protection is not used in practice, in spite of the fact that legislation allows for it.

As regards environment and *forest* related policy and its creation (*if any*) I have to mention, that from my point of view it seems that foresters have been all the time losers during the last decade and maybe already since the mid of 90ties. There are no doubts on one hand that the ecological feeling of foresters is basically strong enough to manage forests in proper sustainable way and improve this management in the “close-to-nature” manner (another question is how and where they are pressed on by the so-called market economy) and on the other hand that “green watch” is useful and needed. But one can hardly agree with some proclamation, or parts of them, produced e. g. by “Statement of scientists on protection of Czech forests” or “Declaration of the Czech Botanical Society on biological and ecological aspects of Czech forest management”, or with proposals of so-called Bio Platform re. biodiversity (implementation of the NFP II – project form).

For example the last item includes “definition of biodiversity” as follows: *Protection of forest biodiversity deals partly protection of organisms and forests communities covered by some legislative nature protection provisions and protection of nature processes, which is included in conservation legislature only indirectly till this time (existence of protected areas system)”. Sic! The same people in other statement trying “to support efforts aimed at the change of current forest management, which have support in modern biological research and are directed to protection of biodiversity and nature processes in forests. An accent is put on forests valuable from the nature protection point of view (Sic!). In any case we do not want to doubt of a function of production forests and a need of wood production”.*

Those people probably do not know anything about the statements of CBD COP-6 and its work programme on biodiversity which includes forests of all types and explicitly underlines that it is not only a matter of protected forests. It means also productive, commercial forests and thus it is necessary to stress again that protection of nature is not possible to do only for “protection of nature” as such. Frequently unilateral experts or volunteers who, perhaps in good belief, but without knowledge and responsibility, have too much certainty about the rightness of their actions and courage animadvert on and cancel out work of foresters.

Existing reserves and SPAs have, of course, crucial importance and some news should be ensured. But if we really want to save biodiversity we have to work with commercial forests. Only when the economic benefits of the sustainable use of biological resources are demonstrated in practice we can expect some - for both, foresters and those who are trying to protect nature – profitable win-win effect. It has to do something with heterogeneity, structure and composition of stands but it is also in relation with regional representatives. This should be ensured just through managed forests merely because for their dominance.

Back to above mentioned “*investigation of nature processes*”. Unfortunately in this connection well-known story about National Park Šumava (Bohemian Forest) exists. It deals with deterioration of vast areas of forested land by bark beetle after its outbreak in the beginning of 90ties due to the policy of no-intervention and possibly with idea to create national park with natural forest in short term perspective. There are efforts to explain this – in spite of the through bark-beetle nevertheless man-made ecological catastrophe, affirming that so-called “*investigation of processes*” were included among the tasks of national park creation. The Governmental Order No. 163/1991 Coll. on Creation of National Park Šumava and determination of its protection conditions created NP Šumava in 1991 – just in time of bark beetle outbreak. According this Order: “*Mission of national park is preserving and improvement of its natural environment, especially protection or renewal of spontaneous course and conducting of natural system functions, strict protection wildlife and plants, preservation of typical appearance of landscape, fulfilling of scientific and educational aims, as well as utilisation of the national park territory to tourism and recreation, which does not deteriorate natural environment*”. It is possible consider the “scientific aims” but there is nothing on “*investigation of processes*” in the 163/1991 Coll. It seems that above mention proposal for NFP II – on the “*investigation of processes*”, which is not included in respective legislation up to data, should represent a way of its legalisation and finally could legitimise the irresponsible trial to create natural forest (or park according to the IUCN guidelines) in short term period using the complete destruction of forests including typical appearance of landscape. Now the NP administration has “*restoration of natural forest on localities of bark beetle calamity with regard to auto-regulation potential*” as the first target

Some discrepancies and illogic bindings exists in forest, resp. water management legislation, with laws that have reprehend themselves as an aim conservation of nature, conservation of landscape and protection of environment. Also an important item is mentioned, whether interests of nature protection (conservation for nature itself = *l'art-pour-l'art*) in cultural landscape are every time really in balance with interests of environment protection. It is an important question because our country (including national parks cases) usually represents cultural landscape part of which are also human beings.

The concrete case of the National Park Šumava (Bohemian Forest) shows the illogic that is „methodology of economic assessment of natural processes” prepared on the order of the Ministry of Environment in the frame of a grant system. According to this methodology the same offence against the Forest Law in production forests - from the view point of environmentalism advocates frequently incomprehensible (bark-beetle usually excludes Norway spruce, which is generally considered as unacceptable tree species and openings should be planted by broadleaves) - could be the basis for sanction till gross misdemeanour, while in forests of protected territory (Šumava National Park case) it is not regarded nor as jeopardy, nor as damage of the environment. Unfortunately unclear and indefinable notions exist, which within their incidence can lead to the infringing of proprietary and civil law.

At the same time also the Landscape Protected Area Šumava belongs among Protected Areas of Natural Water Storage (CHOPAV), where the extent of forests lots may be reduced maximally on 500 ha comparing to state with the year in which the appropriate CHOPAV was declared. It is indicated, that along the borders with Austria and Bavaria is ca. 30 km<sup>2</sup> of clearings - it is vast area destruction of forests, which are important from hydrologic point of view. It can be considered as anthropogenic destruction because as a matter of fact according to the Act 114/1992 Coll. Without responsibility for infringing of Forest Act law on waters, in spite of the fact that they also include standpoint of landscape conservation and man in his environment. It is sure that economic exploitation of landscape, agricultural or forestry one, is impossible to stop even if it is in CHOPAV or Landscape Protected Areas but in particular here all stakeholders should be very responsible.

The protection here, only for so-called „protection" of nature, is in evident discrepancy with the Act on Protection of Environment No. 17/1991 Coll. which considers human beings in the landscape (§ 2: „Environment includes everything what create natural conditions of organisms existence inclusive man and create preconditions of their further development".) and should perhaps be superior re. Act No. 114/1992 Coll. (when this law is at the same time superior to forest and water laws). Thus conflict of interests between various policies involving environment and forestry (as well as other sectors) are unfortunately continuing.

### **Forest owners view**

The right of forest owner to be informed in person and writing on the proposal of Special Protected Territory creation was included in the law. The owner should be in a position to apply his/her objections to such a proposal in terms of administrative procedure. The law makes it possible to conclude contracting protection of territories, which are enlisted among European important sites and till now they have not a statute of protected territory. In reality the conclusion of such contracting protection is almost unreal. Forest owners who have an interest on contracts for their lots are not allowed to settle the contract if only one single owner has even though a petty part of the lot in the area of the European Important Site (ELV) according the Ministry of Environment guidelines. Also a term for solution of problems provided by the law for one year since hand over the contracting protection application was quite insufficient.

Amendment of the law also declares right of the owner on financial compensation of detriment (§ 58). Nevertheless applying public notice of 2006 and methodological instructions of the Ministry of Environment depreciates declared forest owner right. Two years there was no applying public notice to the law. It was published in 2006 and in spite the fact that mistakes in it were known already before its approving and owners were assured on its instantaneous updating, the Ministry of Environment sent only on the end of 2008 written communication that public notice is mistaken in some parts and there is a need to amend it. Planned amount of compensations vouchsafed is realised perhaps entirely of 5 %. Algorithm calculations of majority of kinds compensations are not in accord with real detriment and they are indeed lower. Administrative demands of compensations recovering are needlessly high. The amount of compensations is usually declared as questionable, compensations are shortened and they are discharged with various protractions taking sometimes several years.

The Ministry of Environment i.a. asserts that title to compensation fading in the event of transmission of proprietorship and in the event of inheritance! Thus the current practice of nature conservation in the Czech Republic is sometimes and/or largely provided at expenses of land owners, inclusive private and municipal ones. Also the concept of binding standpoint to

some activities in legal regulations is not too clear. It concerns particularly the proposal of Forest Management Plan (LHP) and afforestation non-forest land.

Plans of the Special Protected Areas (SPAs = ZCHU) care are not binding for a lot of owners. They are, however, binding for processing of Forest Management Plans (LHP) and Forest Management Guidelines (LHO). Authorities of Nature Protection State Administration qualifies consonant standpoint to Plans or Guidelines by inclusion of the plan of SPAs care into the Forest Management Plans or Management Guidelines. In this way plans of SPAs care will become binding for owner and as it is considered as their own tool, they are without pretention to compensation of arose detriment. Ministry of Environment then declares that Plan/Guideline is a tool of forest owner and that requirements demanded from the nature conservation viewpoint the owner put to his Plan himself, on his own accord. Hence it does not mean any detriment. Authorities of nature conservation so envisage statute of binding standpoint like authority without any stint interference with quoted projects and demand adjustment, which are not based on expert warranty bearing upon the object considered. Discussion on amendment of Act No. 114/92 Coll. proceed at present. Possibly because of the Ministry of Environment was not compliant or able to explain to the EU that Forest Management Plans are not projects. A part of this discussion is also classification of Forest Management Plans influence on European Important Sites.

### **Instead of closing**

Still one more fact has to be mentioned – it is already 6 years on January 2009 when so-called 2<sup>nd</sup> phase of public administration reform were finished. District offices was abolished and most of their authorities and duties were transferred to so-called “municipalities with enlarged activity (ORP)” or to regional offices according the Act No. 320/2002 Coll. Up to data the consequence was i. a. lost of forestry skilled people and lowering of the enforcement standard of state administration in forestry. Current exam of “special skilled activity” is surely not enough if forest education and practice is not required for the position of officer responsible for forest administration. Regular seminars are also insufficient and, last but not least, state forest administration is still understand as a repressive body, which is not a partner and advisor for forest owner.

On the beginning of this change was an idea to save money. Unfortunately the number of the ORP was quite high (205) and thus, to save money and show that the system is good, it was necessary to join more agendas for one employee and substitutes originally existed in district disappeared. Foresters of various levels know that the current system is less effective than system of previous districts – not speaking about quality of services offered.

The worst problem of this system is that self-governing organs are in fact employers of those officers who should defend interests of forests and forest owners. Municipal representatives or deputies can have quite another priorities than forests, sometimes under the pressure of lobbying. It is also one of the reasons of low enforcement of a law and therefore there are quite frequent ideas that current system of public administration must be changed.

Also in this connection there is a special Act on State Forest Ownership Management under preparation – as a matter-of-fact the scheme has to be prepared by December 31, 2009. Currently the Forests of the Czech Republic deals with state forests according Act No. 77/1997 Coll. on State Ownership. There is a promise that the final proposal will be offered to the professional public for discussion. A debate is still whether this law should cover forests of all state forest administrators (e. g. including forests under the administration of National Parks) or if it should concern only current Forests of the Czech Republic State Enterprise. As

regards of this step it still must be considered that no one government since the beginning of 90ties did not finalise the process of restitution. Ownership of church represents about 170,000 ha of forests and further forests from historical proprietorship of municipalities have to be returned back, too.

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# **Economic information system (EIS) as a tool for the solution of conflicts between forest owners and nature conservation authorities**

*Jaromír Vašíček \**

## **Abstract**

Human society expects forest systems in the cultural landscape to perform three groups of functions: economic, ecological and social. Forests in the cultural landscape represent as a rule the most conserved natural communities of plants and animals. Countries set up legislative regulations through which they endeavour to preserve this natural wealth for future generations.

The practical application of these regulations brings numerous conflicts between forest owners and nature conservation bodies. The disputes primarily concern the restriction of forest management resulting in the detriment incurred and/or production loss. The core of conflicts is the amount of damages and/or forest production losses, and legal actions concerning the amount of possible damage and loss which are frequent. Courts usually face difficulties in making the decision as their decision-making normally dwells on expert opinions, which may be contradictory.

The Czech Statistical Office currently gathers basic data on forestry in order to assess macro-economic characteristics of the sector. However, the file of basic forest data being not detailed enough; it cannot serve for the solution of the above-mentioned problems. Inspiration for developing a tool, which would help to resolve the conflicts in question, is the existing Farm Accountancy Data Network (FADN)<sup>5)</sup> system established by EU legislation (by Council Regulation No 79/65)<sup>1)</sup> which is used to monitor economic development in agriculture. The monitoring serves for the regulation of common agricultural policy. In the past years, the Forest Management Institute Brandýs nad Labem (FMI) tested in practice as a pilot project the collection of forestry microeconomic data, which provided records useful in the solution of the problems concerned. The project proceeded in the form of a voluntary inquiry and interrogators who were FMI workers visited individual respondents. They filled together with them in a unified manner digital form in a software programme created especially for this purpose.

The paper presents results from this pilot project and propositions for its practical use. The most appropriate form of its introduction in practical life is considered its legislative anchoring in the Act on the National Statistical Service.

*Keywords:* Forestry economics, economic statistics, information system, subsidies and compensations.

## **Introductory remarks**

The economic situation of forest owners has worsened as compared with the 1990s. In question is not only a mere market fluctuation but also a continual trend that is fundamentally worsening at the present due to the world financial crisis. Reasons are multiple. In the first place, we have to mention the exhaustion of comparative advantages in the Czech Republic, which consisted in timber production at Czech costs and in the sales of forest products at European prices. At present, the economic problems of forest owners combine the

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unfavourable surplus of timber on the market with disastrous windstorms and hence low timber prices.

Apart from the growing price of human labour and growing prices for energy there are other additional costs, for example, for ecological certification, administrative procedures concerning the environment or costs of better social conditions for employees, to mention just some. The costs are a not negligible factor for the observance of the applicable forest legislation. The Czech Forest Law<sup>6)</sup>, which is more stringent as compared with other forest laws in Europe, requests from the forest owners to use low-impact and hence more costly forest management procedures. An example can be the limited clear-cut size and the prescribed tree species composition in reforestation.

Although the timber processing industry in our country is rapidly developing, there are still large amounts of exported of raw timber or wood with low value added. Forestry and wood processing industries represent a sector focused on exports. Due to the currently decreasing strength of the Czech crown, the fact partly compensates for the economic problems of exporters but the compensation only little reflects into the viability of forest owners.

Another relatively essential circumstance limiting forest owners in their economic activities is the Law on nature conservation and landscape protection. Approximately 30% of forests in the Czech territory are subject to some conservation regimes stipulated by the Law on nature conservation and landscape protection.<sup>11)</sup> The limitations bring a financial detriment, too, and in some cases even direct losses on forest management by forest owners. Key provisions concerning proprietary rights are included in *Article 11 of the Declaration of Fundamental Rights and Freedoms*<sup>12)</sup>, which is an inseparable part of the Czech Republic Constitution and reads as follows:

- (1) Everybody has the right to own property. The proprietary right of all owners has the identical legal content and protection. Inheritance is guaranteed.
- (2) The Law stipulates which property required for the assurance of needs of the whole society, development of national economy and public interest may be in the ownership of the state, municipality or established legal entities; moreover, the Law may stipulate that certain things can be only in the possessions of citizens or legal entities residing in the Czech Republic.
- (3) Ownership is binding. It must not be misused to the detriment of rights of others or in contradiction with public interests protected by law. Its execution must not harm human health, nature and environment beyond measure stipulated by the law.
- (4) *Expropriation or enforced restriction of proprietary right is possible in public interest, based on the law and against compensation.*
- (5) Taxes and charges can be imposed only pursuant to law.

The core of provision is embedded in paragraph No. 4 pointing out that restriction of property rights is possible only on basis of an act, in the public interest and for compensation.

### **Current situation**

It logically follows from the above text that forest owners should receive a corresponding compensation for possible losses and direct damages incurred in forest management due to conservation reasons. The compensation is established through expert opinions related to concrete cases. A large-scale and detailed survey of economic data is missing so far. Statistical data on forestry and forest management are currently provided in the following two



lines that are more or less mutually independent. Detailed economic information is important when deciding on the amount of State and County forest management subsidies to forest owners. State and County assess subsidies without deeper differentiation.

The first line is represented by the Les 8-01 report issued by the Czech Statistical Office (CSO) in order to periodically (once a year) identify industrial indicators for the sector of forestry. These are normally presented in technical units. Firms liable to provide the data are those with prevailing forest activities and entities having under management forest areas larger than 200 hectares. The data serve to establish macroeconomic parameters in forestry, which are then projected into macroeconomic parameters of the development of the national economy as a whole.

Departmental reports provided by the Ministry of Agriculture (MZe) – Les (MZe) 1-01 and Les (MZe) 2-01 represent the second line. The two compilations contain industrial data, which make them more detailed in individual sections than the reports provided by the Czech Statistical Office. Both compilations have an annual period of surveying:

- Les (MZe) 1-01 is intended for the same group of respondent firms as Les 9-01, i.e. for entities managing forest properties over 200 ha. Les (MZe) 1-01 is a report on the forest management of respondent entities in the given year both in technical units and in the structure of costs and yields.
- Les (MZe) 2-01 is intended for corporations and limited liability companies with predominant forest activities – namely contractors supplying works to forest owners within the framework of supply contracts. Les (MZe) 2-01 is annual report informing about costs and yields in forestry. Elaboration of the above reports is obligatory for the contacted firms.

Data from the reports, processed and converted to values for the whole Czech Republic, are published annually in the Report on the state of forest and forestry<sup>7)</sup>, the so called Green Report, and serve as basic ground-works for forest policy makers, experts and the general public. However, these data are not much detailed and not applicable for the solution of local problems connected with the amount of damage due to the restricted forest management claimed in individual or collective administrative acts.

The deficiency of detailed economic information for the sector of forestry showed very urgently in the preparation of the Programme for rural development. It was for example necessary to propose tariff rates for partial forest operations, which was a very difficult task without sufficiently detailed data. We can also see conflicts rising between forest owners and nature conservation authorities because detailed data for the forest owners and nature conservation bodies to rely upon are still missing and data surveyed by the statistical office are too coarse and of not sufficiently informative value.

### **Comparison with agriculture**

The data-providing information on the system<sup>9)</sup> obligatory in agriculture is FADN<sup>4)</sup> (Farm Accountancy Data Network). Similar information systems in agriculture exist in other EU member countries, too. Czech forestry does not have such a system at present but its building up will be necessary so that forest owners and entrepreneurs in forestry can claim their requirements for subventions and provide proper arguments.

It would be a mistake to polish the economic parameters of individual forest owners at the expense of forest condition. In this case, it would mean to breach the well known "generation

commitment" in forestry, which imposes an obligation on us to pass our forests to coming generations in a better condition than we received them from the past generations.

The intention of Forest Management Institute (FMI) was to develop a new economic information system that would encompass precise, statistically tested data about the economic situation of forest owners and other entities engaged in forestry as these are crucial for choosing an optimum approach to the policy of subsidies (both from national and European sources) and compensation and for defending forestry interests.

The Economic Commission of the Czech Academy of Agricultural Sciences, Department of Forestry, fostered the development of such a system.<sup>10)</sup> In 2005, professional circles discussed the system in other sessions at which it was supported and recommended for implementation. During the following year negotiations and consultations took place and the system's data structure was prepared. The work culminated in a pilot project in 2006. The system was tested as the pilot project in 2008.

### **Legal basis of the system**

Unlike in the sector of agriculture, the use of such a system is not anchored in the Czech forest legislation. The statistical monitoring and the assessment of economic indicators is regulated by the Act No. 89/1995<sup>2)</sup> Coll. on the State Statistical Service and by some other legal regulations (Act No. 2/1969 Coll. as amended, by which the spheres of activity are defined for individual state departments). The whole system will be continually subject to provisions of the above-mentioned Act on the state statistical service, namely in the field of data collection coordination and protection.

After negotiations with the State Statistical Service representatives, the best solution appears in running the enquiry as a system of statistical surveying outside the Programme of statistical surveys (§ 7, 10 and 11 of the Act No 89/1995 Coll. on the State Statistical Service<sup>2)</sup>). The statistical surveying imposes high demands on the protection of information flows and collected data in agreement with the legislation in force, particularly with the Act No. 89/1995 Coll. on the State Statistical Service. All FMI employees participating in the collection and assessment of data will be bound by the vow of silence pursuant to § 16 of the Act no. 89/1995 Coll.<sup>2)</sup>

### **Purpose and objectives of the system**

The following criteria have been set in assessing the plan and in the development of the information system that served as guidelines for the implementation of the proposal, featuring at the same time individual objectives of the proposal:

- To improve the hitherto level of surveying in the field of forestry. The current level of data on economic processes in forestry is not sufficiently detailed.
- To acquire a general view on the financial needs of individual processes in forestry. The current state does not provide enough information about the financial needs of individual processes. Only with sufficient knowledge of the phases of forest operations it is possible to make objective decisions and to set criteria, among other things in the policy of *subsidies* and in the elaboration of conceptual documents.
- To provide for the application of the gained knowledge in the decision-making of public authorities. The acquired and analysed data can be used as ground-works in the creation of conceptual decisions and *subvention* procedures. They will constitute a supporting pillar in the decision-making process and produce concrete characteristics

of the economic situation in forestry within the framework of the surveyed structure. The elaboration of analyses should be based on topical and exact data in a sufficiently detailed structure, namely in the field of European subvention programmes.

- To facilitate a retroactive comparison of outputs with the general evaluation to individual respondents. The detailed analysis of data should not serve only to public authorities but also to individual respondents. Thus, a comparison will be possible of the analyses with the general output, which can be provided as a feedback to the respective firms involved.
- To provide independent and detailed information to forest owners to claim compensations for restricted management as a consequence of individual and collective administrative acts of public authorities.

### **Role of the Forest Management Institute Brandýs nad Labem (FMI)**

With respect to a relatively complex structure of the questionnaires, we put maximum emphasis on the least possible load on respondents. Therefore, we suggested that the data would be gathered by means of interrogators from amongst the FMI staff, who will do the filling of the structure together with the respondent and resolve on the spot possible obscurities and problems (which are expected to be numerous considering the variability of our sector).

In designing the procedure of work FMI keeps to the Austrian experience with a similar system and partly also to FADN. The collection of data is expected to take place in summer, after the financial statement for the current year, i.e. in the months of July and August. Firms participating in the survey will be provided a retrogressive analysis for comparison of their data with aggregated information for the whole Czech Republic.

In order to ensure the economic information system of high quality, FMI is capable of covering the entire territory of the Czech Republic with a network of interrogators from amongst the staff of its individual subsidiaries. FMI staff knows local conditions, which is a clear advantage in obtaining economic information.

The unified project methodology and processing will guarantee a high quality of project outputs.

The availability of related information from the environment of the FMI data warehouse will enable further analyses and comparisons in the entire range of requirements of our sector. Technical support is guaranteed by the high standard of information technologies that are used in data administration already in the current operations. Outputs and analyses will be presented only in aggregated form. This is why any data misuse or information leakages are not to be feared.<sup>3)</sup>

### **Voluntariness is the main principle**

The whole project rests mainly on cooperation and willingness because the provision of data will be voluntary. The entrance of forest owners and forest entrepreneurs into the system is entirely up to their own decision. Although the entry cannot be enforced, all participants should understand that their contribution would reflect in outputs that are more refined and in more detailed economic analyses and immediate information useful to them.

### Pilot project 2008 selection plan

Size of forest area	Number of respondents	%	Whole size of forest area (ha)	Average area per respondent (ha)
To 200 ha	60	37%	5920	99
200 - 1000 ha	49	30%	24 580	502
Ower 1000 ha	52	32%	723 176	13 907
<b>Total</b>	161		753 676	4 681

### Samples of results:

The main cost shares forestry activities	To 200 ha	Over 200 ha	Total average
Silviculture	53,2 %	34,8 %	41,6 %
Harvesting	44,9 %	46,9 %	46,1 %
Other costs	2,0 %	18,3 %	12,2 %

Indicator	Unit of measure	To 200 ha	Over 200 ha	Total average
Costs of establishing of the new forest	CZK/ 1 ha	70 199	77 300	74 965
Costs of protect young stands	CZK/1 ha	7 479	5 661	6 315
Cost of cleaning	CZK/1 ha	5 275	4 919	5 000
Costs of forest protection against harmful agents	CZK/1 ha	430	510	480
Total costs of silviculture	CZK/1 ha	1 263	1 358	1 323
Total cost of harvesting	CZK/1 m <sup>3</sup>	189	166	174
Cost of skidding	CZK/1 m <sup>3</sup>	138	149	145
Costs of timber hauling	CZK/1 m <sup>3</sup>	90	108	105

## Conclusion

The submitted proposal for the development of an Economic Information System in forestry of the Czech Republic that would be implemented by FMI Brandýs nad Labem as an independent organization is currently discussed at the Ministry of Agriculture. The current development of forest economics, which is considerably affected by the world financial crisis, requires the realization of such a system. The pilot project confirmed the high quality and the representativeness of results that will find application in channelling subventions and compensations into forestry. Moreover, the results of the pilot project showed that the system could become a tool for the solution of conflicts between the forest owners and the authorities of nature conservation.

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- 2) The Act No 89/1995 Coll., on the state statistical service, in the wording of the Act No 220/2000 coll. and the Act No 411/2000 Coll.
- 3) The Act No 101/2000 Coll., on protection of the personal data and on amendments to some related acts, in the wording of the Act No 227/2000 Coll., the Act No 177/2001 Coll., the Act 450/2001 Coll., the Act No 107/2002 Coll., the Act 309/2002 Coll., the Act 310/2002 Coll., and the Act No 517/2002 Coll.
- 4) The Degree of the Ministry of Agriculture No 173/2004 Coll., on the manner and the extent of information required by the Liaison Agency FADN CZ
- 5) In the European Union has created a system of FADN in 1965, which was established by Council Regulation No 79/56 created the legal basis for the organisation of the network. This site is governed by a number of specific EU directives. The European Commission has decided to establish a system of FADN, because it sought a tool capable of providing the information necessary for the management of the CAP (Common Agricultural Policy-CAP). Wanted and needed to monitor agricultural situation not only with using aggregated data (reported as part of the General farm account), but also as a real situation of farmers working on their farms, as a concrete reality in the context of agricultural land in member countries. Thus, in the framework of official regulation form FADN set these two targets: annual determination of incomes from farmhouses and business analysis of agricultural farms. On the basis of the abovementioned regulation the primary purpose of FADN is to provide data which should serve as a basis for drawing up annual reports on the State of agriculture in the EU allowing the evaluation of CAP impacts.
- 6) The Act No 289/1995 Coll., on forests, modifying and amending certain acts ( the Forest Act)

- 7) Reports on the state of forests and forestry Ministry of Agriculture, Volumes 1995 – 2008.
- 8) [www.fadn.cz](http://www.fadn.cz)
- 9) The FADN selection plan for the Czech Republic (In 2008 include the FADN farm sample total 1631 involved, 569 of legal persons and natural persons 1062. The total area of agricultural land survey respondents is 957,274 ha, representing approximately 27 % of total cultivated agricultural land in the Czech Republic).
- 10) The Economic Commission of the Czech Academy of Agricultural Sciences, Department of Forestry, meeting on 19. October 2004.
- 11) The Act No 114/1992 Coll., on the protection of nature and landscape
- 12) The Act No 1/1993 Coll., Constitution of the Czech Republic and Charter of fundamental rights and freedoms.

# Czech forest and water related legislation after the 5<sup>th</sup> Ministerial Conference on the Protection of Forests in Europe 2007

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## **Abstract**

The paper summarises important points of Czech forestry legislation particularly in relation to the last recommendations of the Pan-European process, namely to Resolution 2 of the 5<sup>th</sup> Warsaw MCPFE related to water, which is inevitable for all life including forests and human society. Ideas referring forest and environmental laws not only since 2007 but also some older legislative measures and forestry activities are mentioned in this context. The current respective legislation, parts of the Forest Act, as a tool for sustainable forest and water management are described.

Forests as well as waters represent important elements of the landscape and both natural resources have very probably much to do with climate change. Furthermore forests and water are closely linked but unfortunately they are only rarely managed in really integrated way. The recommendation of the Czech NFP II is mentions: "to develop coherence between forest and water management policies". Finally, there are pointed out some ideas to improve economical sustainability of forestry and the present status of compensation of forest owners for restrictions due to the public interests.

## **Introduction**

Forests and water for sure pertain to each other as a part of the landscape and have always been reflected by human society; research has largely focused on the close relation to forests and erosion control. Multifunctional forest and watershed management and erosion control should be practiced and considered on an international scale because sustainable forest management, particularly of mountainous areas, provides the basis of life for millions of people in Europe. Trees in our forests, as well as an urban environment, are under increasing pressure, as they are drying out or even becoming waterlogged. Through man's activities, trees are damaged and become vulnerable to all kinds of attack. To protect trees in a sustainable manner, up-to-date knowledge and reliable data on our tree stock is needed. Besides this specific knowledge, research tools and reliable equipment are essential.

Many international meetings stressed the importance of water particularly in relation with forests. The UN ECE Timber Branch in Geneva organised together with the Secretariat of the Water Convention an international seminar „Environmental services and funding of protection and sustainable usage of ecosystems" with emphasis especially on water cycles throughout the landscape. The issue of financing of services offered by forest ecosystems in relation of forest and water was discussed. Thus, thinking on fair classification and valuation of non-wood benefits, forest functions or forest services arose again. It was not unexpected that the 5<sup>th</sup> Ministerial Conference on Protection of Forests in Europe held in Warsaw in 2007 pointed out these important elements in its final declaration and in one of its two resolutions.

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## **Trees and water**

Forests as well as waters are definitely important elements of the landscape and both of them are in connection with the problem of possible climate change. This statement underlines the fact that forests and water are closely linked but unfortunately they are rarely managed (probably not only in our country) in an integrated way. The recommendation of the NFP II: "to develop coherence between forest and water management policies" should be stressed.

Water has often been mentioned in connection with floods appearing as the result of extreme precipitation during the last years. This is a phenomenon which is beginning to appear more frequently in our climate zone where western currents prevail. Water as one of the important landscape-forming factors underwent a complicated period; technical solutions in the manner of "we shall command the wind and rain" aroused delusions that man is capable of dominating nature. During the 1997 floods in Prague it was announced that Prague would never again suffer from floods – and only a few years later we were cured of our arrogance and had to humbly admit that it is beyond our technological possibilities to influence extreme natural phenomena. This costly paid knowledge should help us to prevent the worst from happening and our mistakes to be repeated. Nevertheless flood events are part of the hydrological cycle in nature. Torrents difficult to control and with small watersheds will always be a source of problems during floods. The creation of a flood wave on torrents is fast with a rapid flood tide, and no flood protection measures can be organised within such short time.

Unfortunately, the existing legislation makes the implementation of flood and erosion protection measures much more difficult and complicated. A number of hard-core environmentalists who have created "dogmas of nature protection and landscape conservation" thrust an uncompromising way contradictory to the protection of the cultural landscape. One-sided interests impede the protection of people, their property and constructions that are part of the cultural landscape for generations. It is sad that they are able to tie themselves to trees to stop their felling in order to thrust their dogmas forward, but they are not able to come with a specific proposal how to secure the protection of sustainable conditions of the cultural landscape as safe environment for man and other creatures.

The torrent specialists have always supported nature protection and forest revitalisation. After many years of experience with torrent control it is sure that permanent management of the watercourse is needed not only in the area where water streams through a forest but also in its entire basin. Hopefully some new specialists interested in torrent control will come as well as reasonable environmentalists protecting the environment of the cultural landscape and willing to discuss and agree on compromise solutions. Such people would manage to conserve a healthy cultural landscape for present and future generations.

## **Czech forestry legislation and the 5<sup>th</sup> Warsaw MCPFE Resolution 2**

Nothing too substantial happened in the forestry / environmental legislation since the last symposium of IUFRO 6.13.00 in Sarajevo (2008). There were only some amendments of laws concerning forestry up to date. More important is that an amendment of the Act on Protection of Nature and Landscape is under preparation. There are persisting problems with:

- low enforcement of law;
- overlapping of so-called "double-lined" responsibility for forestry (Ministry of Agriculture and Ministry of Environment) as well as water management;



- and bad image of forestry and lack of forestry communication and P. R. and consequently with a weakening of the forestry sector's position.

Currently a new version of the National Forest Programme II is under discussion, which will hopefully become a basis for new forest and game keeping/hunting legislation. There is a hope that a new design of the Forest Act will include topics (and even chapters of the new law) related to forest and water according to the proposed measures of NFP II discussions. The recommendation of more international forestry sessions says: *The executive authority is connected with the public participation, it is transparent and responsible, management and decision-making processes are decentralised and partnership is improving.* Czech responsible institutions should probably follow this, too.

As it seems that water will play a more and more important role in the life of the forests and of the whole society in coming years. The following lines are more or less related to Resolution 2 of the 5<sup>th</sup> Warsaw MCPFE. Its documents includes i. a. the following wording: *European forests have a vital role to play, as they can improve and benefit the quality of life and in particular contribute to climate change mitigation, energy supply and water protection. Declaration also stresses the role of forests for water quality and quantity and for alleviating floods and droughts, as well as noting impacts of climate change on forest and water as well as recognizes the importance of the full economic value of the multiple services provided by forests and the need to have adequate means and measures to secure these services. Forests and their sustainable management have to play an active role in maintaining and enhancing water quality and quantity and in mitigating natural hazards, such as floods, droughts, avalanches, land slides as well as in combating soil erosion and desertification. It is necessary:*

- *to establish coherence between policies on forest and water resources and coordinate sustainable forest management and integrated water resources management,*
- *to develop and implement innovative tools for securing water-related services provided by forests, such as payments for ecosystem services (PES - payments for ecosystem services - contractual transactions between buyers and sellers for ecosystem services or land use/management practices likely to secure those services as it was recommended by UNECE Water Convention -“Recommendations on Payments for ecosystem services in Integrated Water Resources Management”,*
- *to promote national forest programmes or equivalents for cross-sectoral coordination.*

The Signatory States i.a. are committed to incorporate the economic valuation of water-related forest services into relevant policies and strategies on forests and water.

### **A bit of historical survey**

Forest services assuring such a level of functional forest effects that would correspond to concrete needs of human society at the given place and at a given time were long ago acknowledged as necessary in Europe. France of the 19<sup>th</sup> century and its torrent control service or the Austro-Hungarian Imperial Act No. 117/1884, stipulating the service for the territory of the today's Czech Republic, should be mentioned. The forest service torrent control has been existing in the Czech Republic until now, documenting not only our ancestors' understanding of public benefits but also the variable position of forest services within the production forestry sector in the course of time. An analysis of forest acts Nos. 116/1960, 61/1977 and 289/1995 Coll., shows the following sequence of the position of the service: 1) rational (1960), 2) none at all (1977), and 3) half-hearted (1995) – in sharp contrast

to the effective forestry legislation in countries of the service origin (France and Austria). Nevertheless, forestry is historically responsible for small water courses and torrent control.

Forest functions as positive assets sufficed for the satisfaction of public needs for generations. The permanent spontaneous effects of the forest – just in relation to water – were possible thanks to the fact that since the 19<sup>th</sup> century the European forestry legislation has provided for permanent existence of the forest in cultural landscapes. And forest owners managed their forests in their own interest in sustainable manner as well as for continuous and well-balanced gains; thus forests were preserved together with their functions.

But spontaneous functions could not accommodate alone the increasing public demands for particular positive effects. Therefore the state power received authorisation to order forest owners to accept restrictions of their forest management against compensation for losses for the sake of public interest in offering “compensation of increased cost”. A certain subsidy policy was developed in this context but it does not work too much. In this connection it must be considered that about 58 % of all Czech forests represent an area with the need for targeted non-wood-producing forestry activities of an environmental or social nature; forests important from the water management point of view represent about one fourth of the forests.

### **Czech legislation related to forest and water**

The Ministry of Agriculture is responsible for both forests and water management but there is the Ministry of Environment yet, which has also part of the responsibilities for both resources (double-lining administration makes some problems sometimes). Water quantity is very important due to the fact that all water gets on the Czech territory only in form of precipitation.

The protection of water resources and of water quality depending on its use is part of water resources management. Surface water is fundamentally affected by spot pollution (towns, communities, industry) and in area one (material losses, soil erosion, atmospheric deposition). In compliance with the Act 254/2001 Coll. on Waters, the Czech Hydro-meteorological Institute is in charge of monitoring the quality of groundwater and surface water. Other institutions and streams administrators provide some purposeful monitoring as well. Protected Areas of Natural Groundwater Accumulation (CHOPAV) were proclaimed by a Decree of Government to protecting groundwater at the end of the 1970ies.

It means that there is a special law referring to water but as regards of water in the valid Forest Act No. 289/1995 Coll., only Article 35 "Reclamation and Torrent Control in Forests" deals with it and this is not enough. Permanent management of the watercourse is needed not only in the area where it passes through a forest but also in its entire basin. This activity as a public beneficial service of state administration to protect cultural landscape against water flooding and care of torrent catchment areas has been the exact, rationally formed tasks mentioned in legislation since 1960 (Forest Act No. 166/1960 Coll.) – see above. The Forest Act No. 61/1977 Coll. did not include the torrent service tasks and thereby this service lost its legal basis. Because the forestry sector was embraced as a productive branch of timber production, the appropriate amendment was not applied and its economic structure was not changed for activities having the character of useful public services in the time of central planned economy.

And finally – during the last years there has been a lack of funding for "small water courses" (totally 60,463.92 km under the responsibility of Forest Section) comparing to the Water Section which is responsible for rivers etc. This is somehow standable because of the 1997,

2002 and 2006 floods but on the other hand the prevention in the upper parts of river courses were postponed or suspended at all. Thanks to long-term research there are experiences with:

- Characteristics of the basic types of forest functions in conservation of water regimen and cultural landscape;
- Characteristics of the fundamental types of water management functions;
- Characteristics of the forest stands types important from the water management point of view and their dislocation in the country (forests in the protective zones of water sources for water supply with complex water functions cover 256 000 ha;
- 10 % and important mountain forests create 420 000 ha - 16 % of total forest area.

There are known technologies of multipurpose forest management in protective zones of water sources as well as knowledge on expenses for covering the functions that are important from the standpoint of water management in the country. This means can provide sufficient protection of water sources and adequate protection of cultural landscape in foothills against erosion and floods. Attention was paid to the economic parameters of silvicultural services in the frame of water management forest functions. Although the Czech Republic has concepts of forest functions for the society well scientifically grounded, perhaps on the best level as for the relationship between forest and water, there is not yet the corresponding policy and legal instruments formulated on its basis for preservation, improvement or development of particular functions of the forest. The conclusions drawn by the science still remain on the level of an unfulfilled wish. Those responsible for forests did not create conditions for implementation of important research results into forestry practice.

Forestry failed to care for run on services in the area of forest - water relation. There were not created appropriate political and legislative conditions of existence for such services in the transformation period in the beginning of 90ties. Unfortunately the tragic events - floods of 1997 and 2002 - were not used to improve this situation.

### **Services of Forest Ecosystems and Forestry Services**

The forestry legislation of the Czech Republic has introduced the term “non-wood-producing forest functions“. Pursuant to the Act in addition to the production of material commodities tradable on the market there is another type of benefits through which the existence of forest is beneficial to human society. The important non-wood-producing functions of the forest include benefits, i.e. positive effects of the forest on water quality, levelling the runoff regime extremes of small streams, especially mountain torrents, and water conditions of the cultural landscape including possible mitigation of flood and erosion effects.

This of course is not a matter of the ordered restriction of forest use addressed to forest owners – this *restriction* of exploitation was usually changed into further human activity in the context of forest management and exploitation – i.e. charged to the forestry service. Such service as a *forestry service* was contemplated in the Czech Republic towards the end of 1970ies. In 1979 the difference in the political-economic nature of services was defined between "spontaneous effects of the forest" (spontaneous non-wood-producing functions of the forest, forest ecosystem functions) and targeted functional forest management measures such as forest management services providing the controlled non-wood-producing functions of the forest.

It was one of the periods of culminating public interest in forest and water issues. Government Resolution No. 121/1975 placed a duty upon Ministry of Forests and Water Management to

“keep and increase the retention ability of forests and cultivate *forests* important from the water management point of view in compliance with the needs of water management“.The forestry service was to provide for two key water management functions (detention function in mountain forests and complex functions in the protective zones of water sources). Actual services were not established because there was no political will to create legislative instruments for their functioning as a new economic component of forestry.

The status has not been changed even after the political transformation in 1989. The issue therefore remains an urgent subject for consideration especially by the state authorities responsible for state forest policy or the founders of the Forests of the Czech Republic (LČR) State Enterprise. It has nearly been forgotten that - while the Act of the Czech Republic No. 77/1997 Coll., contained an obligation to emphasise satisfaction of public interest in the areas of their respective business activities as the purpose of this type of ownership in the market system of a democratic society already in the period of our approximation to the European Union – the sense of this measure remained without any response on the part of forest institutions and forest management. State-owned forests (more than half of the forest-land in the country) are managed by the mentioned enterprise LČR. The sense of the existence of state ownership of the forests has, however, not been legally and concretely declared, neither what is the public interest in the forests nor what the government should support in the public interest.

PESs in fact are not addressed up to date in the Czech forest strategy and there is only a small reference to this matter in the Forest Act. Such services in fact do not exist in the Czech Republic. The reason is that, again, in the forestry sector there has not been up to date a political will:

- to acknowledge services as an indisputable part of silvicultural activities in terms of an economic system of forestry,
- to deal with internalisation of forest services in competent state agencies,
- to create the political presumptions and consequently the legal background for such services in forest legislation.

The valid Forest Act No. 289/1995 Coll. knows only "non-productive functions" (§ 2b) and forests of special categories, however, in § 38 on purpose-made forests it considers it as a duty to "suffer limitation of management of such forest stands". It covers only the title of financial burden rising to proprietors from "limitation of forests management". This means again that "forest management" is considered only as a production of marketed goods or substances and not as a silvicultural service. Law is therefore far away from the conception of services as components of forest estates with economic exploitation in the public interest.

Nevertheless National Forest Programme II (for the period up to 2013) includes some ideas re. PES: It underlines "to develop coherence between forest and water management policies, and coordination between sustainable forest management and integrated management of water resources, as well as developing innovation tools such as Payment for Ecosystem Services or other measures that ensure that water management services are provided by forests."

A number of examples of outputs which have been developed as a preparation for the integration (internalisation) of services into the forest management structures may be mentioned (unfortunately never officially implemented):

- Characterisation of primary forest functions in water conservation, in the protection of water regime and cultural landscape: hydrologic functions (spontaneous, no-cost

effects of the forest) and water management functions (controlled, with effects purposefully enhanced or induced, i.e. with labour and capital investment) as two separate political-economic components of the forest management: *the combined no-cost effect* of forest production and forest *services with the input of specific labour and with the capital investment*;

- Forest management methods (tending, logging, hauling, forest protection technologies) of *multipurpose* forest management in the protection zones of water sources (production of timber + protection of water quality and quantity) based on a classification of functional groups of forest;
- Costs of the above mentioned controlling functions of forests relevant for water management in the Czech Republic, i.e. costs of sufficient protection of water sources and of adequate protection of the cultural landscape in piedmonts against erosion and high waters (around 1 milliard CZK per year based on the price levels of 1995 and on calculations of purposeful methods of forest management and known surfaces of forest areas); economic effectiveness of functional measures from 11 % up in water source protection measures, and at about 20% in the reduction of economic losses due to floods;
- Value of environmental forest functions including the hydrologic function as positive externalities for the national economy and social sphere of society; science has also grasped the environmental value of the life-giving functions for nature itself in economic terms;
- Testing of procedures in a verification project of functional regulations on the basin of tributary to the water reservoir in the Beskids Mts. in forests operated by the Forest Enterprise Ostravice, stipulated by measures enjoined to the Ministry of Forestry and Water Management (MLVH) by Government Resolution No.121/1975 as a “Demonstration Object of MLVH for water management functions of the forests“. All technologies of forests management were analysed individually by functional groups including watercourse regulation;
- Formulations of established procedures for draft ministerial instructions coming into effect as “Instruction of MLVH No. 13/1982 on the management of forest lands in the protection zones of water sources“ on September 1, 1982 as a sub-legal *generally binding* legal standard for the Czech Republic. The Slovak Republic also passed the same standard.

### **Does the tool on forests cover also forest - water related issues?**

What about the non-binding or binding commitments of international processes? Such instruments should be useful i. a. in relation to forests and climate. Potential climate change has been one of the most examined risks of mankind in the last few years. In compliance with global efforts, the Czech Republic is focused on research concerning future global change and its impact on water resources and water management. Of course, it is a task for forestry because of the strong tie of forest and water. There is a need to draw attention to possible occurrence of weather extremities, if not to climate in general in accordance with the early-warning principle. Such tool should definitely take into account forest - water issues as these topics were on the agenda of many international meetings. New FAO tasks include among its priorities a new approach to “water resources management“. This issue together with climate is considered as a breaking point.

## Conclusion

Forest services were implemented pursuant to generally binding standards by enthusiastic foresters but it was not translated to the new legal system of the Czech Republic after 1989. Forestry continued to be understood and structured as an industrial single-sector of timber production. The forestry economic system was not transformed into a double-sector sector with economic activities using the integration of services into the economic structure of forestry, similarly to its economic production part. Thus forest services remained an alien element to forest policy and conditions were not created for the constitution of instruments and application of respective activities in forestry. The forest policy concept of forest management with single production purpose has been continued – regardless of the postulated desirable nature of integrated functionality – even in the liberal democratic system.

Development of the “National Forestry Programme of the Czech Republic” II, which might and should gradually change the situation, has defined too many conceptual objectives and the spectrum of opinions of these principles has been very wide. Dominating with respect to forest functions are pressures of nature conservation and landscape protection for the sake of nature itself. A very serious factor is the lack of qualified public forest services offers. Under external pressure the care of forest ecosystems has been down-sizing, given up or left to “zero management” as early as possible on the largest possible areas of cultural landscape. Under these conditions there is a risk that these areas - should they get out of the “usual” status - may become the large-scale destructive elements for the forests, as it has repeatedly happened in the Šumava National Park.

Forested watersheds provide a wide range of goods and services and are necessary for human settlement in many areas. Employment linked to all these activities is important, not only for the regional economy, but also to prevent -migration from less favored areas. Therefore sound management and protection on e.g. mountain forests is of vital importance to the sustainable development of many areas as well as for adjacent lowlands.

The theme of services provided by forest ecosystems in relation to water is again a subject to consider if forestry should seriously consider public interest in forest and really assure it, i.e. the concept and offer of forestry services:

- Forestry for sure has much to offer to society and to the national economy in the area of protection of fresh water sources, protection of water condition and, in some levels, protection of cultural landscape against natural disaster caused by floods.
- Services may bring to forestry income as another part of economic usage of the forest.
- Something can be provided by spontaneous and no-cost services of the forest ecosystems but there is another part which must be provided by the forestry service as an economic activity requiring specific labour and capital inputs.
- Public service in forestry may enhance the image of the whole sector, its position in the society, economic stability of forest assets and support of rural development.

Forest services provided to the public should be fairly compensated through appropriate financial mechanisms at various levels (national and regional). Owners and forest managers should be informed on public interest related to the fulfilment of targeted forest functions in the public interest; this should be done with payments of their charges. Of course the discussion on possible points in forestry policy and legislation in the Czech Republic (hopefully through the NFP II) is needed to create a realistic offer of services using functional effects of forest in addition to forestry production of marketable commodities. One has to

overcome existing conflicts of interests between various policies involving forestry. It is good to repeat that some problems of current forestry have something to do with the wording: "Making markets freer was good - making them fairer would be even better". Forests do not represent only timber for the entrepreneurs sphere or for experimental plots for environmentalists. Thus appropriate management is urgent because of a need to improve the image of forestry.

There wasn't a political will in forestry to acknowledge services coming from the forest and/or forestry services as part of forestry economic activities, that would represented real, not only ideological, equivalent of forest production in exploitation of this renewable natural resource. These services would have had been prosecuted in public interest not only from enthusiasm or by the order to proprietors and forest managers on their account in the name of civilisation development, but as economic activities in terms of economic forestry system, it means payments. On the basis of such innovative tools as PES securing of water related services provided by forests should be created, forestry image improved and signed commitments implemented through existing and even improving forestry and environmental legislation.

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# Compensatory damages for restricting owner's property rights in favour of environment protection as seen in the example of the Acts on Forests and on Nature and Landscape Protection in the Czech Republic

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## Abstract

The introductory part of the presented paper defines the notions of ownership and analyses the legal establishment of the institute of ownership restriction in the Czech legal order. The main part of the work concentrates on the legal analysis of the amended Act on Nature and Landscape Protection, in particular its Section 58 which focuses on compensation for ownership restrictions.

*Key words:* property rights; environment protection; monetary compensation for ownership restriction; forest management and agriculture right

## Abstrakt česky

Předkládaná práce se v úvodní části věnuje definici a vymezení pojmů vlastnictví, rozboru právního zakotvení institutu omezení vlastnického práva v našem právním řádu. Těžiště práce spočívá v právním rozboru novelizovaného zákona o ochraně přírody a krajiny, zejména § 58, který je věnován náhradám za omezení vlastnického práva.

*Klíčová slova:* vlastnické právo; omezení vlastnického práva, ochrana přírody; kompenzace újmy; náhrady za omezení vlastnického práva; lesní hospodářství a zemědělství; právo; právní předpisy

## Introduction

Rehabilitation of the traditional institute of private ownership was introduced to the Czech legal system together with the recognition of other fundamental rights and freedoms following the changes after November 1989 which laid down the legal foundations for the emancipation of all forms of ownership and declared the legal guarantee of ownership inviolability. These provisions were then incorporated as Article 11 into the Charter of Fundamental Rights and Freedoms, which together with the Constitution of the Czech Republic represent the fundamental documents of the constitutional order in this country. An actual restriction of ownership or its enforced forfeiture through expropriation is facilitated by Article 11, paragraph 4 of the Charter upon meeting three cumulative conditions which are: public interest, *ipso iure*, for substitution. Article 35 of the Charter of Fundamental Rights and Freedoms also assumed the right for favorable environment.

## Ownership – subject and definition of the term

Ownership represents a group of rights described as absolute rights, i.e. not only independence of this right of another person's right but also the fact that the entitlements of a particular legal person correspond to the duties of all other legal person. Yet, ownership in the sense understood by our legal regulation, similar to the systems of law in other modern states, can be restricted to a great extent.

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In order to complete a systematic classification, it is needless to note that further restrictions and duties of land owners arise from the following:

- civil regulations of neighbour's rights
- easements
- expropriation as an extreme interference with property rights.

The civil regulations of neighbour's rights and its demonstrative list specifically indicate restrictions regarding: a building's or plot's exposure to hazard, air pollution, undergrowth and cornices, fencing, entry to land.

Compensation for Restrictions of Management are dealt with in Act No. 114/1992 Coll. on Nature and Landscape Protection. The obligation to allow statutory limitations of one's rights following from this Act is more general, as it is valid for other Acts as well, not purely for the Act on Nature and Landscape Protection (ANLP). The legal basis is constituted by enactments of Article 11, Sec. 3 and 4, as well as Article 35, Sec. 3 of the Charter of Fundamental Rights and Freedoms. In this sense, Article 14, Sec. 3 of the Charter of Fundamental Rights and Freedoms allows statutory limitation of the freedom of movement in selected areas for reasons of public interest with regard to nature protection (this authorization is part of Sec. 64 of ANLP).

The Act on Nature and Landscape Protection encompasses a number of statutory institutes concerning the exercise of ownership right, its limitations and the relevant relations with regard to nature and landscape protection. In some cases these duties are absolute, in other cases relative. On the part of the owner, the duties in some cases are voluntary, in other cases require obligatory observance. In a number of cases the owners or tenants are entitled to state compensation for the restriction of their property rights or compensatory, respectively monetary damages.

The Act encompasses restrictions of property rights, e.g. in case of general gene pool conservation (Sec. 5), proclamation of temporarily protected areas (Sec. 13), status of specially protected areas (Chapter 1 and following), refraining from any intervention which could negatively alter or damage the preserved natural condition of the territory proposed for special protection or as an area of European importance (Sec. 40, respectively 45b), exchange of lands for establishing systems of ecological stability (Sec. 59), expropriation of the real property or property rights for the conservation of nature and landscape (Sec. 60), the state rights of first refusal of non-built-up land in private ownership outside of settlement formations in some specially protected areas (Sec. 61), admittance of nature conservation authority employees to third-party land for the execution of their work (Sec.62), access to the landscape, including the establishment of publicly accessible roads, trails and paths, fencing of land, passage over third-party land (Sec. 63), the obligation to conduct scientific research and biological assessment prior to the intended construction work or other use of the landscape (Sec. 67). One of the most powerful tools of nature conservation is the entitlement of nature conservation authorities to limit or prohibit any activities, even legal ones, which might cause a negative change in the generally or specially protected parts of nature (Sec. 66). This option represents an important preventative tool of environmental conservation.

The following two key statutory instruments to the aforementioned Act were subject to the legal analysis:

- Regulation No. 432/2005 Coll. of October 18, 2005 which sets the conditions and the course of granting financial compensation for causing damage due to restrictions to farming, as well as an example and terms of lodging a claim.
- Regulation No. 335/2006 Coll. of June 16, 2006 which sets the conditions and the course of granting financial compensation for causing damage due to restrictions to forest management, as well as an example and terms of lodging a claim.

Upon the passing of the “Natura 2000” amendment to Act No. 114/1992 Coll. on Nature and Landscape Protection, which became effective as of April 28, 2004, the institute of monetary compensation for impeding of forest and agriculture management was newly introduced to the legal regime of the Czech Republic in the branch of environmental law. This institute, which is listed together with an owner’s obligation to allow statutory limitations on environment protection, permits owners to be entitled to financial compensation in terms of farming and forest management.

The following owners and tenants are entitled to financial compensation in accordance with Article 58, Sec. 2 of the abovementioned Act:

- owners and tenants of farmland
- owners and tenants of forest land
- owners and tenants of fishponds designed for fish or waterfowl breeding.

Compensation for restricting forest land owners’ property rights in favor of environment protection is awarded and determined in accordance with statutory instruments algorithms in the following cases:

1. leaving the forest or its part to spontaneous development
2. changing the tree species composition of a forest stand
3. prolonging the rotation period set by the Forest Management Plan or the forest management outline set in the take-over report
4. maintenance or establishment of coppice forests
5. decreasing stand density
6. temporary constrictions to principal felling until the cessation of the relevant Forest Management Plan or the forest management outline set in the take-over report, on the condition that the constriction exceeds one year or that the owner/tenant cannot move the principal felling within the permitted maximum total cut in comparable timber assortments to other forest stands
7. leaving individual trees until they physically disintegrate, on condition that the trees constitute a part of a stand with stand density not exceeding 0.2
8. leaving timber lying in the forest after harvesting was carried out
9. exceptional or cost-intensive measures
10. limiting the volume of allowed felling in the process of drawing up a relevant Forest Management Plan.

The institute conceived in this manner expresses the community (state's) acceptance of responsibility for the condition of the relevant components of the environment despite the fact that the process entails legal restrictions of ownership. At the same time, the right to compensation (monetary compensation) expresses the acceptance of the necessity to support economically active legal persons, as economic activity is an indispensable part of a properly functioning society. The aggravation of economic conditions for management has an adverse impact on the commodity and services markets, and the increased costs for products or services result in the loss of the given legal persons' competitive strength. The amount and limits of compensations represent a compromise between the social demand and the fiscal feasibility.

### **Compensatory damages and Act No. 289/1995 Coll. on Forests**

The aim of the Act is to determine the prerequisites for preservation, tending and regeneration of forests as national endowments forming an irreplaceable component of the environment, to enable the fulfillment of all their functions and to promote their sustainable management (Sec.1). Land designated for the fulfillment of forest functions (formerly referred to as a so-called "forest land resources") according to Section 3 encompasses the following:

- a) land with forest stands and areas where forest stands were removed for the purposes of regeneration, forest rides and unpaved forest roads if these do not exceed the width of 4 m, as well as land where forest stands were removed temporarily on the basis of a decision of a state forest administration body
- b) paved forest roads, small water bodies, other areas and land above the upper forest limit (bare land), with the exception of built-up land and access roads there, as well as woodland pastures and fields for wild animals, unless such land is part of agricultural land resources, and provided that the land is connected to the forest or is used for forest management purposes. State forest administration bodies may order such land to be marked as part of land designated for the fulfillment of forest functions.

The basic duties (Sec. 11) encompass the following prescribed conduct:

Every individual must behave in such a way as to avoid any danger or damage to the forests, and to facilities or equipment used for forest management purposes. Forest owners are obliged to endeavor not to harm the interests of other forest owners and to ensure that the functions of the forest are preserved (i.e. fulfilled in a consistent and stable manner) and that the gene pool of forest tree species is preserved (protected). *"A forest owner shall be entitled to compensation of any damage resulting from any restrictions of forestry activities by a state administration body which resolved to impose such restrictions. The state administration body may decide that such compensation be covered by the persons whose interests were served by the decision to impose such restrictions"* (Sec.11, Paragraph 3). Forest land must not be used by anybody for other purposes unless provided otherwise by the act.

In the interest of special management of protection forests or in special purpose forests, measures different from some of the provisions of the Act may be taken, especially in relation to the size or adjoining of clear-cut areas. Such measures can be proposed in the plan or the guidelines, or may be determined by the relevant state forest administration body at the suggestion of the forest owner or on its own initiative (Sec.36).

Owners of *protection forests* are obliged to carry out forest management in a manner which ensures particularly the protection function of such forests.

*Owners of special purpose forests shall be obliged to tolerate any restrictions during their forestry activities in such forests. They are entitled to compensation for any increased costs, should these result from the restrictions imposed on their forestry activities. Forest owners are obliged to take measures imposed by the relevant state forest administration body to achieve the aims pursued through such imposition.*

*Forest owners are entitled to compensation for any increased costs incurred as a result of implementing such measures (Sec.36, paragraph 4). Compensation is not paid where forests have been declared as special purpose forests in the form of pheasantries and in cases when the compensation for increased costs is provided under special regulations.(Sec. 36, paragraph 3).*

A State forest administration body shall decide at the suggestion of the forest owner who and to what extent shall cover the increased costs of the forest owner resulting from any restrictions of his forestry activities (Section 36, paragraph 5). The Ministry specifies by a legal regulation the details of the provision of compensation for increased costs in accordance with Section 36 and in accordance with Regulation No. 80/1996 Coll. on rules of allocations of subsidies for planting of a minimum proportion of ameliorating and land-reinforcing wood species and on provisions of reimbursement for the increased costs.

### **Economic and financial impact of the amended Section 58 on compensatory damages of Act No. 114/1992 Coll. on Nature and Landscape Protection**

According to the explanatory report<sup>1</sup> for the prepared legal enactment of the “Natura Amendment of the Act on Nature and Landscape Protection”, in 2004 the estimated impact of the proposed enactment to the state budget was approximately 300 mil CZK annually.

The estimated financial impact could not but be specified only generally within the proposed amendment to the Act. Firstly, the limitations which may arise from the Act are of highly diverse character (for instance conservation of specially protected plants and animals). Secondly, certain limitations as defined in the Act can have highly diverse impact on a given management system. Thirdly, for instance the activities in Bird Areas and Sites of European Importance will be conditioned by a granted agreement in most cases, and as such the extent of damages cannot be predicted as the requirements of individual species have not yet been exactly defined and consequently projected into the relevant management methods. Compensatory damages are granted also for restrictions which arise from decisions, binding viewpoints and agreements granted on the basis of the Act. Such decisions are issued by state administration bodies of different levels and there is no unified database or basic outline of the quantity and character of such administrative acts.

Further impact of the proposed government provision on other public budgets and economic entities, particularly small and middle businesses, is not expected. Social or environmental impacts are not expected either.

If prior to the approval of the amendment to the Act on Nature and Landscape Protection the estimated amount of compensations for ownership restrictions amounted to approximately CZK 300 mil, the actual reality proved different. The amendment came into force on April 28, 2004 and the relevant implementing regulation for calculating the extent of compensation came into force after the lapse of time required for the publication, which had been preceded

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<sup>1</sup> Explanatory report for Act No. 218/2004 Coll. [Ref. 8.March 2008] Available on: <http://www.cemc.cz/uvod.html>

by its approval on June 16, 2006. As the listed *Table 1* reveals, over the period of 3 years, the total amount of granted compensations reached CZK 29 mil (8 %).

Table 1: Number of applications, the extent of compensations required and granted, in 2004 – 2006 (according to Dort 2007)

Compensations in given year	Number of applications	Required sum [mil. CZK]	Number of accepted applications in [numbers] and [%]		Granted compensations [mil. CZK] and [%]	
2004	22	127	6	27	11,5	9
2005	85	200	52	61	7,5	4
2006	40	26	32	80	10	38
<b>Total</b>	<b>147</b>	<b>353</b>	<b>90</b>	<b>61</b>	<b>29</b>	<b>8</b>

Note: For better orientation, conversion rate of 1 EUR = 26.5 CZK can be used

First applications for compensatory damages were submitted by March 31, 2005 in arrears, which means they were valid for 2004. In the period only 6 applications were accepted and the total amount of CZK 11.5 mil of compensations was paid. The high number of submitted applications in 2005 was a result of the fact that in accordance with Section 58 of the Act on Nature and Landscape Protection, which stated that also state enterprises could apply for compensatory damages, applications of Forests of the Czech Republic, as an entity managing state forests, were submitted. The enterprise's applications amounted to CZK 175 mil. In 2007, a total of CZK 12.7 mil was paid (this sum related to restrictions incurred in 2005, 2006 and two for 2007 respectively), out of which CZK 1.9 mil were related to farmland and CZK 5.67 mil to forests and the rest to fishponds. The amount paid in compensatory damages incurred in 2007 (i.e. the applicants submitted the applications by March 2008) has not been finalized yet, as all appraisals have not been completed yet and as such the compensations are gradually assessed and paid. So far, in 2008 CZK 6.3 mil have been paid for forest management and CZK 327,000 for agricultural management of farmland.

The calculation of compensation for restrictions of forest management proves more complicated, as the formula listed by Regulation No. 335/2006 Coll. use values which require the knowledge of procedures in accordance with Regulation No. 55/1999 Coll. It is difficult to estimate whether more applications will be submitted in the future as a result of better knowledge ability of forest owners and approved bodies about the possibility to require compensation. However, it is likely that the differences between the required and granted amount of compensation will continue to decrease, which can be accounted to better awareness of calculation procedures and the application terms, as well as to further clarification of contested interpretations of the relevant legislation. Yet, it is obvious that a strategic decision of Forests of the Czech Republic, State Enterprise, will play a key role in this case. Particularly, whether the enterprise applies for compensation, or more accurately, unifies its approaches to applying for compensation within the entire organization, or whether the decision about applying for compensation will be left in the power of individual forest enterprises' management and in the power of the heads of individual forest districts.

## Conclusion

Compensatory damages for restricting forest management were incorporated in the Forest Act already in its original wording and state administration bodies have relatively successfully mastered the application procedures since January 1, 1996 (when the Forest Act came into force).

Particularly upon the passing of “Natura 2000” and the related proclamation of protected areas, the institute of monetary compensation for impeding of forest and agriculture management in favor of environment protection represents an entirely new institution.

The newly introduced legal regulations adopted at the time of the Czech Republic accession to the European Union (2004) represent a compromise proposal within the parliamentary democracy system which found their place within the legal system of the country. Despite the fact that they show a number of application equivocalness and problematic parts, they undoubtedly represent a further part which allows the legal certainty of individual persons. Furthermore, they represent another element of legal regulation; operation-ability, survivability and possibly functioning will be tested during its application by legal persons within a longer time period.

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# **Different management for different protected areas in Iran**

*M. Masoud Ghelichkhani*

## **Abstract**

Iran is a vast country (1.636 million km<sup>2</sup>) and has various climates and ecosystems from north to south (2500km) and from west to east (1500km). While in the north there is humid forest, in the central and eastern parts there is desert flora & fauna. On the other side; Mediterranean forest captures the western territories meanwhile in the south we can find mangrove forests. There is irrespective of wetlands, lakes, and dispersal mountainous forest over all the zones of the country with differences of 5800 meter in elevation and about 2000mm in precipitation, and sometimes with more than 50<sup>0</sup> Grad differences between the coldest and the hottest region. Such variety in nature and ecosystems culminates in various areas categories and consequently leads to different management practices.

In Iran natural ecosystems are managed in five areas categories:

- 1- National Parks
- 2- Protected Areas
- 3- Hunting forbidden areas
- 4- National natural marks
- 5- Wildlife Refuges.

Of course; each area mentioned due to its location & characteristics, needs special management as well. For instance, a national park near the Tehran Capital City needs a management different in comparison with another national park like Lar far away from cities in the high mountains or Oromie Lake National Park that just comprises water ecosystems.

## **Introduction**

All Areas protected in Iran are managed in five different categories; national parks, protected areas, national natural parks, wild life refuge and forbidden hunting regions. These territories are different from each other based on what kind of provisions and laws refer to them. However, the concept doesn't mean that each area protected belongs to one category and is the same as other areas protected in that same category with similar provisions. It may seem that all areas protected in a given category are managed alike but as a matter of fact, each protected area has its own management considering its own condition and characteristics.

For example; Oromie lake national park that is only an aquatic habitat would be managed more or less differently in comparison with Sorkhe Hesar, a national park that is near the Tehran capital city with a high risk of land aggression and non-authorized building expansion. As another example; Gholestan national park is endangered by non-authorized hunting mostly because of its nature and its ecosystems.

## **Every area, every management**

In Oromie national park we don't face land aggression or non-authorized building because there is no land to capture. But water pollution, non-authorized fishing and protecting wild aquatic habitats are main matters to consider during animating the national park. On the contrary, land aggression and non-authorized building are main matters in Sorkhe Hesar

national park management has to deal with. Because, this national park is so near the Tehran capital city and as a result there is population pressure influence on the national park through recreation and city extension. Hereby we need to use and execute relevant provisions & law as regards the matters more & more powerfully. In Golestan national park the main matter is non-authorized hunting. This national park is located far away from cities with rich natural and wild life mostly favorable for animal hunting. Because of extension and topography of the park, protecting it from hunters is so difficult while few persons would want to capture land in such a wild habitat.

There are many other national parks with different characteristics and conditions that differ from each other whether land aggression or non-authorized hunting or soil or water pollution exists. Three examples indicate that national parks or other areas under protection have similar laws and common provisions when they are placed in a certain category but management in reality becomes special & different with common law and provisions as it needs to address specific problems & matters that a protected area is faced with to and requires managers that are able to manage it effectively.

### **Different management on the different area protecting**

All in all, at least in Iran there are five kinds of managements wholly different from each other. These five wholly different management systems are separate based on their different laws & provisions. Such difference exists all over the country since laws over the area protected in every category in everywhere are the same as legally acceptance. The management which can be found in each category depends on how an area is protected irrespective of in what categories it is and according to what characteristics and conditions exist. When a national park or protected area is far away from cities without residential potential, management is different as if the same national park or protected area would be exposed to building or aggression. Sorkhe Hesar national park has lost more than 20% of its area changed into houses or military garrison. Here a management to confront land aggression is more essential than execute related law or provision much more powerfully than in Lar national park with a mountainous nature and very cold climate without people's trend to build houses there. But shepherd try to enter the park for grazing their cattle in summer. Here management needs to use laws and provisions to prevent cattle to enter the park and compensation of any loss that happens for range. In Kavir national park where the extent of the park area is very vast with a desert habitat, management concentrates on rescue of wild animal during periods of drought through providing irrigable areas and reviving of springs. However, such activities are not covered in the environment laws. Instead here the manager hasn't anything to do with land aggression whether for the sake of houses or garrisons.

In forested areas mostly in the north of Iran preventing wood smuggling and non-authorized tree cutting is the main matter of national parks to be managed. This isn't a matter at all in Kavir national park. On the other hand providing water isn't a matter in Kavir national park. The laws and provisions approved to confront wood cutting, are used here and need to be implemented more powerfully.

### **Result & Discussion**

In Iran every kind of area protected category has its own allocated laws, provisions and wholly different management like in other country all over the world; it can be said there are at least five kinds of management in Iran over protected areas. Because of the vast extent of Iran with various climate and ecosystem and conditions each territory under title of a category is protected depending in which part of Iran it is located needs one or some laws and



provisions to be used and executed more and more effectively. Some times it seems, regarding the a matter over an area, that a related law is deficient and managers need new laws or a more compiled and powerful law while such a law isn't needed in other area that may need different law or provision more effectively or approval of new ones. Hereby as mentioned, we notice in action much more managements than only five equal to five area protected categories. Sometimes one or some matters become so serious and make management different in a territory so that it seems to be belonging to other categories as can be seen upon Alborz protected area. There the land aggression and water pollution in protected river is so serious that management becomes like a national parks in action. All these causes that Iranian environment legislation feels deficiencies now and needing to be revised but every revision may be useful just for a given area and useless for other areas. Therefore various & flexible management practices are needed wherever an area faces special matters that would emerge and strengthen over the areas and may need legislating new laws or revised existing laws and provisions if necessary.

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# Japan's National Forest Programme and its Implications

*Ikuo Ota \**

## Abstract

There is no single written document named “National Forest Programme (nfp)” in Japan. Instead, the Basic Forest and Forestry Plan and the system of the national forest plan form Japan's nfp as a whole. This paper aims to describe the legislative basis of the plan and the system, and digests the content of the Basic Forest and Forestry Plan. It also tries to evaluate the Japanese situation by using the “Principles of nfps in Europe” which were introduced in the Vienna Resolution 1 of MCPFE in 2003. As a result, it is evaluated as a good and sincere policy, but there is not a small space for improvement in Japan's nfp.

*Key words:* Basic forest and forestry plan, Japan, national forest programme, Vienna resolution

## Introduction

The idea of a national forest program (nfp) is launched in the Agenda 21 of the United Nation Conference on Environment and Development at Rio de Janeiro in 1992. The principal objective of nfp is to establish basic national direction of forest policy along with the idea of sustainable development regarding all the related field of industry and society in a country. Countries belonging to the UN are expected to create their original nfp.

In Europe, nfp is regarded as one of the key issues of the Ministerial Conference on the Protection of Forests in Europe (MCPFE). In order to promote sustainable forest management, nfp is considered as an important tool for all the countries in Europe. Resolution V-1 of the 4<sup>th</sup> MCPFE at Vienna in 2003 mentioned about SFM and nfp as follows: *Strengthen synergies for sustainable forest management in Europe through cross-sectoral co-operation and national forest programmes.*

Most of the European countries either have accomplished or are on the process creating their nfp. Some of the countries such as Finland and United Kingdom have already revised their nfp after thorough evaluation of the first one in recent years. On the other hand, Sweden, the biggest forest country in Europe, does not like to create nfp as a single published document unlike most other neighbours. Swedish people seem to think that the government must not regulate or intervene in free market activity of forest related industries that are rather enjoying a good prosperity in today's economy.

Japan also does not have a single written document named “national forest programme”. Instead, a system of forestry related laws and forest plans that have been established decades ago and revised time to time are regarded as the nfp of the country. This paper describes the present status of Japan's national forest programme and its implications.

## Basic Forest and Forestry Law

The Basic Forest and Forestry Law of 2001 is one of the most important laws in the field of forestry in Japan. This law is the amendment of the Basic Forestry Law which was established in 1964. The most noteworthy change was the fundamental purpose of domestic forest management. The previous law placed timber production as the primary objective of forest

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management, but on the contrary, the purpose of the new law is to place environmental functions as the primary objective and timber production as the second. It means forest policy direction in Japan has drastically changed at the beginning of this century from production to protection.

The purpose of the Basic Forest and Forestry Law is shown in the first article: *“This law is intended to design fundamental idea related to forest and forestry measures, and to designate basic matters by which the idea is to be realized. Also, it is to promote forest and forestry related measures synthetically and deliberately by clarifying roles of national and municipal governments, so as to stabilize and to improve national life and to pursue sound development of national economy”*.

Basic Forest and Forestry Law of 2001 mentions about the significance of variety of environmental functions of forests in article 2, and the importance of forestry on rural economy in article 3. It designates the Basic Forest and Forestry Plan in article 11. This article 11 is the legislative basis of the central part of the Japan’s nfp.

The Basic Forest and Forestry Plan is the highest governmental guideline of forest policy with about 20 years of perspective time horizon. Basic Forest and Forestry Law provides that the government should revise the plan in about five years intervals with considering changes of surrounding situation of forest and forestry. The present Basic Forest and Forestry Plan was created in September, 2006.

The law provides that the plan has to include the following contents:

- Basic policy direction of forest and forestry issues.
- Targets for realizing multiple functions of forest, timber production, and its utilization.
- Overall and planned policy framework for forest and forestry by the government.
- Deals related to forest and forestry other than mentioned above.

### **Basic Forest and Forestry Plan of 2006 - General direction of forest policy**

The previous Basic Forest and Forestry Plan was created in October 2001, three month after the establishment of the Basic Forest and Forestry Law. The present plan intended to overcome problems of previous one that arose from changing circumstances around forest and forestry during the last five years.

In the first chapter of the plan four focal points are described. First of all, insufficient management of plantation forests is mentioned. There are over ten million hectares of plantation forests in Japan, and the majority of them are under fifty years old. This means that most of the plantations have been established after the World War II. Thinning is the most critical practice that is necessary for such young forests, but low economic return of domestic forestry has been retained forest owners from doing thinning operations for decades.

Plantation forests in Japan are not like tropical plantations with fast growing exotic species or short rotation fibre trees, but with domestic tree species of forty or more years of rotation period. It is more like a semi-natural softwood forest with a good forestry management such as spruce forest in Czech or pine forests in Poland. The reason we call them plantation is that we plant seedlings on the site after clear cutting either softwood or hardwood forests existed before. Major tree species of plantation forests are Japanese Cedar (*Cryptomeria japonica*), Japanese Cypress (*Chamaecyparis obtusa*), Japanese Larch (*Larix kaempferi*), Japanese Red Pine (*Pinus desiflora*), and Pihuta (*Abies sachalinensis*).

Secondly, the diversification of people's need for forest is mentioned. Environmental issues such as flood, avalanche of rocks and earth quake with destruction of tree cover, endangered species, and global warming are strongly related to the condition of forests. More social issues like shortage of water, animal damage for agriculture and forestry, protection of beautiful scenery, and forest therapy are also related to forest management. Although many of such needs for forests often have conflicts each other, satisfying as many needs for the public as possible is critical for governmental policy.

Thirdly, changes in timber utilization and wood supply are mentioned. Housing construction is one of the major wood consumption in Japan, but recent changes of construction methods diversify wood supply sources. Timber from North America, Russia, and Southeast Asian countries is lowering their position in the Japanese timber market; instead timber from Europe is gaining importance. Domestic timber products are also regaining its status, and the self sufficient rate of wood is slightly going up since 2002. Increasing production of wood biomass and technological improvement of wood plastics are also expected.

Lastly, structural weaknesses of domestic forestry and forest industry are mentioned. Forestry has suffered from high cost and a low profit situation for many years, so that not a few of forestland owners are interested in keeping their forestry activities. Fragmentation of forest land is still a big problem as well as steep terrain and heavy rain in summer due to the monsoon climate. Small business with low efficiency in forest industry, especially in the sawmill industry, is another obstacle for expanding the domestic forest sector. Governmental policy direction for correcting such an outdated situation is strongly needed.

Based on the mentioned problems which Japanese forest and forestry are facing, the new Basic Forest and Forestry Plan designates reflective and positive perspectives as follows:

*1) Respect for needs of the public:* It is necessary for the government to promote sound forest management for satisfying people's diverse needs for providing a long run , constant and less expensive supply of domestic timber, and for offering correct and useful information about forest, forestry, and forest products to the general public.

*2) Contribution for environmental conservation:* It is necessary for forestland owners, both public and private ones, to practice sound forest management so as to provide various environmental functions as well as full utilisation of forest resources.

*3) Development of aggressive forest policy against recent changes in situation:* It is necessary for central and municipal governments to engage an aggressive forest policy so as to push small enterprises and groups of people including forest owners associations that are operating some kind of successful activities related to forestry in remote mountainous villages such as: intensive management of forestry, mechanization, high density road system, technological innovation for wood products, experimental export of special timber products, and other activities.

### **Basic Forest and Forestry Plan of 2006 - Objectives**

In order to achieve nationwide establishment of sustainable forest management, the Japanese government designated a zoning system with three kinds of forests: "Forest for soil and water conservation", "forest in symbiosis with people", and "forest for repeating utilization".

Forest for soil and water conservation is the most popular forest located in mountainous area. The desirable state of this forest is described as follows; trees are not too dense so as to have appropriate sun light coming through the forest floor, vegetation of understory is growing, root system of trees and shrubs are deep enough to stabilize the soil, aggregate structure of

forest soil is well developed and high water holding capacity is achieved, and necessary erosion and flood control works have been done.

Forest in symbiosis with people is the forest surrounding residence areas as well as scenic and cultural areas. A desirable state of this forest is described as follows; forest with primeval nature preferable for rare animal and plant species, forest with natural beauty or historical sites, forest with protective functions such as prevention from noise or wind, and forests with recreational and educational functions. They may have some facilities for recreation, culture and education for people to visit.

Forest for repeating utilization is mainly for timber production. The desirable state of this forest is described as follows; certain areas of productive forest standing on the site of good soil with appropriate commercial tree species, and with a high growth rate and high CO<sub>2</sub> sequestration capacity. Proper forestry infrastructure, such as forest road systems, should be facilitated.

Objectives of national forest policy designated in the Basic Forest and Forestry Plan are to establish mentioned zoning system over the country including all forests belong to state and in municipal and private ownerships. In order to make progress clear to the public, the government prospected the goals both for environmental functions and timber production within certain time horizon.

For measuring the accomplishment of environmental functions, desirable forest areas with zoning are targeted. *Table-1* shows the present status and targeted state of forest area with three zones and three different kinds of forest management. “Single-story management forest” means usual even-aged softwood plantation forest. “Multi-storied management forest” means close to nature managed forest with a multi-storied canopy system. “Natural regenerated forest” means more natural forest stands without active human intervention.

Table-1 Present status and targeted state of forest area in Japan (2005, 2025)  
(Unit: 1,000 hectare)

		Plantation (man-made)		Natural regenerated	Total
		Single-story	Multi-storied		
Forest for soil and water conservation	2005	7,300	700	9,000	17,000
	2025	7,200	1,300	8,500	17,000
Forest in symbiosis with people	2005	400	100	2,700	3,200
	2025	400	100	2,600	3,100
Forest for repeating utilization	2005	2,700	200	2,200	5,100
	2025	2,600	300	2,100	5,000
Total	2005	10,400	1,000	13,900	25,300
	2025	10,200	1,700	13,200	25,100

Source: Ministry of Agriculture, Forestry and Fishery (2006)

The biggest change which will be desired to happen is the increase of multi-storied forest. It shows that the Japanese government is eager to convert even-aged softwood plantation forest into more close to nature forest in order to enhance its environmental functions. .

The plan also expects the increase of timber inventory of the nation from 4.34 billion cubic meters in 2005 to 5.30 billion cubic meters in 2025. Average timber inventory per hectare should mount from 173 cubic meters in 2005 to 211 cubic meters in 2025. On the other hand, annual increment of timber inventory is expected to decrease gradually because of maturing

and aging of plantation forest. Total national annual increment in 2005 was 81 million cubic meters, but will be 58 million cubic meters in 2025.

Table-2 Present status and the target of domestic timber production and utilization 2004, 2015 (Unit: 1,000 cubic meters)

		2004	2015
Production		17,000	23,000
Utilization	Sawn timber	11,000	14,000
	Pulp	4,000	5,000
	Plywood	1,000	3,000
	Others	1,000	1,000
	Total	17,000	23,000

Source: Ministry of Agriculture, Forestry and Fishery (2006)

Table-2 shows the present status and the target of timber production and utilization. Domestic timber production has been shrinking for decades since 1970s, but it turned into increasing in recent years. The plan prospected constant and stable increase in timber production as well as enhancing environmental functions as described above.

Total consumption of wood in 2004 was about 90 million cubic meters and has been slightly decreasing in recent years. Self-sufficient rate of wood in 2005 is around 20%, but it is expected to go up from now on.

### National System of Forest Plan

The nationwide system of forest plan has been introduced in 1951. The forest Law is the legal basis of the system. The system experienced minor changes several times since then, and the present system of forest plan was established by the amendment of Forest Law in 1998. As shown in *Figure 1* the Basic Forest and Forestry Plan is placed on the top of the system. It means that the whole system of forest plan is aimed at realizing the purposes and targets of the Basic Forest and Forestry Plan.

Within the system, there are 4 stages of forest plans. The first stage is the National Forest Plan. This plan is strictly based on the Basic Forest and Forestry Plan. It will be made by the Minister of Agriculture, Forestry and Fishery in every 5 years with 15 years of time horizon.

There are two plans at the second stage. For the state forest, independent regional forest plan for the state forest will be made by the regional forester. For the non-state forest, a regional forest plan will be provided by the governor of the prefecture. Of course, these regional forest plans have to be based on their upper classed plan. Both of the regional plans are made in every 5 years with 10 years of time horizon, and should be coordinated among each other.

The third stage is the forest improvement plan for municipality. All of the municipalities, i.e. cities, towns, and villages, in the country must have a forest management plan made by the mayor for every 5 years period with 10 years of time horizon. This obligation for municipalities is new and the most recent amendment of the Forest Law.

The final stage are forest management plans for private forestland owners. It is not an obligation but a recommendation mainly for large owners or group of owners. Forest owners associations are the main planner of such documents in most of the cases. Forest owners who have forest practice plan can get some benefit from the government such as tax reduction. For

forest owners who do not have a forest practice plan, general observances by the law are adapted.

Through the system of forest plans, governmental policy directions are intended to penetrate into all types of forest owners' categories in the country. Especially, the three categories of zoning applied to all the private forests would be the most unique feature of Japanese forest policy, which is realized by this system of forest plan.

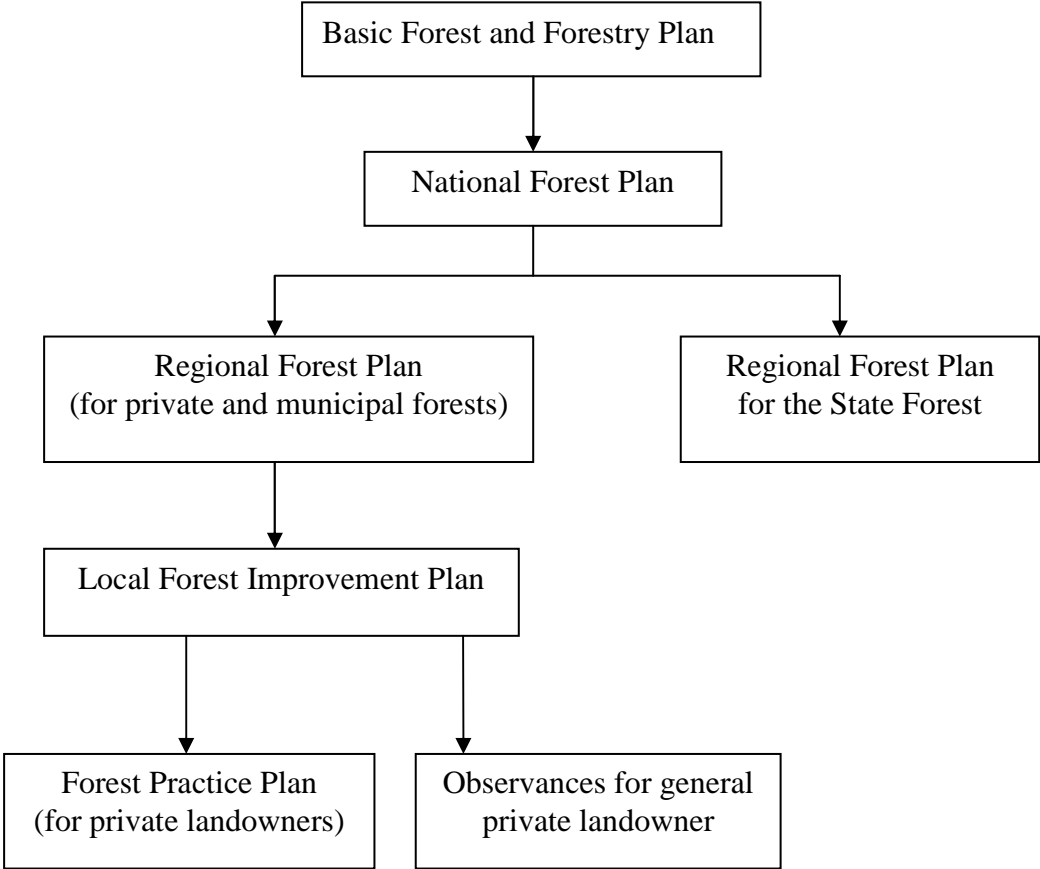


Figure-1 National System of Forest Plan in Japan

**Discussion**

As mentioned in the introduction to this paper, European countries and MCPFE are very much interested in establishing national forest programmes. For improving nfsp in member countries, MCPFE adopted the Vienna Resolution 1 in 2003, and publicized the “MCPFE Approach to National Forest Programmes in Europe” as an annex to the resolution.

In the Approach, 11 principles of nfps in Europe were introduced. They are comprehensive and clean-cut principles for improving nfps for European countries, and are also applicable to all the other regions in the world. Therefore, the author examines the Basic Forest and Forestry Plan as nfp in Japan by using these principles.

Principles of nfps in Europe and results of evaluation are shown in *Table-3*. Concerning the principles of “Iterative process with long-term commitment”, “Consistency with national

legislation and policies”, and “Integration with national sustainable development strategies”, the evaluation results are excellent. Because the Basic Forest and Forestry Plan is a bureaucratic product, it is easy to understand why the plan is consistent with various legislations and national policies. As provided in Article 11 of the Basic Forest and Forestry law, the Basic Forest and Forest Plan should be in harmony with the Basic Environmental Plan which is the basis of national environmental policy in Japan.

Table-3 Evaluation of Japan’s nfp by the Principles of nfps in Europe

Principles	Evaluation
Participation	Poor
Holistic and inter-sectoral approach	Fair
Iterative process with long-term commitment	Excellent
Capacity building	Good
Consistency with national legislation and policies	Excellent
Integration with national sustainable development strategies	Excellent
Consistency with international commitments recognising synergies between international forest-related initiatives and conventions	Fair
Institutional and policy reform	Good
Ecosystem approach	Good
Partnership for implementation	Poor
Raising awareness	Fair

On the other hand, in terms of the principles “Participation” and “Partnership for implementation”, the evaluations show a rather poor result. The law also designates the obligation for the government to organize an expert council for establishing the Basic Forest and Forestry Plan, and notification with questioning time for the public after establishing the draft plan. It seems to have enough participatory process, but there is no open public discussion during the process so that it should not be satisfactory to fulfil the requirement of the Vienna resolution. The same critique is to be done to the principle about partnership. These are the major weak points for Japan’s nfp.

For the other principles, evaluations are either good or fair. About the principle of “Holistic and inter-sectoral approach”, evaluation is fair because not many of the different industrial sectors are mentioned in the plan. About the principle of “Consistency with international commitments recognising synergies between international forest-related initiatives and conventions”, the evaluation is also fair. The plan mentions international cooperation, especially partnership against illegal logging, but it seems weak in contrast with a large national economy of Japan. Thinking about the fact that Japan is one of the major importers of forest products in the world, more and more efforts in the field of international cooperation should be done.

Overall evaluation of Japan’s nfp is good but not excellent. It sincerely mentions the broad issues related to forest and forestry in Japan, but does not covers many of the other sectors. There is a fairly big space for improvements ahead.



## **Concluding comments**

National forest programmes are more important for developing countries in the tropics than for developed countries in the temperate zone. However, as European countries emphasised in a resolution of MCPFE, national forest programmes are a good tool for all the countries to move on to the direction of sustainable forest management. Because of having a nationwide system of forest plan as well as a basic policy for forest and forestry, Japan does not intend to establish independent document of nfp.

It must be a sound political decision not to make another complicated document, but evaluation of present Japan's nfp which is represented by Basic Forest and Forestry Plan and the system of national forest plan, the status is not much satisfactory. By learning from the experience of Europe, the Japanese government would have a chance to rethink the status and to establish newly created nfp by overcoming weaknesses of the present system as described in this paper.

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# DEVELOPMENT OF PRIVATE FORESTRY SECTOR IN SERBIA AND ITS ROLE IN NFS/NFP PROCESS

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## Abstract

Forest policy and organization of forestry in Serbia during the last 18 years has been built on a centralized institutional framework, as laid out in the 1991 *Law on Forests*. After the political changes in Serbia, the Serbian forest sector is not fully reformed, especially in deregulation and privatization. Significant steps were made in establishing a strategic framework for the development of forestry in general culminating in the formulation of the National Forest Program of Serbia, which is in progress.

However, the structure of private forests in Serbia shows a large number of forest owners, with corresponding small average forest properties in small parcels. The private forest sector in Serbia is characterized by high fragmentation of properties, a large number of parcels and owners, and by insufficient organization of forest management. Consequently, small sized private forests under today's forest policy circumstances are a significant problem for efficient forests management therein. Whatever, their size, significant timber volume, and annual increment, which are similar to those of the state forests, stress their importance as a resource. Moreover, the traditional significance of forests for residents of rural regions, primarily for satisfaction of their basic needs for firewood and timber combined with reduction of agricultural and industrial capacities leading to reduction of employment, determined new forms of business in forestry and related branches.

The objective of this paper is to analyze the role of the private forest sector (private forest owners & small and medium enterprises) in the process of defining national forest strategy (NFS) and a national forest program (NFP) in Serbia, along with potentials for its development given in the strategic frames and action programs.

*Key words:* private forest sector, private forest owners, small and medium forest enterprises, national forest program, forest policy.

## 1. INTRODUCTION

After the political changes in Serbia in 2000, the Serbian forestry sector is not fully reformed. Significant reformative steps were made in establishing a strategic frameworks for development of forestry in general and in formulating the National Forest Program (Nonic, Milijic, 2008).

The share of private and state forests in Serbia, according to latest data is almost equal. The area of private forests is 1.058.400 *ha* which is approximately 47% of total forest area (Bankovic *et al*, 2008). Forest ownership structure under today's forest policy circumstances is a significant problem for efficient management of private forests in Serbia (Nonic *et al*

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2008). In brief, the private forest sector in Serbia is characterized by high fragmentation of properties, a large number of forest lots (around 3,9 *millions*) and a large number of forest owners (around 0,9 *millions*) along with insufficient organization of forest management (Nonic, Milijic, 2008; Glück *et al* 2009). More than 72% of the owners posses properties smaller than 1 *ha*, 26% own property sized from 1 to 10 *ha*, and only 2% of the total number of forest owners posses forest property larger than 10 *ha* (Glück *et al* 2009).

However, there are a sizable areas covered by private forests, significant values of timber volume, and considerable annual increment similar to those in state forests, which stresses their importance as a very valuable natural resource in Serbia (Nonic, Milijic, 2008). New data's about Serbian forests along with entrepreneurial initiatives related to wood and non wood products clearly emphasize a need for redefining relations in the Serbian forest sector, especially in favor of its private part (Nonic, Milijic, 2008).

The objective of this paper is to analyze the role of the private forest sector (private forest owners & small and medium enterprises) in the process of defining a National Forest Strategy (NFS) and a National Forest Program (NFP) in Serbia, along with potentials for its development given the present strategic frames and action programs.

## **2. IMPEDIMENTS FOR PRIVATE FORESTRY SECTOR DEVELOPEMENT**

Forest policy and organization of forestry in Serbia during the last 18 years has been built on a centralized institutional framework, as laid out in the 1991 *Law on Forests*. According to Nonic: “*However, in the context of the political and economic changes after 5<sup>th</sup> of October 2000, as well as reform processes within the public administration, significant changes occurred in the field of forestry*” (Nonic *et al*, 2008:1). Nevertheless, the Serbian forest sector is not fully reformed and there are still existing impediments for private forest sector development. Most important impediments are related to the existing legislative framework, present service supplied predominance of the State forest enterprise and an unresolved status of restitution of former private forestland.

### **2.1. Existing legislative framework related to private forestry sector**

Legislative aspects related to the private forest sector are defined by the *Constitution of the Republic of Serbia* from 2006 and the *Law on Forests* from 1991. According to section 86<sup>th</sup> of the *Constitution of the Republic of Serbia* private and state ownership rights are equal and have equal legislative protection. However, section 87 declares that all natural resources are goods of public interest and therefore are owned by the state. In section 88 a difference between forest and forestland is made and forestland is not considered as a good of public interest. Therefore private forestland can be used freely, and the law can limit the usage which can endanger environment or interests of other owners (2006/a). These sections do not adequately define the status of private forests since there status is controversial in terms of considering them as a good of public interests.

The existing *Forest Law of the Republic of Serbia* (1991) prescribes that „... *forests as public welfare must be maintained, regenerated and utilized in such a way that their values and multiple benefits are conserved and increased, sustainability and protection is ensured, and increment and yield are permanently increased*“ (1991, Art. 2). With these aims forest regions were formed by the same Law (1991, Art. 5). They include both state-owned and private forests (1991, Art. 21). Therefore forest management operations and tasks must be equally implemented in all forests, disregarding the category of ownership. According to the existing *Law on Forests*, private forest owners manage their forests; however, the State entrusted public enterprises for forest management and public enterprises of national parks perform

professional and technical tasks in private forests within the forest area they manage (1991, *Art.10*).

The *Law on Forests* from 1991 defines 27 forest management areas and five national parks (1991, *Art.21*). Forestry companies (PE *Srbijasume*, PE *Vojvodinasume*) and national park public enterprises (*Djerdap*, *Tara*, *Fruska Gora*, *Kopaonik* and *Sar Planina*) manage all state forests within those forest areas and national parks (1991; 1993). According to the Law, private forests within each forest area are in the custody of the responsible state forest or national park enterprise. This company conducts specified professional and technical tasks (1991).

According to existing Law, obligations of private forest owners are (1991):

- to have a forest management plan (1991, *Art.24; Art.27; Art.32; Art.33; Art.34*);
- tree marking before felling performed by private forest service (1991, *Art.38; Art.39*);
- obligatory compensation for logging which owner pays into the state budget (1991, *Art.54*);
- obligatory timber and fuel wood stamping and license for transport (1991, *Art.47*);
- obligation to protect their forests from illegal activities, fire, insects and diseases (1991, *Art.65; Art.66; Art. 69*);
- obligation of reforesting forest areas affected by fire and clear-cut with or without permission (1991, *Art.36*).

According to the existing Law, if the State declares a certain forest area which is privately owned as protected, the owner has a legal right to claim for a compensation from the State because it can not be utilized (1991, *Art 73*). However, the majority of forest owners have never received compensation to which they are entitled. The Law does not even mention indirect and direct measures of support to private forest owners (Nonic, Milijic, 2008).

Until the year 2000 small and medium-sized forest based enterprises were not developed in Serbia. The *Law on Forests* from 1991 prescribed the formation of a State enterprise which will perform forest utilization by contract with the Public Enterprise “*Srbijasume*”. However, this was never realized and PE “*Srbijasume*” performed forest utilization by 2001. The existing *Law on Forests* does not even mention the term “small and medium-sized enterprises” in forestry and therefore no regulations related to SMEs are prescribed. The existing Law only defines the role of PE “*Srbijasume*” and proclaims this PE as the only user and manager in state forests (Nonic, Milijic, 2008).

## **2.2. Present service supplied to private forest owners and SMEs**

The *Law on Forests* from 1991 introduced the term professional and technical tasks in private forests. Those tasks consist of: 1) issuing licenses for logging to forest owners, 2) tree marking in private forests, 3) issuing timber and fuel wood transport licenses for forest owners, 4) organizing forest protection activities in private forests (1991, *Art.10*).

As mentioned previously Private forest owners manage their forests, however, the public enterprises are entrusted with performing professional and technical tasks in private forests the area they manage. Public Enterprise “*Srbijasume*” performs professional and technical activities in approximately 97% of the private forest area while the share of area in which other enterprises perform those tasks is minor (Nonic, Milijic, 2008). Professional and technical activities in private forests are financed from the budget of the Directorate of forests.

Private forest management programs, which are obligatory under the *Law on Forests* (1991, *Art. 24*), are missing. Therefore PE performs professional and technical tasks in private forests according to *temporarily annual management plans for private forests*. Such plans prescribe silviculture, protection and utilization of private forests by, cadastral municipalities. Annual plans cover the territory of forest estates by cadastral municipalities and are valid for a period of one year (2003/b).

A first step in the procedure allowing a forest owner to harvest in its private forest property is filing a demand to the Private forest service, amended by proof of ownership issued by the Land register service. After the demands are filed a forester goes to a parcel where harvesting was demanded for and selects trees which can be cut, based on silvicultural needs of a forest stand and indicated in the annual management plan (1991, *Art. 38*). After tree marking the forester registers all marked trees and calculates a compensation for harvested wood, according to the assortment structure and official price list for wood assortments, as issued by the Public enterprise. The forest owner is obligated to pay this compensation 15 days after trees are marked for cutting, no matter if they are cut or not, at the amount of 3% of commercial value of logs to the State budget (1991, *Art.54*, 1995/a). The aim of this compensation is improvement of forest conditions and protection of forests but, as there are no investments in private forests, all financial means obtained by this compensation flow to state budget and to investments in state forests (1991). After harvesting is performed, forest owners must file a motion for stamping of harvested wood. Based on this the Private forest service officers verify whether the harvesting operation was done properly and according to tree marking, stamp the wood and issue the necessary transportation documents (1995/b).

As for services supplied to SMEs in forestry, institutions for support to entrepreneurship have been established in a model derived from the socialist period and were directed to perform services for large state enterprises. As such, they are not capable to adjust to changed conditions of market economy and lack orientation toward the needs of small-scale forestry and SME (Nonic *et al*, 2008).

### **2.3. Predominance of the State forest enterprise**

The existing Law established PE “Srbijasume” (1991, *Art. 9*). Tasks of PE beside silviculture, forest protection, production of timber of state forests etc. consists of professional and technical tasks in private forests (1991, *Art. 10*).

The existing model of technical support for private forest owners through a Private Forest Service within a public forest enterprise proved to be inefficient. Public enterprises concerned do not have enough developed technical and organizational capacities. They lack the interest for successful performance of these duties in private forests which is a significant obstacle for improvement of private forest management (Begus, 2006; Nonic, Milijic, 2008). The biggest obstacle of the current system in organizing professional and technical tasks in private forests is a clear conflict of interest. Since the major task of PE is state forest management, private forest issues cannot be in the first line of their attention (Begus, 2006).

Another problem is financing of services for private forests. Every year the Directorate for Forests makes a contract with Public Enterprises in which professional and technical tasks for private forests are defined. While the Directorate of forests pays a certain amount of financial support to PE “Srbijasume” for technical activities in private forests, PE “Srbijasume” uses the money without any further control of activities at the end; only activities in administrative procedures have been provided (Nonic, Milijic, 2008).

Moreover, a serious problem is the inadequate organizational structure, of the service for private forests within the Public Enterprise "Srbijasume" which does not function as an independent department and, until recently, without personal coordinating the work. This results in a lack of vertical coordination and communication at the regional and local levels of the Service. The current number of employees in the service for private forests in PE "Srbijasume" is not adjusted to the needs; therefore their activities are mostly concentrated in tree marking, marking of industrial and fuel wood, and issuing of documentation for timber transport. Because of those duties they do not have enough time for other tasks, especially not for extension and advisory activities (Begus, 2006).

In addition, forest management plans are missing, so foresters do not have enough information about private forest property/forests, and consequently do not have a clear picture of the situation which causes inadequate an approach to management of private forests. Communication between forest owners and foresters runs mainly from foresters to owners and is about legal procedures. Extension service is limited because procedures are too complicated. Some extension work is done, mainly along with tree marking, but it is not coordinated and organized (Nonic, Milijic, 2008). The predominance of the State forest enterprise can be seen in relation with forest based SMEs development. All existing SMEs are dependent of PE, which is a manager and user of State forests, and most of the existing SMEs were established after the process of PE restructuring (Nonic *et al*, 2008). Reorganization of PE "Srbijasume" intended to reduce the number of employees through a program allowing employees to become contractors and eventually business partners of PE while utilizing the forests (Nonic, Milijic, 2008). In recent years over 400 SMEs per year sign a contract with PE "Srbijasume" for forest utilization, and their structure is very heterogeneous. However, a large number of competing enterprises SMEs in forestry have almost all of their business contracts with PE "Srbijasume and they very much depend on the State enterprise (Nonic *et al*, 2008).

#### **2.4. Status of Restitution of former private forestland**

During the period after World War II with the new government changes were introduced in the state organization and the ownership structure in general. At first, the so-called socially owned property was established by nationalization and originating from state, communal, and private forests, monastery and church forests. Rural and communal forests were resolved and entirely designated as state forests (Nonic, 2004).

On the confiscated forests the *Basic Law on Expropriated and Confiscated Forest Property*, was passed and part of these properties were given to new owners, based on the *Federal Law on Agricultural Reform and Colonization*. Forest properties were nationalized according to articles 3, 10 and 26 of the *Federal Law on Agricultural Reform and Colonization* (1946, Art. 3, 10, 26). In addition, the owners belong here, against whom confiscation started and had not been finished, according to previous *Law on Liquidation of Agricultural Reform on Large-scale properties* from 1931. All these forest properties were transferred to ownership of the State. There was no compensation for these nationalizations. New owners became farmers without any land property and forest cooperatives, which were established for forest management improvement (Nonic, 2004).

Today, only some phases of the restitution process have started, such as passing of the *Law on Restitution of former church property* (2006/c) and the *Law on Evidence of confiscated property* (2005). Until now, almost 8.000 ha of forest land have been returned to the Serbian Orthodox Church, and it is expected that several dozen thousands of hectares will be returned to churches and religious communities in the years to come.

However, besides of returning the property to the church, other owners are still not mentioned in the process. This can be explained by the lack of political consensus. However, the strategic direction of The Republic of Serbia toward EU integration will lead to resolving the issue of restitution. It can be expected that within this process the area of private forest will increase (Glück *et al* 2009).

### **3. RECENT POLICY AND LEGISLATIVE PROCESSES IN THE PRIVATE FORESTRY SECTOR**

During the political changes in Serbia significant reforms were made in establishing strategic and legislative frameworks for the development of forestry and in the formulation of a National Forest Program. While redefining roles and responsibilities within forestry, the importance of the private forestry sector is emphasized with special attention in the new forestry development strategy.

#### **3.1. Forestry Development Strategy of the Republic of Serbia**

Until 2006 in Serbia there was no overall forestry development strategy since strategic goals were implemented in legislation and certain official documents. This changed with the development of the *Forestry Development Strategy of the Republic of Serbia*. The document represents a basic strategic and development element for the Serbian forest sector. The State has determined the principles, development goals and the measures of implementation. It sets the framework and demands for institutional reform and redefines the relations, roles, and responsibilities within the Serbian forestry sector (2006/b). Concerning status and concern for private forests, it is declared in the Strategy: “...*the responsibility of the State in resolving almost all major issues about the growing stock, from the assessment of the state of the forest to the organizations of forest owners, requires the State initiative undertaken especially when the owners’ initiative is lacking, and a decisive executive role, to create a uniform attitude to forests regardless of their ownership form. The objective is the enhancement of private forests and the sustainable development of private forestry within rural development*“(2006/b:19).

The Strategy emphasizes the need for the development of small and medium-sized enterprises in forestry (SME). The goal is to increase the contribution of forestry to economic and social development of the Republic of Serbia (2006/b). According to the Strategy, SMEs in forestry should provide enhancement of living standards of Serbian citizens, especially in rural areas, increasing employment and regional development. There are several other policies that influence private forestry, and the main strategic directions are support for SMEs and entrepreneurship (Nonic *et al*, 2008).

#### **3.2. Draft of the new Forest Law**

The basis for implementation of Forestry Development Strategy is the *draft of a new Forest Law*, which has been in a process of preparation since 2004. It is expected to be passed in 2009 (Nonic, Milijic, 2008).

In the actual draft forest law some regulations on private forestry are maintained such as tree marking, compensation for cuttings, timber and fuel wood marking and licenses for transport (2007, *Art. 43; 45; 84*). At the same time, forest owners and forest owners associations or their companies can perform tasks of public interest. In that sense the new law, will give the owners the option to decide between service providers and specifies measures to support private forests owners (2007, *Art. 79; 80*). The draft of the forest law prescribes that owners do the harvesting and protection of their forests and that advisory and technical tasks must be done by registered companies (2007, *Art. 79*).

It is planned to categorize forest owners based on the area of their forest property. Properties larger than 100 *ha* will be required to have a forest management plan. In addition, they are obliged to organize PFS or to have a contract with company registered for technical and advisory services in private forests (2007, *Art.21*). Owners of smaller properties must have a forest management program, and technical services are to be performed by a registered company which the state has appointed. Technical activities on small properties will be financed from the State budget (2007, *Art. 25*). The draft of the forest law declares the role of and support to organisations of private forest owners (2007, *Art. 80*).

The draft of the forest law recognizes existing entrepreneurial activities. SMEs can perform forest harvesting, silviculture, forest road construction; they must be registered for these activities and meet the conditions prescribed by regulations (2007, *Art. 44; Art. 99*). It allows the establishment of consulting agencies in forestry which can perform forest management planning, forest protection, silviculture, advisory and technical support to private forest owners and SMEs in forestry (2007, *Art. 79*). Their employers must have a renewable license issued by the Chamber of Forest Engineers and Technicians (2007, *Art. 94*). These are regulations to further the development of SMEs in forestry. Basic regulations related to registration for businesses in forestry and licenses required for forest employees working in SMEs and consulting agencies should ensure the quality demanded for sustainable forest management.

### **3.3. National Forest Action Program (NFAP)**

The draft of the forest law defines the role of the *National Forest Action Program (NFAP)* of the Republic of Serbia according to the Forestry Development Strategy (2006/b) which is to be the action plan for its implementation. Two basic principles were set for private forests: increasing public interest in the principles of sustainable forest management and achieving of the owners' personal interests. Solutions for problems in the private forest sector proposed by NFAP are: establishment of a Forest Fund; annual policy of financing forestry activities based on NFAP; concrete support for development of private forestry; and connection with rural development funds.

The draft of the forest law proposes the establishment of the Forest Fund (2007, *Art. 82*): „...with the purpose of realization of public interest and long-term objectives determined by the *National Forest Action Program*”, and provides that funds will be accumulated in a special account of the ministry responsible for forest resources. By proposition of the Forest Law it is planned that financial resources for the Forest Fund will be procured from various sources (2007, *Art. 83*). According to the proposition of Forest Law (2007, *Art. 90*), funds of the Forest Fund are to be used on the basis of an annual Government program, for support in implementation of mid term and annual programs and projects defined by NFAP. Those programs refer to: forest reproduction; construction and maintenance of forest roads; development work and support to project implementation; promotion of sustainable management. It is planned that forest owners will be able to receive subsidies from the Forest Fund for improvement of forest conditions through direct support in co-financing work. According to the NFAP about 40% of funds aimed for forest reproduction are intended for private forest owners.

Support for private forest owners' associations is planned, financed from the Forest Fund, through advisory support for establishment of interest organizations at regional and national levels and direct support for establishment of new associations at local level. Funds for forest management and labour protection will be available for organized forest owners.



Approximately 1.4% of the total ten-year funds for implementation of NFAP are planned to be directed to support to private forest owners' associations.

Support from the Forest Fund is planned for development of small and medium sized enterprises in forestry, as advisory support, and support for the establishment and development of SMEs. Study trips and professional training will be included. Direct support in co-financing work and procurement of necessary equipment is planned. Approximately 0.7% of the total ten-year spending for implementation of NFAP is planned to be directed as support to the development of small and medium enterprises in forestry (Kadovic *et al*, 2008).

#### **4. DEVELOPMENT OF PRIVATE FOREST OWNERS' INTEREST ORGANIZATIONS**

Recently, during the course of the joint project activities of the Food and Agriculture Organization of the United Nations, CEPF and Directorate of Forests, private forest owners became interested in associating which would strengthen achieving their goals and representing their joint interests (Milijic, 2007). Numerous workshops for private forest owners within the FAO and CEPF projects<sup>4</sup> have resulted in an increased interest of owners for associating (Nonic, Milijic, 2008). From 2006 until April 2009 (*Table T-1*), 19 local private forest owners associations were formed in Serbia. In addition, there is also one Forest Community established in 1903 (2003), which aim is common forest management (2000).

Private Forest Owners' Associations (PFOA) is NGOs and their statutes and overall goals are very similar (Milijic, 2007). They aim to represent the interests of their members and not on joint forest management. Every owner manages his own forests, while the association coordinates joint works like forest infrastructure, and joint marketing activities (2000). Training and cooperation with other associations and institutions is carried out jointly.

Basic data on the average size of forest property of associated forest owners shows that their forest properties are larger than the Serbian average (Milijic, 2007). This can be explained by the reason that active owners of larger properties, living in regions where residents are traditionally linked to forests and oriented to entrepreneurship in forestry, have joined the associations (Milijic, 2007; Milijic *et al*, 2007). They aimed explicitly at furthering their economic interests. Further development of PFOA will eventually lead to establishment of forest management associations (Nonic, Milijic, 2008).

Most recent activities supported by CEPF/PROFOR project led to establishment of Serbian Federation of Private Forest Owners' Associations (SFPFOA) in the end of May, this year. Among, representation of forest owners' interests, main goals of the Federation is: promotion of local, regional, national and international cooperation between forest owners and support to establishing new local associations; facilitating links between forestry administration, public forest service and forest owners. Although the Federation is very young it is expected that it will eventually lead to further development of private forest sector and in improving the position of private forest owners' in forest policy process.

On the other hand, SMEs in forestry are not yet organized. There are no forest production based clusters or other forms of interest organizations of SMEs, which could aim in creating a production network, in terms of rounding value added chain and which could perform forest entrepreneurs' interest representation.

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<sup>4</sup> FAO project FAO/TCP/YUG/2902(A): „*Institutional Development and Capacity building for the National Forest Program*“ ([www.forestserbia-fao.sr.gov.yu](http://www.forestserbia-fao.sr.gov.yu)), FAO project GCP/FRY/003/FIN: “*Forest Sector Development in Serbia*“.([www.forestryprojectserbia.org](http://www.forestryprojectserbia.org)), CEPF-PROFOR project: Project: “*Private and community forestry-developing livelihoods on the basis of secure property rights in selected countries of South East Europe*” ([www.skog.no/cepf/profor.asp](http://www.skog.no/cepf/profor.asp)).

**T-1. PRIVATE FOREST OWNERS' ASSOCIATIONS IN SERBIA (2009)**

<b>№</b>	<b>PFOA</b>	<b>YEAR OF ESTABLISHMENT</b>	<b>MEMBER OF SFPFOA<sup>5</sup></b>
1.	Forest community Beocin	1903.	Yes
2.	PFOA Rastiste	2006.	Yes
3.	PFOA Milicinica	2006.	No
4.	PFOA Podgorac	2006.	Yes
5.	PFOA Goranjis	2007.	Yes
6.	PFOA Selacka	2007.	No
7.	PFOA Negotin	2007.	No
8.	PFOA Mackov kamen	2008.	Yes
9.	PFOA Krsijora	2008.	Yes
10.	PFOA Stol - Kej	2009.	No
11.	PFOA DAR	2009.	Yes
12.	PFOA Krivelj	2009.	Yes
13.	PFOA Kandalica	2009.	Yes
14.	PFOA Grezna	2009.	Yes
15.	PFOA Vlasko polje	2009.	Yes
16.	PFOA Ekoplavna	2009.	Yes
17.	PFOA Crni Vrh	2009.	Yes
18.	PFOA Tilve	2009.	Yes
19.	PFOA Custica-Prekrnski del	2009.	Yes
20.	PFOA Crni Timok	2009.	Yes

SOURCE: [www.vps-srbija.org](http://www.vps-srbija.org) (2009)

However, in existing private forest owners' association there is a number of private owners' who are entrepreneurs, so some joint activities of SMEs are conducted. Development of local PFOAs as a basis for entrepreneurial activities in forestry, along with support to forest management could lead to development of SMEs clusters in future.

## 5. CONCLUSIONS

Even though almost 10 years of democratic changes in Serbia have passed, the position of public forest administration and predominance of state forest enterprise have not been changed; apart from establishing a strategic framework for forest sector development, and private forestry as its crucial part. However, the *Forest Development Strategy* cannot be implemented without legislative changes since it is not concordant with the existing Law; also, the Strategic orientation is not compatible with the existing Law. Although, public forest administration have tried to put serious efforts in changing relations between state and private forest sector and in support to establishment of private forest owners' interest organization, new legislative and organizational framework have not been yet established.

The current organization of extension and technical services for private forests and the lack of an organized advisory service do not satisfy either owner's needs or State demands for sustainable stewardship and improvement of private forests. A similar situation exists in the case of forest related SMEs. It is necessary to emphasize that in existing conditions, there is

<sup>5</sup> Serbian Federation of Private Forest Owners' Associations

no organized system of support toward private forest owners, private forest owners' associations and SMEs in forestry, only specific project activities on certain pilot regions. This obviously indicates that there is a need for an organized system of direct (financial) and indirect (advisory and educational) support toward the private forest sector (private forest owners and forest related SMEs), as well as for support to associations of private forest owners and organizations of forest entrepreneurs on local, regional and national level..

Restrictive regulations for forest owners are, for instance, the obligation to pay levies for harvesting, followed by obligatory permission for harvesting and tree marking by a forest authority before cutting, followed by the obligation of obtaining timber transportation licences. In addition, there are regulations related to SMEs which result in a strong dependency of the State forest enterprise as the only legal user and manager of state forests not providing favourable conditions for SMEs development. It can be concluded that both private forest owners and forest based SMEs in Serbia are discriminated according to the existing *Law on forests*.

The share of private forests is one of the largest in the region - around 47% according to the results of the National forest inventory from 2008 (Bankovic *et al*, 2008). There is a large number of forest owners, along with new large-scale owners emerging such as churches and monasteries, and a significant number of small and medium forest based enterprises. This makes it hard to accept that unfavourable legislative solutions and sectoral organization still exists and that there is only a small influence of forest owners' organizations as well as a lack of organizations of forest based SMEs.

On the other hand, by supporting private forest owners and SMEs development, the State administration will definitely gain clear support of large number of potential voters, and legitimacy for future decisions related to the private forest sector. This could lead to a development of a private forest sector, to the reduction of the existing State enterprises monopoly on the timber market, and to the development of competitiveness in the forest sector as a whole. Moreover, the private forest sector is very much connected with rural development of Serbia which plays a key role in reduction of poverty in undeveloped regions of the country. Therefore, private forests and their owners and SMEs in forestry should be viewed as an important factor in creation and implementation of rural development and poverty reduction policy too.

Umbrella organization of private forest owners, local associations of private forest owners', clusters of SMEs in forestry as well as the other forms of cooperation, and the implementation of forest policy measures are important for achieving the goals of the *Forestry Development Strategy of the Republic of Serbia*, and for the development of the Serbian forest sector.

However, realization of these measures and the availability of finances demands urgent legislative changes and building of institutional capacities. Planned measures of support for private forest owners and small and medium enterprises in forestry as well as the funds intended to this purpose can be a significant encouragement for the development of private forestry. The realization of such measures depends on preparation and passing of necessary official documents, especially the new forest law and the National Forest Action Program. National political issues and the willingness of certain interest group and decision-makers to support the reform of Serbian forestry and development of private forest sector primarily are important. It depends on future activities of private forest owners, entrepreneurs, development of their organizations, and their readiness to intensify interest representation activities in the policy arena.

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# REVIEW OF FOREST LAW IN SERBIA – TENDENCIES AND NEEDS

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## INTRODUCTORY CONSIDERATIONS

European countries showed respect to their forests in October 2008 when over 100 forest-related events were organized in 30 countries to celebrate the First European Forest Week. The purpose of this was to increase the visibility of forests and the forest sector and raise the awareness on their importance.

The adaption of forests and forestry to climate changes, as well as the role of forests in contributing to energy supply and in conserving water resources is important. After the storm that on 8th of August 2008 spread over Belgrade, when stormy wind fell 14 trees, it is clear that the climate change will have great impact on survival of forests, as well as on the more frequent natural catastrophes, land erosion and spreading of pests (parasites) and herbal diseases, especially „pepelnice“<sup>1</sup>. Experts cite that conifers bear the brunt of climate changes. Anyway in our country are registered 68 kinds of trees. The Secretariat for communal and housing affairs has allocated resources for realization of the Program of regular maintenance of 11 excursionist's forests during 2008 and the job was confided to public enterprise „Srbijašume“ for regular maintenance of excursionist's forests of Avala, Košutnjak, Miljakovac and Ada Ciganlija, as well as care for Kosmaj and forest along the highway.

The first more reliable data on the state of forests in Serbia were presented in statistics from 1938. year<sup>2</sup>. During 1990. the afforestation was 26,71%, and according to the newest data the afforestation of the Republic of Serbia amounts to 29,6%, what shows the development of the forest fund in the last 70 years in Serbia. In relation to the number of inhabitants the afforestation amounts 0,3 hectare per capita. While 43% of forests in Serbia are state property, more, i.e. 57% are private property. This paper brings closer experiences in development of the forest sector in Serbia. Here are presented the review of the Law on Forests<sup>3</sup> and the new Draft of the Forest Law together with an explanation of needs and reasons for adoption of the new Forest Law.

## ENVIRONMENTAL PROTECTION AND FORESTS IN SERBIA

Quality of environment in Serbia is monitored by systematic and periodical measuring and analysis of pollutant substances in the environment and demonstrated by the estimate of their effect on human health and environment. In 2004 in Serbia were adopted four laws in the field of environmental protection: Law on Environmental Protection, Law on Environmental Impact Assessment, Law on Integrated Protection and Control of Environmental Pollution and Law on Strategic Evaluation of Impact on Environment.<sup>4</sup> These laws meant a lot in the sphere of protection of environment in Serbia. The set of environmental laws, among which the Law on protection of nature, were discussed and adopted in 2009 in the Parliament of the Republic of Serbia.

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<sup>1</sup> Those are sorts of fungus that attack mainly oak forests. In the last 20 years they appeared in our region.

<sup>2</sup> Afforestation of that time was 20.262 km<sup>2</sup> or 23,3%.

<sup>3</sup> “Official Gazette of the Republic of Serbia“, No. 46/91, 83/92, 54/93, 67/93, 48/94, 54/96.

<sup>4</sup> “Official Gazette of the Republic of Serbia“, No. 135/04.

According to the Law on Environmental Protection natural values are natural wealth which include air, water, land, forests, geological resources, flora and fauna.<sup>5</sup> Management of natural values is achieved by planning of sustainable utilization and preservation of their quality and diversity, in accordance with conditions and environmental protection measures established by this and special law.<sup>6</sup> Natural values can be given for utilization in accordance with conditions and on the manner established by Law on environmental protection and special law.

According to the valid Forest Law in our country forests and forest land in state and public property cannot be let on lease. As an exception to the provision of this article, forest land can be let on lease in case of providing its rational utilization, and under conditions defined in general act of a managing enterprise.<sup>7</sup> By the new Forest Law aiming at the enhancement of the forest state, the Government shall define annually the stimulation policy for the enhancement of the forest state and it shall enact the annual Decree on the utilization of stimulation funds for forest enhancement. With this Decree, within the fund for rural development, the Government shall define the measures and the scope of stimulation of the development of private forestry from the resources of this fund.

State bodies, scientific institutions, institutions in the area of education, health, information, culture and other institutions, as well as other forms of associations, in the scope of its activities, urge, direct and provide for strengthening of conscience on importance of environmental protection. Strengthening of conscience on importance of environmental protection is provided for through system of education and upbringing, scientific-research work and technological development, advancement in the process of work, public informing and popularization of environmental protection.<sup>8</sup>

Associations of citizens in the area of environmental protection prepare, propagandize and realize their programs of protection, protect their rights and interests in the area of environmental protection, propose activities and protective measures, participate in the decision making procedure in accordance with law, contribute or work directly on informing about environmental protection.<sup>9</sup> One of the basic principles of environmental protection is principle of informing and public participation. This means that in effectuating of the right on healthy environment everyone has the right to be informed on the state of environment and to participate in the decision making procedure whose enforcement may influence on environment.<sup>10</sup>

## **SOME ISSUES OF LEGAL REGULATION ON FORESTS**

It is interesting to know that upon the establishment of the European Community the member states have chosen to maintain forest policy under the national competence. For the moment Serbia is not the member of European Union. The Program of the Republic of Serbia shall be the basic document which shall establish the Forestry Development Strategy in Serbia with an

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<sup>5</sup> See: article 3. of the Law on Environmental Protection, "Official Gazette of the Republic of Serbia", No. 135/04.

<sup>6</sup> Article 11, paragraph 1. of the Law on Environmental Protection.

<sup>7</sup> See: Article 76, paragraphs 2 and 3. of the Forest Law, "Official Gazette of the Republic of Serbia", No. 46/91, 83/92, 53/93, 54/93, 67/93, 48/94 and 54/96.

<sup>8</sup> See: article 6 of the Law on Environmental Protection, "Official Gazette of the Republic of Serbia", No. 135/04.

<sup>9</sup> Article 7. of the Law on Environmental Protection.

<sup>10</sup> See: article 9. of the Law on Environmental Protection, "Official Gazette of the Republic of Serbia", No. 135/04.

action plan for its implementation. The National Forest Action Program shall be passed by the National Assembly for the period of 10 years.

One of the most important news that the new Forest law will bring is the establishment of the Forest Agency for performing of the affairs of a public forest service in Serbia. The Forest Agency shall be responsible for the drawing up of the Regional forest development plans. The Agency can entrust the drawing up of the Regional forest development plans to a legal entity which satisfies the conditions regulated by the Forest Law, based on public competition. Regional forest development plans shall be based on the data from the National forest inventory, Forest management plans and programs<sup>11</sup> and other sources.

Special importance in the Draft Forest law is given to public participation. The protagonists of planning in forestry shall enable the participation of interested parties and the wider public in the procedure of drawing up of the planning documents (Regional forest development plans, plans and programs). The data in National forest program, National forest inventory and Regional forest development plans shall be available to the interested public. The data in the planning documents shall be available on request to the bodies of the Republic without restrictions and compensation.

The Forest Law from 1991 proclaims in article 8, paragraph 2. that state enterprises established to manage forests cannot be transformed into joint-stock company or limited liability company. According to the new Draft Law on management of forests in property of the Republic of Serbia, the director of state forests can be public enterprise or commercial company, on the condition that it performs forest management as its primary activity. It is planned to put in order the issue of status of existing public enterprises by transitional and final provisions of the Forest Law. The Director is obliged to manage state forests with care of good merchant, in accordance with principles of forest management established by the Forest Law and by rules of a good forestry practice codex, and especially to provide for permanent and high-quality maintenance, protection and advancement of the state of forest, in such a way, that the value of state forest is preserved and increased and that takes care of accomplishing the largest possible gain by utilization of state forests, forest land, tourist, recreation and health potentials of forests and other economic potentials.

The provisions of the new Forest Law shall refer to all forests and forest lands, irrespective of ownership. For the sake of exercising the public interest in private forests, private forest owners, in accordance with the size of forest holding will be entitled to a definite material, professional and advisory support by the State for the sustainable management of forests pursuant to this Law and other regulations. Also, private forest owners' associations can be organized with the aim of advancement of the state of private forests and implementation of sustainable management measures in private forests.

According to the Draft Forest Law for the purpose of the implementation of advisory activities for the enhancement of forest and forestry development Minister can establish the Forest Council. The Council shall consist of the representatives of the Ministry, other State bodies, prominent experts and scientists from institutions and forestry-related organizations, as well as the representatives of nongovernmental organizations, forest owners, and others. We should remind that the importance of forest protective zones is great. Negative influence on forests has also fall of the subterranean waters level in the river area by Sava and Danube. Having in mind the fact that forests in Vojvodina represent only about 6,3%, for this area is

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<sup>11</sup> Forest management plans and programs shall be drawn up based on the performed monitoring of forest conditions in the field.



proposed to plant 35 sorts of cultures. By work of wells, which are main suppliers with water, the level of subterranean waters is objectively reduced in forest ecosystems, especially in Srem, what influences on the change of environmental conditions.

The Forest Agency shall ensure the monitoring and shall report to the Ministry and the public. During the approval procedure, the Regional forest development plan, Forest management plans and programs shall be presented to public inspection during the period of not less than 60 days for Regional forest development plans, and for management plans and program of not less than 30 days from the day of announcement, with mandatory public presentation of planning documents.

According to the Draft Forest Law an information system in forestry shall be established and managed by the Ministry. The information system shall provide all necessary information on the situation and changes of the forest resources for the purposes of planning, monitoring and reporting. The activities of information system establishment and maintenance shall be financed from the Budget. It is important to stress that Minister for state administration and local autonomy in the Government of the Republic of Serbia made a decision on the foundation of a special working group for preparation of the text of the Draft Law on communal police, which became Law adopted by the National Assembly in July 2009.

In order to protect and promote forest ecosystems, forests are to be managed in such a way to provide for rational forest management, preservation of genetic fund, amelioration of structure and realization of the most important forest functions. State bodies, owners and users of forests are obliged to undertake necessary measures for preservation and sustainable utilization of forests, measures of renewal, raising and their promotion, as well as control and protection of forests in the case of trans-boundary pollution.<sup>12</sup>

## **CONCLUSION**

It is well known that land is hard renewable natural resource. We can conclude that forest health and biodiversity should be regularly monitored on the entire territory of the Republic. Experts claim that on our Planet 3-4 species of flora die out every day. On 21st of March we celebrated the day of protection of forests speaking a lot about sustainable development. This sustainable development is realized by making and enforcement of decisions by which is provided for harmonization of interest of environmental protection and interest of economic development. Besides this, the new Forest Law has to take into consideration general public – national interest for our forests. Some of the issues considered in this paper persuade us that this will be achieved by the new Forest Law that came into effect in May 2010 and will be applied in the Republic of Serbia from the 16th of November 2010. The fulfillment of international obligations in the field of forestry requires new legal solutions, but also the harmonization of forest legislation with the European Union legislation.

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<sup>12</sup> See: article 25. of the Law on Environmental Protection, “Official Gazette of the Republic of Serbia“, No. 135/04.

# Principles of new forest legislation and policy in the Slovak Republic

*Rastislav Šulek \**

## Abstract

The paper deals with both the new Forest Act which is the basic piece of forest legislation in the Slovak Republic (SR) as well as the National Forest Programme (NFP) which is the basic document of Slovak forest policy. The first part analyses reasons for adoption of the new Forest Act together with the process of its adoption. Moreover, purpose and contents of the new Forest Act are mentioned. The second part deals with the importance of the NFP and the process of its adoption. Mission and goals as well as the structure of the NFP, including strategic objectives and priorities of the NFP, are analysed. Finally, the actual persisting problems in the field of forest policy and practice are pointed out.

*Key words:* forestry, national forest programme, forest policy, innovation policy

## 1. Introduction

Forests are one of the most typical natural resources all around the world. For many centuries, forestry was an issue of great importance. Recently, forestry has achieved recognition as a global issue and sustainable multi-purpose forestry has become the government's policy in many countries. The Slovak Republic (SR) has been participating in formulation and enforcement of principles of modern forest policy since the very beginning. At the beginning of 1990s, the aims and objectives of the SR forestry policy were expressed in two basic documents issued by the Ministry of Agriculture and approved by the SR Government and Parliament – the Principles of the State Forest Policy in the SR and the Strategy and Concept of the Forestry Development in the SR. These documents contained priorities and principles of forest policy, further embodied and described in the SR forest legislation.

Nowadays, the fundamental document of the Slovak forest policy is the National Forest Programme (NFP). Also, the Slovak Republic, after a rather long period of changes and amendments of the old forest legislation (originating from 1970s!), has finally adopted the new Forest Act that is considered to be a basic piece of forest legislation. These are the reasons why this paper deals with both the process of adoption of the new Forest Act, its purpose and contents as well as with the process of the NFP adoption, its mission and goals. Another objective of this paper is to point out some of the actual problems that may still cause certain instabilities between different actors in the forestry sector.

## 2. Forest Act of the SR

The successful development of the forestry sector in the SR, as in many other countries in transition, has depended to a great extent on the existence of an appropriate and effective legal and institutional framework which enables it to function efficiently (ŠÁLKA ET AL. 2003). As the transition process has been continuously advancing, the legal and institutional framework has needed to be revised and improved in order to resolve problems and meet new challenges as they arise.

Former forest legislation in the SR originated from 1970s. Because it was created in connection with state ownership of forests, forest legislation was too directive. As such, due

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to the social, political and economic changes after 1989 (e. g. restitution of original property rights), forest legislation had to be significantly amended in the 1990s. However, amended forest legislation was not able to cope with all problems of the forestry sector and adoption of a new Forest Act seemed to be necessary. The main reasons for adoption of the new forest act in 1990s were following:

- Demand of the society in the case of public-beneficial forest functions has significantly increased.
- Public interests of society and private interests of forest owners have had to be well-balanced.
- New conditions for financial support of sustainable forest management had to be developed.
- State administration of forestry had to be rationalized.
- Complex legislative arrangements (i.e. one forest act) have been required.

Unfortunately, the road to the new forest act has been long and devious. First of all, during the years of 1991 – 1995, former forest legislation has been significantly amended. Then, during the years of 1995 – 1998, the amended forest legislation has been stabilized and widely introduced into forest practice. The first serious ideas about the adoption of the new forest act appeared in 1998. In June 2002, the first draft of a new Forest Act was approved by the SR Government and, after rather complicated disputes, in February 2005, the second draft of the new Forest Act was approved by the SR Government. Finally, in June 2005, the new Forest Act was adopted by the National Council of the SR (the Slovak parliament).

The new ideas about forest legislation and policy, originating from the mentioned reasons for adoption of the new forest act, have been incorporated into the introductory articles of the new Forest Act stating its purpose as follow:

- to preserve, improve and protect forests as a part of the environment and natural wealth,
- to provide differentiated professional sustainable management of forests,
- to harmonize interests of society and forest owners,
- to develop economic conditions for sustainable forest management.

The contents of the new Forest Act consists of the following main parts:

1. basic provisions including purpose of the Act and legal definitions,
2. definition of forest land and principles for its protection,
3. principles of differentiated management of forests including provisions on forest categories, management systems, timber harvesting and forest ameliorations,
4. purpose and practical performance of forest protection,
5. principles of public use of forests including right to public access to forests and activities prohibited in forests,
6. compensation of damages on forest property and compensation of forest owners due to restrictions of property rights,
7. system of professional management of forests including issues on forest management plans, forest information systems and authorized forest managers,
8. subject of state forest property together with its administration,
9. activities of forest guard,
10. financing of public activities needed for sustainable forest management,
11. system of state administration of forestry including duties and competences of the Ministry of Agriculture of the SR and district and county forest offices,
12. liabilities for breach of duties together with offences.

### 3. National Forest Programme of the SR

Based on the results of the Ministerial Conferences on Protection of Forests in Europe, the national forest programmes, developed on the basis of the EU Forest Action Plan, are basic tools of sustainable forest management in Europe. Also, the NFP of the Slovak Republic is a basic document for securing sustainable forest management of the Slovak forests. Moreover, in the case of the SR, the NFP will serve as a new forest policy for the period of years 2007 – 2020.

The SR NFP was prepared by the National Forest Centre in 2006, discussed and approved by the SR Ministry of Agriculture in March 2007, and then, in April 2007, it was submitted for governmental adoption. The SR Government adopted the NFP in June 2007 and, finally, it was approved by the SR Parliament in September 2007.

General mission of the NFP is to secure sustainable forest management based on adequate use of economic, ecological as well as social forests functions so that the development of whole society especially in rural areas is provided.

The three main goals of the NFP are as follows:

1. Economic goal: to increase long-term competitiveness of the forest sector and improve sustainable use of forest products and services,
2. Ecological goal: to maintain and improve biodiversity, carbon sequestration, and integrity and resistance of forest ecosystems,
3. Social goal: to contribute to the quality of life through preservation and improvement of social and cultural dimensions of forests and forestry.

There are two basic parts within the structure of the NFP – the first one consists of 5 strategic objectives and 18 priorities (*Table 1*), the second one deals with financial arrangements including EU and SR financial support.

The individual priorities are concretized so that the key position is analysed and major problems together with partial frame objectives are defined. These objectives shall be worked out into more details on a regular basis and updated through measures formulated in the so-called Action Plan of the NFP SR. This Action Plan shall be developed in 2008 and it shall serve as an implementation tool of the NFP and as a strategy for its evaluation and monitoring. Further practical implementation of the NFP shall be developed within the concepts, programmes and plans of different sectors.

The National Forest Programme of the SR is a key document of forest policy and its significant role is highlighted by the fact that the SR NFP, except of the so-called “traditional” priorities (e.g. support of close-to-nature forest management, support of use of environmental-friendly technologies and machinery, enhancement of forest protection, preservation of protection functions of forests, support of use of forest biomass for energy production, support of cooperation of forest owners), comprises also the “modern” innovative priorities (e.g. preservation and improvement of biodiversity in forests, mitigation of climate change impact, increase of contribution of forestry to rural economy, increase of competitiveness and economic viability of forestry, strengthening of cross-sector cooperation and coordination of policies affecting forestry, support of systematic PR).

**Table 1: Strategic objectives and priorities of the SR National Forest Programme**

<i>Strategic objectives</i>		<i>Priorities</i>	
1	Support of ecological management of forests	1	to support close-to-nature forest management
		2	to support development and use of environmental-friendly technologies and machinery
		3	to preserve and improve biodiversity in forests
2	Improvement and protection of the environment	4	to mitigate climate change impact and to support adaptation of forests to effects of climate change
		5	to enhance forest protection
		6	to develop forest monitoring
3	Improvement of the quality of life	7	to preserve and improve protection functions of forests
		8	to increase contribution of forests and forestry to rural economy
4	Increasing competitiveness long-term	9	to increase long-term competitiveness and economic viability of multifunctional forestry
		10	to support research and technological development in order to improve competitiveness of forestry sector
		11	to monetize and market non-wood forest products and services
		12	to support use of forest biomass for energy production
		13	to support cooperation of forest owners and to improve education and training in forestry
5	Enhancement of cooperation, coordination and communication	14	to secure implementation of international commitments in relation to forests and forestry within the implementation of the objectives of the NFP
		15	to strengthen cross-sector cooperation and coordination of policies affecting forestry
		16	to secure eligible interests and needs of forest owners and the whole society
		17	to support utilization of timber originated from forests managed in a sustainable way
		18	to support environmental education and systematic public relations in order to achieve positive changes in public understanding of the importance of forestry

#### 4. Conclusion

Although a lot has been done since 2005 when a completely new Forest Act passed in parliament, there are still quite many problems that need to be solved. – It seems that the majority of them originate from conflicts between economic interests of forest owners and ecological interests of society and some of them even originate from the still rather strict forest legislation. As examples of current problems the following issues may be mentioned:

1. Problems of the amount of subsidies from public sources for providing of public-beneficial forest functions, indemnification of forest owners, etc.);
2. Problems of harmonization of provisions of the forest and nature protection legislation when forest management in protected areas is considered e.g. harmonization of planning activities that „have to be done“ and those that „are not allowed to be done“;
3. Problems of participation of the general public in decision-making processes based on a participatory approach;
4. Problems of strict legal provisions on management of forests according to forest management plans and by authorized forest managers with required education and experience standards;
5. Problems of application of different forest certification schemes (PALUŠ 2000).

The provisions of the new Forest Act as well as the goals, strategic objectives and priorities of the SR National Forest Programme together with their implementation in forestry practice may help to overcome at least some of the mentioned problems.

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# Financing Biodiversity Measures in Slovenian forests

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## Abstract

This article describes a legal framework for financing the forest biodiversity measures in Slovenia. Management of Natura 2000 sites in forested areas is implemented through the forestry management planning. Due to this Slovenian specific, measures for maintaining or restoring the favourable conservation status of species and habitats are financed through the forestry financial scheme. The main forest legal document which defines measures for sustaining biodiversity of forest habitat types and forest's wildlife is called Rules on the protection of forests. Financing is defined through the Rules on financing and cofinancing the forest investments. This article analyses co-financing payments for measures aiming at preserving habitats of protected wildlife like large carnivores, protected bird species, insects and measures for aiming at populations of protected species for the period 2000 - 2008. The measures and finances are shown for all forests in Slovenia and for one forestry unit.

*Key words:* biodiversity, compensation payments, forest, forest investments, Natura 2000, protection measures, Slovenia

## 1. Introduction

In Slovenia, forests cover approximate 60 % of the state surface area, which is an area of 1,183,252 ha. All forests regardless of their ownership and size are managed according to the management plan. These plans are prepared by the public service institution Slovenia Forest Service (hereinafter SFS).

A long tradition of the sustainable forest management practice result in a very high percentage of the preserved forests and a large number of rare and endangered species on national and international level. Almost 50 % of Slovene forest is included in the European ecological network Natura 2000. The Natura 2000 gave forestry sector new obligations addressing the fact that forestry unit management plans can serve as natural resource management plans, which are necessary for the conservation of a favourable status of habitat types and habitats of species (Danev, Krajčič. 2008).

In 2007 the Operational Programme: Natura 2000 Site Management Programme (hereinafter OP, Resolution of the Government of the RS on the 11th of October 2007) and the Resolution on National Forest Programme (hereinafter NGP, Official Gazette of RS, No. 111/2007) were adopted. When Natura 2000 was implemented, the Government of the Republic of Slovenia asserted that no additional costs for its implementation, maintaining and management would be needed. The OP also delineated that no additional costs would be needed and that they are already covered within the budgets of the public institutions (Institute of the RS for Nature Conservation, SFS, Institute for Water of RS, etc). In forestry sector this decision was possible because the protection measures planned in the OP (Annex 4.2) were already defined in the Rules on the protection of forests (hereinafter Protection Rule, Official Gazette of the RS, No. 92/2000 and 52/2006).

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The NGP as a fundamental strategic document, designated as a determination of national policy of sustainable development of forest and hunting management practices, defines wild animals as a public good and state property. For the sustainable management of game populations measures in their habitats are important. They are orientated in maintaining, reconstructing and improving the life conditions of game species considering the whole forest ecosystem (The Act on game and hunting, Official Gazette of the RS, No. 17/2008). Measures in game population's habitats are also contributing to the preservation of habitats of wild animals and it is particularly important for preserving rare and endangered species. The European and National payments are determined in the Slovene Act on forests (48th Article), and in the Rules on financing and cofinancing the forest investments (hereinafter Co-financing Rule, Official Gazette of the RS, No. 73/2008). Resources for activities listed in the Co-financing Rule are determined in yearly forest investment programme.

## 2. Rules on the protection of forests

The Rules on the protection of forests have determined the co-natural, sustainable, and multifunctional management and use of forests. It gives a precise definition of the biological balance of forest ecosystem in forestry legislation and also prescribes measures for ecosystem protection. The biological balance in forest ecosystem is maintained or restored with acknowledgment of guidelines determined in the 14th Article of Rules, and measures prescribed in forestry management and silviculture plans. Measures for maintaining or restoring the biological balance:

- maintaining rare scrub and tree species and their populations,
- maintaining rare and endangered animal species and their habitats,
- leaving dead wood biomass,
- monitoring of state and development of forest,
- setting up and maintaining water sources and maintaining wetlands,
- maintaining the specially valuable habitats of the rare and endangered species,
- adapting the forest work in the parts which are of special importance for the rare and endangered species,
- additional measures: setting up and maintaining bird nesting houses, planting fruitful tree and scrub species, etc;

Carrying out the above measures is considered as *measures for maintaining the habitats of wild animals and other autochthon organisms* (12th Article).

For example, the amount of dead wood biomass required for maintaining the rare and endangered species in chosen management zone is indicatively determined in forestry unit management plan and precisely in the silviculture plan. A management zone represents the area of adapted use of forest resources due to the biodiversity forest function (Danev et al. 2007). Dead wood biomass is shown in relation to the position of trees (standing or lying) and is given as the percentage of total growing stock. Standard values of the total amount of dead wood biomass for all forests is between 0.5 – 3 % of total growing stock. Trees which are going to be left for dead wood biomass are selected by forester and forest owner during the selection of trees for cutting. Trees selected for dead wood biomass are usually: standing dying trees above 30 cm of diameter with secondary holes, standing and lying rotting trees with mushrooms, and other damaged trees, etc. All trees planned to be selected for setting up bird nesting houses and areas of special valuable habitats of the rare and endangered species should be marked by the SFS as special biotopes called ecocells.



### 3. Rules on financing and co-financing the forest investments

Co-financing Rule determines the measures for maintaining or restoring the biological balance from the Protection Rule as the activities that are financed or co-financed through the forest investment programme only from national budget or from European budget. Forest activities for maintaining the habitats of wild animals and other autochthon organisms are part of the environmental and Natura 2000 measure, and are determined in the Article 12 and 12a. Environmental and Natura 2000 measures are co-financed mainly from the national budget. Level of co-financing those measures depends on the level of ecological and social forest functions which are determined in the forest unit management plan and in forest working normative. SFS is responsible for calculating and for the control of payments. Co-financing is possible only for private forests.

Activities for maintaining the habitats of wild animals and other autochthon organisms are planned in the yearly forest investment program on the basis of silviculture plan. At the end of each year SFS prepares the investment programme for the next year. Forest owners can participate in the development of investment programme but the final decision on necessity of the proposed activities is taken by SFS. This is because the available national funds usually do not satisfy the needs of all forest owners so the SFS applies the urgency criteria. For the protection measures (Natura 2000 measures) the urgency criteria is the conservation status of species and habitat types. SFS gets the conservation statuses from the Institute of the Republic of Slovenia for Nature Conservation (hereinafter IRSNC). IRSNC gives SFS the conservation statuses and determines protection measures with their management zones in the document called nature conservation guidelines (Danev et al. 2007). SFS includes the protection measures and management zones into their unit management plans and silviculture plans. If protection measures are defined as urgent activities, SFS contacts the forest owner. The communication between SFS and forest owner should start before the activities are to be implemented into the investment programme so that SFS and IRSNC can identify any possible problems. All the co-financing amounts are paid after the SFS's supervision is done and the report is written. In case of leaving dead wood biomass, nesting trees and biotopes left for natural development, the forest owners are qualified to get the compensation payments (see Table 1 and 2).

*Table 1: Co-financing amounts for maintaining the habitats of wild animals and other autochthon organisms (Source: The Rules on financing and co-financing the forest investments, Annex 1, Table 1)*

Type of forest work/activity	Co-financing rate		
	Ecological and social function level		
	1st	2 nd	3 rd
1. Maintaining scrubs and river banks, patches, wind corridors and forest edges (610)	90 % *	80 %	70 %
2. Maintaining grassland areas in forests (611)	90 %	70 %	50 %
3. Setting up water sources in forests (617) and maintaining (612), (616)	90 %	80 %	70 %
4. Planting fruitful tree and scrub species for animal nutrition (613) and maintaining (618)	90 %	70 %	50 %

5. Setting up (614) bird nesting houses and maintaining (615)	90 %	90 %	90 %	
6. Protection of biotopes:				
biotopes with cutting (651)	8 €/ m <sup>3</sup>			
biotopes with silvicultural needs (652)	90 % of costs for silviculture work			
biotopes left for natural development (653)	100 % of value of possible cutting on stub for the area of the biotope per year, 20,00 €/ m <sup>3</sup>			
7. Development of the pastures in forests (620)	50 % of costs for development without costs for clear cutting			
8. Leaving dead wood biomass:				
<i>Basis for the compensation payments:</i>	standing (already died or dying trees) (670) – diameter above 30 cm	90 % of the basis	70 % of the basis	50 % of the basis
Max. amount 10 m <sup>3</sup> /ha	lying (more than 50 % must be still usable) (671)	50 % of the compensation for standing trees	50 % of the compensation for standing trees	50 % of the compensation for standing trees

\* Percentage of costs for forestry working normative and materials

Table 2: Co-financing payments for maintaining the habitats of wild animals and other autochthon organisms in years 2001 - 2008 (Source: SFS)

Act. No.	Type of forest work/activity	Unit	Range	EUR
604	other biomeliorative activities	ha	0.6	90.14
610	maintaining scrubs and river banks, patches, wind corridors and forest edges	ha	98.6	31,490.82
611	maintaining grassland areas in forests	ha	4,247.8	310,266.10
612	maintaining water sources in forests (ponds and springs)	piece	413	14,003.80
613	planting fruitful tree and scrub species for animal nutrition	piece	24,364	22,160.33
614	setting up bird nesting houses	piece	108	803.99
615	maintaining bird nesting houses	piece	76	363.15
616	maintaining the larger water sources in forests	piece	79	27,773.69
617	setting up water sources in forests (ponds)	piece	20	1,799.83
618	maintaining fruitful tree species for animal nutrition	piece	112	142.00
620	development of the pastures in forests	ha	10.3	2,278.80
650	protection of biotopes	piece	22	1,355.20
651	biotopes with cutting	m <sup>3</sup>	42.00	157.74
652	biotopes with silvicultural needs	ha	12.9	2,899.53
653	biotopes left for natural development	m <sup>3</sup>	120.18	4,474.27
670	leaving standing dead wood biomass	m <sup>3</sup>	491.63	5,736.82
671	leaving lying dead wood biomass	m <sup>3</sup>	50.28	454.58
			Total	426,250.80

## 4. Analyses of co-financing payments for biodiversity measures

### 4.1. National level

On the national level, the most of the resources (more than 70 %) available for maintaining the habitats of wild animals and other autochthon organisms are going for the activity no. 611 (maintaining grassland areas in forests). Activity 611 is mainly done by the local hunting organizations.

Trough the past three years, the co-financing resources looked stable. For some very important protection measures written in the Annex 4.2 of the OP, the activities and finances are slowly rising. This is especially meant for activities leaving the standing dead wood biomass, setting up and maintaining the water sources in forests and setting up the bird nesting houses (Figures 1 and 2).

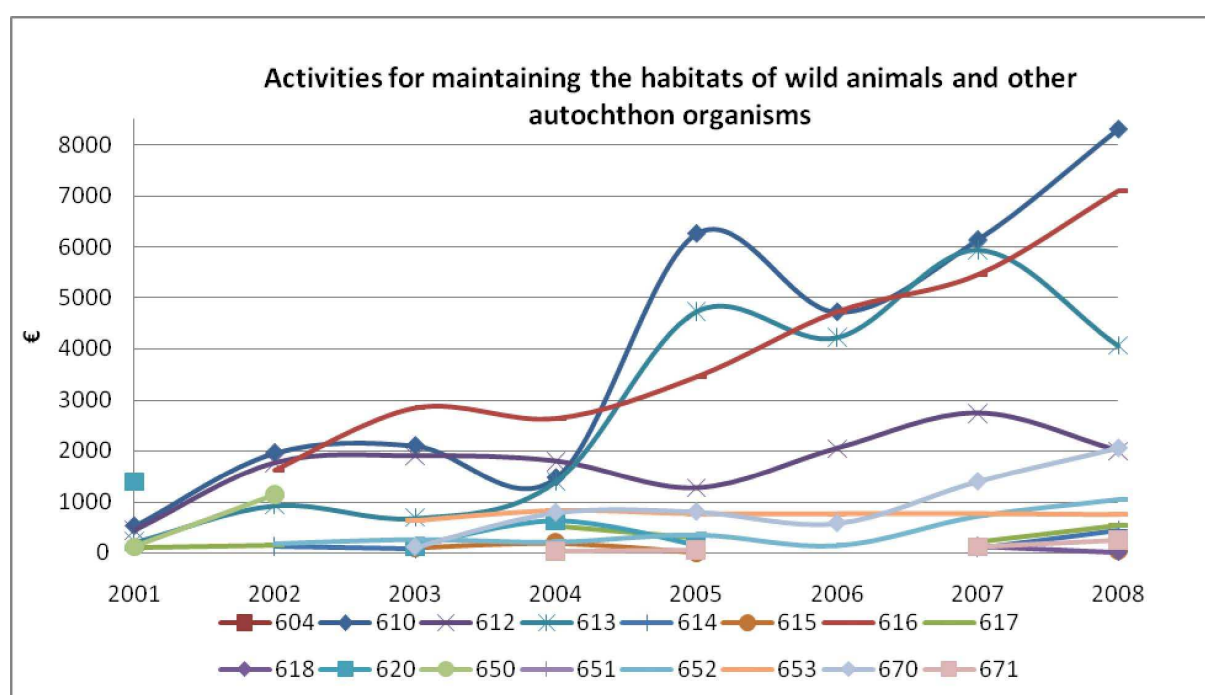


Figure 1: Amounts of co-financing payments for maintaining the habitats of wild animals and other autochthon organisms between years 2001 – 2008 (without activity 611, Source: SFS)

### 4.2. Forestry unit level – Unit Dravograd

#### 4.2.1 Introduction

The Dravograd forestry unit comprises central northern part of the forestry district Slovenj Gradec, near the Austrian border. The surface area of the unit Dravograd is 104.9 km<sup>2</sup>, the forest abundance is 55.9 %. The multipurpose forest represents 98.3 % of the forest land. The main principle by the forest management planning is to durable produce quality wood considering all the others forest functions. In this unit, the wood production function is significant. A predominant share of economic forests is in private ownership, where the landowners are dependant on incomes out of logging (Table 3). The function of preserving biodiversity is on the 1st level mainly on the sites of capercaillie leks and maintained grassland in forests. On the 2nd level there are forests that are important for preserving (sub)

populations of target plant and animal species and habitat types. Natura 2000 sites are captured into this scheme. In the unit there are round 10.4 % of forest defined as Natura 2000 sites. Among these forests – defined on the 2nd level, are relevant winter resorts for game, mires, barren land and rocky mass.

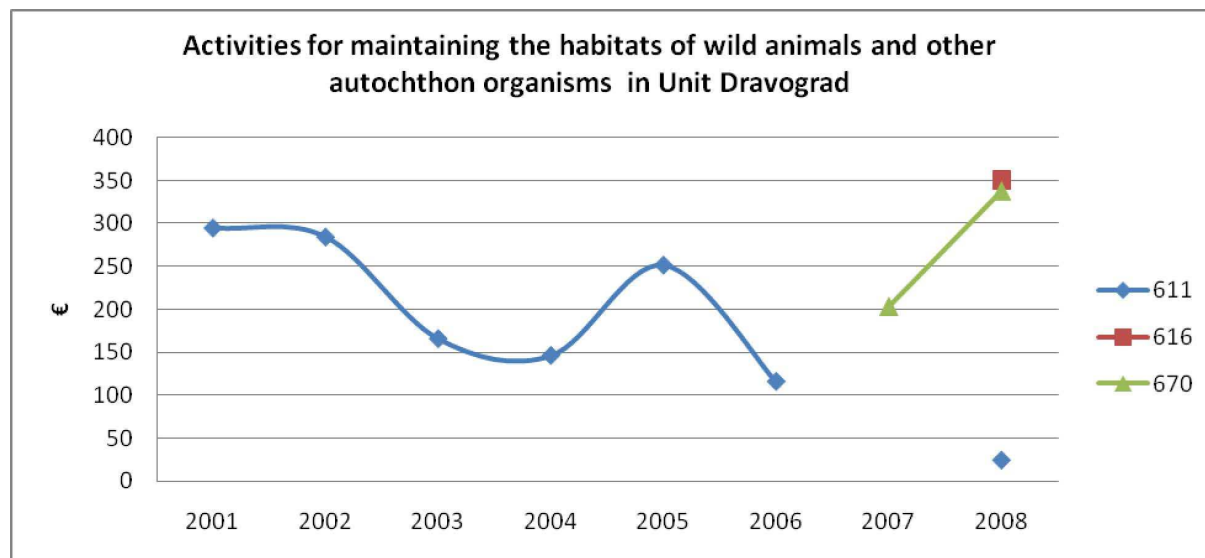


Figure 2: Amounts of co-financing payments for maintaining the habitats of wild animals and other autochthon organisms between years 2001 – 2008 in Unit Dravograd (Source: SFS)

Table 3: The surface of forest sites emphasize with forest function (Source: SFS)

Functions (selection)	Area (ha)	Share (%)
function of wood production	5,862.32	100.0
function on preserving of natural values	3,413.58	58.2
function of preserving biodiversity	3,286.,98	56.1
hydrological function	200.50	3.4
hunting management function	15.66	0.3

Note: the share is calculated from total forest area in the forest unit Dravograd (5,862.32 ha)

#### 4.2.2 Previous and future management planning

In the Pohorsko hunting management region, the objectives are orientated particularly to assure close to nature management and to increase the investments into the habitats for preserving endangered species. The guidance's for managing the pasture areas for wild animals dictate that in landscape where the main settlement type is solitary farm, the priority pasture areas are installed within the larger forest units and on higher altitudes. In the process of renewal of unit forest management plans (hereinafter FMP) (each 10 years), SFS tries to revise as much as areas, where these measures are reasonable. These areas captured in the FMP are within the 1<sup>st</sup> level of function of preserving biodiversity. Most activities for maintenance or improvement of habitat of animals for the last couple of years were planned for forest sites that represent habitat for woodland grouse species. In 2008, measures for improving the habitat for wild animals were planned on the forest areas of 2000 ha.

Table 4: Co-financing payments for maintaining the habitats of wild animals and other autochthon organisms in years 2001 - 2008 for Unit Dravograd (Source: SFS)

Act. No.	Type of forest work/activity	Unit	Range	EUR
611	maintaining grassland areas in forests	ha	24.0	1,281.04
616	maintaining the larger water sources in forests	piece	351	351.00
670	leaving standing dead wood biomass	m <sup>3</sup>	338.00	542.00
Total				2,174.04

In accordance with general objectives of managing forests in the unit Dravograd, general guidance's for managing forests are determined:

- preserving biodiversity,
- assuring favourable conditions for plant and animal species, its habitats and habitat types (Natura 2000 sites).

In year 2009 for improving the life conditions for wild animals in the unit Dravograd, are planned following activities (Table 4):

- (610) to maintain scrub areas,
- (611) to maintain grasslands; mainly forest clearings in higher altitudes,
- (612) to maintain water sources and mires. Under the activity of setting up bird nesting houses and other biomeliorative activities are also:
- (651) to protect biotopes with cutting down,
- (652) cultivation (8.72 ha) that holds opening and preserving cores of bilberry and shrubs for improving nutrition conditions,
- (613) planting fruitful tree species.

#### 4.2.3 Practical example of biodiversity measures planning and realization

Košenjāk is a mountain ridge (1522 m a.s.l.), that rises up on the northern side of Drava River and leans on the wide mountain massive of Golica as its southern spur. The proposed area for performing the activities for preservation of black grouse habitats and the habitat types of mountain meadows comprehends 965 ha. The areas where the interventions are planned occupy 26 ha. These are mostly secondary spruce forests with a small share of mountain meadows and heaths. Black grouse (*Tetrao tetrix* L.) is one of endangered bird species in Europe and is as such listed on

Appendices I, II/2, III/2 of the European Directive on the conservation of wild birds (Council Directive 79/409/ EEC, OJ C 139, 13 June, for which in the special protected areas - Natura 2000 (SPA's)) protection measures and conservation of the processes are required and recommended also outside of them. The area of Košenjak is extensive enough, that long-term persistence of nature without high costs investments is possible. The area serves as a biogenetic bridge for certain birds subpopulations in the South-eastern Alps. The planned activities are aimed mainly on maintaining and restoring the central part of the bird's habitat (Gulič. 2005):

- (610) to maintain scrub areas,
- (611) to maintain grassland areas,
- (612) to maintain water sources and mires,

- (651) to protect biotopes with cutting down and with adapted cultivation of selected forest areas.

*Table 5: Planned cultivation and protection activity/work categories for private forests for the unit Dravograd for the period 2008-2017*

Type of forest work/activity	Unit	Private forests	State forests	Together
Total forests area	ha	4,951.09	911.23	5,862.32
Cultivation work <i>together</i>	ha	1,171.54	262.01	1276.77
Protection work <i>together</i>	days	22.9	67.67	90.57
	ha	57.15	48.72	105.87
Maintaining scrub areas	ha	0	5.7	5.7
Maintaining grassland areas	ha	26,31	24.19	50.5
Maintaining water sources and mires	days	2	0	2
Setting up bird nesting houses and rest	days	20.9	67.67	88.57
Protection from wild	ha	30.84	18.83	49.67

For last 20 years the local hunting society chose to be responsible for the preservation of black grouse at this site. The action plan serves them as assistance for expert implementation into their work. The proposed activities from the action plan are implemented into the forest unit management plan of unit under the chapters of planned cultivation and protection activities, planned biomelioration measure of hunting management region plan, and in the annual plan for hunting ground Dravograd. The first action of protecting biotopes with cutting down in extent of 1,0 ha was performed in year 2008. The action was carried out in cooperation with SFS, IRSNC and land owners.

## 5. Results and Discussion

The system of nature protection measures is incorporated into forestry legislation and financing system. Analysis results show that the system of planning the protection measures and financing these activities was employed even before Slovenia entered the European Community. The analysis also show that for now the Government of the RS was right in the forestry co-financing measures, when it estimated that no additional resources for Natura 2000 will be needed.

The priorities of the planned activities in the forest investment programme are lead trough ecological and social forest functions valorisation when the adoption of the forestry unit management plans is in process. The managers of the plan and their organization should not be afraid of more optimistic planning, if there is a lack of national resources. As we can see from the analysis, the financing activities are slightly changing also to the compensation payments (Figures 1 and 2). This means that the diversity of the activities is more and more present and probably that the forest owners are getting acquainted with other co-financing possibilities.

If we want to continue the Slovene tradition of sustainable forestry management and preserving the favourable conservation status of the rare and endangered species and habitat types we should gradually increase finances for co-financing biodiversity measures. The

public institutions IRSNC, SFS, Agriculture and Forestry Chamber and other bodies like the Forest owners associations, hunting societies and Slovene Hunting Association should also try to promote other financing possibilities for sustainable development opportunities that derive from forest through European or other resources. If this will not be assured the conservation status of rare and protected species and habitat types would probably get worse. This would not be in compliance with OP and EU biodiversity action programme. Especially because it is planned that in the year 2009 the first forestry unit management plans will become plans needed for Natura 2000 protection. Due to that fact and very high share of private forests (73 %), the resources for co-financing payments for protection measures on Natura 2000 sites, will probably have to increase.

*Special thanks to the Slovenia Forest Service for collecting co-financing data.*

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# Forestry legislation in Sweden

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## Contents

Note: Sources of general reference. ....	121
1. Legal arrangements up to year 1900 .....	122
1.1 Introduction.....	122
1.2. The period of the commons .....	122
1.3. Business but no legislation.....	124
2. Teaching people silviculture by law, 1903-1983 .....	125
2.1 The path to the first law in 1903 .....	125
2.2 The Forestry Boards – a key tool for the forest policy.....	127
2.3 A full set of forestry laws: 1923.....	128
2.4 The national forest inventory and other developments .....	129
2.5 1948: Sustainability and profitability.....	130
2.6 Divergent views and new actors in policy making .....	131
2.7 Sticks and carrots: forestry by regulation 1979 and 1983.....	132
3. Towards deregulation and a multi-purpose forest management.....	136
3.1 The emerging environmentalism .....	136
3.2 A reversal of policy: the 1993 Forestry Act.....	137
3.3 Evaluation and follow-up of the policy reform.....	138
4. Beyond mere legislation: the task of introducing a silvicultural philosophy – and changing it.....	139
References .....	142

## Note: Sources of general reference.

Most sources in this field are in Swedish language. Stridsberg & Mattson (1980) provide a deep-going analysis of the role of forestry in relation to the general economic and social development from early modern time, and on the role of the developing legislation in the general political process. Eliasson and Hamilton (1999) describe the Crown's efforts to regulate forestry, starting in late medieval time, with a fairly superficial treatment of the 20<sup>th</sup> century. Ekelund & Kihlblom (1996) and Ekelund & Hamilton (2001), the former in English, concentrate on the period after the first Forestry Act (1903), analysing the objectives of each piece of legislation, and making a detailed follow-up of their implementation with focus on the work of the County and National Forestry Boards. Enander (2000, 2001, 2003, 2007) gives an account of the political processes behind the successive Forestry Acts, against a background of the general development of the forestry and forest industry sectors. All these authors focus on public policy making.

A broad account of the development of forestry in Sweden, including legislation and institution building, is provided by Kardell (2004). In his PhD thesis work, Eliasson (2002) deliberately takes a bottom-up perspective in his account of the 19<sup>th</sup> century's forestry boom and the consequent conflicts of interests arising when traditionally minded peasants encountered officialdom and capitalism. The Professor of Sociology of Law, Stjernquist (1973), writing in English, examines the legislation and the work of the Forestry Boards in relation to private forest owners from 1905 and 1960. from the standpoint of sociology of law. In two later papers (1992, 1993), he develops refreshing views on tenure and legislation. Appelstrand (2007) examines from the same perspective (in Swedish) forestry legislation up to 2006, with special emphasis on environmental governance.

When general information from Eliasson & Hamilton, Ekelund & Hamilton and Enander is used for the running narrative, no specific references are given, as the accounts widely overlap. Direct references to parliamentary committee reports (SOU), government proposals to the parliament (Prop), and legal texts (SFS) are given as footnotes. Translations of these texts are partly from Stjernquist, partly my own

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## **1. Legal arrangements up to year 1900**

### ***1.1 Introduction***

In a preceding paper (Nylund & Ingemarson 2007) I have examined forest tenure in Sweden. After radical privatisation during the 19th century, a mixture of family holdings (about 50%), company forests and publicly managed land have characterised the 20th century. In the present paper, I examine how the State has strived to first regulate and later actively develop the forest resource through legislation and institution building. The analysis ends with the great policy reform expressed by the 1993 silvicultural act and its immediate consequences. An examination of national forest policy developments since the mid 90's, and Sweden as an actor in the EU and UN forest policy will be presented in a forthcoming report

Up to the 19<sup>th</sup> century the guiding view of all forest policy was that forest is a God-given good, to be exploited with due consideration and restraint (cf. von Below and Breit 1998). The worry over perceived and real timber scarcity set the note over all Europe. However, the first scientific foresters in the early 19<sup>th</sup> century saw forest as a resource which could be developed and increased. However, in Sweden it took three generations for the idea to enter the public mind and be expressed in Sweden's first Forestry Act (1903). After that, the 20<sup>th</sup> century has seen a successively more normative and coercive legislation, until a reversal in 1993. The latter shift in policy is currently evaluated by government authorities and publicly discussed.

In a survey of forest legislation, extension and forest owners' response, Stjernquist (1973, p.21 ff.) observed that traditional law aimed at preserving the existing social order in society, while legislators assumed the laws to take effect by their mere existence. On the other hand, Stjernquist claimed, modern political legislation aims at changing the behaviour of individuals (and public companies). The forestry legislation in Sweden and other countries are, according to him, early examples of a new legal thinking, the result of which is nowadays evident in every aspect of life. The legislation gradually introduced from 1903 to 1948 had two immediate goals: to stop destructive logging practices and to introduce orderly silviculture among the private forest owners, in the beginning almost exclusively people combining agriculture with forestry. In line with Stjernquist's thinking, the real aim of the present paper is to describe how legislators strove to influence the behaviour of Swedish forest users/owners, above all peasant ones, from early modern times to the present, and how the users/owners responded, particularly those managing holdings.

### ***1.2 The period of the commons***

Legislation in pre-Christian and medieval Sweden was based on provincial laws, codified in the 12<sup>th</sup> century and onwards (cf. Hoff 1997, Eliasson and Hamilton 1999, Fritzboeger 2004). In the 14<sup>th</sup> century, these formed the basis of a Country Law and a Town Law. Under this legislation, the use what we today tend to call "minor forest products" was central, while timber was so widely available that it stayed less in the focus. Royal prescripts were issued to regulate specific matters, but can in no way be said to reflect any kind of consistent or public policy.

The establishment of the centralised national state during the first half of the 16<sup>th</sup> century also marked the beginning of a consistent forest policy. Firstly, the Swedish Crown in 1542 presented a general claim to all unsettled land and, less specifically, upheld a right as a partner in all commons. These claims reflected medieval practices as stated in the Danish Jutland's Law and elsewhere in Europe (cf., Eliasson and Hamilton 1999, Fritzboeger 2004). Secondly, it reserved to itself the right to all oak trees, indispensable for the fleet. This right was to

remain a thorn in the eye to the peasants as long as it existed. Thirdly, the mining industry, requiring vast quantities of wood and charcoal, was given rights to forest use on former commons, as well as the income from land tax on those areas. This practice shows that the Crown considered itself as an overlord of all forest, having a *dominium directum*, while all other parties had various kinds of non-exclusive user rights, *dominium utile*. Compared to most of Europe, the regal claims in Sweden came lately and were modest. In neighbouring Denmark, the king claimed ownership to the soil, while the peasants owned the growing trees, according to the medieval Jutland law's rules concerning forest commons (cf. Hoff 1997, Fritzboøger 2004)

A constitutional reform in 1617 created the formal preconditions for modern-style legislation. In 1647, the first pieces of regular forestry legislation were passed in the form of two Forest Ordinances, one dealing with "carrying trees" including shipbuilding oak, the other restricting wasteful logging practices and shifting cultivation in high forest. Both matters had previously been treated in royal letters and discussed in Parliament, but this was the first time the form and procedures of legislation still observed today were used regarding forest issues. – Considering the public discourse 200 and 300 years later, it is interesting to notice that heavy opposition to any restrictive legislation was weathered during the Parliament debates preceding the two ordinances, arguing that this infringed on the property rights and "God's Order of Creation" (see discussion in Eliasson and Hamilton 1999).

In the period 1674 to 1697, several royal commissions worked in southern Sweden. Their main task was to demarcate Crown land from the commons, but they also regulated the peasantry's user rights in the Crown forest, thereby setting some kind of model standard for their management. The forest administration got the right to mark out timber for the peasants' immediate use. – Another round of commissions during the latter part of the 18<sup>th</sup> century also discussed forest management, but had little influence on policy.

A Forest administration gradually developed. The first Royal Master of the Hunt and Game Keeper (*Jägmästare*) is mentioned in 1551, and the organisation was designed to protect and organise the royal hunting. In 1634 a parallel post as *Riksjägmästare*, or in effect a Chief Conservator of Forests, was instituted. Around this nucleus of a national forest administration a network of higher and minor officials developed. These were charged with maintaining "law and order" in the forests, above all to look after the Crown's rights to oak trees but also stop other illicit use of the forest, according to existing local rules. As of 1780, even subsistence timber from the village commons had to be marked by the forest service<sup>1</sup>. The spirit of all legislation was to prohibit perceived negative practices, not to foment positive, creative practices. The guards were severely underpaid and consequently corrupt, and were loathed by the peasantry who could not see their activity as anything but harassment of the rural people.

The general attitude of the authorities towards the rural people and their use of forest goods was restrictive, not to say negative. King Gustavus III, in his search for support from the peasantry in his struggle with the nobility during the latter decades of the 18<sup>th</sup> century gradually reduced the staffing of the forest administration and relaxed the regulations (main deregulation in 1789, beech trees 1793, ship oaks 1830, mast trees 1875, Enander 2007b, p. 45).

In a paper on forest tenure (Nylund and Ingemarson 2007) it was shown how new perceptions of the concept of land ownership appeared at this time, and resulted in successive land reforms. At the same time, the age-old resistance to the Crown's meddling in private persons'

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<sup>1</sup> According to the Royal Ordinance on the Forests of the Realm, 1734

forest use got a more clear-cut ideological basis, the economic liberalism. As a result, state interference in the expanding forest economy was minimised and Crown land was partitioned and privatised.

### ***1.3 Business but no legislation***

Around 1850 large parts of Sweden's forest land, except in the North, was demarcated and had private owners (Nylund and Ingemarson 2007). Sawmilling picked up speed when steam saws were introduced and Britain opened up for free trade at that time, and continued expanding for the rest of the century. Pulp and paper making became important after 1890. The rest of the North was successively either privatised or brought under regular management by the Crown. Over the entire 19<sup>th</sup> century, forest exploitation increased, and the old fear for timber shortage got substance. The professional foresters, notable among them A. af Ström, founder of the Royal Forest Institute (1828) and author of the first textbook, *Handbok för Skogshushållare/Manual for Forest Managers* (1823) had a clear vision of how forest should be managed for sustainable yield. Yet, the spirit of the time was against any legislation on the use of the forests. After thoroughly examining the situation through a committee, the Parliament in 1858 decided not to legislate on the management of private property, but to strengthen and develop the management of the Crown forests. To this end, the State Forest Administration was reorganised to manage remaining and newly acquired Crown land according to best contemporary standard. The purpose was triple: to generate income for the Crown, to regulate the timber supply to sawmills, and to set tangible examples to corporate and estate forest owners. To manage the Crown forests, the remains of the previous forest administration were reorganised into a State Forest Directorate (later *Domänstyrelsen*) in 1859. Management principles for these forests were laid down in Forest Ordinances. Ordinance 1866:62, followed up by 1894:17 required silvicultural management plans based on scientific principles, and aiming at high sustained yield (cf. Dickson 1956, p.28 ff.). As the companies' holdings got larger, they modelled their forestry organisation after the State Forestry organisation with districts and sub-districts headed by professional foresters.

This was a result of the attention the forest issues aroused in Parliament along with the growing forest industry – and the expanding clear-cuts. The “1856 forestry committee” presented proposals for an updated legislation, but both the committee and the MPs had their focus on the illicit use of the forest, rather than on general management principles as such. However, it also had a radical proposal, that forest intentionally devastated by its owner should be put under compulsory management by the Forest Service. That idea was hotly opposed in Parliament, and all initiatives to legally compelling rules for regeneration after exploitation were shelved. As an illustration of the mood in the parliamentary estate of Peasants can be mentioned, protests were raised even against a recent ban on shifting cultivation, seen as an intolerable infringement of property rights (quoted by Eliasson 2002, p.335).

Yet, there were voices proposing legislation similar to that being introduced only two generations later. JM Sprengporten (1855/1873), an influential politician with a career involving forestry, developed ideas which were to reappear in the future. Any forestry law must define the concepts forest and/or forest land. The prime purposes of a law should be to prevent the devastation of growing forest and make sure that final felling is done in a manner making regeneration possible.

Considering the political opinion against regulation, the State Forest Directorate sought to use existing property legislation as a tool to stop the illicit cuttings. These were no longer carried out by single peasants who cut household timber where they had no right to do it, but by

unscrupulous loggers or even companies supplying the industry with timber. In the county of Vesterbotten, the illicit timber volume actually confiscated by the Forest Service in the years 1866 to 1868 was larger than the total volume legally marked out for felling! The number of legal convictions for forest-related crime rose to over 200 per 100 000 inhabitants, while it in the rest of the country at that time ranged from 2 to 30 (both examples from Eliasson 2002 p 342). Dramatic action by the foresters came sometimes close to armed violence, but on the whole, after some very turbulent decades in the north, law and order was restored. In the public debate, strong opinions still claimed that illicit logging was not to be treated as theft, since the timber appropriated was not produced through man's labour but given by Nature's bounty. – Eliasson (2002) makes an interesting note on the large-scale exploitation, illicit or legal: As general industrialisation was just starting, employing relatively few workers, the forest work provided a livelihood for large numbers of landless households and decisively contributed to reducing social tensions.

Politically, the forest issue continued to be debated. The 1862/63 parliament update of the criminal law made it easier for the State foresters to act against illicit logging. The 1865/66 parliament decided to establish extensive "Crown parks" for the rational management of the northern forests. The above mentioned Ordinance for the Crown forests was issued, setting principles for a selective logging system aiming at continuous regeneration – a practice lacking empirical support and much debated since af Ström's (1830) devastating criticism. Due to the special conditions on the island of Gotland, regeneration after clear-felling was made compulsory, in spite of the general resistance to any kind of regulations. Contrasting the records on reforestation with the logging statistics from other parts of the country, it is very clear that, even in the Crown forests, reforestation was neglected where the exploitation was most intense (Enander 2000).

## **2. Teaching people silviculture by law, 1903-1983**

### ***2.1 The path to the first law in 1903***

A new forest committee was appointed after a parliamentary reform, abolishing the traditional system with for estates and introducing a two-chamber legislative body, with an even stronger representation of the peasantry than before, and produced its report in 1870. It presented estimates of the current status of the forests; a delicate task since no national forest inventory had still been conducted. It proposed further intensification of State forestry, and worried about "social and moral consequences" of the ongoing exploitation. Therefore, it suggested a limit on logging leases of ten years, compared to the current twenty years. It sought to slow down extraction through a ban on transport and milling of small scale logs, supposedly from immature trees, and, most radically, recommended compulsory regeneration after final felling, in many respects echoing the Sprengtporten proposal, discussed above. – The State Forest Directorate criticised all recommendations; it seems clear that it saw a future in a further strengthened State-owned forestry. In line with this, it got a parliament mandate and funds for buying land for reforestation in southern Sweden. This created a basis for state forestry in southern Sweden, where most of the commons had been privatised during the first decades of the century. From that date up to 1955, a total of 635 000 ha was acquired for state forest production, 70% of it in the southern part of the country (Eliasson 2002). To this came areas never privatised, coming to a total of 4.4 million ha, including unproductive land.

Based on the committee recommendations, the Government in 1874 proposed a silviculture law, compelling all private owners to ensure regeneration, which in case of failure could be executed by the authorities at the expense of the owners. Yet, because of dissension between the two chambers of parliament over the severity of the proposed sanctions, no laws were

enacted (Enander 2000). In contrast, Finland got its first silviculture act, similar to the proposed Swedish one, in 1886 (Palo 2006). – Other legislation proposed in 1874 and 1875, defining grave illicit logging as theft, was intensively debated, particularly regarding where the limit should be set between single, often landless households' unregulated use of wood, and commercially motivated theft (Eliasson 2002). With the passing of the latter laws, the privatisation of forest can be seen as completed: forest goods were treated as any other commodity by the law, leaving a grey zone in its actual application for social reasons only. In that debate, the previously frequent argument about the forest as a free good was not brought up at all, illustrating how the growing commercialisation rapidly was changing age-old perceptions. - Finally, in 1874 several MPs also proposed a law regulating the minimum dimension for timber to be felled, but after heated debate this was made to apply only to the hottest industrial areas in the north. Still, even this limitation of the rights of private ownership was seen as totally unacceptable to many; for example, the Minister of Finance, CF Waern, politically a Liberal, resigned from his post (Enander 2000).

The unsatisfactory forest regeneration continued to be debated, and in 1888 the parliament introduced a subsidy for forest plantations on private land. But the really hot issue was the company acquisitions of peasant land, further described by Nylund and Ingemarson (2007). The matter was raised in the Parliament in 1892 with no consequence, but a decade later the situation was considered alarming enough to be regulated by law, even if this seriously affected the owners' rights to sell his land. Such a law was proposed in 1904, and carried through in 1906: no further peasant land was to be sold to corporate owners in the northern part of the country.

In response to the inability of the parliament to act on the key issue, a silvicultural law, King Oscar II and Prime Minister Boström set up a new forestry committee in 1896, representing various interest groups, rather than political parties. The committee not only collected facts and research results from the country and abroad, but also arranged meetings with the public all over the country, following a strict agenda of matters to be discussed. Also, a wide array of local and regional authorities was consulted. All controversial issues were concentrated into the first paragraph; the remainder treats procedural matters and exceptions (wetlands, dunes and timberline; forest to be converted to other uses):

- “Private land must not be logged or treated after logging in such a manner, that the regeneration of forest is endangered”
- If the land has been abused so that the forest does not regenerate, the responsible person is obliged to correct the situation.
- County Forestry Boards will be set up to enforce proper action in such cases”

These proposals were made law<sup>2</sup> after much debate. But it is equally interesting to see which committee proposals were *not* accepted by the parliament:

- a requirement for professionally trained managers of larger estates and company forests.
- a nationwide law on minimum dimension for clearfelling.
- compulsory marking by public inspectors of all trees to be felled.
- a declaration of the principle of sustainable timber production and long-term economic viability.

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<sup>2</sup> SFS 1903:79

The 1903 Forest Act was a first step towards a general obligation to rational forest management. The reception of the law was mixed. It was a victory over century-long resistance to public regulation of the use of private property, but insufficient in itself, according to the forestry professionals. Lacking a legal definition of forest, and keeping in mind the widespread extensive grazing, law enforcement officials found it difficult to delimit land where the forest laws were to be applied from agricultural land with trees on it. Forest owners, on the other hand, were initially incensed by hard-line representatives for the newly instituted Forestry Boards. The issue of the day was at which point of owner mismanagement legal intervention had to begin. Details of the early deliberations are given in a paper by Carbonnier (1907). - Over the next decades, forest grazing slowly lost importance, but was still enough of a problem in 1948 to be specifically banned. A greater problem was that younger forest still lacked protection, and started to be felled once the older trees were gone. The boards quickly settled on the carrot-rather-than-stick approach mentioned below (cf. the 1923 instruction to the Boards, codifying existing practice; Table 1 VAR FINNS DETTA?).

## ***2.2 The Forestry Boards – a key tool for the forest policy***

The privatisations of the 19th century, creating a quarter million forest owning peasant households covering half of the country's productive forest land, could easily have resulted in a permanently poor management of these forests, and the management of the company land also needed consolidation after decades of pure exploitation. Referring to the observations of Stjernquist (1973 ) quoted above, a law aiming at changing social practices requires some kind of active enforcement. Fortunately, the path chosen was that of extension, primarily educating and motivating forest owners, while coercive and punitive action was used only as an ultimate corrective to deliberate law infringement. This principle was to be actively upheld during all successive legislation. The creation of County Forestry Boards can in retrospective be seen as far more decisive than any single legal requirement of forest management as such. Still, a hundred years later, the Swedish Forest Agency as it is now called, plays a pivotal role in the implementation of the national forest policy, particularly among the owners of 250 000 private forest owners (cf. discussion in Appelstrand 2007, pp.195 ff).

It was a strategic decision to start fresh, not using the State Forest Directorate as a base for the new organisation. Yet, the forestry boards were not created from scratch, but incorporated both staff and working methods from existing county "*hushållningssällskap*" (agricultural societies), a kind of semi-public advisory organisations, also engaged in reforestation of degraded forest and wasteland, and in counselling landowners on timber affairs. After a few years with a coercive profile, the new organisation opted for the same policy as these societies had followed, i.e. that of counselling and motivating the landowners to manage and improve their forest. This policy was explicitly mentioned in the government proposition for a new law in 1923<sup>3</sup>, discussed below. While the 18<sup>th</sup> century forest guards had been loathed, the 20<sup>th</sup> century silviculture advisers managed to be welcome in most rural homes. This happened to some extent by stressing positive action but being a bit lax about law enforcement initially, strategy later criticised, but considering the past record a wise policy. The boards also strove to place its staff in their own home regions, to ensure their familiarity with local condition, thus enhancing their acceptance among the forest owners. Fascinating insights into that process are provided by Stjernquist (1973).

The Forestry Boards were financed through a duty levied on all fellings, related to the market stump value.<sup>4</sup>). The forest owner had to declare all fellings for sale in his regular income-tax

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<sup>3</sup> Prop. 1923:104

<sup>4</sup> SFS 1912:274. Initially (SFS 1903:79) a tax was levied on exports only.

return, and paid normal income tax as well as the special duty earmarked for the Forestry Boards. The size of the duty varied over the years, but was originally 1.3%. - In 1925, a coordinating body was instituted to ensure that all Forestry Boards were following the same standards; in 1941, this was upgraded into a National Forestry Board<sup>5</sup>. In 2006, the individual county boards were brought into a single organisation, the Swedish Forest Agency.

Regarding taxation of income from forestry, it is notable that Sweden in these years was considered to be mature for a system based on actual income from fellings. This required that timber sales were regularly accounted for and not hidden away from the taxman. By basing the tax on stumpage value rather than on total sales, it was advantageous for the peasant owners to do the felling themselves, as the additional income was not taxed at all. - Neighbouring Finland had similarly low levels of corruption, but chose to levy the tax on the calculated productive capacity of the forest land instead of on actual income, and maintained this system until the late 1900's.

### **2.3 A full set of forestry laws: 1923**

Once the resistance against legislation was broken, the advocates of more active national forest legislation continued to push the ambitions further. In 1911 another parliamentary committee started working. It identified three levels of ambition of legislation:

- Regeneration laws, ensuring that forest land remains in a productive state. This had been achieved by the 1903 Act.
- Laws protecting growing forest and setting lower diameter limits to logging. This became the next immediate goal.
- Laws requiring rational and sustainable silviculture. This was proposed in 1923 but rejected.

In the course of its work, the committee commissioned local forest inventories and made nation-wide estimates of the state of the forest resources. The results pointed at current overcutting, which threatened long-term timber supply.

The committee was about to present its recommendations, when the Government was prompted to immediate action by the ongoing economic crisis precipitated by the protracted World War I (1914-1918). Fuelwood cutting had increased sharply as the import of coal was cut off, and growing forest stands were widely ravaged (cf. Ekelund and Hamilton 2001, p.37 ff.). The response was a temporary law<sup>6</sup> (1918) banning all cutting of growing forest, except for proper thinning, without explicit permit of the Forestry Board. Another paragraph aimed at curbing speculation, forbade resale of properties within five years of acquisition. – This regulation was modified in 1938<sup>7</sup>, when logging of more than 2% of a property within 5 years of acquisition was banned, without Board authorisation. - Finally, the Forestry Boards got the right to immediately forbid logging without first bringing the issue to a legal court (Enander 2001 p79; Appelstrand 2007 p.39). - The laws were passed without opposition in the parliament.

As soon as post-war conditions had stabilised, the proposal to protect growing forest was bought up again. The temporary law had been renewed yearly, but when it came to making it permanent, the resistance was still notable. Ironically, the critical voices took the poor state of the forests as an argument against protection. As there was no old timber left to cut, the

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<sup>5</sup> Prop 1941:94.

<sup>6</sup> Prop 1918:441

<sup>7</sup> SFS 1938:392



owners would be denied their right to harvest their land if younger trees could not be felled! Basically, the issue was still whether property rights were to be upheld against the principles of sustainable production forestry. However, the five previous years of regulation had made the idea of compelling regulation acceptable to a parliamentary majority.

The resulting 1923 Forestry Act<sup>8</sup> was a more complete piece of legislation than the 1903 one. It emphasised the key role of the Forestry Boards, repeated the 1903 statement that “Private land must not be logged or treated after logging in such a manner, that the regeneration of forest is endangered”, provided short definitions of forest land, and made the following new points

- Should the forest anyhow had been left in an unsatisfactory state after logging, the owners was obliged to actively ensure its regeneration [by planting, sowing, etc.]
- The owner’s obligation to ensure regeneration was extended to cases of storm, insect damage and other calamities,
- Immature forest was only to be thinned for a better development of the stand, unless especially authorised, (but not clearfelled).
- Felling on a property must not be so extensive, that the continued supply of “household timber” was endangered.
- Land classified as “difficult to regenerate” was to be logged only after marking by the Forestry Boards.

However, the requirement of forest management for sustainable yield, presented already by the 1896 committee, was still resisted by an, albeit shrinking, majority of MPs. A proposal to oblige forest companies and major private owners to have long term silvicultural plans was also rejected. The prohibition to fell within five years of a property acquisition without Forestry Board permission was not prolonged after 1923, but was temporarily reintroduced in 1938 (cf. Ekelund and Hamilton 2001 p. 39). The 1906 prohibition for companies to buy peasant land in the north was extended to the whole country in 1925, but by then company acquisitions had ceased to be a real issue, as the commercial boom had come to an end and stumpages were declining. The protection of forest difficult to regenerate was extended by the time-limited 1932 Lapland Act, which made marking by Forestry Board official compulsory on all land in the northern submontane and montane zone.

The legal paragraphs were broadly held, and terms were not defined. It was left to the Government to formulate concrete instructions. In practice, the Forestry Boards were to issue compelling (*tvingande*) instructions and more general recommendations for the forest owners. Thus, in publications intended for practical use, interpretations of the law text in practical terms were included, as was general advising as to how to achieve the best result from silvicultural work. This principle has been followed in all subsequent legislation.

#### **2.4 The national forest inventory and other developments**

A major obstacle to the formulation of efficient forest policies had been the lack of reliable data on the state of the forests. By this time (1923), the principles of large-scale forest inventory had been scientifically developed, and a large-scale pilot inventory had been carried out in the county of Värmland. The Government authorised successive county inventories, until the entire country was covered, in 1929<sup>9</sup>. Reliable estimates of growth and standing

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<sup>8</sup> SFS 1923:212

<sup>9</sup> A comprehensive report was published in SOU 1932:26

volumes were now obtained for the first time, but getting reliable data on the fellings proved more difficult (and continues to be so even today). - A second round of inventories was initiated in 1938, but completed only in 1952, as the wartime caused a standstill.

Meanwhile, as first the Great Depression and then the path towards World War II dominated the horizons, forestry ceased to be an issue for two decades. The Forestry Boards became accepted and even appreciated institutions. However, their work during this period was later severely criticised for not making full use of the existing legislation, particularly regarding regeneration. The principles for thinning were getting established among the forest owners, who realised a tangible benefit from it. Costly regeneration of logged-over stands was less popular. Furthermore, professionals of the period considered selective logging a manageable way to ensure sustainable forest production, but in retrospective, they were wrong: in the early 1950's, large areas of forest were neither fully stocked nor showing sufficient natural regeneration. On the other hand, forestry and forest industry had developed into well-established businesses of great importance to the country's economy. The period of large-scale illicit logging was over. Companies, peasant owners and public forest managers had found their forms of working. It was evident to everybody that economically rational forestry primarily, aiming at supplying a growing, internationally competitive industry with raw material, was there to stay for a foreseeable future.

In this connection it is worth mentioning that timber measurement was regulated by law in 1935<sup>10</sup>. Far from being a mere technicality, an objective measurement system for timber was of fundamental importance for private forest owners negotiating with powerful buyer companies.

### ***2.5 1948: Sustainability and profitability***

By the early 1940's, professionals advocating a more active forest policy found the time appropriate for advancing their positions. In 1942, the National Forestry Board was instructed to prepare for a revision of the legislation. The goal was said to be intensified management, a halt to property speculation, and adaptation the new forestry and social conditions. Without saying, it was still understood that focus was still on the combined agriculture plus forestry households, to ensure their proper income and to maintain social stability in the countryside (cf. Appelstrand 2007, p. 49). A proposal for new legislation was presented by the Board in 1946, where principles of sustainability in economy and timber production were clearly stated. The economic sustainability implied also, that nobody could be forced to clearly unprofitable silvicultural measures. The principle of production sustainability got a very pointed formulation: the management should aim at even timber extraction over time (Enander 2001).

With some exaggeration, it can be said that the forest owners' obligations, as stated in previous legislation, were based on a moral duty towards the good of the nation. But the complementary view, that forestry is a rational economic activity, had been advanced ever since the introduction of scientific forestry thinking in Sweden. The profitability requirement put the farmer-owner into focus – unless contributing to the total homestead economy, the owners would never take interest in silviculture. The founder of the Forest Institute, later to become the Royal College of Forestry, I.A. af Ström, very clearly expressed such ideas in the opening clauses of the second edition of his textbook (1830):

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<sup>10</sup> SFS 1935:xx with subsequent updates

*With Forest Management, such measures are understood whereby forest land is brought into condition to produce the mostly required kinds of forest and the most useful and largest sustained yield, and the most advantageous use...*

*The more one wants to follow the rules, the more time-consuming and costly the implementation, wherefore one should always take into calculation the price of forest products on the locality where the forest is to be managed and the requirement of these products on that locality and the more or less advantageous market conditions, and thereafter choose less or more expensive measures to be taken to bring the forest to higher and better yield.*

The introduction of economic thinking into the legislation made it possible to issue detailed instructions on the application of the new law, built on established principles of business administration (Pettersson 1950; Skogsstyrelsen 1949). This brought with it, that nobody could be obliged to clearly unprofitable silvicultural measures. In the following debate, the issue was still once the rights of private ownership versus a national need to develop a major natural resource. However, the profitability clause appeased the opposition, and the law was passed in both chambers.

These were post-World War II years, and aspects of coordinated national planning were popular in Europe. The second novelty in the law, the principle of even yield, reflected a concern with the raw material supply for the industry, now rapidly recovering after the war time slump. For the company forestry, it caused no problems, but its application to private forestry required fairly wide flexibility in its enforcement. Otherwise, in the 1948 Act regulations already present in the 1923 act got an updated form. With a few amendments, it remained valid until 1979.

In these years, forthcoming data from the second national forest inventory showed, that the state of the nation's forests was far from satisfactory. The Forestry Boards' extension work had resulted in better thinning regimes in growing forest, but too many stands were understocked after repeated selective cutting, forest grazing ruining the seedlings emerging in the clearings. Thus, a nation-wide restoration of the forests to full production capacity was embarked upon. In the wake of the war there was a general acceptance that the private property had to serve a common good, not only benefit its owners. The "Nordic model" in general sought to reconcile public and private interests in general, avoiding both nationalisation and extremes of individualistic behaviour. The gradual acceptance of the 1948 law among a majority of landowners made possible a much more vigorous forest policy than before. Led by the State Forest Service and the companies, active regeneration measures (planting, soil preparation, sowing etc) were scaled up by a factor of four. During the following decade, the basis was laid for today's high level of forest production from fully-stocked stands.

## ***2.6 Divergent views and new actors in policy making***

The post war period was first started with reconstruction – Sweden remained materially unscathed by the war – and the economic boom accompanying the Korea war. After this, the yearly growth of forest industry was 5-6%, accompanied by slowly falling timber prices, making logging in parts of the inland unprofitable. However, a development was possible because of a rapid mechanization and rationalization of forest operations. A short boom 1973-74 was followed by turbulence up to the early eighties, and basically good profitability after that, with the exception of the 1990-93 recession (Enander 2003, pp38 ff). In retrospect, national inventory data (the inventory was by now continuous) show that felling exceeded

growth only for a short period in the mid 70's, the only time in the 20<sup>th</sup> century. When the boom was going on, however, many voices claimed that the private forest owners were not active enough in their management. In the early 1970's, the forest cluster interests had grown strong enough to cause a shift in priorities of forest policy, favouring the industry's well being before the interests of the family forestry. Socially, this was losing in importance, as former subsistence farmers were recruited to the factories, and the number of full time farming households sunk towards 60 000 – to be compared with the 250 000 forest holdings; both figures referring to the year 2000.

The political left had all the time been suspicious of the private forest owners' capacity to manage their forests. A public investigation in 1925<sup>11</sup> ventilated this issue, but concluded that conditions were rapidly improving, thanks to the advisory work of the Forestry Boards (Appelstrand 2007, p. 44). The Social Democrat party and some trade unions had since the 1940's campaigned for a larger degree of "society", i.e. State control, over forestry.. In the early 50's, trade union interests unsuccessfully advocated an outright socialisation of the private forests. In 1956, the former Minister of Finance, PE Sköld (Social Democrat) submitted a proposal in parliament to scrap the profitability principle and the protection of growing forest, and to make thinning as well as felling of over-aged forest compulsory. All this to mobilise more timber for the factories - 'industry capitalism' and trade union socialism' for a long period made company in Sweden's economic policy. The growing forest owner associations wanted a deregulation, the trade unions pushed for more regulation. In 1965, a forest policy committee started working, and in 1973 its proposals were delivered. Yet, the committee was deeply divided over the majority's proposal to introduce long-term (central) planning for the forest sector, to scrap the sustainability principle in favour of a flexible forest exploitation following the business cycles, and to introduce a system of fees and subsidies to steer the timber market supply.

A committee proposed, in 1973<sup>12</sup>, that all Sweden ought to be subjected to one general management plan regardless of ownership. It also claimed that the sustainability principle could be abandoned, at least as long as the business cycle was positive. Such ideas were, however, considered alien to the "Swedish way". The immediate result was two amendments to the existing (1948) legislation, with no reference to the need for enhanced fellings:

- Forestry had to show consideration to conservation and environmental aspects (1974<sup>13</sup>; see below).
- The Forestry Board had to be informed in advance about all final fellings (1975)<sup>14</sup>

### ***2.7 Sticks and carrots: forestry by regulation 1979 and 1983***

However, after further preparations, a completely revised Forestry Act was introduced in 1979<sup>15</sup>. The law introduced obligations of dubious economic advantage to the owner. The socio-political development in society at large had resulted in a shift in balance between the interests of peasant land owners, now accounting for some 5% of the total population only, and the increasingly urban majority of workers and middle-class, to the favour of the latter. The "national well-being", i.e. the forest industry, required that the full production capacity of the national territory was utilised.

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<sup>11</sup> SOU 1925:12

<sup>12</sup> SOU 1973:14

<sup>13</sup> SFS 1974:

<sup>14</sup> SFS 1975:

<sup>15</sup> SFS 1979:429

In the 1979 Forestry Act, “a continuously high and valuable timber yield” was substituted for the previous goal of “a satisfactory economic gain and an even yield”, making the individual owner’s economic interest a secondary matter. To the 1948 obligation to thin was added

- compulsory pre-commercial thinning
- compulsory reforestation of low-productive forest, including species rich, former grazing woodland

In 1983<sup>16</sup>, the advocates of regulation managed to add

- compulsory felling of mature forest: at least half of the area ready for final felling had to be felled.
- mandatory forest management plans.

The National Board of Forestry issued detailed instructions for the observation of the new provisions.

One may wonder how a market economy society like Sweden was made to accept this level of regulation. The answer may be found in the high degree of success of the post-war forestry model. Individual property rights were respected within the framework of a totally regulated agricultural and forestry sector, and the silvicultural rules carried with them a high level of long-term economic rationality. Considering that the average economic rotation of timber forest ranged from some 80 years in the south to the double in the north, the recovery from the badly exploited forests of the time of the 1903 Act to the present state had been remarkable. Sweden’s entire forest production capacity was now geared to one goal: maximum production. The restoration work embarked on after 1948 had been successful, and the age structure of the forest looked constantly better. With the exception of two shorter down periods, one in the late 1970’s and another more serious in the early 90’s, the output of both sawmilling and pulp making has been steadily increasing.

As noted above (4.2), from the very beginning, subsidies for above all regeneration of less profitable object were an important instrument in the work of the Forestry Boards. On the other hand, the forest owners contributed both to the general budget of the boards and to the subsidies through a “silvicultural fee” or tax levied on the timber sales.<sup>17</sup> In order to support self-employment among private owners, the basis for taxation was the standing value of the timber; the logging income was exempted *//kolla bättre//*. In the sixties, the silvicultural fee was less than 0.1%.”

Looking into the total financing incl. subsidies, about 1/3 of the Forestry Board budget came from silvicultural tax, 1/3 from the state budget, 1/3 from fees for services provided. The total allocation for state subsidies to forestry (Figure 1), expressed as 1991 price index<sup>18</sup> remained fairly constant up to the late 1950’s, with a short exception during the depression year 1933 and -34, when unemployment relief was channelled to large draining projects. In 1948, legislation regarding subsidies and a lending fund for silvicultural works was updated and made more efficient (Ekelund and Hamilton 2001, p55). From 1959 the subsidies notably rose, while the active intervention policy signalled by the 1979 act led to an almost tenfold increase.

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<sup>16</sup> SFS 1983:427

<sup>17</sup> A detailed account is provided by Ekelund & Hamilton 2001, Appx 1.

<sup>18</sup> Using the Statistics Sweden long term price index. [http://www.scb.se/templates/tableOrChart\\_33837.asp](http://www.scb.se/templates/tableOrChart_33837.asp). Budget allocations from Ekelund & Hamilton 2001 p. 250

The Social Democrats had campaigned for far larger deductions to be deposited on compulsory silvicultural accounts, to be used for regeneration costs, but this was dropped along with the 1975 policy committee recommendations. Instead, the 1979 act was accompanied by an almost ten-fold increase in the silvicultural fee, stabilised at 0,8% during the 1980's. The funds so mobilised were directed, initially to an intensive thinning campaign, and continuously to the regeneration of degraded and mountain forest and other less profitable objects, initially also to and to forest road construction. They were also paying for the silvicultural assessment (ÖSI) and the establishment of seed orchards (*Table 1*). A large part went to northern Sweden. - As policy instruments, the subsidies must be considered efficient, but with the amounting pressure for a policy reform, it was decided to abolish both the fee and the subsidies in the 1993 legislation, and let the owners use their own money as they saw it fit.

Table 1. Allocations for support to silviculture and road building, and silvicultural fee levied 1975/76 to 1993/94

	Direct support	ÖSI+seed	silv. fee	rate 0/00
93/94	99	4		
92/93	90	50		
91/92	135	67	phased out	
90/91	241	67	425	8
89/90	244	67	424	8
88/99	255	67	424	8
87/88	294	72	431	8
86/87	231	56	426	8
85/86	333	49	425	8
84/85	364	46	419	8
83/84	435	33	347	6,5
82/83	450	26	262	5
81/82	368	21	295	5,5
80/81	205	10	229	4,5
79/80	51+150	5	184	10
78/79	119		16	0,9
77/78	116		17	0,9
76/77	93		18	0,9
75/76	78		18	0,9

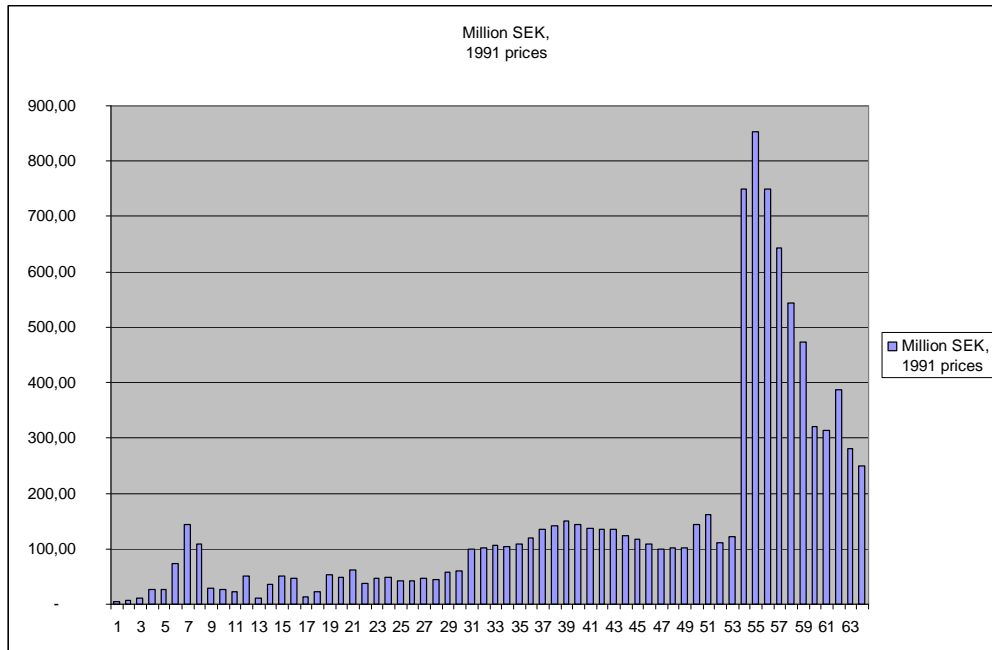
All data from Yearbook of forest statistics, pertinent years

Allocation amounts are not fully comparable over the years as the base of statistics varies.

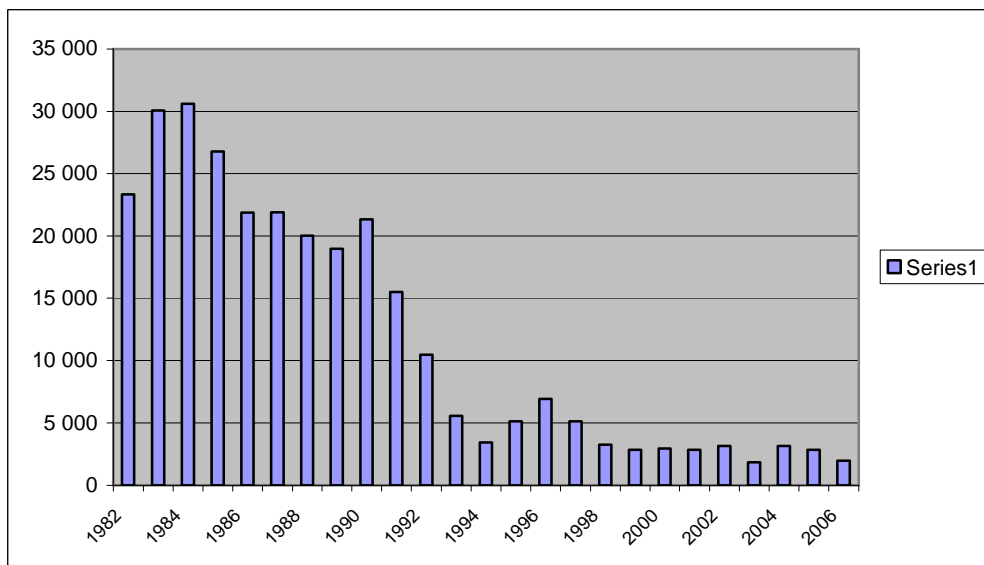
Year 1979/80, an extra allocation was made for support to thinning,

paid for by a tenfold increase in the silvicultural fee

**Fig. 1 State allocations for subsidies to silviculture 1923-1991**



**Fig. 2 Number of written advice and recommendations to family forest owners by the Forestry Boards 1982-2006**



### 3. Towards deregulation and a multi-purpose forest management

#### 3.1 *The emerging environmentalism*

During the 19<sup>th</sup> century, main legislation issues concerned property rights, treated in a previous paper, and logging regulation. Sustainable timber production was a concern of the 1903 Forestry Act, and continued to dominate the “lawscape” up to the 1983, as discussed above. While forestry was being geared to maximum production, a new concern was emerging in greater society, environmentalism (cf. Enander 2007b, pp. 177 ff.).

Strictly speaking, environmentalism existed in Sweden since the beginning of the 20<sup>th</sup> century in the form of nature preservation through national parks, reservations and natural monuments. The movement was uncontroversial to the industrial forestry since only small areas were set apart, the majority being located outside productive forest. Many professional foresters belonged to organisations promoting conservation and preservation. Nobody protested against the afforestation of the Calluna heaths in the southwest, nor against the poor state of logged-over forests. But the intensification of forestry, starting in the 1950’s, slowly awoke an articulate opposition. One opinion objected to the “spruce darkness”; the afforestation of marginal agricultural land created an unfamiliar landscape around settlements. The opposite was also criticised: the vast clearcuts, in Norrland sometimes covering several hundred hectares in one block. More efficient self-regeneration in cold zones was achieved through deep ploughing; this was criticised for destroying the land for reindeer as well as for trekkers. In other areas, spontaneous broadleaf regeneration in the newly tended regeneration areas was sprayed away with herbicides, causing black headlines in the press. The then recent attention on DDT, and the regional problem of acid precipitation also contributed to creating an atmosphere critical to forestry and forest industry. But to criticism of spruce planting, clearcutting, ploughing and chemicals came a general “green wave” opinion negative to industrial forestry, accompanying the general social fermentation and spread of both green and socialist ideals during the 1960’s and 70’s.

It took time for the forestry cluster to realise that the world around it was changing. Its self-contentedness is illustrated by the fact, that none of the environmentalists’ concerns were dealt with in the legal reform work of the 1970’s. It was claimed that the 1974 obligation to consider conservation aspects remained a dead letter as long as §5 of the 1983 provisions, obliging any forest owner to restock low-productive by biologically interesting woodland, were enforced by the Forestry Boards (cf Appelstrand 2007, p 228). However, the National Forestry Board included five pages on environmental consideration in its instructions, including suitable measures during final felling (Enander 2007b p.192). The practice of cutting very large tracts in one operation was abandoned, but the hottest issues, that of conserving key biotopes, often the §5:3 forests and the remaining old growth, remained unaddressed until the end of the period. In 1981, the Parliament even increased the subsidies for replacing the lowly stocked stands.

However, the public opinion was rapidly changing. In 1990<sup>19</sup> a far reaching, new environmental policy was decided, and further developments until the present day (2008) are based on principles then established.

The Swedish language literature – Appelstrand’s (2007) thesis being an exception – tends to focus on national factors, but seen in a European perspective, the Swedish legal reforms paralleled by similar processes in many European countries, and driven by the same forces.

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<sup>19</sup> Prop. 1990/91:90



These came into expression in the 1992 Rio conference, where both the Convention on Biological Diversity and other decisions had direct bearing on forestry, and also resulted in anew awareness of concepts such as biodiversity and multiple-use forestry among Swedish politicians. Furthermore, on a European level, the EU (where Sweden joined only in 1995) had set up a standing committee on forests in 1989. An update Forestry Action Plan was presented in 1992. With members from all Europe, a permanent Minister Conference for the protection of forests in Europe (MCPFE) was set up in 1990; its second conference in Helsinki 1993 issued a later frequently quoted declaration, emphasising the importance of sustainability and multiple use, as well as representing a European response to the CBD requirements to conserve biodiversity. A varied group of European countries (Croatia, Finland, Portugal, Slovakia, Spain and Switzerland) had by 1993 revised their forestry legislation in the same direction as Sweden, and many more were to follow suit within the next years (Schmithüsen et al. 2000)

### ***3.2 A reversal of policy: the 1993 Forestry Act***

If the forest policy up to the 1950's had had the wellbeing of the farmer population in focus, and the period 1960 to 1990 served the interests of the industry and the industrial workers, it was now finally the turn of the "ordinary citizen" who by now was an urban dweller, using forest for recreation and concerned about the long-term wellbeing of the Planet. Structural change in farming had brought down the number of farms from a quarter million in 1960 to less than 80 000 in year 2000, and mechanization had introduced the contractor-machine operator as the main loggers, instead of farmers doing logging in the winter. The growing stock and timber yield had been increasing since the first inventory in the 1920's, and the fears of timber shortage for the industry of the 1970's had turned into a constant surplus over actual fellings. Furthermore, the political changes had brought large amounts of timber in the Baltic countries and westernmost Russia to the market. And, the private forest owners continued protesting against the far-going regulations in the silvicultural law, while, as mentioned above, the environmentalist protest against 'timber production at any cost' had changed opinions in all political parties. When the 1990 forestry committee, appointed by a Social Democrat government, delivered its report<sup>20</sup>, the parliament had got a non-socialist majority. While a major change was advocated by all, the socialists wanted to retain a certain amount of regulation and compulsory management plans, while the environmentalists wanted far more radical regulation in the field of conservation.

The resulting compromise<sup>21</sup>, the 1993 Forestry Act, looked as follows (cf. Appelstrand 2007, p 229 ff.):

1. The opening paragraph (the goal statement) introduces a new, general statement, "the forest is a national resource". It makes the production goal of former legislation more vague, "a sustainably good yield", and states a second goal of equal importance "while maintaining the biological diversity". The existing reference to other "public interests" is retained. – It may seem strange that the legislators chose to word the conservation goal so narrowly, mentioning only biodiversity. One reason may be that conservation previously had been considered above all from esthetical points of view, but one may also guess that not even these august persons were immune to the jargon of the day, and the strong emphasis in Rio on biodiversity. However, the wording of the government's missive to the Parliament<sup>22</sup> makes it clear that the

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<sup>20</sup> SOU 1992:79

<sup>21</sup> SFS 1993:553

<sup>22</sup> Prop. 1992/93: 226 A law proposal in Sweden is always accompanied by an explanatory text, given much importance in Swedish jurisprudence when interpreting the law.

intention is to include all aspects of environmental conservation, which were to be given importance equal to the production goal. – The Forestry Board instructions and counsels go into considerable detail on suitable consideration-conservation measures in practical silviculture, but as Appelstrand (2007) remarks reviewing the literature commenting on the 1993 act; there existed no way of quantifying the environmental goal or actually balancing the two goals in conflicting situations.

2. The act was characterized by substantial deregulation, however not to the extent of abolishing the fundamental obligations to ensure regeneration, and to protect growing forest. But the compulsory cleaning and thinning, the obligation to fell mature forest, and to have a complete management plan were all abolished. Specific rules on maximal clearcut percentages, aiming at limiting all-out exploitation followed by selling the property, replaced former detailed rules. Instead, the owner was given freedom to use other management methods than the cyclic final felling system.

3. As already mentioned, the silvicultural tax was cancelled and most subsidies were terminated. The role of the Forestry Boards was partly reformed, and the organization was shrunk as both the silvicultural assessment (ÖSI) and the mandatory management plans were abolished. The intention of the (since 1991 non-socialist) government was that the owners freely should use forestry expertise in making suitable management plans.

4. Regarding environmental consideration, the Parliament decided, contrary to the committee, to follow the tradition of making goal statements in the law and leaving the concrete regulations to the Forestry Board. The only specific matters raised in the law were increased consideration (utökad hänsyn) on impediments, wetland forest and valuable broadleaf species, limitations of draining and fertilization, and a compulsory report on environmental consequences of new silvicultural methods. Finally, consequences of infringements were stepped up compared to previous legislation, including a possibility, in extreme cases, of imprisonment.

However, the most important change was not in the wording of the new law, but in the general change of atmosphere. As described above, in all most industrial countries, new thinking on the use of forest land and forest resources became established. At the same time, non-legal regulation of forestry in the form of certification raised environmental and social standards of forestry beyond the legal requirements, which thus established minimum levels.

### ***3.3 Evaluation and follow-up of the policy reform***

As the reform was expected to influence the entire forestry sector, the National Forestry Board made a preliminary evaluation in 1997, and a major one in 2001 (Skogsstyrelsen 2002). The latter includes a treatise on the history of forest policy with special emphasis on the Forestry Boards (Ekelund & Hamilton 2001). A new committee was given the task of proposing possible changes in the legislation, and presented its final report in 2006<sup>23</sup>. The main conclusion was that the fear for negative effects on deregulation was mostly unfounded, and recommended only minor adjustments. The government, after 2006 once more non-socialist, delivered a proposition on forest policy to the parliament, making hardly any changes in the 1993 act, but called intensified silvicultural work within the present framework, however without subsidies or new coercive rules. The Forestry Boards, which meanwhile had been reorganised and changed their English name to Swedish Forest Agency, were more strictly than before barred from competing with private firms in making management plans, marking timber for felling, etc. Later the same year, a second step in

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<sup>23</sup> SOU 2006:81 "Mervärdesskog", Forest for added value.

reorganisation was initiated. However, suggestions that the organisation's tasks should be transferred to the County administrations was rejected; instead, the Forest Agency was to remain as a separate authority, being the practical tool for enforcing the government's policies.

During the decade up to 1993, regeneration, cleaning and thinning had markedly improved; the latter two from unsatisfactory levels. It was feared that the reform would lead to lower standards. The evaluation, SUS 2001, showed that during the first years after the reform, the percentage successful regeneration had gone down from 81 to 74% since 1996, that year's census reflecting the last year of pre-reform regenerations. The main reason was to be found in temporary increase in reliance on natural regeneration without scarification. This trend was however soon reverted, as land owners realised the need for more active regeneration measures. The 2006 committee report concluded, based mainly on SUS2001 and more recent general statistics, concluded that, except for the initial drop in regeneration success, variations in silvicultural treatments were caused by external factors and not by the change in legislation, and consequently recommended no changes.

This applied even more to the achievement of environmental goals formulated during the early 90's, and extended in a parliamentary decision on environmental goals in 1998. These goals, more than the provisions of the forestry law, provided guidelines for environmentally responsible silvicultural practices. The issue of conservation against production is discussed by Beland Lindahl (2008, pp. 42 ff.).

That year, a few changes were introduced into the 1993 legislation. Every forest owner was obliged to have a formal description of forestry and environmental goals<sup>24</sup> – a simple substitute for the previous mandatory management plans. The National Forestry Board was also authorised<sup>25</sup> to issue prescriptions for allowable regeneration methods. Finally, the 1993 rules limiting the portion of a property to be clear-cut were sharpened, as a relative low number of blatantly non-sustainable property takeovers, exploitations and subsequent sales to insolvent owners, incapable of meeting regeneration costs, were brought to justice.

#### **4. Beyond mere legislation: the task of introducing a silvicultural philosophy – and changing it**

As emphasised above, ever since the first Forestry Act in 1903, a policy of motivation and education rather than of coercion was employed to make private forest owners comply with the goals of legislation, with regional Forestry Boards as key agents. Ekelund & Hamilton (2001) provide detailed statistics on the various activities and measures taken by the forestry boards. Regarding law enforcement, few cases were ever brought to court: up to 1948, the number for the entire country was 30 to 40 per year; after that date, no statistics are provided, assumingly since legal actions has been extremely rare. The number of felling prohibitions varied with the business cycles, but ranged from about 150 per year to a peak of 450 in 1948, stabilising at less than 50 after 1960. For 1980 to 1990, less than ten felling prohibitions were communicated yearly; the total number of cases of formal legal prescriptions numbered less than 500 yearly. - All figures here and below should be related to the number of private (mostly peasant) holdings, being about 250 000, comprising around 10 million hectares.

The key message of the 1903 and subsequent Acts was that felling must be followed by regeneration. The Forestry Boards were to give individual advise and make written agreements with the landowners on how to fulfil the regulations. During the first twelve years

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<sup>24</sup> SFS 1998:1538

<sup>25</sup> SFS 1998: 1540

of board work, some 1200 consultations resulting in agreed regeneration measures were made per year. During the next 24 years, the number was almost doubled. For the period 1948 to 1978, the number of agreements varied widely, from over 20 000 in 1948 and slightly less in 1974 and 1975, to only a few thousand around 1960, the latter period being one of very low timber prices and economic problems for the entire sector. For the period 1980 to 1990, an annual mean of 13 000 regeneration agreements following formal consultation are recorded, 2000 agreements regarding restocking of unproductive stands, and 1000 regarding nature conservation.

From 1975, advance notification of intended fellings larger than half a hectare became compulsory. Ekelund and Hamilton (*ibid.*) provide data on action taken by the forestry boards in 1976, just one year after the passing of the law.

- notifications of 35 000 fellings of 208 000 ha
- 7 700 notifications resulted in contact with the owner for counselling, whereof 1490 cases resulted in formal restrictions. Out of these,
- 136 cases where motivated by nature conservation
- 253 cases were motivated by the low age of the forest
- 297 cases were motivated by concerns for the regeneration
- 199 cases concerned protection forest

The low frequency of formal action by the boards is a result of the continuous contacts between the silvicultural advisers and the forest owners, during formal educational arrangements and personal contacts. A mean of 113 000 forest owners per year had some kind of contact with a board adviser! It can be assumed that, knowing about the requirements of the law, most owners contacted the adviser even before submitting the notification. When management plans became compulsory in 1979, possible problems were normally sorted out during the planning work. Forest owners were also eager to have management plans. Nearly 50% of the private forest had plans made by board staff in 1978. So, when plans were made compulsory in 1979, they were already widely accepted management tools among private forest owners.

Public statistics quoted by Appelstrand (2007, p.237) give a picture of the intervention of the boards during a ten-year period before 1993. Per year, 27 000 “advises and instructions” were formally communicated by the boards, but only 460 cases of coercive action and prohibitions. Conservation issues represent only a minor part of the “advises”, or 2 000 in the late 80’, in spite of the prominent role these issues by then were occupying the public debate on forestry.

While felling and initial regeneration measures were closely monitored, the regeneration outcome could only be monitored in retrospective. The total area of sowing or planting rose from about 100 000 ha per year in the early 50’ies to near 200 000 ha after 1980, showing no correlation with the varying number of regeneration agreements mentioned above. The annual clear-felling area varied between 200 00 and 300 000 ha for the entire post-war period; about one-third of which was left to natural regeneration. In the 1980ies, the actively regenerated (planting, sowing) area was almost equal to the clear-fellings. - The national forest inventory has recorded regeneration success, beginning in 1975. From a low 40% fulfilling legal requirements, the success rate rose to 90% in 1992, The monitoring of silviculture got a forceful tool in 1979, when the ÖSI, a total assessment of the silvicultural status of forest, was initiated. When it was abolished in 1993, about 90% of the private land was covered. Based on ÖSI data, the Forestry Boards were able to locate stands where silvicultural work was

required, and could notify the owners even where no direct legal infringement had (yet) taken place.

The incentive packages offered to the private forest owners comprised not only counselling and education, but also subsidies for active regeneration measures (soil preparation, sowing and planting), for road building and for draining. Additionally, unemployed forest workers were paid by State funds to do extensive silvicultural work, particularly pre-commercial thinning; 30 000 – 70 000 ha per year were thus thinned. The fee levied on timber sales income was successively raised over the years, part of it financing the growing number of adviser, part financing the subsidies, which thus ultimately were paid by the forest owners themselves. Over the period 1980 to 1991, when the whole system was abolished, the annual subsidies totalled about 300 million SEK. Annual means of 100 000 ha of active regeneration and 1200 km of forest roads were partly financed from these funds. Subsidies were paid both to corporate and private owners, as both categories paid the same silvicultural fees. However, Ekelund and Hamilton conclude that private owners were clearly favoured.

A final evaluation of the forest policy of the 20<sup>th</sup> century can be based on the development of the standing and felled timber volumes. The standing volume was XXX in 1923/7, at the time of the first national inventory, and YYY in 2000. The total fellings were 50 million m<sup>3</sup> in 1927, 75 million in 2000, while the total (including reserves and protected areas) stem growth that year exceeded fellings with 30 million. From that point of view, the forest policy has been a success.

Appelstrand (2007, p 217 ff) discusses the new policies and their consequences for the Forestry Boards. The non-socialist government in power after 1991 wanted to strengthen the regulatory function of the boards and reduce their advisory function, partly to avoid criticism that the public authority was competing with private firms providing services such as management plans and marking for felling. Also, providing advise to individual landowners was the most cost intensive part of the boards' work. In 1992, 59% of private forest owners had regular contact with an advisor, and the most prominent group was elderly, long time owners who were not members of a Forest Owners' Association. Increasingly, individual advise – other than concerning the legality of proposed silvicultural measures – was subject to market-based charges. Consequently, in year 2000, the number had dropped to 36%. On the other hand, the advisory work of the Associations probably increased, but there are no comparable data at hand. Campaigns directed to local forest owner communities had proved successful, with 90 000 participants in a competence-building campaign "Richer forest", 1990-92; the recent conservation oriented campaign "Greener forest" engaged 130 000 owners, corresponding to half of all holdings. – ÖSI assessment was also discontinued after 1993, basically because the cost-benefit ratio was considered unsatisfactory, but by then some 90% of the private forest area had been covered, and the data were useful for a long time addressing "problem spots" among private holdings.

The 1993 reform marked a period of reshaping the organisation and work of the Forestry Board system, which will be discussed in a planned report on Swedish forest policy after 1993.

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# **COLLISION BETWEEN REGULATIONS IN FOREST LAW AND ENVIRONMENT RELATED LEGISLATIONS IN TURKEY**

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## **1. Introduction**

In Turkey, all forests are under the control and supervision of the State regardless of their type of ownership. Therefore the State plays a dominant role in forest management and through legal arrangements, and determines the methods and principles of benefiting from forests. Although State forest management principle forms the basis of forest legislation, many provisions enabling people to benefit from forests are included in this legislation. Benefiting from forests in Turkey, where the forests are basically managed and owned by the State, appears as benefiting from forest products and forest land (Coşkun, 2006).

Forestry policies in Turkey have been protection of forest areas, sustainable provision of industrial and fuel wood to meet domestic demand, provision of non- wood products, rehabilitation and reclamation of degraded forest areas, establishing and expanding national parks and protected areas, protecting wild- life, providing social services such as recreation, hunting etc., and contributing to the rural economy to decrease their pressure on forests. Forest resources provide vital socioeconomic contributions especially for local communities, which comprise around 7- 8 million people living in more than 20 000 forest villages. Almost all energy needs of these communities are provided at highly subsidized prices from sales from state forests as fuel wood. In addition, a significant amount of wood volumes are illicitly cut and utilized by the forest village dwellers. Round wood needs of forest villagers are also provided at subsidized prices from state forests. NWFPs produced from forest areas provide some important contributions to family directly as well as cash income to household budgets in forest regions. Fodder provided by free grazing and by cutting and carrying away for winter feeding is by far the most important NWFP for forest regions in mountainous areas (Ayanoğlu 2006).

Forests in Turkey are protected by the Constitution. Article 169 of the Turkish Constitution deals with the protection and improvement of forests and emphasizes State ownership and management of forests (Coşkun, 2006). Although the laws were enacted by considering the essential principles of the Constitution, some of them might be against it. Under such a circumstance special laws have a priority over general provisions of the law in practice. Current forest legislation has lack of some provisions in terms of biodiversity protection. It has some contradictory provisions that cause some conflicts among several statutes and implementation authority. The European Union Affiliation process gives an opportunity to update such laws by modifying or amending them. Therefore, current forest legislation needs to be altered to cover all issues dealing with biodiversity protection (Güneş, 2006).

In this study the constitutional basis for environment and forests is introduced first. Then, an overview of current forest legislation is given. Then, laws in conformity with the current forest code are summarized. Overreaching and contradictory provisions put in other laws are mentioned.

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## **1.1 Constitutional Basis of the presently applicable Legislation**

The Constitution 1982 contains provisions relating to environmental protection and maintaining forest and natural resources. In this regard, Article 56 with the heading of Environmental Protection, says: “Anybody shall be entitled to live in a balanced and healthy environment. Developing environment, protecting environmental health and preventing environmental contamination shall be duties of the State and citizens.” This opinion is approved and completed by Article 63 which says: “The State shall assure the protection of the values regarding historical, cultural and natural presence and in this respect, shall take relevant supporting and encouraging measures. The limitations to be applied to these presence and values subject to private ownership and the assistance and the exemptions to be granted for this reason to rightful persons shall be regulated by law.” (Anonymous, 2001).

Article 168 of the Constitution with the provisions on the detection and operation of natural resources under State’s supervision regulates the utilization of these resources without rendering any damage thereupon. The Article says: “Natural wealth and resources shall be under the command and possession of the State. The title to detect and operate of these belongs to the State. The State may assign this title to natural or legal persons for a prescribed period. The question of which wealth or resource shall be detected and operated by the State in joint partnership with real or legal persons or directly by means of real or legal persons shall be subject to express permission of law. In this case, the conditions binding for real and legal persons and the principles relating to the supervision and surveillance to be conducted by the State and respective enforcements shall be described by law”.

Considering these provisions for environmental protection and natural resources of the Constitution 1982, the sensitivity of the Constitution may clearly be seen in its approach to forests. Article 169 of the Constitution carries the heading of “Protection and Improvement of Forests” and contains the provisions to this objective. Pursuant to Article 169: “The State shall put into effect the legal regulations for the protection and improvement of the forest and in this regard, shall take measures. New forests shall be grown up instead of those destroyed by fire, and no agriculture or feeding activity may be permitted in these areas. The supervision of each and every forest shall be conducted by State.

No ownership of State’s forests may be assignable. By law, State’s forests shall be administered and operated by the State. These forests may not be owned by means of prescription and any servitude may not be instituted other than beneficial to the public. No activity detrimental to forests may be allowed. Any political propaganda causing the damage of forests may not be permitted, any amnesty or any partial amnesty for the crimes of forest may not be effected. The crimes committed for the purpose of setting fire, exterminating or narrowing of forests may not be included within the coverage of amnesty or partial amnesty....” (Anonymous, 2001).

## **1.2 Forest Law**

In 1956, the present Forest Law numbered 6831 was enacted and modified many times since then. It defines the principles of forest land use and types of ownership and quality: Forests are defined as State Forests, Forests belonging to the public legal entities and Private Forests according to the criteria of ownership (DPT, 2001). On the other hand according to the criteria of quality forests are classified as Protected forests, Natural forests and Production forests.

The Turkish Forest Law is composed of 7 chapters. Contents of this chapters are:

- Chapter I pages 1-6: Definition, classification, administration and inspection of forest
- Chapter II pages 7-44: State forests
- Chapter III pages 45-49: Forests belong to the Public legal entities
- Chapter IV pages 50-56: Private forests
- Chapter V pages 57-114: Common rules
- Chapter VI pages 115-117: Miscellaneous provisions
- Chapter VII pages 118-119: Temporary provisions

In Republic of Turkey, all affairs concerning State Forests or the places regarded as State Forests shall be handled or organised by the General Directorate of Forestry. All forests owned by parties other than the State are subject to the inspection of the General Directorate of Forestry in accordance with the provisions of this Law (Aras, 2002).

## **2. The Laws Having Consistent Provisions Of the Forest Code**

### **2.1 The Environment Act**

The Environment Act No 2872 dated 1983 contains provisions relating to forestry. Article 1 of the Act says : “The objective of this Act is to regulate the arrangements and measures to be conducted for the protection and improvement of environment having the quality of common presence of all citizens; the best utilization and protection of the lands in urban and rural areas; the prevention of the contamination of water, soil and air; the improvement and assurance of health, civilization and living standards of future generations in compliance with the economic and social targets based on specific legal and technical essentials.” (Anonymous, 2008)

The scope of the objectives of Environment Act, Article 1 directly includes forests and their protection. Forest is a rich environment for life inclusive flora and fauna and an ecological system in quality of wealth with respect to natural composition, varieties of species and in some cases, integration with history. In this regard, all the objectives established in Environment Act in favor of environmental protection also apply to forests (Güneş and Coşkun, 2004).

Article 9 of the Environment Act with the heading of Environmental Protection is in direct relationship with forests. This Article says : “The areas under protection to be designated in line with the decisions for any land utilization in rural and urban areas, and the essentials relating to protection and utilization to be applied in these areas shall be regulated by law. In the framework of the essentials hereto; any extreme and inappropriate kind of utilization, any disturbances to the country’s basic ecological balances as a result of importing any kind of waste and garbage from foreign countries, any risk for the species of flora and fauna, any damage to the entirety of natural presence shall be forbidden.

The Board of Ministers shall be authorized to designate and announce the areas sensitive to nationwide and worldwide environmental disturbances and contaminations as being “Special Environmental Protection Areas” so that the prerequisite measures should be taken in order to guaranty the preservation of the beauties for the prospective generation, and to determine a ministry which will prepare the essentials relating protection and utilization to be applied in these areas as well as plans and projects.”

A considerable amount of the areas designated by the Board of Ministers as Special Environmental Protection Areas on the basis of this Article are forest lands. In this regard,

Article 9 carries a specific importance in terms of forestry. In these areas, Environment Act and Forest Act shall be applied on a complementary basis. In the Decree having the Command of Law about this issue is prescribed that the forests fell in the areas of Special Environmental Protection shall be considered under Environment Act and therefore subject to special protection (Coşkun, 2000).

## **2.2 The National Parks Act**

The objective of the National Parks Act No. 2873 dated 1983, is to regulate the essentials relating to the designation of national parks, natural parks, natural monuments and natural maintenance areas having national and international importance, and the preservation, improvement and administration thereof without damaging their characteristics and specifications. This Act exhibits parallelism to the Forest Act No. 6831 which is still in effect. The Forest Act, whereby forests are classified in Article 4 with respect to their characteristics and specifications, also applies this classification to national parks.

In Article 25 of this Act, the question of national parks is considered as follows: “The General Directorate of Forest shall deal with the allocation of the forest to science deemed necessary by location and specification as well as the areas which fell in the regulation of forest; the maintenance of nature; the assurance of country’s beauty; the provision of society’s various sport and recreational needs; the provision of convenience to tourist acts; the allocation, arrangement and operation or cause their operation of national parks, natural parks, natural monuments, natural protection areas and forest promenade locations” (Anonymous, 2009a). If the locations fell under the regime of forest, the areas of natural parks, natural monuments and natural protection shall be designated with the approval of the Ministry of Environment and Forestry.

## **2.3 The Bosphorus Act**

The Bosphorus Act No:2960 dated 1983 contains provisions on the protection of natural, cultural and historical presence in favor of public. Article 3 of the Act regulates the question of construction in Bosphorus. Most of Istanbul’s forest areas are located in the Bosphorus region. Therefore, the Bosphorus Act should be taken into consideration. Especially, relative to the question of construction, a dispute was experienced for some period between the Forest Act and the Bosphorus Act. The application of the Bosphorus Act being a more general regulation is contrary to Law Literature while there exist the Forest Act No. 6831 which is more specialized and presents arrangements relating to forests. For this reason, the application of the Forest Act would be more appropriate to the forests areas in Bosphorus Region.

Article 4 of the Bosphorus Act No. 2960 also contains provision “for private forests”. According to this Article, the forests in the boundaries of Bosphorus belonging to a private party shall be confiscated by the Ministry of Environment and Forestry. Consequently, the private forests in Bosphorus Region shall be deprived of this status and become State’s forest. The location addressed under this status shall be regulated in compliance with the project and programs prepared by the Ministry of Environment and Forestry considering natural features of the Bosphorus Region. According to the provision of Article 4 private forests located in Bosphorus Region shall not be subject to any construction. Additionally, as considered under the status of State’s forest, following Article 169 of the Constitution, no right of use may be instituted outside of public benefit and the private forests located in Bosphorus Region shall deem to have all the capacities relating to public goods (Coşkun, 2000).

## **2.4 The Public Works Act**

The Public Works Act No. 3194 dated 1985 provides that settlements and constructions are in compliance with the plan, science, health and environment conditions. The Public Works Act has a direct or indirect influence on forestry. Article 4 of the Act; says “the provisions of this Act not conflicting with the special laws shall be applied at the locations to be designated by the Encouragement of Tourism Act; the Protection of Cultural and Natural Presence Act; the Bosphorus Act; the Act About Administration of Greater Municipalities and other special acts being in compliance with relevant provisions of this Act” (Abacıoğlu, 2002). The Forest Act is one of the special acts mentioned in the article and provision of the Public Works Act not conflicting with the Forest Act shall be applied in the locations to be designated by the Forest Act.

Article 52 of the Public Works Act addresses the permission for construction to be examined in terms of the Public Works Act. According to this Article, excluding the private forests, which were created by way of planting, private forests may not be divided among their heirs and assigned to the other parties with parts less than 500 hectares. However, pursuant to Article 17 of this Act, constructions may be carried out in areas of some private forests provided that 6% of the horizontal area is not exceeded and relevant permission obtained. During the construction, the maintenance of natural features of forest areas shall be taken into consideration. Linkages between the Forest Act and the Public Works Act can be seen without difficulty considering the wording of horizontal areas and the construction in accordance with Planning of Public Works. The concept of horizontal area is Floor Area Coefficient (FAC) which is described in the Public Works Act and the same article also contains the concept of “the construction in accordance with the Planning of Public Works” which means that the provisions of the Forest Act must be applied with respect to the Public Works Act (Coşkun, 2000).

## **2.5 The Protection of Natural and Cultural Presence Act**

The Protection of Natural and Cultural Presence Act No. 2863 dated 1983 contains provisions relating forestry. Article 2 of the Act says: “This Act contains the issues relating to movable and immovable, cultural and natural presence of which protection is required as well as the assignments and responsibilities of the natural or legal persons.” (Gedik, 1997). In Article 6 of the Act, cultural and natural items, for which protection is a must are enumerated with the samples of trees, group of trees and similar immovable natural presence with specific qualities.

## **2.6 The Shore Act**

The objective of the Shore Act No. 3621 dated 1990 is to establish the essentials relating to the utilization of shores in favor of the public. Implementation at some points overlaps with forestry. On the shores along which State holds supervision and surveillance, a forest cover may also exist. In a such case, the sections which are not conflicting with the Shore Act shall be applied on the basis of Article 3 regulating exceptions. In case of a conflict, the provisions of the Act of Shore shall be applied.

## **2.7 The Act about the Organization and Assignments of the General Directorates of State’s Meteorology Affairs**

Article 2 of the Act No. 3254 dated 1986 is related to forestry. According to this article, the administration shall be responsible for providing meteorological services to the organizations and establishments relating to agriculture, forest, tourism, public works, energy, health, military forces and other organizations and establishments which are deemed necessary; and

to carry out meteorological services to be assigned by international agreements. The Forest Administration has to cooperate with the General Directorate of State's Meteorological Affairs on meteorological data, which have particular importance for forest fires. This subject is expressly specified in the Act.

## **2.8 The Act about Agricultural Fighting and Agricultural Quarantine**

Section 5 of the Act No. 6968 dated 1957 carries the heading of special provisions relating to forests. Article 6 of the Act says: "The fighting against the disease and detrimental action seen especially in forests shall be carried out by the Forest Administration by means of the budget of forest. If the disease and detrimental are both related to forest and agricultural lands, this fighting shall be carried out by the Administration of Forest pursuant to this Act" (Anonymous, 2009b). According to Article 37, the fighting against diseases and detrimental action detected in a private forests or afforestation areas which may constitute a danger shall be carried out by the Forest Administration.

## **2.9 The Village Act**

Article 6 of the Village Act No. 442 dated 1924 regulates the subject of utilization of the goods i.e. pasturage, coppice, summer pasture which are common among villages. In Subparagraph 17 of Article 13, the protection of village wood is enumerated among the obligatory duties of villagers. Section 5 of Article 36 of the Act with the heading of the duties of headman (the elder of any village), says: "If any fire or flood occur within the boundaries of a village, the headman must gather villagers and attempt to extinguish or encircle. In the same provision, the case of forest fire is examined. Where any forest fire occurs, villagers even if they are outside of the village boundaries, are obliged to assist" (Anonymous, 2009c).

## **2.10 The Act of Shanty**

Article 18 relating to the prevention of new construction of shanty houses of the Law No. 775 dated 1966 says: "After this law entered into force, inside or outside of the boundaries of Municipality, each and every permanent or temporary structures constructed on lands being under the command and possession of the State, either during construction or after inhabited, shall be promptly exterminated by Municipality or State Police without a requirement for any decision." As a conclusion it may be stated that forests are under the command and possession of the State, the Municipality shall play an active role during the extermination of all structures on these lands having no permission which is deemed to be a crime pursuant to the Forest Act No. 6831.

## **2.11 National Afforestation and Erosion Control Mobilization Law (Law No. 4122)**

An Act to promote actions by public and private entities directed at afforestation and soil protection measures, to establish a balance among land, water and vegetation and to preserve environmental values in state forests and other lands or lakes or rivers owned or managed by the state or lands owned by legal persons (art. 1). The Act consists of 18 articles divided into 7 sections: Objective and scope (1); Determination, Allocation, Permission and Implementation (2); Planning, production and utilization (3); Financial Edicts (4); Training, Introduction and Rewarding (5); Prohibitions, Pursue for Offences and Punishments (6); Miscellaneous Provisions, Abolished and Modified Provisions (7). Section 2 provides for permissions for afforestation and erosion control measures and outlines the duties of Ministries and other public institutions with respect to afforestation and erosion control. "Memorial Forests" will be established by the Ministry of Environment and Forestry on request of natural and legal persons (art. 5). The Ministry of Environment and Forestry t plays a central role in the implementation of an afforestation and soil erosion control policy (art. 6).

The current Forest Code has some articles dealing with afforestation and reforestation activities that lead us to plant fast growing trees and alpine species when reforesting or afforesting bare lands. On the other hand the same law does not allow to plant medicinal and aromatic plants when performing the same activities. This means in terms of biodiversity protection that the current forest legislation lacks relevant provisions in terms of biodiversity protection. Beyond that, the National Forestry Strategy requires to enlarge forested areas by both reforesting and afforesting bare lands, whereas biodiversity protection requires leaving some particular areas, especially pastures and steppes, as they are. Simply because several species are surviving in such pastures and steppes. Enlarging forested areas by both reforestation and afforestation efforts may cause a conflict with biodiversity protection (Güneş, 2006).

### **2.12 Terrestrial Hunting Law of 2003, No: 4915**

The purpose of this law is to protect and improve both game animals and wild animals along with their habitats in a sustainable basis; control terrestrial hunting; economize those resources at both local and national levels, and cooperate with public institutions and other stakeholders. This law covers game and wild animals and their habitats as well; protection and improvement of those animals; hunting and wildlife management; establishment and management of hunting grounds; hunting tourism; wild animal breeding and their trade; raising public awareness, hunter education, and training; crimes committed against those resources, criminal prosecutions, and punishments.

### **2.13 Pasture Law of 1998, No: 4342**

The Law states that pastures within forest boundaries are subject to the Forest Code. According to article 28 of the Pasture Law, pasture lands allocated to forest villages and municipalities inside forest boundaries are benefiting according to the provisions of the Forest Code. As an institution, the Ministry of Environment and Forestry is entitled to administer, manage and take necessary protection, amelioration and developments of pasture lands within forests.

## **3. The Laws Having Contradictory Provisions to the Forest Code**

### **3.1 Mining Law**

The Mining Law was amended by the law no: 5177 in 2004. Parallel to that amendment the Forest Code was amended as well by the same law. According to article 16 of the Forest Code, mining search within forest boundaries are performed by considering the Mining Law. All buildings and infrastructures like roads, facilities, pipelines, energy and water pipes are allowed according to the Forest Code by paying a particular amount of royalty.

When analysing the above amendment it is seen that all types of mines even limestones and rocks can be searched in forestlands. In here, a serious threat for sustainable forestry is to consider sands, rocks and limestones as mines and allowing all searching and digging activities of those mines within forest boundaries without any limitation. Since extracting those minerals which are much more in demand in forestland, they pose a serious threat for sustainable forestry and such activities have increased since entering into force of the said amendment. In here a dilemma occurs. Rocks, sands and limestones are essential materials for constructions while extraction of them threatens sustainable forestry, and puts more pressure on forestlands. On the other hand, leaving mining areas without amelioration causes another problem. Both Loose authority and bad management of mining areas results in unintended mining residues. Beyond that, mining activities with 50 years leasing period sets aside a particular threat to forest

lands; in many instances the miners exceed the leasing permit boundary and occupies more forestlands. In addition, lack of inspection and control encourage forest destructions, and make impossible amelioration of those areas.

The forestry regulation as one of the barriers in front of mining is merely one of these disconnections and contrarities. Law numbered 5177, which is a huge step, is taken in order to overcome the mentioned barriers, resulted in increase of the pressures on the forests that took its basis from mining activities. This last amendment on Mining Law expands the application areas of the mining activities in the forests and appears as a regulation that causes forest destruction. Moreover, it abolishes the provisions of Law numbered 5177; Forestry Law numbered 6831; National Afforestation and Erosion Control Law numbered 4122; Environment Law numbered 2872; National Parks Law numbered 2873; and Law on Protection of Cultural and Natural Resources numbered 2863 that protect natural resources (Şentürk and Birben, 2007).

### **3.2 Tourism Encouragement Law of 1982, no: 2634**

Article 8 of the Tourism Encouragement Law provides an obligation to allocate the following forest areas for tourism activities;

- Forest lands having appropriate climatic and environmental conditions for health tourism. In such areas physical cure centers, rehabilitation facilities, and other recovery infrastructures are allowed to be constructed.
- Forest lands having geothermal water resources,
- Areas inside forest lands fitting well for winter tourism resorts,
- Areas inside forest boundary which are appropriate for eco-tourism, such as summer pastures, rural tourism facilities,
- Areas inside forest lands fitting well for constructing golf courses,
- Areas fitting well for constructing facilities for scenic beauty, environmental beauty, biodiversity conservation and benefiting from sand dunes,
- Shorelines next to or inside forest lands which are appropriate for kruvazier and yachting and blue cruise,
- Areas inside forests which are appropriate in terms of climate and geography for constructing international racing parks and courses. Those areas are allocated to the Ministry of Tourism within a month time period upon requesting by the said Ministry.

All the above areas allocated to the Ministry of Tourism are open for construction for the purpose of the above activities. However, it has been argued whether those activities have pure public benefits or not. And thus, except for national security and countrywide tourism activities, the above activities have been threatening sustainability of forest resources.

Tourism of summer meadows and rural tourism are other important issues to be dealt with. As a result of Turkish culture, tradition and life style people live in rural areas migrate to summer meadow for feeding their animals. And even people live in cities spend their severe summer time in summer meadows as well. Those people construct their homes and other facilities open areas inside forests and over the years those areas become destructed forest lands and results another threats for sustainable forestry. For example, in Southern Turkey, large amount of the forest areas have been occupied by those people and they have constructed thousands of buildings for housing and animal husbandry.

According to General Directorate of Forestry as of 2008 about 36.000 ha. Forest lands have been allocated to tourism facilities so far.

### **3.3 The Law of Land Survey of 1987, no: 3402**

Up to now, forest land survey could not be completed in Turkey. This is one of the most crucial points for Turkish forestry, and uncertain forest boundaries threaten sustainability. On the other hand, two authorities are entitled to carry out forest land survey issues. One of them is the Forest Land Survey Commission and the other one is the General Land Survey Commission. The former is authorized to apply old forest boundaries and mark those lines on the ground. The latter is authorized to draw forest boundaries in 2005 and complete all land surveys. However, such a dual authoritative structure creates some conflicts between forestry institutions and local people. Because, some people might lose their title deed and cause serious conflicts. Before the year 2005 the Forest Land Survey Commission was authorized to complete all survey works and are more secure for sustainability of those resources.

### **3.4 The Criminal Code**

The Forest Code has some provisions about crimes and penalties. In here so many destructive activities are considered as crimes and the committed crimes are imposed penalties like imprisonment, fines, and ceasing destructive activities, and cancelling licenses and leases. Such legal provisions are applied for private forests and forests belonging to the public legal entities as well. A new Criminal Code entered into force in 2005 with special provisions in article 152 that consider as crimes cutting, uprooting and damaging all types of trees, shrubs, seedlings in all countryside including private forests and forests belong to public legal entities except for State Forests. Since the Forest Code has a similar provision, it creates a dual provisions and causes conflicts in between the two laws. Forest Law No. 6831 contains prohibitions in one part, while containing punishments in another. Section III of this law includes provisions under the title of forest protection and Section V. includes penal provisions. Under Section III, which relates to the protection of forests. Article 17 handles the prohibitive provisions and Article 93 handles penal provisions. Also Articles 114 and 112 include provisions relating to the fines (Elvan, 2006).

## **4. Results and Recommendations**

Laws having contradictory provisions to Forest Code are more prone to exploitation and benefiting from forests than protection. Particularly the Mining Law and the Law of Tourism Encouragement have a special place for that and explicitly pose threats to sustainable forestry. Of course it is reasonable for the Country that all activities supporting economic development and wellbeing, but protecting forest resources are as much important for the Country as economic development. Which one has more public benefits are a matter of value judgement and public choice, and political issues rather than technical ones. Particularly mining extractions are important for economy, but a comparison between forest destruction and mining is to be made, and then a sound decision should be found. On the other hand, sacrificing public forest for tourism and creating holiday resorts for upper class people is to be discussed.

Beyond that, all activities causing forest destruction are provisioned in the Forest Code. But some of them are obviously destructive for forests. For example, article 2 of the Forest Code allows areas lost their forest vegetation before 1981 to be taken out of forest boundary and able to open for settlements, agriculture and other investment activities. Such a provision raises an expectation for public that such a time limit might be extended to the present and encroachment be expanded to about 500.000 ha. of former forest lands.

In brief, all provisions having a potential for destruction on forests should be annulled. Public benefits for investments within forest lands should be more fairly measured, and an ultimate



decision has to be made by the authorities based on a participatory decision making process. Particularly, licenses assigned for tourism and mining activities should be issued after a scrutinise inspection, and the period for those licenses should be reduced or reconsidered. Improvements in education and increasing the level of awareness of environmental concerns within environmental organizations and the public as well as demands for green spaces and ecotourism express probably pressure on forest administration for assigning more protected areas and a reduced level of production. This pressure may exceed the rational and logical limits, and squeeze production outputs sometimes unnecessarily. But it will also get to helping wiser management of forest resources (Ayanođlu, 2006).

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# LEGAL AND ORGANIZATIONAL ASPECTS OF FOREST POLICY OF UKRAINE

*Artem Torosov* \*

## **Abstract**

Forest policy is an important component of the general strategy on balanced socio-economic and ecological development of Ukraine in a long term perspective. Of special importance is the legal and organizational capability of forest policy to produce institutional transformation in the forest sector of the country.

*Key words:* forestry, forest policy, forest legislation.

*Forest policy of Ukraine is based on two interrelated components, the first being a dynamic element connected with the development of political and socio-economic relations in the State, and the second being more conservative and associated solely with silvicultural and environmental considerations based on scientifically sound recommendations on forest management. The mechanism of implementing forest policy suggests that there are appropriate regulatory legal documents of State importance. Among such documents are:*

- -the State program ‘Forests of Ukraine for the Period of 2002 to 2015’ (in effect since 2002, at present being revised);
- -the Concept of ‘Reforming the Ukraine’s Forestry for the Period up to 2015’ (in force since 2006);
- -the Forest Code of Ukraine (in force since 2006).

There are some other documents issued at the State and departmental levels relating to the strategy on developing individual lines of forestry practices.

*Below are listed the major lines of forest policies:*

- improving the legal framework of forestry and harmonization with international principles of sustainable development and effective forest management;
- developing and introducing criteria and indicators for sustainable development in the forest sector;
- increasing the percentage of forest land up to an optimal level and shifting over to landscape-watershed approaches and forest-typology principles of management;
- conserving and building up the ecological potential of forests and improving their productivity and value;
- developing forest science and education;
- strengthening social security of forestry workers;
- broadening international co-operation.

The priority areas of forest policy have to be approved at the legislative level. and these priorities are reflected in the new Forest Code of Ukraine. But it is necessary to adapt by-laws to specify legal, silvicultural, ecological, organizational and economic requirements of forest policy. In this connection during the 2007-2008 period the emphasis was put on the completion of the development of a new legal regulatory framework. To date, over 20 documents have been drawn up at the State and departmental levels with some of them having been already approved by the Government of Ukraine.

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One of the priorities in forest policy lies in the conservation of State ownership of forests and at the same time in the development of communal and private ownership. The predominance of State ownership is mostly conditioned by the key role which Ukrainian forests play in shaping landscapes, in conserving the natural environment, in providing biodiversity, and in performing mainly ecological and protective functions. Consideration must be given here as well to national traditions in forest management and to peculiarities in transition to the market economy when private and public interests most likely do not coincide.

To date, the law in effect focuses on a separation of State-owned lands from lands that in the communal property. According to the law communal property must incorporate forests within inhabited areas but this cannot completely resolve contradictions between interests of territorial communities and other authorities at different levels. Because of this, some regulatory documents are now being developed to provide for appropriate mechanisms aimed at implementing the above law, including its provisions pertaining to the forest sector.

The development of private forestry should be linked to peculiarities and traditions of forest management in different parts of the country with due regard to an optimal structure of private forestry. Considering that Ukraine has, by and large, lost her experience in private forest management it makes sense to develop private forestry primarily on farmlands that are being withdrawn from active use and on some forest lands within farms. These considerations of Ukraine's forest policy are reflected in the provisions in the Forest Code of Ukraine.

Of special interest is the fact that legal and natural persons may be owners of forests that have been created by themselves on degraded or low-grade land lots with no limitations on to the area. This provision is of importance today considering that according to the Concept of Reforming and Developing Forestry during the next 10 years will lead to an increase of 1 million.ha, or over 10%, of the total forest area of Ukraine. With this projection in mind, forestry enterprises will be given lands, mainly not suitable for farming, for afforestation. In doing so, a number of problems are to be solved as for compensation for damage to land users on the basis of the cadastral assessment of land resources.

At present, the State Committee of Forestry of Ukraine has drawn up a regulatory act on economic stimulation to afforestation including forest-growing on private lands. This act, in particular, should provide for State support for first 5 years for land being given to forest owners and for permanent forest users creating new forests. The act also provides for compensation for loss in incomes, for the 20 years' period, to private forest owners who create new forests. In drawing up this document use was made of experiences gained by other European countries, and first of all by neighboring Poland and Slovakia. In 2008, a special international expert mission was invited by the Ukrainian Government to render methodological assistance in legislative co-ordination so as to create economic incentives for forest-growing practices.

One of the priorities in forest policy lies in a gradual decentralization of administration by delimitating the administrative and economic functions of State authorities engaged in forest management at all levels with transfer of appropriate powers to the economic players. With this aim a regulatory document is now being drawn up to specify duties of territorial forest authorities and to regulate their interrelations with the State forest enterprises. In doing so, interrelations between State authorities and State forest enterprises should be based on economic and legal contractual principles, not on administrative principles.

As far as reforming State forestry enterprises are concerned, forest policy provides for a competitive market of services to be rendered to forestry. In this connection thorough consideration has been given to European experiences in attracting private enterprises to

forestry practice, in particular, to experiences of Poland and the Baltic countries. Based on this experience, a large-scale experiment is under way since 2007 in different regions of Ukraine to attract entrepreneurs to forestry practice. In 2008, the State Committee of Forestry of Ukraine approved a resolution on the all-round introduction of the positive European experience into Ukraine's forestry. In this connection some regulatory acts were drawn up, in particular, document on preparation of tenders for services to be rendered to forestry by private organizations.

The shift to European models of organization of forestry production will make it possible to solve one of the toughest problems of Ukraine's forestry which is delimitating the economic and managerial functions at the level of forestry enterprises. Interrelations between the two independent subjects of economic activity, a private organization and a forestry enterprise, should be based on a contract so that they could fully solve silvicultural and economic problems with keeping the balance of interests between both sides. It is essential here that the functions of control and supervision are performed in an informal way by enterprises and State forestry bodies whereas under the existing system these functions are performed by the staff of State forestry enterprises alone.

The interactions between the State and entrepreneurs calls for its further development and is to be reflected in Ukraine's forest policy. In regions that are difficult of access for forest utilization it is necessary to apply concession mechanisms in order to place forests at the disposal of home and foreign entrepreneurs for a long-term use. Concessions are first to be considered in the Carpathian region of Ukraine. This will make a good start for using this type of forest land with its 5 million cubic meter of mature and over-mature wood stock. As of today, the State is not in a position to develop these woodlands for lack of funds necessary to build roads, buy costly equipment and promote the necessary social infrastructure. It is worthy to note that the network of forest roads in Ukraine per 1000 ha of woodland is now less than that in European countries by a factor of 4 to 5. In contrast concessions to private entrepreneurs could provide long-term investments and lead to developing an industrial and social infrastructure in the region. This allows not only tackling silvicultural and ecological issues of forest utilization, but also solving social problems of the local population. The existing legislation of Ukraine, the Land Code and Economic Code, permits the use of concession mechanisms, though the new Forest Code of Ukraine does not provide for logging through the agency of such mechanisms.

Technical re-equipment of the forest sector is a bottleneck in Ukraine's forest policy. One of the priorities lies in providing forestry enterprises with up-to-date materials and equipment with due regard to the environmental requirements. In 2008, the Ukrainian Government invited a European expert mission to assist in using modern logging equipment. This mission pointed to the necessity of applying differential approaches to natural conditions of Ukraine. In particular the mission stated the possibility of using both modern equipment (harvesters, forwarders and cable installations) and the existing machinery. In doing so, it is necessary to enhance State support so as to widen forest infrastructure, to intensify technical re-equipment, and to activate the international co-operation through contemporary innovative mechanisms of development.

The most complicated challenge is associated with financing Ukraine's forestry under contemporary conditions. Forest policy implies the introduction of financial and economic-managerial mechanisms that ensure profitability of forestry and balance of interests between forest owners, agents of management and economic players. It should be noted that the allocation of necessary budget funds becomes, year after year, a problem considering the fact

that the State is practically the monopolist owner of forests. It would be appropriate to make a special State-owned forest off-budget fund aiming at financing State programs on forest management and protection / conservation. The core of such a budget could be filled up with money from payments for forest utilization, penalties and fines for damage caused by violations of the forest legislation, and compensations for losses in forestry due to withdrawing lands from the available forest area.

Unfortunately the valid Budget Code of Ukraine does not allow for creating such off-budget funds. But in this case, the creation of a special forest fund would be justified because there would be no need in an expense item which the State budget aimed for at financing forestry. The special forest fund would allow to effectively plan revenues and expenditures in forestry and to provide financial assistance to enterprises in the regions that are deprived of considerable forest resources due to objective natural conditions e.g. enterprises in the Steppe and Forest-Steppe zones of Ukraine.

At present, economic standards are considered to be a scientifically sound basis for improving methods of financing the forest sector. In this connection, beginning in 2007, the State Committee of Forestry of Ukraine has been using a procedure, approved by the Government, for allocation of budget finances among involved State programs based on economically proved standard expenditures on forestry operations across the country's regions and according to the financial status of specific enterprises.

Thus, forest policy, in relation to improving the financial system, suggests State regulations for standard-based financing and for introduction of market mechanisms for pricing i.e. payments for selling wood at auctions, for using lands of the forest estate with the purposes of recreation, hunting, commercial collection of mushrooms, berries, herbs, etc.. In doing so, it is necessary to provide the required financial support to forestry on the part of the State, taking into account an exceptionally environmental important role played by the Ukrainian forests. The State as a forest owner will fulfill its obligations concerning the conservation and enhancement of ecological and protective functions of the forests and the State budget should finance, pests and disease; erosion control; management over the natural reserves; forest inventory; science and education.

Over the last decade, a gradual process of creating the regulatory and institutional framework is going on to ensure a stable performance of the forest sector, which is a principal mission of the contemporary forest policy of Ukraine. It may be said that the awareness of the existing problems and the development of recommendations to solve them, including recommendations for a long-term period at the level of national forest policy, makes it possible to foresee and bring well down the challenges associated with a number of factors that are independent of forestry, such as:

- legislative, institutional and financial-economic transformations at a macro-level;
- insufficient harmonization of the State regulatory legal framework with the international standards as well at the level of national economy's sectors;
- factors of natural character (natural disasters, destructive insects, diseases etc.);
- Anthropogenic influences upon forests.



IUFRO Division 6: Social, Economic, Information and Policy Sciences,  
Research Group 6.13.00: Forest Law and Environmental Legislation

Annex 1: Agenda of the 11<sup>th</sup> International Symposium on Legal Aspects of  
European Forest Sustainable Development  
Zvolen, Slovakia, May 13-15, 2009

Tuesday, May 12<sup>th</sup> 2009

Arrival of participants

Dinner (on the way from the Vienna airport/in the hotel Franko)

Wednesday, May 13<sup>th</sup> 2009

- 08:45            *Departure from the hotel to the university (5 minutes walk)*
- 09:00 – 10:00        *Registration                    (Technical University in Zvolen)*
- 10:00 – 11:45        *Opening session            (Technical University in Zvolen)*
- 10:00 – 10:15 Opening of the Symposium                    (Peter Herbst)
  - 10:15 – 10:30 Welcome at the TU in Zvolen                    (Ján Tuček – rector)
  - 10:30 – 10:45 Welcome at the Faculty of Forestry (Rudolf Kropil – dean)
  - 10:45 – 11:15 Ferlin, F., Herbst, P., Kampen, P., Golob, A.: Experiences in development of recent forest legislation of selected West Balkan countries
  - 11:15 – 11:45 Polyakova, L.: Comparative analysis of development of forest legislation in Europe
- 11:45 – 12:15        *Coffee break*
- 12:15 – 13:35        *Working session I.        (Technical University in Zvolen)*
- 12:15 – 12:35 Ota, I.: Japan National Forest Programme and its implication
  - 12:35 – 12:55 Delvan, E., Birben, U.: Collision between regulations in forest laws and environment related legislation in Turkey
  - 12:55 – 13:15 Ghelichkhani, M.: Management requirements over various environments aspects
- 13:15 – 14:45        *Lunch*
- 14:45 – 16:05        *Working session II.        (Technical University in Zvolen)*
- 14:45 – 15:05 Vančura, K.: Impacts of forestry and environmental policy and legislation related to the 5th MCPFE Resolution 2
  - 15:05 – 15:25 Hríb, M.: Compensatory damages for restricting owners property rights in favour of environment protection
  - 15:25 – 15:45 Vašíček, J.: Economic information system as a tool for the solution of conflicts between forest owners and nature conservation
- 15:45 – 16:15        *Coffee break*

16:15 – 17:30 *Discussion* (Technical University in Zvolen)

19:30 *Official dinner* (Technical University in Zvolen)

Thursday, May 14<sup>th</sup> 2009

09:00 – 10:40 *Working session III.* (Technical University in Zvolen)

- 09:00 – 09:20 Danev, G., Gulic, J., Krajcic, D.: Financing biodiversity measures in Slovenian forests (legal and financial framework)
- 09:20 – 09:40 Milijic, V., Nonic, D., Radosavljevic, A.: Private forest sector and its role in NFP/NFS process in Serbia
- 09:40 – 10:00 Lavadinovic, V., Gatterbauer, H., Hackländer, K.: Effects of hunting legislation on wildlife management: A comparison of Austria and Serbia
- 10:00 – 10:20 Tomic, N.: Review of forest law in Serbia - tendencies and needs for change (poster)
- 10:20 – 10:40 Torosov, A.: Legal and organizational aspects of forest policy of Ukraine

10:40 – 11:10 *Coffee break*

11:10 – 13:00 *Working session IV.* (Technical University in Zvolen)

- 11:10 – 11:30 Zeneli, G.: Legal aspects of use of forest biomass in Albania: between sustainability and bio-energetic use
- 11:30 – 13:00 Final overall discussion

13:00 – 14:15 *Lunch*

14:15 – 16:00 *Closing session* (Technical University in Zvolen)

- 14:15 – 15:00 Discussion on the Seoul IUFRO World Congress (Peter Herbst)
- 15:00 – 15:30 IUFRO DSA Celebration for Karel Vančura (Heinrich Schmutzenhofer, Peter Herbst)
- 15:30 – 16:00 Closing of the Symposium (Peter Herbst)

17:00 *Visit of the Borová Hora Arboretum (dinner included)  
departure from the hotel at 17:00*

Friday, May 15<sup>th</sup> 2009

09:00 – 17:00 *Field trip (Vydrovo Forestry Open Air Museum)  
departure from the hotel at 09:00*

20:00 *Farewell party (hotel Franko)*

Saturday, May 16<sup>th</sup> 2009

Departure of the participants



IUFRO Division 6: Social, Economic, Information and Policy Sciences, Research Group 6.13.00: Forest Law and Environmental Legislation

11<sup>th</sup> International Symposium on Legal Aspects of European Forest Sustainable Development, Zvolen, Slovakia, May 13-15, 2009

Annex 2: LIST OF PARTICIPANTS

LAST NAME	FIRST NAME	ORGANIZATION	COUNTRY
Birben	Ustuner	Istanbul University, Faculty of Forestry, Environmental and Forest Law Department	Turkey
Danev	Gregor	Institute of the Republic of Slovenia for Nature Conservation	Slovenia
Elvan	O.Devrim	Istanbul University, Faculty of Forestry, Environmental and Forest Law Department	Turkey
Ferlin	Franc	SNV Netherlands Development Organization, Montenegro	Montenegro
Ghelichkhani	Mohammad Masoud	Tarbiat Modarres Ave	Iran
Gulic	Jurij	Institute of the Republic of Slovenia for Nature Conservation	Slovenia
Herbst	Peter	IUFRO 6.13.00, the forest law and environmental legislation working group	Austria
Hrib	Michal	CULS, Faculty of forestry and Wood Sciences	Czech Republic
Kalns	Valdis	JSC Latvijas valsts meži	Latvia
Kampen	Peter	SNV Netherlands Development Organisation	Macedonia
Lavadinovic	Vukan	Master Student at BOKU Vienna	Austria
McLeod	Angus	College of New Caledonia, Forestry coordinator	Canada
Milijic	Vojislav	Faculty of Forestry, Belgrade University	Serbia
Ota	Ikuo	Faculty of Agriculture, Ehime University	Japan
Polyakova	Lyubov	State Committee of Forestry of Ukraine	Ukraine
Salla	Manjola	Agricultural University of Tirana	Albania
Schmutzenhofer	Heinrich		Austria
Staněk	Jiří	Ministry of Agriculture	Czech Republic
Šulek	Rastislav	Technical University in Zvolen, Faculty of Forestry, Department of Forest Economics and Management	Slovakia
Tomic	Nataša	University of Belgrade	Serbia
Torosov	Artem	Ukrainian Research Institute of Forestry and Forest Melioration	Ukraine
Vančura	Karel	Czech Forestry Society	Czech Republic
Vašíček	Jaromír	Forest Management Institute Brandýs nad Labem	Czech Republic
Zeneli	Gazmend	National Association of Communal Forest and Pastures	Germany



### Annex 3: Research Publications and State of Knowledge Reports of the IUFRO Research Group 6.13.00 Forest Law and Environmental Legislation

- Sulek, Rastislav; Herbst, Peter; Schmithüsen, Franz (eds.) 2010: Legal aspects of European Forest Sustainable Development. Proceedings of the 11th International Symposium in Zvolen, May 2009. Faculty of Forestry, Technical University in Zvolen, Slovakia.
- Avdibegović, Mersudin; Herbst, Peter; Schmithüsen, Franz [eds.] (2009): Legal aspects of European Forest Sustainable Development. Proceedings of the 10<sup>th</sup> International Symposium in Sarajevo, May 2008. Forestry Faculty of the University of Sarajevo, Bosnia-Herzegovina.
- Herbst, P.; Mekic, F.; Avdibegovic, M.; Schmithüsen, F., (Eds.) 2008: Forstwirtschaft und Forstrecht in den Reformstaaten Mittel- und Osteuropas 1990 – 2007. Forstwirtschaftliche Fakultät der Universität Sarajevo. 180 S. ISBN 978-9958-616-07-5
- Ghulidjanyan, Andranik; Herbst, Peter; Sargsyan, Nelli [eds.] (2008): Legal Aspects of European Forest Sustainable Development. Proceedings of the 9th International Symposium in Zikatar, Armenia, June 2007. FREC Forest Research and Experimental Centre, Yerevan, Armenia.
- Ayanoglu, Sedat; Günes, Yusuf; Aydin Coskun, Aynur; Herbst, Peter [eds.] (2006): Legal Aspects of European Forest Sustainable Development. Proceedings of the 8<sup>th</sup> International Symposium in Istanbul, Turkey, May 2006. Department of Forest Law, Faculty of Forestry, Istanbul University.
- Schmithüsen, Franz; Herbst, Peter; Nonić, Dragan; Jović, Dušan; Stanišić, Mirjana [eds.] (2006): Legal Aspects of European Forest Sustainable Development. Proceedings of the 7th International Symposium Zlatibor Mountain, Serbia, May 2005. Forstwissenschaftliche Beiträge Forstpolitik und Forstökonomie, ETH, Zurich, Vol. 35. 338 pages
- Gallardo Gallardo, Enrique; Schmithüsen, Franz [eds.] (2005): La Contribución del Derecho Forestal – Ambiental al Desarrollo Sustentable en América Latina. IUFRO Research Group 6.13.00 Forest Law and Environmental Legislation. State of Knowledge Report, IUFRO World Series, Volume 16, Secretariat, Vienna. 381 pages
- Abrudan, Ioan V.; Schmithüsen, Franz; Herbst, Peter [eds.] (2005): Legal Aspects of European Forest Sustainable Development, Proceedings of the 6<sup>th</sup> International Symposium, Poiana Brasov, June 2004. Transilvania University of Brasov, Romania. 180 pages
- Schmithüsen, Franz; Trejbalova, Katerina; Vancura, Karel [eds.] (2004): Legal Aspects of European Forest Sustainable Development. Proceedings of the 5<sup>th</sup> International Symposium, Zidlochovice, May 2003. Forestry and Game Management Research Institute, Jiloviste-Strnady, Czech Republic. 252 pages
- Le Master, Dennis C.; Herbst, Peter; Schmithüsen, Franz [eds.] (2003): Experiences with New Forest and Environmental Laws in European Countries with Economies in Transition. Proceedings of the 4<sup>th</sup> International Symposium Organised by the IUFRO Research Group 6.13.00, Jaunmokas, Latvia, August 2002. Forstwissenschaftliche Beiträge der Professur Forstpolitik und Forstökonomie, ETH, Zurich, Vol. 29. 187 pages

- Schmithüsen Franz, Iselin Georg, Herbst Peter [eds.] (2002): Forest Law and Environmental Legislation – Contributions of the IUFRO Research Group 6.13. Proceedings VII. Forstwissenschaftliche Beiträge der Professur Forstpolitik und Forstökonomie, ETH, Zurich, Vol.27. 253 pages
- Schmithüsen Franz, Iselin Georg, Le Master Dennis [eds.] (2002): Experiences with New Forest and Environmental Laws in European Countries with Economies in Transition. Proceedings of the Third International Symposium; Jundola, Bulgaria, June 2001 jointly organized by the IUFRO Research Group 6.13.00 and the USDA Forest Service. Forstwissenschaftliche Beiträge der Professur Forstpolitik und Forstökonomie der ETH Zürich, Vol. 26. 184 pages
- Zimmermann Willi, Schmithüsen Franz [eds.] (2002): Legal Aspects of National Forest Programs. Papers Presented at the Meeting of COST Action E19, National Forest Programs in a European Context, Aberdeen, Scotland, March 2001. Forstwissenschaftliche Beiträge der Professur Forstpolitik und Forstökonomie der ETH Zürich, Vol. 25. 153 pages
- Schmithüsen Franz, Herbst Peter, Le Master Dennis [eds.] (2000): Forging a New Framework for Sustainable Forestry: Recent Developments in European Forest Law. Selected Contributions from the IUFRO Research Group 6.13.00 Forest Law and Environmental Legislation. State of Knowledge Report, IUFRO World Series. Volume 10. Secretariat, Vienna. 354 pages
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