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Forest Land Ownership Change in Hungary

COST Action FP1201 FACESMAP Country Report



COST Action FP1201
Forest Land Ownership Change in Europe:
Significance for Management and Policy
(FACESMAP)

Forest Land Ownership Change in Hungary

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COST (European Cooperation in Science and Technology) is a pan-European intergovernmental organisation allowing scientists, engineers and scholars to jointly develop their ideas and initiatives across all scientific disciplines. It does so by funding science and technology networks called COST Actions, which give impetus to research, careers and innovation.

Overall, COST Actions help coordinate nationally funded research activities throughout Europe. COST ensures that less research-intensive countries gain better access to European knowledge hubs, which also allows for their integration in the European Research Area.

By promoting trans-disciplinary, original approaches and topics, addressing societal questions, COST enables breakthrough scientific and technological developments leading to new concepts and products. It thereby contributes to strengthening Europe's research and innovation capacities.

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Background of the project

Forest ownership is changing across Europe. In some areas a growing number of so-called “new” forest owners hold only small parcels, have no agricultural or forestry knowledge and no capacity or interest to manage their forests, while in others new community and private owners are bringing fresh interest and new objectives to woodland management. This is the outcome of various societal and political developments, including structural changes to agriculture, changes in lifestyles, as well as restitution, privatization and decentralization policies. The interactions between ownership type, actual or appropriate forest management approaches, and policy, are of fundamental importance in understanding and shaping forestry, but represent an often neglected research area.

The European COST Action FP1201 FOREST LAND OWNERSHIP CHANGES IN EUROPE: SIGNIFICANCE FOR MANAGEMENT AND POLICY (FACESMAP) aims to bring together the state-of-knowledge in this field across Europe and can build on expertise from 30 participating countries. Drawing on an evidence review across these countries, the objectives of the Action are as follows:

- (1) To analyse attitudes and constraints of different forest owner types in Europe and the ongoing changes (outputs: literature survey, meta-analyses and maps).
- (2) To explore innovative management approaches for new forest owner types (outputs: case studies, critical assessment).
- (3) To study effective policy instruments with a comparative analysis approach (outputs: literature survey, case studies, policy analyses).
- (4) To draw conclusions and recommendations for forest-related policies, forest management practice, further education and future research.

Part of the work of the COST Action is the collection of data into country reports. These are written following prepared guidelines and to a common structure in order to allow comparisons across the countries. They also stand by themselves, giving a comprehensive account on the state of knowledge on forest ownership changes in each country.

The common work in all countries comprises of a collection of quantitative data as well as qualitative description of relevant issues. The COUNTRY REPORTS of the COST Action serve the following purposes:

- Give an overview of forest ownership structures and respective changes in each country and insight on specific issues in the countries;
- Provide data for some of the central outputs that are planned in the Action, including the literature reviews;
- Provide information for further work in the Action, including sub-groups on specific topics.

A specific focus of the COST Action is on new forest owner types. It is not so much about “new forest owners” in the sense of owners who have only recently acquired their forest, but the interest is rather on new types of ownership – owners with non-traditional goals of ownership and methods of management. For the purpose of the Action, a broad definition of “new forest owner types” was chosen. In a broad understanding of new or non-traditional forest ownership we include several characteristics as possible determinants of new forest owners. The following groups may all be determined to be new forest owners:

- (1) individuals or organizations that previously have not owned forest land,
- (2) traditional forest owner categories who have changed motives, or introduced new goals and/or management practices for their forests,
- (3) transformed public ownership categories (e.g., through privatisation, contracting out forest management, transfer to municipalities, etc.), and
- (4) new legal forms of ownership in the countries (e.g. new common property regimes, community ownership), both for private and state land.

This embraces all relevant phenomena of changing forest ownership, including urban, absentee, and non-traditional or non-farm owners as well as investments of forest funds or ownership by new community initiatives, etc. Although the COST Action wants to grasp all kinds of ownership changes it has to be noted that the special interest lies on non-state forms of ownership.

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Acronyms and abbreviations

CEPF	Confederation of European Forest Owners
CPR	Common-pool resources regime
EU	European Union
FACEMAP	Forest Land Ownership Changes in Europe: Significance for Management and Policy
FKGP	Small Farmers Party
FAO	Food and Agriculture Organisation of the United Nations
HUF	Hungarian forint
MDF	Hungarian Democrat Forum
NFP	National Forest Program
NGO	Non-governmental Organisation
PEFC	Programme for the Endorsement of Forest Certification

1. Introduction

1.1. Forests, forest ownership and forest management in Hungary

Hungarian forestry has several controversial features. Its contribution to the GDP is hardly measurable, on the other hand forestry is still considered an important factor in employment. The forest cover is around 20%, as after the plough-land the forested land it is the second largest field of cultivation in Hungary. The country can be described by various climatic factors, the yearly precipitation range is between 400 and 1000 mm, altitude range covers 100 m – 1014 m. These two factors result a wide span of site conditions in Hungarian forestry from semi-arid deserts to cold hills. In term of biodiversity, Hungarian management plans describe 115 tree species, where conifers (spruce, scotch pine, black pine) covers only 15% of forest cover and the majority of the forests are consists of broad leaved trees: mostly beech, oaks and turkey oak. Non-native species as improved poplars and black locust are also important and generate conflicts with nature protection movements. Another significant factor of Hungarian forestry is that the historically low forest cover has been doubled for the last 50 years, but forests are still considered as a scare resource and forest management is strictly regulated and supervised by state. From legal point of view forestry is regulated by a new forest law which was accepted at 2009. Forest law highly considers nature protection issues and strictly regulates forest management, society considers wood as an environment friendly material, but attacks forest managers at the same time even in case of the most environment friendly forest removals.

1.2. Overview of the country report

Approximately half of Hungary's forest is in state ownership the other half is in private

ownership, while other forms (churches, communities, etc.) are not significant. Private ownership emerged after the political changes of 1989-1990, when land privatisation started (Gál, 1999). Private forests are affected by extremely fragmented ownership due to the problems and difficulties of ownership transformation after the political changes in 1990. Restitution process started in 1992 and finished around 1998. The process can be described mostly with the use of compensation vouchers and use of auctions where there was a great possibility to formulate joint ownership (Jager, 2008). While there are complains about fragmented ownership status practically in every country, Hungarian situation is still different. It is common that more than 200 hundred owners share a single forest compartment and smaller owners have around a few square meters of forest area only.

To understand current forest policy and status of private forests in Hungary, we have to consider the following facts:

- heritage of the socialist system
- very strong state administration and planning rules
- haphazard restitution process and fragmented ownership structure
- strict separation of forest ownership and forest management
- large share of joint ownership
- high importance of forest management compared to forest ownership
- large share of low motivated private forest owners
- intensive heritage processes
- intensive state policy to block out foreigners from land market
- significant restrictions on land market
- high demand toward fuel wood.

As several factors show into different directions, difficult to provide estimations of further development of private sector.

2. Methods

2.1. General approach

According to the aims of the country report which is to give a comprehensive overview of forest ownership issues in the country, a mix of methods is applied. They include a literature review, secondary data, expert interviews as well as the expert knowledge of the authors.

Data include quantitative data (from official statistics and scientific studies) as well as qualitative data (own expert knowledge, expert interviews and results from studies). A literature review explicates the state-of-knowledge in the countries and contributes to a European scale state-of-art report. Case examples are used for illustration and to gain a better understanding of mechanisms of change and of new forest owner types. Detailed analyses of the collected data and case study analyses are done in subsequent work steps in the COST Action.

2.2. Methods used

Report was prepared within the cooperation of University of West Hungary, Forestry Research Institute and National Food Chain Safety Office, Forestry Department being central body of state forest administration.

Report is based mostly on literature evaluation. Most of this literature is available only in Hungarian language. Also legal background was studied and national experts were asked to express their opinions.

Theoretical approaches related to policy, economics and sociology with various data collection (e.g. questionnaire survey) and analysis method are applied in the studies. The scope of the study is national, because of the size of the country and because all the related legislation is national level (there's no autonomy for municipalities in this field and the same legislation is valid all over the country).

3. Literature review on forest ownership in change

The COST Action national representatives aimed to review and compile information on changes in forest ownership in their countries based on scientific and grey scientific literature, including reports and articles in national languages and official statistics, formal guidance or advisory notes from official websites, etc.

The scope of the literature review is as follows:

- Forest ownership change (with a specific focus on new forest ownership types), private forest owners' motives and behaviour, management approaches for new forest owner types, and related policies and policy instruments.

The literature review consists of the following three steps: collection of all literature as defined relevant, detailed description of 10 most relevant publications, and a 1-3 pages summary according to the structure given in the guidelines. The full list of literature includes grey literature, i.e. literature not easily accessible by regular literature search methods (unpublished study reports, articles in national languages, etc.). These references are listed at the end of the report. The 10 detailed descriptions of publications are found in the Annex. The literature review contains the following questions: Which research frameworks and research approaches are used by research? What forms of new forest ownership types are identified? Which specific forest management approaches exist or are discussed? Which policies possibly influence ownership changes in the country and which policy instruments answer to the growing share of new forest owner types?

3.1. Research framework and research approaches

There are two significant forest research centres in Hungary:

- ERTI Forest Research Institute (from 2014 affiliation of Agricultural Research Institute) and
- Faculty of Forestry, University of West Hungary.

Private forestry receives much less attention in Hungarian forestry science than it should, due to the following factors:

- traditionally, forest research focused on natural, biological and factors as damages, die back, forest protection, growth rate etc.
- agriculture and forestry are strictly separated due to the lack of traditional farm system which is typical in Western Europe, agricultural research does not address forestry issues.
- state forestry and private forestry has only very limited connections, most forestry research activities cover topics which are important for state forestry (eg. nature protection restrictions, public relations, permanent forest cover, etc).
- it is difficult to gain reliable information from private forestry, part of their activity is hidden from tax office, employment is not registered, difficult to evaluate self-employment, etc.

If the privatisation is studied as a whole, it must be understood that between 1990-1995 Hungarian society and economy went through so significant changes, mostly because of the scale of industrial privatisation that agricultural and especially forestry privatisation was seen only as a marginal issue. To support this evaluation, it can be mentioned that Mihalyi Peter, university prof. doctor of Hungarian Academy, in his work "Encyclopaedia of Hungarian Privatisation" does not mention forestry at all.

3.2. New forest ownership types

Forest privatisation started in 1992, its peak was in 1996 and was practically finished in 1998. There is obviously no research from the previous decades.

In the first years of privatisation, its significance was not realised as main state policy was to keep private forests in large management units, similarly to the communist type co-operations. In no great changes were expected in the procedures of forest management and forest administration.

Within the Forestry Faculty, first research addressing private forest was launched in 1998. Jager carried out a country wide questionnaire among new forest owners, to collect opinions and attitudes of these forest owners. Approximately 2000 opinion of new forest owners were collected.

Economic questions of private sector were studied by Schiberna, E. in his PhD work.

It must be mentioned that private forestry sector is based on the triangle of owner-manager-contractor as it will be explained later in detail. As Horvath, S. presented his PhD work in the field of contractors; three major actors were covered by in-depth scientific evaluations.

University of Sopron was also a member of several international research activities addressing forest ownership issues. The main objective of the GoFOR project was to study and evaluate evolving practices of new modes of governance in the field of forest policy and in adjacent policy domains (like nature conservation policy, rural development policy etc.). The program had several implications to private sector also.

Multifor.RD achieved a European level of comparison of forest owners' behaviour and attitudes. Hungary was found to be the most traditional and most resource oriented.

3.3. Forest management approaches

A specific feature of Hungarian forest management is the very strong state influence and regulation. State Forest Administration does not only supervises or approves management plans but prepare these plans for both state and private managing bodies. As a result, only very limited freedom is given to forest managers, management activities are regulated, strictly supervised and carried out in a traditional way.

In 2003 a forest accountancy network was established to gain reliable economic information from private forestry sector. This system was maintained for three years and its results were published by Schiberna, E.

As it was mentioned above, another important feature of Hungarian private sector that private sector can be described the triangle of

owners- managers-contractors. Due to the large number of forest owners, management decisions and administration is carried out a framework organisation, an appointed person, e.g. forest manager. On the other hand forest work, activities are not executed directly by manager but contractors are applied.

3.4. Policy change / policy instruments

Forestry was always exposed to state politics. Intensive nationalisation during 1950-1960 affected seriously forestry sector. Large afforestation program in the same period, which modified species composition and doubled forest cover was also policy-driven.

Privatisation itself was based on a political decision, explained in detail in chapter.6.1.1. It must be understood that privatisation was executed in a very short time, without previous practices, without considering the effects in detail. While idea of land privatisation was supported by the society as a whole, errors in the execution resulted an extremely fragmented ownership structure. From this point, battle was lost at the very beginning and private sector has been trapped in fragmented ownership for twenty years.

In the last two decades there was no political decision to clarify the situation, on the contrary, all political documents emphasised the importance of slow, but steady improvement. As an example, it can be stated that when new forest law was adopted in 2009, ministry officers declared that ownership questions were not addressed in forest laws.

The state forest administration itself was not interested in the clarification of the ownership structure as it might result the fragmentation of management structure (instead of large co-operations, associations and other umbrella organisations single farms would impose more administrative burden on state forest administration.)

National Forestry Program¹ was adopted in Hungary by Governmental decision 1110/2004. (X. 27.). It covers the period

¹ <http://erdo.kormany.hu/download/9/5a/20000/NemzatiErd%C5%91program%20a%202006-2015%20k%C3%B6z%C3%B6ttiid%C5%91szakra.pdf>

2006-2015 and describes the current situations clearly, as area of private forests in Hungary is 800.000 ha, average ownership size is 2 ha/person (400.000 forest owners) and defines the expected results at the field of private forestry. These are the following:

- decrease of non-managed areas
- development of large private contractors (integrators) to offer services on a contractual basis
- increase the perception of forest within the triangle of general public – owner – , manager
- increase of forest cover, efficient land use, employment in line with rural development
- more efficient public access and public use in private forestry
- close to nature forest management,

permanent forest cover in private forestry

One may note that improvement of the ownership structure was not overemphasised in NFP goals. National Forest Program is in line with following state policy documents:

- National Environmental Program
- National Regional Development Program
- National Rural Development Plan
- Agricultural and Rural Development Operative Program
- Regional Operative Program
- National Agri-environmental Program
- Vásárhelyi Plan, (National Hydrology and Flood Prevention Plan)
- National Educational Base Plan.

4. Forest ownership

The aim of this chapter is to give a detailed overview of forest ownership in the country. The most detailed information on national level is often structured in different ways in different countries. In order to show the most accurate information, it was decided to use the national data sets in the country reports. In order to make this information comparable still, the information is also collected in an international format which is used in the Forest Resources Assessments by FAO. The transfer from national data sets to international definitions is, however, not always easy. This report therefore critically assesses in how far the national categories and definitions may be transformed into the international FRA data structure or in how far there are inconsistencies between them.

4.1. Forest ownership structure

4.1.1. National data set

In Hungary, land registry system was settled around 1860. Today it is a country wide, legally approved comprehensive system, covering the whole country, supported by GIS system and a robust digital database. It is the only source of legally accepted ownership, e.g. in case of a sale of a land new ownership will emerge only if contract is registered into this database.

Around mid '90s, when due to land privatisation approximately 300.000 new

owners had had to be registered in a relatively short time, land registry system suffered significant delays. It was common that new owners received evidence of their property only with several years delay. Today the land registry system is up to date, sale contracts are registered on the very day of their issue.

As a consequence of this national database, state registers detailed information about land owners (e.g. number, gender balance, age distribution, etc.) Database is open for public on a case-by-case basis; aggregated data is not open for public.

4.1.2. Critical comparison with national data in FRA reporting

Hungarian forest administration uses two categories to describe forested areas:

- area of forest 1 933 600 hectares (20,8% of total area) includes forests only
- area allocated for forestry purposes is 2056600 hectares (22,1% of total area) This second category includes forest roads, open areas in forests, etc.

FRA tables refer to first category, providing net forest area. Note the increase of the forest cover (250 thousand hectares between 1990 and 2013) due to intensive afforestation programs, mostly in private sector.

Table 1: Public and private forest surface in Hungary (Source: Nebih, 2013 – Short report of main facts of forestry in Hungary, 2013.)

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2013
Public ownership	1792	1132	1150	1150
Private ownership	4	699	831	865
...of which owned by individuals	4	403	559	731
...of which owned by private business entities and institutions	0	103	138	0
...of which owned by local communities	0	194	134	134
...of which owned by indigenous / tribal communities	0	0	0	0
Other types of ownership (municipality, church, mixed).	5	75	2	41
TOTAL	1801	1907	1983	2056

It seems to be a significant theoretical mistake that local community forests are regarded as private forests. Expression “local community ownership” seems to be equal or similar to municipality ownership, represented by city council.

This form cannot be considered as private ownership, as its several features are similar to state ownership. It is recommended to separate three basic ownership forms: state, private and municipality.

4.2. Unclear or disputed forest ownership

The ownership system in Hungary is clear, well recorded and maintained. Land registry system is accurate and contains proper geographical data. Legal basis can be found in 1997 years CXLI Law of Land Registry System. Within private forests, there is a dominance of undivided common ownership. Some owners own very small areas (only as small as a few square meters (!)); in some cases data is not accurate (e.g. owner has died already or wrong, missing data was recorded during the privatisation and few owners can not be identified) but in general terms the data is accurate and subject of permanent state supervision. In case of state ownership, ownership rights are represented by National Land Fund Administration organisation. Legal basis form: 2010 years LXXXVII Law of National Land Fund.

As private owners may offer their land for National Land fund, within 1% of land there is undivided mixed ownership with both state and private owners within same land parcel. This imposes further management problems and difficulties with statistics.

4.3. Legal provisions on buying or inheriting forests

4.3.1. Legal restrictions for buying or selling forests

Between 1992 and 1994 there were no restrictions on land purchase contracts. First law of land ownership was adopted in 1994 which stated maximum private ownership limit as 300 hectares, and excluded foreigners from Hungarian land market. For this reason legal bodies were also banned to purchase land with some exclusions as state, churches, etc.

In the mid '90s Hungarian agricultural land was relatively cheap, foreigners, especially Austrians had been looking for ways to purchase land in Hungary, more or less contravening the national legislation. Typical solution was to purchase and pay the land for private owners, but cover the transaction with long term rent and purchase option. These contracts were called "pocket contracts" saying that these are not registered at State

Land Office but were kept in pocket instead. A key concept of the conservative government was to forbid and prevent these contracts. Legislation was modified several times to increase the barriers against foreign land owners.

Hungary became a EU member country in 2004 and a 7 year derogation was obtained to maintain restrictions against free market of agricultural land, and this derogation was extended for another 3 years and finally land market was opened only in 01.05.2014. As a preparation against foreigners, new land legislation was adopted by the parliament as 2013. CXXII. Law of the Agricultural and Forestry Land Purchase and Rent.

The core concept of the legislation is to provide restrictions against free market of land as strong as possible. To achieve this target, tools were the following:

- person without agricultural or forestry education/qualification is allowed to purchase maximum 1 hectares of land.
- pre-emption rights are provided to state at first level and local agricultural producers in several grade when these person may enter into land purchase contract instead of original buyer with the declaration that they accept the conditions (e.g. price, etc).
- local land committees shall be formulated of local landowners and exclusive right is granted for them to support or reject any land purchase contracts based on the evaluation of the proposed sale contract and its effect on ownership situation. No wonder how local committees will vote.²
- state agricultural authority will approve land ownership contract when local committee support has been expressed.

These rules now are examined in detail by both EU level and Hungarian Constitutional Court in order to justify that new legislation is in line with EU rules and freedom of ownership.

² Due to the delay in legislation, local committees have not been formulated but State Land Administration Office acts as a substitute of these committees.

4.3.2. Specific inheritance (or marriage) rules applied to forests

In relation to civil law regulations, new civil law codex entered into force in 2014 as 2013. V. Law of Civil Code. Heritage rules are described in book 7. There are no specific rules about land and forest heritage with one exception: Heir may refuse heritage of land and animals if he or she is not involved in agriculture, while keeping other pieces of heritage. (This is the only case when heir may choose which part of heritage he or she accept, in other situations heir can only refuse the heritage as a whole. 7:89 §).

The basic rule of heritage law that all assets are divided among offspring is also valid for agricultural land. Heirs may reach a common agreement within the heritage process to distribute the heritage in a different way (e.g. by keeping the land in single ownership) but others must be compensated.

In relation with marriage, there is only one rule which affects ownership: in case of divorcing, parties may exceed 300 hectares of land ownership limit (17§ (c)). The reason behind the rule is to prevent splitting of the managed area.

Experts usually agree that in order to prevent further fragmentation, specific heritage rules should be adopted. There are some predictions about the number of forest owners

to be doubled in the next ten years due to the current age distribution of the owners and heritage processes.

4.4. Changes of the forest ownership structure in last three decades

4.4.1. Changes between public and private ownership

In Hungary significant changes took place between 1992 and 1998, within the so called privatisation process. Details are described in chapter 4.4.3

4.4.2. Changes within public ownership categories

Forestry act determines that only state owned body may act as a manager of state owned forests. Since there are 22 state forest companies in the country, there has been a long discussion to merge them into a holding structure.

4.4.3. Changes within private forest ownership

Another source of increase of private forestry is afforestation. Intensity is more or less in line with changes of subsidy system (Figure 1).

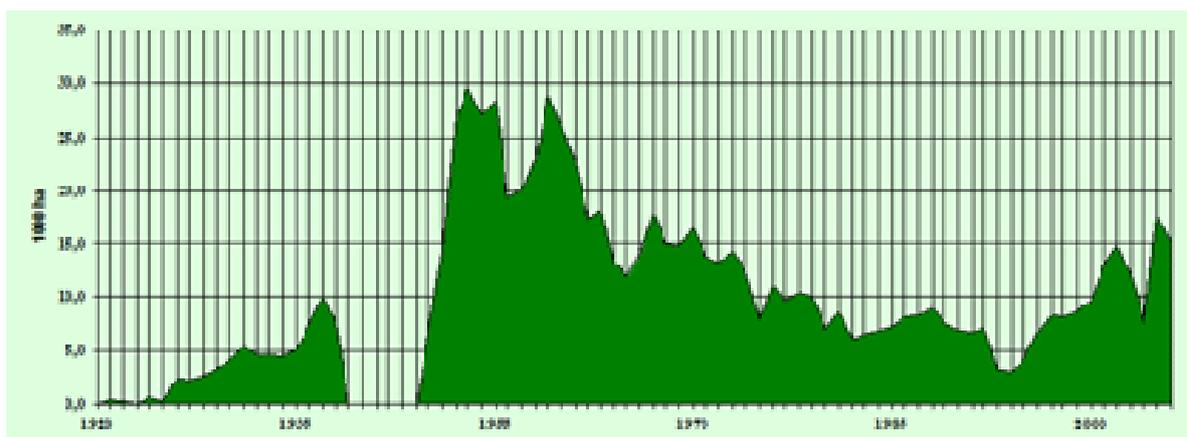


Figure 1: Afforestation activities in Hungary 1920-2010

4.4.4. Main trends of forest ownership change

Across Europe, the following drivers for ownership changes had been identified in the COST Action:

- Privatization, or restitution, of forest land (giving or selling state forest land to private people or bodies)
- Privatization of public forest management (introduction of private

forms of management, e.g. state owned company)

- New private forest owners who have bought forests
- New forest ownership through afforestation of formerly agricultural or waste lands
- Changing life style, motivations and attitudes of forest owners (e.g. when farms are given up or heirs are not farmers any more)

New ownership types were formulated after the transformation of the previous political regime. The change in civil rights in 1989 enabled the privatisation, and the actual privatisation process started in 1992 and lasted until 1998 (Schiberna 2007).

After 1994 business associations were not allowed to buy new forests, neither joint forest ownership companies (but new properties can be involved by members). Because of these restrictions the expansion of the share of these ownership types slowed down (Lett 2006).

In 1994 a new law was introduced about joint forest ownership, and then the first overall law about the forests after 1989 was introduced in 1996, which became invalid by 2009 with a new forestry law, which is also expected to change in some terms in the following years.

Between 1989 (practically 1992) and 1994 business associations were allowed to buy new properties, which enabled foreign citizens to buy land at very low price compare to the western countries (private people from abroad were not allowed to purchase land). It was terminated by policy in 1994, when only individuals could buy property (Lett 2006). From the owners point of view the distance from the forest is an important problem: those living far from the property have not got a close relationship with the forest. This and the undivided ownership are the reasons for today's lack of management (Jáger 2001).

Inadequate distribution of subsidies between forests and arable lands is a problem which

should be solved by new policy instruments (Jáger & Mészáros 2001). A possible solution is provided by implementing the standard output evaluation, which enable forest owners and managers to get a higher portion of subsidies (Schiberna et al. 2011).

The greatest difference in comparison with other Eastern-European countries that process did not aim to recover the original or historical ownership structure existed in a given time or time period.

Two different processes were applied: compensation and land re-allocation. Compensation vouchers were given to people whose property had been nationalized or who suffered in any forms from political reasons. Compensation vouchers were then used in auctions where a part of the state owned forests were sold. According to Jager (2008) these auctions facilitated greatly the formulation of common ownerships.

In the framework of land re-allocation, the forests of former agricultural co-operatives were re-allocated among the members of the co-operatives. During the socialist time members owned the co-operation, and co-operation owned the land, within the new form private owner (one or more person for each parcel) was named inland registry system, while the co-operation only could rent the land from new owners. Transformation was achieved using several methods, owners could choose in first step, random selection was used in case overlapping claims, and land committee was nominated to finalise the process.

While there are complains about fragmented ownership status practically in every country, Hungarian situation is still different. It is common that more than 200 hundred owners share a single forest compartment and smaller owners have around a few square meters of forest area only.

As a general rule, apart from churches only private persons may own the forest and other agricultural land. Any other bodies are excluded from land ownership by law.

Trends in forest ownership: New forest ownership through...	Significance*
<ul style="list-style-type: none"> Privatization, or restitution, of forest land (giving or selling state forest land to private people or bodies) 	3 - most important forestry process of the last three decades
<ul style="list-style-type: none"> Privatization of public forest management (introduction of private forms of management, e.g. state owned company) 	0
<ul style="list-style-type: none"> New private forest owners who have bought forests 	1 – obviously there is a secondary market and people are selling and buying forest land, but heritage process and further fragmentation is much stronger; pre-emption rights hinder free forest market
<ul style="list-style-type: none"> New forest ownership through afforestation of formerly agricultural or waste lands 	1 – in the early 2000 years the yearly afforestation reached 15.000 hectares (0.75% of forest cover) but currently this number is around 3000 hectares; afforestation subsidies cannot compete with agricultural subsidies
<ul style="list-style-type: none"> Changing life style, motivations and attitudes of forest owners (e.g. when farms are given up or heirs are not farmers any more) 	1 - economic factor of forestry is much stronger in Eastern European countries as wood price is harmonised in European market but general incomes are much lower in eastern countries
<ul style="list-style-type: none"> Other trend, namely: 	

* 0 (not relevant); 1 (to some extent); 2 (rather important); 3 (highly important)

The problem of unmanaged forests is mainly related to urban, absentee, and non-traditional or non-farm owners. The share of this area in private ownership is slowly decreasing (Benkő 2005), but with its 166289 ha in 2012 (NÉBIH 2013) it still represent a considerable problem.

The number of private forest managers were 37134 in 2012 with an average property size of 19,16 ha (NÉBIH 2013).

4.5. Gender issues in relation to forest ownership

State land registry system records the name of the owner from which the gender can be determined. The society does not consider gender issue to be important in case of land and forest ownership, especially within traditional rural villages where women refuse to answer questions of their forest as they insist that this is a business of men. Data exists theoretically, but not available.

4.6. Charitable, NGO or not-for-profit ownership of the forests

This section is concerned with forests owned by organisations such as conservation and heritage NGOs, self-organised community-based institutions and other philanthropic (“Characterized or motivated by philanthropy; benevolent; humane” OED) organisations. The management objective for these forests is usually to deliver social or environmental aims with maximisation of financial or timber returns as a secondary concern. Most owners are corporate and may invoke at least an element of group or participatory decision-making on management objectives and high ethical standards. It is possible for such ownership to be entirely private. However, the provision of public benefits (services (e.g. biodiversity, amenity, recreation etc.) which are free for everyone to enjoy or provide benefits to local communities (employment for disadvantaged people etc.) are sometimes recognised in the form of charitable registration. This in turn puts restrictions on the rights of the owners to use profits and to dispose of assets in exchange for tax exemptions and access to charitable funding.

Forests owned by ...	Yes	No	Uncertain
• Foundations or trusts		X	
• NGO with environmental or social objectives		X	
• Self-organised local community groups	X		
• Co-operatives/forest owner associations	X		
• Social enterprises		X	
• Recognized charitable status for land-owners		X	
• Other forms of charitable ownerships, namely:		X	

As it was expressed above, core part of national land ownership legislation is to keep land in national ownership. Major tool is to forbid any company/legal body ownership in land market. Strictly speaking co-operations, associations do not own the land but act as managers of the forest. However landowners have a membership in these bodies, so distinction is mostly a legal question.

Co-operations are described by 2006 year V. law of Co-operations. Minimum membership limit is 10 members in establishment procedure. Biggest difference between co-operation and association is that in co-operation members have equal vote rights (e.g. one person one vote) while in forestry associations membership vote is determined by share (owned area).

4.7. Common pool resources regimes

Commons - forest common property regimes (CPR) are resource regimes where property is shared among users and management rules are derived and operated on self-management, collective actions and self-organization (of rules and decisions). Examples of traditional CPR regime are pastures, forest land communities in Sweden, Slovakia, Romania Italy and other European countries or irrigation systems in Africa or Asia. The number of new common property regimes is growing and it is challenge of this Action to transfer knowledge and skills of traditional CPRs to new CPRs and vice versa. Example of new CPR regime is community woodlands in UK, established in last 20 years mainly in Scotland, Wales. Our interest in "traditional" and "new" common pool resources regimes (CPRs) in European forest, is based on the understanding that robust resource regimes are critical for sustainable forest management regardless of the property rights. Ongoing practice shows that local land

users (without ownership share) leased use agreement may also be CPR regime if they have the rights to determine management rules typical for commons (e.g. self-organisation and shared rights and responsibilities). Thus proper rules on management (harvesting, decision making and conflict resolution mechanism, cost/benefit sharing, sanctioning etc) are key for sustainable use of CPR regimes.

4.7.1. Theoretical framework

Most studies dealing with common/joint forestry /forest associations, etc. refer to Ostrom and her publications as a scientific reference and to the well know theory called 'tragedy of commons' – it implies that common pool resources cannot be managed efficiently as free riders gain their maximum benefit at the cost of the others and this will lead to overexploitation. Additionally, terminology problem has been noted by several authors. Robert Home in 2009 describes private forests as follows:

"Land ownership, although sometimes regarded as a continuum or spectrum, can be divided into three basic types:

- Private property, held by individuals and other legal entities. [...]
- State land, controlled by public bodies, which may be central, regional or local authorities, or parastatal bodies.
- A range of land rights that can be loosely categorised as communal or 'third sector' (terminologies are debated)."

Other sources use the expressions **common land, communal land-owners cooperative small-scale forest management, community woodland**. The expression '**forest association**' in some articles which is very confusing as this phrase is also used to describe a forest vegetation types.

It is important to distinguish three major forms which may fall under the terminology / expression of “common”:

- village/municipality forests
- pure common pool resources where everybody may use the given area – e.g. there is no management body (for example mushroom collection in public forests)
- joint ownership when there is a large but definitive number of owners. In this case common management faces with two basic questions: decision making and distribution of benefits.

Pure common pool resources (where there are unlimited, non-defined users) indeed can be found in forestry sector. Currently in Europe recreation and significant part of non-wood forest resources are allocated and utilised as a pure common pool resource. In some countries hunting is allocated similar way. Good example of pure common pool resource is carbon dioxide reduction where free rider countries benefit from the efforts of others.

Obviously municipality forest is a complete different form of ownership.

In case joint ownership the size of the group (e.g. joint owners) is defined. This means that it is well-known who the owners are. In this case the question is what kind of legal forms are offered for these owners, how to share ownership and manage forest together.

4.7.2. Historical background

In Hungary, and within the former Austro-Hungarian Empire (Slovakia, Croatia, Transilvania) the feudal system collapsed after 1848-49 revolution. Position of peasants was transformed to freeholder. Core part of this transformation was land allocation to peasants. Forest land was allocated with the obligation of joint management and ownership. Every person had a ‘share’ subject of further heritage. Its name in Hungarian was “közbirtokosság”. Legal basis was renewed in 1935 by adopting new forest legislation and its name was changed to erdőbirtokosság (common forest possession body). Ownership was common – in such term that everybody has a share – similarly to the way ownership exists in companies (gmbh, etc).

In the communist regime most of these forestry commons were transformed into co-operations during the process of land reallocation when single agricultural farms were merged into large agricultural production units (Russian type co-operation, “kolhoz”).

During the restitution/privatisation process the legal basis has been changed: see 1994 XLIX law; and in most cases land ownership unit now was allocated (named) to private persons. In such a way these legal bodies cannot be considered as CPR as owners can determine which their forest compartment / subcompartment is and they can leave the management body if they wish. To make it more complex and difficult, joint ownership exists within these managing bodies.

CASE STUDY 1: SZENTGAL FORESTRY ASSOCIATION

The largest forest common is located in village Szentgal manages 1400 hectares of forest. The forest association is owned by 400 owners, who at the same time are the owners of the forest area. Since this form of management has a long historical tradition in this area, new forest owners accepted to form a forest association during the privatization process. In many other cases, however, there is a permanent conflict between the owners and the management body. The owners mistrust the management and demand closer control over the financial decisions, but they are unable to change the managers who usually are able to dominate the general assembly of the association.

5. Forest management approaches for new forest owner types

The Action is interested if there are any new forest management approaches that specifically address new forest owner types, or that could be particularly relevant for new forest owner types. We are aware that there is not much awareness for this and that there is not much literature available, however, we are convinced that this is an issue: if owners have different goals for their forests there must be new kinds of management, if they have not the skills any more to do it themselves then there must be new service offers, etc. There are assumingly implications in silviculture, technology, work organisation, business models, etc. Such new approaches may be discussed under the key word of new ownership types but often not.

5.1. Forest management in Hungary

5.1.1. Natural factors

Hungarian forest management can be described with the following factors:

- large differences in environmental factors as precipitation between 500-1000 mm
- dominance of broadleaved forests
- high importance of nature protection movements and restrictions

Private forests have a somehow different tree species composition, compared to state forests, as 2/3 is the share of black locust and poplar.

5.1.2. Economic factors

Some economic features have been mentioned in the first chapter. As general salary level is lower in Eastern European countries, same wood price is regarded as a higher economic value. Currently EU subsidies increase further the profitability of private forests. Due to high energy prices and high level of fuel wood demand there are no problems in domestic wood markets.

5.1.3. Management plans

Forest management planning is highly developed and centralised in Hungary. Reasons are mostly historical. Forest management regulations have a long tradition in Central Europe. During the medieval ages, mining especially gold mining was a core part of the economy. As inner structure of mines demanded a huge amount of wood, shortage of available timber forced the kings to regulate forest management as early as the XVI. century. Countries as Austria, Czech Republic, Slovakia, Hungary, Slovenia, Croatia (the previous Austrian Empire) have the similar history, background and knowledge about forest management.

In Hungary the forest law as early as 1879 contained a detailed description and regulation of the process of forest management planning. Later on, when Hungary became a communist state after the second world war, a so called 'planned economy' was established similarly to other countries in the region under the Russian influence. This meant that planning became the core concept of the economy while factories, and land was nationalised. State covered all aspects of economic production with five years plans. These plans hardly were successful but in forestry. Due to the long harvest periods forest management planning process can easily provide good short and long term predictions if actual situation is known. Because long term forestry planning was successful, the communist state supported further improvement of centralised management planning. Moreover, this system has been maintained after the political changes in 1989. As a result a very detailed and accurate system has been applied in Hungarian forest sector. Key features of the actual Hungarian forest management planning system are the following:

All forest compartments are subject of forest management planning, irrespectively of size, ownership, tree species or purpose.

All the forests are visited, inspected and measured by state forest service every ten years to measure and describe the actual forest status and decide about:

- the interventions are necessary in the next ten years,
- time of final harvest and regeneration method,
- future stand type (after the regeneration).

Description of the forest means determination of all the features of the forest as height, diameter, volume, density, tree species composition, growing stock, annual growing rate, average growing rate, etc.

Forest management plan is produced by state forest service for owner / manager of the forest by a nominal fee.

These plans are provided at stand level, forest unit level and district level as:

- the ten-year district forest plan (district forest plan),
- the ten-year forestry operational plan (operational plan),
- the annual forestry plan (forestry plan).

Aggregate data is collected and maintained centrally as Forestry Database. This database was established in 1976 and now contains 35 years of key features of all the Hungarian forests.

In the first decades participation process was very limited, even the forest manager had no right to participate in the planning. Today forest law allows participation for a broad circle and the owner, NGOs, local councils, nature protection groups can affect the planning process.

5.1.4. Forms of management

Current management situation is described in table 2.

Table 2: Management structure in forestry. Source: Nebih, 2013.

Ownership type	Management arrangement	Forest area (1000 ha)	Number of management units
State	State forest companies	1 055	22
	Other state	90	371
	Unknown – state	11	-
Municipal	Municipalities	11	810
Other public*	Other public	6	312
	Unknown – other public	4	-
Subtotal - public		1 177	1 515
Private**	Forest associations	105	822
	Forest co-operations	10	40
	Companies	115	1 208
	Private individuals	445	34 212
	Other private	37	852
	Unknown - private	166	-
Subtotal - private		878	37 134
TOTAL		2 055	38 649

* Other public includes: church, foundations, associations, etc.

** Private ownership can be classified as private individuals, group of individuals (common ownership) private companies, private associations. However, there is no information on the distribution of these ownership types.

The state and public bodies own 56% of the total forest area. According to legal regulations state owned forests can only be managed by state owned companies or public institutions. Municipal forests has only a less than 1% share in the total forest area, therefore their role is rather limited within the forestry sector.

The rest of the forests (43%) belong to private owners, mostly to private persons who

typically own forest in undivided common ownerships. Approx. half (51%) of the private forest area is managed by an individual forest manager based on ownership rights or a contract with the owners. Companies and forest associations are managing 13% and 12% of the private forest area, respectively. While companies can have a wide range of activities besides forest management, forest associations can only be established for forest management purposes.

The common characteristic of all forest management organizations is the fact that forestry operations are typically carried out by forestry contractors. Even the state forest companies tend to outsource forestry works rather than employ forest workers. Sometimes they own heavy machinery and key machinery, but they lend them to their contractors.

5.2. New or innovative forest management approaches relevant for new forest owner types

5.2.1. Informed and trained forestry professionals

According to Hungarian forest legislation, all forest managers are obliged to have a contract with a forestry professional to obtain advice and supervise activities. All issued documentation must be signed both manager and advisor. For private forest owners and managers the most credible source of information is forestry professional. Therefore any new technologies or improvements can be promoted in the private forestry sector through forestry professionals. In many cases forestry professionals not only give advice to forest owners and managers, but also they are directly involved (in a formal or less formal way) in the decision making process.

5.2.2. Subsidy schemes

Subsidy system in forestry in Hungary is entirely relies on EU co-funding. New form of co-operations among forest managers, new (mostly environment friendly) technologies, forestry practices and other innovations can effectively be supported by subsidies. Many of them are strongly linked to the subsidy itself, so they will disappear when they are not subsidised anymore.

Subsidy system increases profitability of forestry sector to a great extent. It is evident the profit is a key factor for owners to agree and start forestry management activities. In this way EU subsidies, even if they address a environment friendly management, Natura 2000 support or any other specific measures,

play a key factor to reduce area of non-managed forests.

5.2.3. Forestry integrator

Forcing forest owners into common forest management units was only partly successful. In the year 2000, 385 thousand hectares of forests were unmanaged, mostly because the forest owners had no up to date information about their obligations and opportunities regarding their forests. Research also shows that lack of organizing power (capable, informed and interested actor) in a region had significant effect on why forest owners were unable to start the management of their forest.

Forest policy addressed this issue with subsidising the operation of forestry service centres called "Forest Integrators". Integrators were private enterprises operating as companies or self-employed persons, and they were supposed to present the organizing power in their region mentioned above through their various services.

Forest integrator is a strategic alliance as integrator provides expertise by consulting, thus the partner forest enterprises can benefit from the integrator's marketing skills and business experience. The consulting service is based on a long-term contract, while the other services of the integrator such as forestry operations and timber trade are negotiated in the specific cases (e.g. the integrator is competing with other actors on the market in these transactions).

According to the plans of the Ministry of Agriculture who provided the subsidy, 100-150 such forest integrators would have been established. However, there were no more than 60-70 forest integrators in the country in an uneven geographic distribution. Even though there is unpublished evidence of their positive effect on the organized operation of the private forestry sector, financial support was terminated in 2009, because it did not fit into the EU subsidy schemes, and the Ministry of Agriculture could not finance it from national sources. Anyhow the program is considered as successful as most of the Forest Integrators continued their business without support and kept their business co-operations with their partners.

5.3. Main opportunities for innovative forest management

There are several opportunities to improve forest management in private forests:

New legislation should be adopted to actively modify ownership structure. Area of very small owners (100-1000 m²) should be nationalised and reallocated to larger owners. Cost should be covered from EU subsidies, wood sales, long term state loans, etc. Participation in this program should be optional for larger owners (1000- 5000 m²).

Forest market should be regulated separately from general agricultural land market as within the field there is a very strong state supervision.

Simplified land sale process should be introduced in case of sale of very small forest areas. Currently it is obligatory in pay for a lawyer even if sale is between fellow owners and area is just a few square meter.

Simplified management planning rules shall be introduced for small forest management units.

State forest service should actively support farmers, single forest owners. Administrative punishments should be reduced. Currently any administrative error (e.g. missing documentation, overharvest, delayed information) results extremely harsh punishment fees. (As an example: 80 euro/m² punishment fee is imposed on forest manager if harvest is approved in management plan but manager did not inform State Forest Service about the actual time of the harvest in 30 day advance).

Joint management and administrative uses should be introduced for farmers, who manage both forest and agricultural land.

5.4. Obstacles for innovative forest management approaches

Describe the most important factors that hinder forest owners from adopting or carrying out innovative (new) forest management (e.g. laws, regulations, institutional arrangements, biodiversity conservation designations, forest operations,

logistics, access to resources, education and training of forest owners, managers or workers, and so on). Please list these factors in order of priority, and for each provide a short description.

From Previous explanations it must be obvious that biggest obstacle of the improvement of private forest sector is the **fragmented ownership** structure. In most case the number of forest owners on each parcel is so high that any co-operation communication, common agreement (even to reach simple majority) seems to be very difficult.

Some experts emphasise the lack of **subsidies**, but in fact Hungary could not spend EU subsidies allocated to private forestry. On the other hand, in some case application or subsidy related administration is complicated. Applying forest managers have to comply with a number of rules and requirements, and any failure would result in the loss of their subsidies. Forest managers also have to pre-finance these subsidies for the time they are actually transferred, which can take a year or even longer period of time.

Forest policy is changing over short period of time. As forestry is a rather conservative way of production, any new approach needs time to be implemented. In an environment where legal regulations, market conditions, and subsidies can change in a few years forest owners and managers are sceptical toward new ideas.

Forest legislation does not support single farmers; physical separation of forest compartment is a complex and costly process. Restrictions imposed on land market also block further reduction of fragmentation.

Forest owners still has **limited knowledge** regarding their forests and forest management. Sometimes even the location of their forests and with whom they own the

forest was confusing to many of the owners.

Since the privatization was taking place in a time of turbulent changes the decisions were made under political and economic uncertainties, and based on limited information, most of the decisions were heavily influenced by opinion leaders e.g. big owners, and forestry professionals.

CASE STUDY 2: 'Szabó' FOREST INTEGRATOR

'Szabó' Forest Integrator is an enterprise of a professional forester, who has been working in private forestry since the privatization. This enterprise provided various services for the partner enterprises including consulting, contractor works and timber trade. After the program for the promotion of forest integrators was terminated the forestry enterprise continued its operation, and also the co-operation with the partner forest managers still goes on. 'Szabó' Forest Integration is a centralized co-operation in which the core enterprise provides services to partner enterprises. Direct co-operations among partner enterprises are not a typical part of a Forest Integration. 'Szabó' Forest Integrator was able to develop a forest service centre capable of providing services for 6500 hectare of forest.

There is a mutual advantage in this type of co-operation. The mid-term co-operation provides a stable operational area for the Forestry Integrator. For the partner enterprises the Integrator is a source of free expertise and a business partner whose reliability is very important if the partner enterprise is not well informed in forestry matters.

6. Policies influencing ownership development / Policy instruments for new forest owners

Policy and ownership are related in various ways: Policies directly or indirectly influence ownership development or even encourage or create new forms of ownership; and policy instruments are emerging that answer to ownership changes, including instruments addressed to support new types of owners e.g. through advisory services, cooperative or joint forest management, etc.

6.1. Influences of policies on the development of forest ownership

6.1.1. Historical overview

Politics always had a strong influence on forestry in Hungary. After the 2nd World War, when communist system was introduced in Hungary, practically all private forests were nationalised. Nationalisation was achieved in several steps, but by early '50 there had been no private forest in Hungary. As a parallel process, agricultural land was also nationalised to formulate co-operative production units.

Period of 1950-1970 is usually considered as golden age of Hungarian forestry when – using significant state support – forest cover was almost doubled in Hungary. Most of these new forests were established and managed by co-operatives. Land of co-operatives was theoretically private land, but in practice it was managed like state ownership. This means that co-operative members had no influence on management decisions and they received salary instead of shares of profit.

6.1.2. Politics related to restitution

After the political changes in 1989 there were different standpoints and opinions of privatisation in general and land privatisation/restitution. Most political parties opposed land restitution but after the first free election in 1990 the winning party (MDF – Hungarian Democrat Forum) had no majority and formed a coalition with FKGP (Small Farmers Party). FKGP had only one

requirement to be a coalition partner and it was the 'land reform' e.g. privatisation.

It was also a political decision that privatisation would not be restitution but a kind of land reallocation as it did not address to restore the historical ownership structure, contrary to almost all Eastern European countries.

Technical solution was to provide compensation voucher for those who suffered any loss or harm in the communist period. Owners of compensation vouchers may participate in land auctions or could use vouchers for other purposes. Theoretically this process would allow achieving an ownership structure which is in line with current needs of participants. Experts agree that one of the biggest obstacles of a sound ownership was the possibility of down bidding process. Starting price was always 3000 HUF/gold crown which could be reduced in few steps to 500 HUF in case of no interest. This very low price was so tempting for participants that they even accepted the consequence: joint ownership. Gold crown was a historical measurement unit referred to the profitability of the land; usually forests were at the level of 4-7 gold crown/ hectare.

6.2. Influences of policies in forest management

6.2.1. 1992-1996: execution of restitution and land allocation

Main feature of forest policy between 1992 and 1996 was that execution overtook policy. Process of restitution and reallocation was started practically immediately after the political decision, while other elements of effective policy – especially legal elements - were missing.

While restitution was almost finished by 1996, most important pieces of law became effective only at the end of this period:

- 1994. LV. law on agricultural land law entered into force in mid-1994,
- 1994. XLIX. law on forestry commons became effective in 1995,

and the famous 'green package, including:

- 1996. LIII. on nature protection,
- 1996. LIV on forests, forest protection and forest management
- 1996 LV. on game protection, game management and hunting

came into force only in 01.01.1997.

These pieces of legislation did not formulate private forest ownership but took as granted, a coat after the rain, according to the well-known Hungarian saying.

6.2.2. 1996-2000: struggle on management rights

As privatisation gradually finished, it became evident for new owners that there was a very high pressure from state forest service to keep large private forest areas under one forest manager (called common/joint management). This was mostly because Hungarian forest law defines very strict administrative tasks, and management planning rules on forest managers irrespectively from size. It is obvious that forest service was worried about how to achieve administrative inspection of 300,000 forest owners instead of 3000 large private management units with the same detail and accuracy.

Struggle reached even the level of constitutional court who declared in its decision of "1347/B/1996 constitutional court decision" that obligations and restrictions imposed on new forest owners (e.g. the obligation to carry out joint forest management) is in line with national constitution.

Gradually it came into light that due to the administrative burdens and conflicts between new forest owners, low interest of urban forest owners, several thousand hectares of forests were left unmanaged. Obviously forest service showed no interest in reduction of non-managed area.

6.2.3. 2000-2004 Preparation to EU accession

Around 2000 state forest policy changed – so to say – in silence and forest administration gradually gave up the previous policy of forcing joint forest management. New rule

says that a single ownership unit can be subject of individual management rights, and common/joint management is obligatory only if there are more than one owner in that single piece of land. In other words a forest owner may obtain the position of an independent forest manager irrespectively of the ownership structure of adjacent land. This was a significant movement, however the previously established joint/common management units have been conserved.

Society showed less and less interest toward private forestry and ownership structure as EU accession became the leading policy movement. Every research body prepared papers about "possible effect of accession..." and establishment movement of Natura 2000 network was started. This gave more power to nature conservation, and more and more pressure can be seen from nature conservation.

6.2.4. 2004-2008: peak of afforestation

As a new member country, Hungary's primary aim was to meet EU legislation. The country started the preparation to the new seven year financial period 2007-2013, established National Forestry Program and started to implement the agricultural subsidy system. As a consequence, a little less interest was given to private forestry. Forestry subsidy system suffered significant delays with the exception of subsidies targeted afforestation, and yearly afforestation level reached 15,000 ha again.

The portion of these unmanaged forests was 50% in 2000 (Schiberna et al. 2011), then 29% in 2006 within the private forest sector (Schiberna 2007). This seems a rather impressive development, but overall evaluation shows that every third hectare in private forestry was kept unmanaged for a period of at least 15 years. Additionally, active management does not always mean a solution for the problem of ownership.

6.2.5. 2008-2014: Energy forests

After 2008 the increasing EU agricultural subsidies changed profitability of agricultural production significantly. The result was lower and lower level of afforestation activities. In 2009 new forest legislation was adopted, with

little simplified administration rules and great attention to state forestry and permanent forest cover. Profitability of forestry increased significantly due to the increasing energy prices. The government put much attention to employment and state forests employ several thousand unskilled workers but no significant improvement of private forestry sector is achieved.

After 2014, land market system was transformed completely but its effect on forest ownership structure is not positive. Currently the core part of agricultural policy is to exclude foreign owners from land market. These movements have effects on private forests too.

6.3. Policy instruments specifically addressing different ownership categories

According to national forest policy, forest law was based on “non-sectorial approach”, e.g. there were similar rules for both state and private forestry. There are only three chapters in which ownership categories are distinguished. These are the following:

- state forests are non-trade able with the exception of small parcels below 5 hectares
- non wood forest products can be collected by general public only in state forests
- permanent forest cover shall be maintained in 25% of natural forests in state forestry. There are no such restrictions in private forests.

To extend the area of uneven aged forest is a priority guaranteed by law since 2009. There are several studies about the economic effects of the new approach, but these studies are not related with the ownership types (Schiberna, 2009).

Based upon recent legislation the uneven aged stands are favourable. There are several studies (from economic and silvicultural approach) about the management types which makes possible to convert forest into uneven aged forest. A study how these management types work in case different private forest ownership types is yet lacking.

6.4. Factors affecting innovation in policies

20 years after the start of restitution process, private forestry is still staggering with fragmentation, bad ownership structure and non-managed forests. It is evident now that:

- within larger forestry commons and co-operations there are serious inner conflicts; minority rights are not efficiently protected and larger forest owners easily overplay the small ones;
- state forest authority is not interested in the reduction of non-managed private forests
- fragmentation will be doubled every 10 years due to intensive heritage processes
- on a commercial basis ownership structure will not be improved due to the expenses and difficulties of land purchase rules.

State should reconsider ownership structure and establish new legislation to reduce number of forest owners; to formulate independent farm based forest ownership. Legislation is the only tool to clean the current forest ownership by transferring 1-10-100 m2 ownership rights to larger ones with automatized compensation process; by formulating 1-5 ha ownership parcels, correlating with forest management subcompartment system.

It is difficult to answer to the question, why the state was so passive in the field of non-managed private forests. A legal answer can be that ownership is a constitutional right where state must interfere with utmost care and minimum force. An economical answer can be that wood price was very low before EU accession and there was no real economic demand for higher output. From the point of nature oriented NGOs the lack of management is the best way of management. From administrative point of view state (as a forest owner) was always state forest oriented and gave much less attention to private forests.

But maybe the most important argument that land policy has/has only a single aim in private sector: to keep foreigners away from Hungarian land market.

The greatest innovation of state policy was to give up the original concept of joint management: according to the regulations until 1998 new forest owners had to manage their forest together if their forest land units were connected and formed a single forest

area, and if it had belonged to a single forest management unit before the privatisation. After the change of this concept, a single land unit (few hectares) may obtain the status of individual management.

CASE STUDY 3: MECSEK 031/11 LAND PARCEL AND ITS OWNERSHIP STRUCTURE

In her diploma work, Andrea Meditz investigated non managed private forests. Mecser 031/11 is a 24 hectares parcel with 8 forest subcompartment, where there are 143 forest owners. Biggest ownership share is 1.33 ha, average ownership 0.15 ha/person, smallest forest owner has only 31 m² of forest.

The area contains 8000 m³ of softwood; age of forest stands is between 28-58 years. Total value is equal to 300,000 euro (considering 30 euro/m³ wood and 2000 euro/ha land price).



It is a mystery why forest management has not been started as wood can be harvested immediately. Further delay will result serious economic losses. Most of the forest owners are local, but average age is over 60 years. Obviously a kind of organisational power is missing to start forest management.

7. Literature

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8. Annexes

8.1. Tables with detailed description of 10 most important publications

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Jager, L., Mészáros, K. (2001) <i>Current state and conflicts of small-scale forestry in Hungary</i>. In: Niskanen, A. (ed.): <i>Economic sustainability of small scale-forestry</i>. Proceedings of European Forestry Institute. Joensuu, Finland. p. 61-70.
English language summary/abstract	Information is presented on the reformulation of Hungarian private forest management after the political and economic changes of the 1990s. As a result of privatisation, the area of private forests exceeds 763 000 ha of which 135 000 ha belong to small-scale forestry (predominantly individual forest owners). As a result of unfinished ownership changes, almost 50% of private forests are still unmanaged. Development prospects of small-scale forestry in Hungary show reasonable differences compared with the current European situation. The current economic situation and the future prospects are evaluated in this article. A comparison of economic performance between private and state forest management is also included. Afforestation, as the main source of enlargement of individual forest ownership category, will also be evaluated in the context of small-scale forestry.
Language of the study/publication	English
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input checked="" type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="checkbox"/> Authority
Theoretical approach	political, historical, economics
Methodical approach	country level statistical data and its analysis

Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Institute <input type="checkbox"/> University
Main results should be given here if not yet included in the summary.	<p>The long-term effects of privatisation are basically sensible. Contrasting with the previous opinions there have not commenced any changes to a considerable extent in the privately owned forests by the new owners. On the contrary, during the transient period a decreasing amount of felling was typical, consequently, in private forests a considerable surplus of allowable cut can be experienced. The most important problem is the high portion of non-managed forests, for the settlement of which a change in approach and attitude in forest-administration and judge-made law is required by all means. Accordingly, extensive spreading of private small-scale forestry is probable in the future Hungary.</p>
Weblink	www.iufro.org/download/file/5254/4510/30800-joensuu01-proceedings_pdf/

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Lengyel, A., Schiberna, E. (2004) <i>Need Assessment of the Private Forestry Sector in Hungary</i>, FAO/IUCN/CEPF joint project: Enhancement of Private Forestry in selected countries of Central and Eastern Europe. FAO
English language summary/abstract	The primary aim of this study was to reveal the current state of multifunctional forestry, its supporting and hindering factors. According to the results most of the interest representation organizations are operating on a voluntary basis, but some of them were or still are obligatory. For example Chamber of Agriculture membership was declared obligatory for all agricultural enterprises, but this rule has been overthrown. Today Federation of Private Forest Owners and Managements (FPFOM) has such privilege, as one of the conditions of being an integrator (and obtaining subsidies connected) is a FPFOM membership.
Language of the study/publication	English
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	sociology
Methodical approach	questionnaire survey
Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University

Main results should be given here if not yet included in the summary.	Association of Private Forest Owners and Managers shows nearly neutral position, although the dispersion of opinions is wide. The number of +3; 0 and -3 rates were the same (6 each), and the rest was slightly positive. Hungarian Federation of Forestry and Wood Industries has considerably positive image, despite of the high dispersion, which is the result of the small sample (one answer has too much weight). This organization is operating on a voluntary basis and therefore the supportive answers are dominant. Hungarian Forestry Association is a traditional organization in forestry branch, but after the change of political system and the economy, its role become unclear, as it has no interest groups behind. So it is not a real interest representative, but rather an interest harmonizing and professional forum. In fact, only one answer was different from neutral. Chamber of Agriculture is no more obligatory and the result of this survey shows dissatisfaction. Similarly to the former case, only one answer was different from neutral.
Weblink	n.a.

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Jager, L. (2005) <i>A rendezetlen gazdálodású erdőterületek tulajdonosi viszonyainak vizsgálata</i>, [Ownership structure in nonmanaged private forests] In: Schiberna, E. (ed), Institute of Forest Assets Management University of West Hungary, Sopron. p 25-35.
English language summary/abstract	Within the framework of the Economic Monitoring Network for Private Forests in Hungary (EMN PF) a survey was carried out in 2004 with 90 sample sites, 300 forest managers and 60 forest areas without official forest manager. The proceeding introduces the data collection within the group of forest owners without forest manager in the property. The involved forest area was 400 ha, owned by 54 owners. The research questions were the followings: is the owner aware of the fact that he/she owns a forest, whether he/she knows the forest and it's management possibilities / has the owner got any intention to settle the problem of the unmanaged forest / has the owner got any intention to manage the forest / what are the future plans with the forest / which are the main obstacles to start the management.
Language of the study/publication	Hungarian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> motives and behaviour of ownership types ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	sociology, political sciences
Methodical approach	questionnaire survey

Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University
Main results should be given here if not yet included in the summary.	The basic knowledge of the owner about the forest is mainly promising. Information related to management and the future plans with the forest are very diverse between the owners. The structure of the property is unfavourable, which is the main obstacle for any development. The owners were classified based the following features: conservative – liberal / ecological – economical / active – passive. An index number was created for each forest owner based upon the three mentioned features. The intentions of the owner are mainly influenced by the activity and the relation to economic processes.
Weblink	n.a.

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Lett, B (2006) <i>Änderung der Eigentumsverhältnisse und Auswirkungen auf die Organisation der ungarischen Forstwirtschaft</i>, [Ownership changes and its impact on the organization structure of the Hungarian forestry] , Forst und Holz. 61. (8) : 308-312., Hannover,...
English language summary/abstract	The article provides an overview on history and structure of Hungarian forestry and focuses especially on the stress field private – governmental forestry after the re-structuring process from the beginning 1990ies on. in
Language of the study/publication	German
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	history, political sciences, economics
Methodical approach	statistical review and evaluation.
Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University
Main results should be given here if not yet included in the summary.	In the result sensible areas of private and governmental forestry are identified and propositions for short and medium term activities for developing Hungarian forestry are given.
Weblink	n.a.

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Schiberna, E. (2007) Organizational structure and economic conditions of private forestry in Hungary, PhD dissertation, Sopron, University of West Hungary.
English language summary/abstract	The main objective of the dissertation is to give an overview of the private forestry sector in Hungary with a strong emphasis on economic perspectives. The issues covered are ranging from the most recent developments to the long-standing and acute problems overarching the 16 year history of this sector. As a theoretical basis of the discussion, the author builds up a model of the private forestry sector by identifying functions to be fulfilled in the management of forest estates. Using this model, many of the technical terms of forestry have been revised and corrected, and some have been proved to be misused. The author makes an attempt to fill the gaps of the professional language with describing the functional types of forest management units, and propose new expressions.
Language of the study/publication	Hungarian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> policy instruments addressing ownership <input checked="" type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	economics
Methodical approach	national accountant network .
Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University

<p>Main results should be given here if not yet included in the summary.</p>	<p>Profitability is the key issue of the study in the forest operations level. One of the top priority problems to be solved in the development of the sector is the phenomenon of abandoned forests. The author disputes the general believes regarding abandoned forests and its triggering factors, and based on statistical evidences provides new understanding of the problem.</p>
<p>Weblink</p>	<p>http://ilex.efe.hu/PhD/emk/schiberna/doktori_schiberna.pdf</p>

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Jager, L. (2008) <i>Az osztatlan közös erdő jogi sorsa, [Undivided common forests, a legal perspective]</i> MSc dissertation, Eötvös Loránd University, Budapest.
English language summary/abstract	
Language of the study/publication	Hungarian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	sociology, political sciences
Methodical approach	evaluation of current legislation, recommendations
Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University
Main results should be given here if not yet included in the summary.	Significant part of Hungarian forests are allocated as undivided/joint ownership, as a side effect of forest reprivatization. New legal tools are required to handle this situation.
Weblink	n.a.

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Jager, L. (2008) Erdőtulajdon és gazdálkodás, [Forest ownership and forest management], Erdészeti Kiszüzetek , University of West Hungary, Institute of Forest Resources, Sopron, 34 p.
English language summary/abstract	The aim of the booklet is to introduce the legislation related to ownership types and forest management, thus support the work of forest owners and forest managers.
Language of the study/publication	Hungarian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input checked="" type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	sociology, political sciences
Methodical approach	a manual for new forest owners about rules and regulations of forest management, legislation
Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University
Main results should be given here if not yet included in the summary.	The booklet is a guide for forest owners and managers about legislation, thus there's no scientific result to mention.
Weblink	http://mati.emk.nyme.hu/fileadmin/dokumentumok/emk/moi/PolitikaEsOkononomia/Kiadvanyok/ErdotulajdonEsGazdalkodas.pdf

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Schiberna E, Lett B, Héjj B (2011) <i>The Economic Monitoring Network for Private Forests in Hungary; Small-Scale Forestry 10:(2) pp. 245-253.</i>
English language summary/abstract	The private forestry sector in Hungary was reintroduced in the early 1990s, as a part of the initial economic reform package aimed at transforming the economy from central planning to a market economy. The fundamental changes required a complete restructuring of the forestry sector, which is still going on, with sound information becoming ever more important. The Economic Monitoring Network for Private Forests in Hungary (EMN PF) is supporting a price and cost reference database, financial analysis of forestry processes, forestry holding analysis and estimation of the economic output of the private forestry sector. Data collecting methods are balanced between accuracy and ease of data collection. EMN PF applies surveys and uses open databases as data sources. Forest owners' and integrators' estimates are an easy way of collecting data, but the accuracy of data is difficult to control. The analysis of forest holdings can be based on the annual financial reports of forest enterprises with pure forest activity. These reports are already existing documents, which therefore are easy to collect in large numbers, but do not provide highly detailed data. Based on the National Forest Inventory and the results of the financial analysis, the economic output of the private forestry sector can be estimated.
Language of the study/publication	English
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input checked="" type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	economics
Methodical approach	Questionnaires were sent out for fix partners (accountancy network).

Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University
Main results should be given here if not yet included in the summary.	<p>The role of the EMN-PF in the development of the private forestry sector in Hungary is a subjective issue, but from an economic and organizational point of view, it has clearly been the most reliable information source to forestry stakeholders and has provided the widest range of information. Thus the EMN-PF has served the information needs of the Ministry, interest groups, research and education, private forest owners as well as the forestry professionals. In addition to the economic information service for stakeholders, an attempt has been made to disseminate information to a wider audience. Since the farm accountancy data network began operating in Hungary the standard gross margin (SGM) has been increasingly used in subsidy schemes to calculate the economic size of farms. There is no definition of SGM in forestry, which consequently excluded private forestry enterprises from subsidy schemes that use minimum economic size of applicants as a criterion. As one of the newest attempts to improve integration of the EMN-PF into national processes, a simple method of calculating SGM has been worked out, and this method is now available for decision-makers. SGM and farm typology applied in the European Union are being reformed and the standard output (SO) will be the new tool for this purpose. SO is the monetary value of agricultural gross production at farm-gate price, which is easier to calculate than SGM and provides a comprehensive basis for cross-sector analysis. This typology tool is not directly applicable to forestry, but in the future it should be considered as a link to both the national level and Europe-wide harmonisations.</p>
Weblink	http://www.editorialmanager.com/ssfo/default.asp?pg=login.asp (needs an account)

SELECTED REPORTS/PUBLICATIONS	
Full reference of study/publication	Csóka, P. (2001). Magyarország Erdőállományai. [Hungarian forest stands – statistical data]. ÁESZ. Budapest. ISSN 0238 1303
English language summary/abstract	The NÉBIH (National Food Chain Safety Office) is a central budgetary organization. The office has a Forestry Directorate in the headquarters and 10 regional Forestry Directorates as part of the county offices. One of the main tasks of the office is to collect and provide data about the Hungarian forest asset. This forest inventory ensures all the data necessary for district forest plans. Partly this data base is free to use, thus used in several scientific work for further analysis. The inventory consists of records such as: afforestation, tree species and age-class distribution, growing stock, annual gross felling volume by felling types and by species groups, forest health condition, protected forest areas, forest land area and ownership categories (etc.).
Language of the study/publication	Hungarian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> policy instruments addressing ownership <input type="checkbox"/> new management approaches <input type="checkbox"/> motives and behaviour of ownership types ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> International beyond Europe
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Cross-national Europe <input checked="" type="checkbox"/> National <input type="checkbox"/> Sub-national <input type="checkbox"/> Public other <input type="checkbox"/> Public International beyond Europe <input checked="" type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public Sub-National
Regional scope	<input type="checkbox"/> National <input type="checkbox"/> Private other <input type="checkbox"/> Private Industry <input type="text"/>
Theoretical approach	forest inventory
Methodical approach	data collection
Thematic focus	<input type="checkbox"/> Other (please name below) <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Public Research Insitiute <input checked="" type="checkbox"/> University
Main results should be given here if not yet included in the summary.	Overview of forest statistics
Weblink	https://nebih.gov.hu/szakteruletek/szakteruletek/erdeszeti_igazgatosag/kozerdeku_adatok/adatok

8.2. Case examples of problem areas

1. Fragmented ownership and heritage process

Examples are presented through the number of private owners within one landownership unit. The sample area that containing 17 villages is located in the region of the Western-Danubian Hills. The total area is 21.221 hectares, the forest cover is almost 50%. The study investigates only the privately owned land and forests and excludes the state owned forests. The total area is therefore 11.752 hectares. The distribution of private land according to the way of cultivation is shown in the following table.

Cultivation	Area (ha)
Plough land	5380,35
Forest	4459,54
Meadow, pasture	1539,30
Other	373,75
Total	11752,96

Distribution of private forest land can be seen in figure 2:

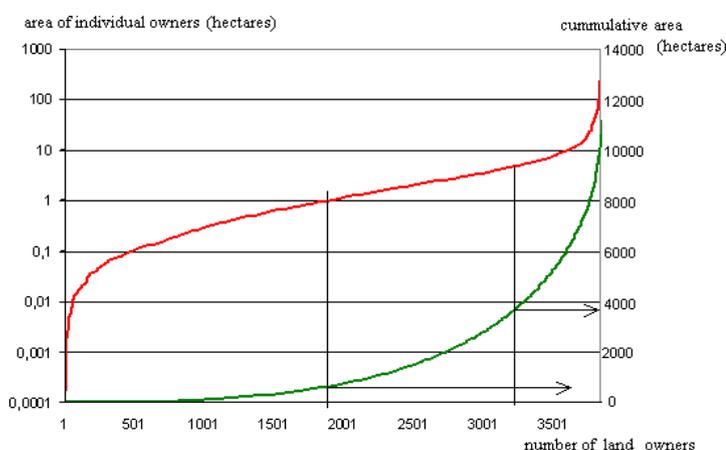


Figure 2: Distribution of private forest land

All together there are 4000 forest owners, of which 500 owners are below 0.1 hectares threshold. There are 2000 persons with cumulative area of 500 hectares. Approximately 700 persons own 2/3 of total area.

2. Land ownership units are much larger than forest management sub-compartment units

Village	Land reg nr.	Forest subcompartment code	Area
Recsk	0336/1	35A	3,48
Recsk	0336/1	35B	2,24
Recsk	0336/1	35C	4,44
Recsk	0336/1	35D	7,2
Recsk	0336/1	35E	2,95
Recsk	0336/1	35F	0,41
Recsk	0336/1	35G	0,96
Recsk	0336/1	35H	6,92
Recsk	0336/1	35I	0,65
Recsk	0336/1	35J	1,49
Recsk	0336/1	35K	6,71
Recsk	0336/1	35L	5,09
Recsk	0336/1	35M	0,56
Recsk	0336/1	36A	12,47
Recsk	0336/1	36B	4,63
Recsk	0336/1	36C	12,49

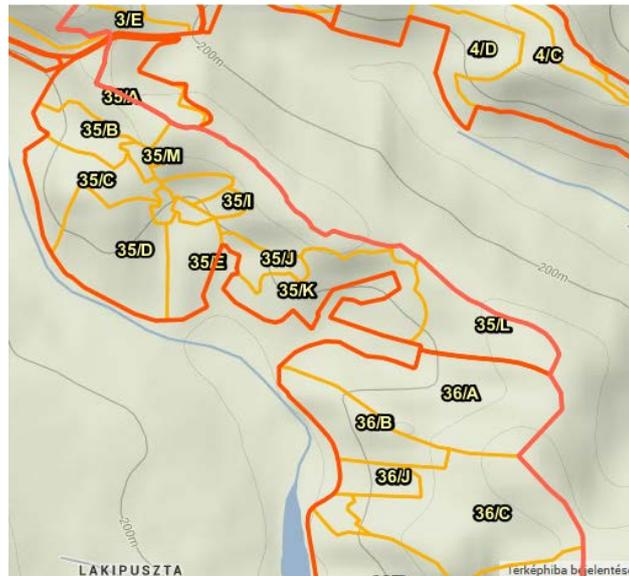


Figure 3: Forest subcompartment system
see: <http://erdoterkep.nebih.gov.hu>

One possible method to reduce the number of forest owners and undivided forest ownership is to divide the land into smaller units. Example presents problems of physical separation and distribution of forest land. All the forest sub-compartments belong to one ownership unit – while forest age structure and value is different in each sub-compartment.



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