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Forest Land Ownership Change in Latvia

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 Latvia

COST Action FP1201 FACESMAP Country Report

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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.

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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

CSB	Central Statistical Bureau
CSC	Consultancy Service Centre
EU	European Union
FASC	Forest Advisory Services Centre
FDF	Forest Development Fund
FP	Forest policy
FRA	Forest Resources Assessments
FSC	Forest Stewardship Council
JSC LVM – JSC “	Latvijas valsts meži” (Latvia’s state forest)
LSFRI “Silava”	Latvian state forest research institute “Silava”
FMP	Forest management plan
MAL	Ministry of Agriculture of Latvia
MS	Member States
NFI	National forest inventory
PDF	Pasaules dabas fonds (formerly WWF Latvia)
PFO	Private forest owners (physical persons)
PFOO	Organisations of private forest owners
RERL	Register of Enterprises of the Republic of Latvia
RSS	Rural Support Service
SFS	State Forest Service
SLS	State Land Service
UAL	University of Agriculture of Latvia

1. Introduction

1.1. Forests, forest ownership and forest management in Latvia

According to the State Forest Service (SFS) data forests cover 51% of the country's land area. Today about 52% of forest area belong to the state, 11% are managed by legal persons or companies, 5% are owned by municipalities and other owners, and 32% by about 138000 private forest owners (PFO). The privatization going hand in hand with the restitution of property rights of the former owners or their successors to the landed properties, including forestlands, owned before the Soviet occupation have resulted in a high number of small and fragmented forest holdings. However, in the recent years the consolidation of landed properties, including forests, is increasing as the biggest owners and forestry companies are interested in enlarging their properties. Still, small and fragmented holdings are typical for the private forest sector. In Latvia, the average size of a forest holding does not exceed 8 ha.

Since the restoration of Latvia's independence in the early 1990s the forest sector has become one of the key branches of national economy. Both state and privately owned forests are equally important sources of raw material for the wood processing industry. In the last decade the total average annual volume of fellings has been about 12 million m³. As to the state-owned forests, a fixed annual allowable cut is established by law for a definite period of time, while in private forests the felling volume fluctuates a lot with the minimum of 3 million m³ in 2009 and the maximum of 7.5 million m³ in 2003 (figure 1).

The state-owned forests are managed in line with sustainability criteria and the Forest Stewardship Council (FSC) certificate approves that. Traditions of forest management were lost in a half of century break of private ownership. The SFS data showed that up to 2010 timber harvesting was done in about 40% of private forest holdings (Jansons, 2010). Other forest management activities (forest regeneration, tending of young stands, thinning etc.) were done considerably less. Part of private forests

is still without management and it is to be pointed out that the principles of sustainability were not always taken into consideration in the management of small forest properties.

Access to firewood from one's own forest and a possibility to leave heritage to the successors are among the major motives for owning a forest in Latvia (Vilkriste, 2008). About 73% of PFO live in the area where their forest property is situated. The average age of PFO is 54 years, and about 1/3 of them are over 60 years old. There are no big differences in the gender structure among the PFO, but according to the surveys male owners are more active than female ones (Vilkriste, 2008).

Forest sector is one of the dominating sectors in the state economy. Sustainable management of private forests is not only conception of Latvian Forest Policy (FP), but also foundation - stone of long term supply of quality timber resources. One of the objectives of FP is to ensure the knowledge and skills needed to improve the FP, legislation and practice and to ensure sustainable forest management by promoting the development of forest education, forest research and exchange of information within the forest sector. It is important to design proper FP implementation tools to encourage PFO to manage their forests in proper way and change their forest management behaviour and decision making towards the goals of FP.

1.2. Overview of the country report

The country report of Latvia consists of introduction and five interrelated parts. Introduction provides a short view on forest resources and their importance in economy, ownership structure and forest management tendencies. The chapter on methodology describes methods used for data collection. Surveys of PFO from 1996 provide information on characteristics of PFO and their viewpoints. Data of the data bases of the SFS and the State Land Service (SLS) are used to analyse changes in ownership structure. The statistics and data base of the SFS supply information on forest

management tendencies in private forest sector. Reports of the different state institutions on various issues are collected from the Internet. Publications on new ownership types and their management tendencies are limited and experts of several organizations are interviewed to get their opinions on the topic.

Literature review on forest ownership changes are based on ten most important publications. Eight of them are reports on research projects; one is dissertation and one – publication in proceedings of IUFRO conference of small-scale forestry. Each report is based on self-dependent research; however methodology for some projects is similar. It gives possibility not only to obtain current data, but also provides information on changes in a certain period of time. All reports are in Latvian; therefore publications in English based on results of these studies are mentioned in the appendix in the summary tables of literature (chapter 8.1). Summary of literature review provides information on management of private forest sector in general and ownership structure, viewpoints and information of PFO, but it is limited information on policy and legislation aspects. Information obtained from the research projects have to be analysed together with the statistic data on forest management, changes in legislation and tools of policy implementation to obtain complete information on private forest sector.

Information on forest ownership includes statistic information on ownership structure and gives overview on legislative system related ownership in Latvia. Since the restoration of Latvia's independence in 1990, there have been processes of land privatization and restoration of property rights, and these have led to changes in the different types of forest ownership. Changes related ownership in the forests owned by the state are insignificant in the last decades. The situation in private forest sector is right opposite. In the last decade number of individuals and their forest area decreases. The SLS data base shows there are 137888

PFO with 7.8 ha average forest property in the 2012 (in 2003 – 166790 PFO). The last research provides information that consolidation is ongoing and percentage of small properties (under 5 ha) decreases (Zarins, 2012).

Forest management approaches, principles and harvesting activities are described for the state and private forests. Management tendencies of private forests are described in details based on survey results. There are no direct innovations in forest management approaches, but it can be considered that most of them are innovative because environmental demands, nature friendly management methods, biodiversity and other issues have to be incorporated to follow sustainability criteria. In the last decades PFO become more and more interested in non-clear cutting forest management and this case is explained in details in chapter 5.2. Main opportunities for innovative forest management are increase in effectiveness and income from harvesting (biofuel), development of technology and use of IT tools. Economic factors are the main obstacle for innovative forest management, but not the only ones.

FP and legislation, as well as different forest implementation tools are presented together with the statistic data on forest management activities in the country report. It demonstrates the impact of restrictions, tax reduction and financial support to regeneration and tending activities in private forest sector. Subsidies for nature protection can be one of tools to create and support new ownership group. Afforestation is a topical issue for land owners, forest and agriculture sector and described in details to show potential to increase forest area and new ownership (chapter 6.1.2). Forest extension and advisory system is one of important tools to implement FP and its correspondence to needs and wishes of PFO is featured. The report also demonstrates use of different extension tools and their adequacy to requirements of different groups of PFO.

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

The Central Statistical Bureau provides information about forest resources, timber prices and costs of different forest related services. Data of the National forest inventory (NFI) provide information on forest resources from 2008. Two data bases are mainly used to analyse changes in forest ownership structure and trends in forest management in private forest sector:

- data base of the SLS – provides information about all owners (gender, age, residence place) and their properties;
- data base of the SFS – provides information about forest properties under inventory and implemented forest management activities.

Detailed statistics about forest resources and forest management activities by different ownership groups (state, municipal government, private) are published yearly in

the CD format by the SFS and available in the website¹ from 2001. Annual public reports of the SFS provide information about forest statistics and activities carried out by the owners and the SFS and demonstrate ongoing trends in forest management in state and private forest sector. Publications about forest sector in Latvia are published almost yearly by or with the support of the Ministry of Agriculture of Latvia (MAL).

Likumi.lv² is a legislation website ensuring free access to systematized (consolidated) legislation of the Republic of Latvia and is used to analyse changes in legislation referring to private forest management. The Rural Support Service (RSS) is responsible for the implementation of a unified state and the European Union (EU) support policy in the sector of forestry and provide proper information about these issues – planned, ongoing and already finished activities.

Information on forest owners' characteristics, socioeconomic situation, motivation, attitude to forest management, knowledge and understanding of forest management and related issues, as well as plans, problems and wishes concerning forest management and extension system were obtained from several research projects. Quantitative and qualitative data are used from the most important studies to describe situation and changes in private forest sector:

- surveys (personal interviews) organized during 1996-2008 (group of average PFO was selected from the SLS data base and interviewed in their properties) (Vilkriste 1996; 2001; 2003; 2008), but active PFO were interviewed in time of their visits to the extension specialists of the SFS (Vilkriste 2001; 2003));
- surveys (CATI method) of active PFO targeted to owners' forest management activities and decision making on harvesting (Domkins 2009; Jansons 2010; Zariņš 2012) and to forest

¹ www.vmd.gov.lv/valsts-meza-dienests/statiskas-lapas/publikacijas-un-statistika/meza-statistikas-cd?nid=1049#jump

² www.likumi.lv

owners' attitude towards cooperation and forest associations (SKDS, 2008).

Author's expert knowledge³ was used to describe results of surveys of forest owners and changes in ownership structure, as well as in extension and advisory system. Information is collected from the web pages of different state organizations, mostly reports. Publications and printed information related to the topic of the research and new owners are limited, therefore several

professionals were contacted to get information, expert viewpoints and comments on different issues:

- the MAL – forest statistics and legislation;
- Pasaules dabas fonds (PDF; previous WWF Latvia) - selective cutting and opinion on changes in ownership and new owners;
- the RSS – use of the EU funds.

³ Dr.silv. Lelde Vilkriste designed methodology of surveys of PFO, organized surveys during 1996 – 2008, analysed changes in the ownership structure during 2004 – 2007, and worked in the SFS (1997- 2005) with implementation of extension system of PFO.

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

Research activities related to the private forest sector started in the Forest Faculty of the University of Agriculture of Latvia (UAL) about 20 years ago, but nowadays the largest part of the research related private forest sector is done by specialists of Latvian state forest research institute (LSFRI) "Silava". Surveys from 2000 to 2003 were financed by

the SFS (in frames of co-project with Swedish Forest Agency), the rest was implemented with the support of the Forest Development Fund (FDF) (holder – MAL).

3.1.1. Surveys of PFO

The first study on situation in private forest sector in Latvia was done in 1996 as a part of master thesis (Vilkriste, 1996) and was a base for methodology of monitoring changes in private forest sector (Vilkriste, 2002). First opinion polls to obtain information on average PFO based on special methodology were organised in 2001 and 2003. Respondents were selected from the data base of the SLS and interviewed in their residence place. Urban forest owners living in big cities were excluded from interviews for several reasons (the data base did not hold their full address (number of apartment is missing); a lot of doors were with an entrance code; no phone numbers to agree on meeting were available etc.). A few pieces of information on urban owners were obtained anyway to point it out as a specific group. Surveys of active PFO were organised in the SFS in 2000 and 2003 and visitors were interviewed to study difference between average and active PFO (Vilkriste, 2001; 2002; 2003).

Surveys in 2007 and 2008 were also targeted to obtain general information about PFO, their motivation, actual and planned forest management, use and evaluation of forest extension services and different information tools, level of knowledge and comprehension on different forest management issues, regional differences and other topical questions (Vilkriste 2007; 2008). In 2007 PFO were interviewed also on the phone, but results showed that it was not possible to get true information on general situation in private forest sector without proper selection of respondents.

Opinion polls of PFO from 2008 were more oriented to active PFO to obtain information about the supply of timber resources and forest management plans (Domkins, 2008; Jansons, 2010; Zariņš, 2012) and owners' attitude to cooperation (SKDS, 2008). Information was obtained based on telephone interviews (CATI method) and respondents

were selected from owners whose contacts were available from the forest extension organisations.

3.1.2. Analyses of the data bases

Several research projects were focused on data analyses of the data bases of private owners and their properties. Characteristics of owners by gender and age, information about different owner groups based on number of owners per property and number of properties per owner, as well as owners residence place and properties distribution by size classes firstly was done in 2004 (Vilkriste, 2004). Three years later similar study was carried out to establish changes in ownership structure based on the information of the SLS data (Vilkriste, 2007).

The latest research is focused on general changes in private forest sector and forest management activities (Jansons, 2010; Zariņš, 2012). Changes in ownership structure were analysed based on the data of the SLS (all properties), but forest management activities and availability of forest resources were analysed based on the data of the SFS (properties under forest inventory). This research is continuing and new results will be available in 2015.

3.1.3. New forest ownership types

The opinion that most of forest owners are “new” or non-traditional in Latvia can be true because of the break in private ownership structure for about 50 years until 1990. Totally there were about 167 thousand owners in 2003 and it is possible to maintain that the largest part of them was without or with minimal knowledge and comprehension on forest management. There are no specific studies on different ownership groups, but it is possible to deal out different owner groups based on statistics, management trends and information available from different research projects.

About 6% of forest properties are without forest inventory (Zariņš, 2012). About 40% of PFO did not carry out forest harvesting in their properties (Jansons, 2010). In 2008 about 60% of PFO reported that they did not have any experience in forestry and sufficient

knowledge (Vilkriste, 2008). It gives evidence that notable amount of PFO are **non-active owners** and **owners without knowledge**. In most cases these are also owners of small scale forest properties (less than 5-6 ha) (Vilkriste, 2008; Zariņš, 2012).

Surveys of PFO give evidence that **habitual** or traditional management in small properties is **firewood collection** and “some cleaning”. About 80% of PFO did firewood collection, but largest part of them does not consider it as forest management activity (Vilkriste, 2003; 2008).

The consolidation process of private properties is ongoing. Total number of owners is reducing and percentage of bigger forest properties is increasing (Jansons, 2010; Zariņš, 2012). It is possible to forecast that group of owners who consider **forest as investment** is growing. Aging of owners will change forest ownership in the nearest future and can increase proportion of group of younger owners, possibly investors. Analyses of the SLS data gives evidence that there were also about 10% newcomers between 2004 and 2007 (Vilkriste, 2007).

The results of surveys give evidence that topics of interest of PFO are changing and coming wider year by year (Domkins, 2009; Jansons, 2010; SKDS, 2008; Vilkriste, 2008; Zariņš, 2012). Changes in the forest normative acts, market (also new market for bioenergy), and availability of financial support mechanisms (the EU funds) change a management decision system of PFO and owners become more active and interested in the forest management. Statistics, publications in mass media and other sources also give evidence that group of **active owners with multiple interests in forest management** is increasing.

About 25% are **urban owners** (Jansons, 2012; Vilkriste, 2007). In 2001 about 64% of respondents mentioned agriculture and livestock-farming as one of their income sources, in 2003 percentage of **farmers** decreased to 46% (Vilkriste, 2003). There are no actual information on occupation of PFO and use of their farms. **Regional differences** are mostly caused by uneven forest coverage in regions (from 27% to 54%), average size of forest property (3.7 to 16.4 ha) and economical situation (Vilkriste, 2002).

The research demonstrates that difference between the active and average PFO and their management tendencies is significant and mainly determined by size of the forest holding; gender and age of PFO and their residence place (Vilkriste, 2002). It means that each group of PFO (by gender; age class; forest property size class; residence place etc.) is different and has specific priorities, demands and wishes in forest management, as well as preferred management strategies and information sources. Surveys provide data and characteristics of different groups of PFO based on their knowledge, use of different information sources. For example, PFO who are interested in bioenergy market have in average 21 ha of forest and are a little bit younger than an average owner; PFO who are interested in attending seminars have in average 10 ha of forest (Vilkriste, 2008). This knowledge was used to develop the forest extension system.

3.2. Forest management approaches

Studies conducted so far were not focused on the new ownership types, therefore the only information about general activities of all owners are available. Usually most of the private owners choose clear cut as dominating harvesting activity. More than half of owners organise harvesting by themselves; use of paid services in their management activities are not priority (Vilkriste, 2008). It is supposed that situation can change in nearest future with the change of generations of PFO and increasing supply of forest management services.

Use of bioenergy in Latvia is increasing, while surveys show that only about 25% of PFO consider bioenergy market profitable in future. Qualitative analyses of survey data demonstrated that only 20% of PFO have at least minimal knowledge about forest biofuel collection and market. Also knowledge about availability on the EU funds is relatively small – less than 1/3 of PFO agreed that they have enough information on available support. The

same amount of PFO does not know about tax reduction on forest related issues. About 10% of owners had heard and have some idea about management with selective cuttings. It is also relatively small level of respondents who were able to answer the questions on environmental and nature protection demands in forest management, as well as comment last changes in forest legislation (Vilkriste, 2008; 2009). Results of surveys establish view that sharp changes in forest management approaches in private forest sectors are not expected in the nearest future.

3.3. Policy change / policy instruments

There is no research directly related to change of policy or policy instruments in private forest sector. Surveys provide information about PFO attitude to changes in forest legislation and extension system, evaluate different aspects of extension system and provide information about owners' knowledge on different FP implementation tools (Domkins, 2009; Vilkriste 2003; 2008). Attitude of active PFO towards cooperation, land transformation and bureaucracy were also studied (SKDS, 2008).

Two years after changes in the extension system in 2006 about 9% of PFO positively evaluated it and 8% of PFO had an opposite viewpoint, but the rest did not have any idea. About 28% of PFO were sure that information about the EU support was sufficient, but qualitative analyses of answers gives evidence that only about 3% of PFO had proper knowledge about available possibilities (Vilkriste, 2008). Reports assert that largest part of active PFO were interested to get financial support for the activities they are interested in; considerably large part wanted to have support for tending young stands (SKDS, 2008; Vilkriste 2008).

In 2008 about half of PFO do not know about tax reductions in forest management. Also in 2003 situation was similar. Considerably large proportion of PFO who mentioned tax rates too high considered much higher rates as desirables in future (Vilkriste, 2003; 2008). In 2008 about 6% of PFO were satisfied with forest legislation, 9% had a viewpoint that there are still a lot of restrictions for owners,

10% had some suggestions for improvement, but the rest were “no position” owners. PFO were not satisfied with requirements of normative acts and law also in early surveys, but at the same time could not give adequate answers to question what had to be changed and improved (Vilkriste, 2003).

Surveys provide information about problems of PFO and their viewpoints on different topics. This information not always can be used as evaluation of different policy implementation tools, but provides important information to decision makers and politicians as well as for extension organisations.

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 (FRA) 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

Forest area in 2010 reached 3354 thousand ha by the NFI data. Table 1 presents distribution of forest area among FRA 2010 categories for 2005 and 2012. Categories and definitions of forest owners are not stated in the normative acts and united definitions are not worked out in Latvia. Categories are named variously in statistics of different organizations, reports and papers. There is a difference also in figures among the data of different organizations based on methodology and principles used for the data collection.

Table 1: Forest area by FRA 2010 ownership categories in 2005 and 2012

FRA 2010 Categories	2005*	2012
Public ownership	1781	1640
Private ownership	1513	1711
...of which owned by individuals	1365	1174
...of which owned by private business entities, institutions	147	537
Other types of ownership	3	3
Public ownership	1781	1640
TOTAL	3297	3354

* <http://www.fao.org/docrep/013/al548E/al548E.pdf>

Forest ownership by status in 2013 by the SLS is following: state owned forests – 49%; privately owned forests – 35%; forests owned by legal entities – 14%; local government owned forests – 2%; mixed status joint ownership – 0.1% and the reserve fund of land – 0.1% (Forest sector in facts and figures, 2014). Public ownership (by FRA 2010) consists of two subcategories: state owned forests and forests owned by local government (municipalities).

Private ownership is forests owned by individuals, families, business entities, private, religious and educational institutions and other private or non-governmental institutions and organizations. Mostly three subcategories of private ownership are displayed:

- privately owned forests (physical or natural persons; by FRA 2010 -

individuals) - forests owned by individuals and families;

- forests owned by legal entities (by FRA 2010 - private business entities and institutions) - forests owned by farms, private companies and other business entities, NGOs, religious and educational institutions, etc.
- other types of ownership - other kind of ownership arrangements are not covered by the categories above. Also includes areas where ownership is still unclear or disputed.

There is no information about forests owned by foundations or trusts, NGO with environmental or social objectives, self-organized local community groups, co-operatives or forest owner associations and social enterprises, as well as forests under common pool resources regimes in Latvia.

4.1.2. Critical comparison with national data in FRA reporting

Detailed description for data differences between national data set and FRA by FAO is given in country report *Global forest resources assessment (FAO, 2010)*. There are two main reasons for the gap – system of data collection and difference in the definitions used. Definition used in national level in Latvia differs from FRA 2010 definition – minimal area for land use category in Latvia is 0.1 ha not 0.5 ha as used by FRA.

Two main sources of information for statistics were used before 2008: the SLS register (maintains information on land use) and the SFS register (contains information only on forestland). Since 2008 information about the area of forest has been acquired from the NFI data collected in a five-year period of time. Data of the NFI are more precise compared to the data used up to then. The difference in total forest area does not characterize only the changes in forest area. The difference is also due to the use of more precise methods. One of the reasons of increase in forest area is natural growth of forest in abandoned agricultural lands.

4.2. Unclear or disputed forest ownership

Forest ownership in Latvia is clear almost in the whole territory. The exception is 0.1% of forest land named as the Reserve land fund. It is land for which the municipality council decision and the Cabinet directive had not been adopted and submitted to the SLS concerning land ownership until December 30, 2009. This was related to the competence or usage with regard to the completion of land reform under the Law on Land Property Rights of the State and Municipalities and Securing the Titles in the Land Book⁴ as well as land that the municipality has enrolled in the reserve land fund under part 21 of paragraph 25 of the Law for the Completion of State and Municipality Property Privatization and Utilization of Privatization Certificates⁵.

⁴ http://likumi.lv/doc.php?id=34595#saist_5

⁵ <http://likumi.lv/doc.php?id=111962>

According to the Law on the Completion of Land Reform in Rural Areas⁶ and the Law on Completion of Land Reform in Cities⁷ till November 30 of 2014 should be notices of the land reform completion in villages and cities.

4.3. Legal provisions on buying or inheriting forests

4.3.1. Legal restrictions for buying or selling forests

The Law on Land Privatization in Rural Areas⁸ determines restrictions of buying forest in Latvia. Section 28 of the law says that land may be acquired in ownership in accordance with the Civil Law⁹ and other laws by:

- 1) persons who are citizens of the Republic of Latvia;
- 2) state and local governments, state and local government undertakings (incorporated companies);
- 3) an incorporated company registered in the Register of Enterprises of the Republic of Latvia (RERL) if these companies correspond to the conditions stated by the Law;
- 4) religious organizations registered in Latvia, the term of activity of which, counting from the moment of registration in the Republic of Latvia, is at least three years;
- 5) farms and individual undertakings registered in the RERL if they belong to the citizens of the Republic of Latvia; and
- 6) state and local government institutions of higher education, the constitutions of which have been approved according to the procedures specified by the Law.

The citizens of the EU Member States (MS) and legal persons registered in the EU MS starting with May 1, 2011 may acquire land in ownership under the same provisions as the subjects referred to in the Paragraph 1 of this

⁶ <http://likumi.lv/doc.php?id=45729> (available in English)

⁷ <http://likumi.lv/doc.php?id=50579> (available in English)

⁸ <http://likumi.lv/doc.php?id=74241>

⁹ <http://likumi.lv/doc.php?id=225418>

Section. If there is sufficient evidence that after the end of the transition period (seven years after joining the EU) there shall be serious difficulties or there is a possibility of occurrence of such difficulties in the market of the agricultural land of Latvia, such term may be postponed for a period of time not longer than three years in accordance with the procedures that have been specified in the Treaty of Accession to the EU.

During the transition period from May 1, 2004 until May 1, 2011, land may be acquired in ownership in accordance with the Civil Law and other laws by:

- 1) the citizens of other EU MS if they want to engage in entrepreneurship in Latvia as self-employed farmers and reside in Latvia for at least three consecutive years, as well as have been engaged in agriculture in Latvia for at least three consecutive years; and
- 2) other citizens of the EU MS and legal persons registered in the EU MS, except for agricultural and forest land.

There are some other laws that indirectly affect market of forest properties and determine conditions when taxes should be paid. The Law on Value Added-Tax¹⁰ determines conditions when owner of forest and other lands should pay value added-tax. According to the Law on Immovable Property Tax¹¹ if the property is gifted the change of the owner may be registered in the Land Register after the principal debt of the tax, fines and late fees have been paid, as well as the tax payment has been paid for the taxation year. If person inherited property, this person should pay personal income tax according to the Law on Personal Income Tax¹². The amount of personal income tax is set according to special formula and some tax reductions for special cases are stated.

The Law on Land Privatisation in Rural Areas¹³, the Law about Privatisation Vouchers¹⁴, and the Rules of Using Privatisation Vouchers¹⁵ determine how person can privatize property using

privatization vouchers, the value of one voucher and period when vouchers should be used. Section 12 of the Law on Land Privatisation in Rural Areas determines that the former owners of land or the heirs thereof have the rights to receive a compensation for the land that has been in the ownership or a part thereof if they wish it and unless they have received land on site or land of an equivalent value in another place. The rights to delete the land ownership compensation certificates, receiving a payment of 39.84 EUR for a certificate, according to the procedures determined by the Cabinet have:

- 1) the former owners of land, who until December 31, 1992 have requested a compensation or land and have not been able to receive such land due to the restrictions specified in the Law;
- 2) the heirs of the first class of the former owners of land, who until June 20, 1991 have requested land and have not been able to receive it due to the restrictions specified in the Law (have been entered into the register of unsatisfied requesters for land); and
- 3) the surviving spouses of the politically repressed and the heirs of the first class of politically repressed of the former owners of land if they have requested a compensation or land until December 31, 1992 and have not been able to receive such land due to the restrictions specified in the Law.

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

Inheritance or marriage rules for any kind of property, also forests, are set in the Civil Law. If estate-owner wants to leave forest to their children, they can do it. The estate-leaver may express his or her intention in a will or an inheritance contract. Children will inherit property in any case, if exceptions are not set in a will or an inheritance contract. All children can inherit property; the property will be divided in fair shares. The surviving spouse shall inherit from the deceased regardless of the form of property relationship that was in effect between the spouses during their marriage.

¹⁰ <http://likumi.lv/doc.php?id=253451>

¹¹ <http://likumi.lv/doc.php?id=43913> (available in English)

¹² <http://likumi.lv/doc.php?id=56880>

¹³ <http://likumi.lv/doc.php?id=74241> (available in English)

¹⁴ <http://likumi.lv/doc.php?id=34503#pn7&pd=1>

¹⁵ <http://likumi.lv/doc.php?id=165215>

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

4.4.1. Changes between public and private ownership

At the end of the soviet era mostly all forests belonged to the state or agricultural enterprises (collective farms). In 1988 about 63% of forest area belonged to the state, 33% to agricultural enterprises and 4% to other

owners. The structure of forest ownership underwent major changes following the restoration of independent statehood in 1990, when during the land reform the restitution of the properties to former landowners or their successors took place. This has led to changes in the different types of forest ownership. Table 2 demonstrates changes in the ownership structure in the first decade after restoration of independence and shows situation before it.

Table 2: Forest area (thousand ha) by ownership during 1988 – 2001 (the SFS data)

Owner	1988	1994	1996	1997	1999	2001
State	1744.9	1606.3	1626.2	1493.0	1430.4	1432.3
Private		440.3	649.8	1275.5	1197.0	1295.2
Agricultural enterprise	916.4	215.2	42.9	18.0		
Municipality						115.4
Other	96.2	557.8	562.3	97.5	216.6	25.3
Total	2757.5	2819.6	2881.2	2884.0	2844.0	2868.2

Since the 90s forest area in Latvia has increased due to the afforestation of land not used for agriculture, mostly in the private sector. Statistics of the SFS reports 3038 thousand ha of forest in 2014. It will be an increase in the forest area, mostly in the private sector, in coming years due to the last changes in the Forest Law¹⁶ effective from January 1, 2015. The land above 0.5 ha will be considered as forest if the number of trees and their size corresponds to the certain criteria. In this case land will be listed as a forest based on an observation in nature without an application of the owner. Experts consider that already about 130 thousand ha of land fit to requirements of being forest and in nearest future this number could double¹⁷.

The structure of forest ownership has not changed very much from 2001. Today state owns 1496 thousand ha (49% of total forest), 1498 thousand ha (49%) is under private property and the rest 43 thousand ha (2%) is the property of municipalities (Latvian Forest Sector in Facts and Figures, 2014).

4.4.2. Changes within public ownership categories

There are no significant changes related to public ownership after 1997. Since 2000 the largest part of public forests are managed by JSC "Latvijas valsts meži" (LVM; Latvia's state forests). Today JSC LVM manages totally 1.65 million hectares of land, including 1.47 million hectare of forest land (1.4 million forests) and implementing the state's function of the forest owner.

According to the statistics of the SFS local government (municipalities) owns 71586 ha of forest in 2007. In 5 year period forest area owned by local government had decreased nearly for a half and it was about 43236 ha in 2014. Information about new owners of those properties is not available.

4.4.3. Changes within private forest ownership

There were 155280 forest owners and users¹⁸ in the SLS data base in 1999 (Vilkriste, 2001). Data show that private forest ownership structure in the last decade has changed. Number of physical persons (individuals) from 2001 to 2012 decreased for 11%, but their

¹⁶ <http://likumi.lv/doc.php?id=2825>

¹⁷ <http://www.zm.gov.lv/presei/aktuali-lauku-iedzivotajiem-par-izmainam-meza-likuma-no-2015-gada-1-ja?id=3981>

¹⁸ Persons who are in the process to register their property in the Land Book

forest area for 19% (table 3). It is important to point out that it was an exception for a short

period of time between 2002 and 2003 when number of PFO had increased noticeably.

Table 3: Number of individuals and forest area 2004-2012 (the SLS data)

Indicator	2001	2004	2007	2010	2012
Number of owners and users (natural persons)	154382	148925	145505	144069	137888
Forest area, thousand ha	1327	1224	1192	1124	1075
Average forest property (per owner), ha	8.6	8.2	8.2	7.8	7.8

Number of forest owners and users reached peak in March 2003 with about 167 thousand records in the SLS data base. This sudden increase was an exception and partly it was caused by owners' wish to harvest more without regeneration of previous cutting areas and escape the requirements of the Forest Law of that time. A number of cases to parcel out clear-cut areas from the property as particular property was fixed. One part of owners reregistered newly established properties to family members, but other part sold them in the market and it was indirect evidence that new group of owners (investors) had started to develop. New harvesting activities in a property were prohibited if the previous cutting areas were not reforested in a proper time, amount and quality. There were no restrictions for the owners to set apart their felling area from the rest of the property as a separate property for a certain period of time. Changes in the Forest Law to prevent gap in legislation according to the restrictions related to harvesting were done in March 2003. If owner parcelled out the part of a property

restrictions for harvesting had kept force in all parts of previous estate for seven years. Soon after these changes number of PFO started to decrease. The latest studies provide evidence that consolidation process of private properties is still ongoing and number of PFO decreasing (Jansons, 2010; Zariņš, 2012).

A number of properties was 3% higher than number of individuals in 2004, but in 2007 this indicator increased to 10%. Also analyses of the SFS data gave evidence that group of owners who have several properties increases, but group of owners with single property decreased (Vilkriste, 2007). Average size of forest property per owner was 8.2 ha, but average size of forest property was 7.1 ha in 2007.

About 21564 forest properties were owned by 3868 juridical persons in 2007. Number of business entities reached 3300 and the total area of their 14239 forest properties was about 164871 ha. Number of juridical persons in a five year period increased for about 5% and their forest area for 23% (table 4).

Table 4: Number of juridical persons and forest area 2004-2012 (the SLS data)

Indicator	2007	2010	2012
Number of owners	3868	3994	4057
Forest area, ha	259623	246727	319799

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)

According to the Law on Land Privatization in Rural Areas in the beginning of restitution process persons could claim back properties owned before July 22, 1940. Land ownership

rights were restored on the basis of a personal request of the former owners of land in the ownership of whom the land in the Republic of Latvia was on July 21, 1940 or to their heirs thereof in accordance with the Civil Law of the Republic of Latvia of 1937. According to the law, the definition of land which can be privatized is: land, which on July 21, 1940 was in the ownership of natural persons, the state, local governments and in the ownership of other legal persons, shall be a subject to privatization in rural areas if such land until November, 1996 has been allocated for permanent use to a natural person, has been reserved on the basis of a term request or has been allocated for permanent use as land of an equivalent value in the place of the former land property.

To encourage rational use of land and undo the injustices that were allowed with the confiscation of private land, the Supreme Council of the Republic of Latvia made a decision in May 15, 1991 on Rights to Receive Compensation for Rural Land Confiscated in July 22, 1940¹⁹. The ownership rights to the land shall be restored to the former owners of land or to their heirs by returning in actual fact the former land property thereof or a part thereof or by transferring into ownership land of an equivalent value within the borders of the relevant parish or district or in other parishes of the Republic with the decision of a parish land commission from the non-requested land or the state or local government land. The former owners of land or they heirs have the right to receive a compensation for the former land property. The ownership rights to the land to the former owners of land or the heirs shall be renewed if the request of the land has been submitted until June 20, 1991, except the case when in the first round of the land reform such land has been allocated for permanent use to other natural persons for the maintenance of farms, household farms, individual orchards, residential houses and summer cottages, for the completion of the construction objects commenced until November 21, 1990, for the maintenance of buildings belonging to the State and local governments, structures and sharing objects of a non-producing character.

¹⁹ <http://likumi.lv/doc.php?id=74241>

The establishment of the State Stock Company²⁰ LVM was determined by an order of the Cabinet of the Republic of Latvia issued in September 1999²¹. The JSC LVM and the stock of this company may not be privatized or alienated. It means that any major changes in public forest sector cannot occur.

The research shows that forest management behaviour of PFO is affected also by the way how owners acquired their property. In the first ten years after regaining independence persons became owners mostly by inheritance or purchasing forests using privatization certificates. Surveys show that about 36% of owners obtained forest with a help of certificates and 6% bought it in the market from other persons. The proportion of inherited properties was about 60% (Vilkriste, 2001; 2003; 2008).

In 2001 less than 5% of owners considered selling of forest property, in 2 years this proportion was close to double. There were about 9% of owners who wanted to increase forest area. The opinion poll among active owners in 2003 showed that about 40% of PFO wanted to enlarge their forest estates (Vilkriste, 2003). There is no published information about the market of forest properties, but it is possible to maintain that the demand for forest estates is still bigger than the supply.

The average price for forest estates rose by 21% in 2004, as compared to 2003. In 2004 the amount of forest land sold has decreased. Approximately 13000 ha were sold by the end of November 2004 in comparison with the 17000 hectares sold in 2003 (Forest sector in Latvia, 2004). There are no more publications related to deals with forest properties among individuals. Changes in the ownership structure are the only evidence for ongoing estate market. It is noticed that between 2004 and 2007 there were about 10% changes in the records of owners' of the SLS and their properties yearly (Vilkriste, 2007). The reasons for changes in the data base of the SLS were not only newcomers and leavers, but also owners who increased or reduced their forest area. It is possible to assume that

²⁰ later renamed to JSC

²¹ <http://likumi.lv/doc.php?id=17919>

the largest part of changes is caused by the deals of forest properties and there are significant factors for creating new forest ownership.

The second more important reason to speak about new ownership is related to changes in the motivation of forest owners and their attitude to forest management. These changes can be caused by owners themselves (changing life style and occupation; aging) or indirectly with changes in the legislation, support mechanisms, situation in the market etc. When owners were asked to mention three main reasons for being an owner, about 64% could not give an answer for it in 2004. The largest part of these owners was heirs. In discussions about 1/3 of PFO accepted that they had also economical motivations (Vilkriste, 2004). In 2008 close to 90% of owners mentioned the way of acquiring property as first reason for being an owner. Only 10% mentioned economical reasons (Vilkriste, 2008). Also other results of surveys and later studies (Jansons, 2010) gave evidence that still about a half of owners is not active in forest management. It is possible to expect changes in formation of new ownership groups if the owners finally became interested in managing their properties, they would be sold or managed by heirs and “motivated” and more economically oriented ownership groups start to act.

About 25% of forest owners used to live outside their properties in towns (Vilkriste, 2001; Jansons, 2010). Information about this group is limited to compare with studies on owners living in rural areas. The research allows declaring that urban owners differ from owners living close to property by their characteristics (age, education), socio economical situation and attitude to the forest and its management. It is possible to forecast that there will be an increase in proportion of urban owners and owners who do not manage a farm based on “ancestral customs” (forest as residence place for own needs

managed by manpower for self consumption and needs).

Even if information about potential areas for afforestation differs among specialists, there is a great potential to increase the forest area by afforestation of abandoned agricultural lands. Calculations made by experts show that totally naturally afforested farmlands in Latvia reached about 298 thousand ha (Lazdiņš, 2011). The forest statistic inventory data²² of 2014 shows that about 195 thousand ha of land in the private sector is undergrown, inter alia 120 thousand ha of agricultural land. Last research on effective use of land points out that there are about 108 thousand bushland and about 368 thousand ha unused agricultural land is already undertaken by bushes and trees (Pilvere, 2014).

The surveys give information that there is a great interest of PFO on afforestation. About 5% of owners reported afforestation in the survey of 2001, but two years later this number doubled. About 40% of owners reported that they had in average 6 ha of not used land for afforestation and largest part of them (69%) had an idea for planting forest (Vilkriste, 2003). Statistics of the SFS shows that total afforested area from 1999 to 2013 is 20.2 thousand ha, inter alia 39% are plantations. By the opinion of experts it can be higher, because not all of PFO reported it. Obviously afforestation will increase forest area of current owners, not establish a notable group of new owners. Afforestation issues are described in details in chapter 6.1.2.

Changes in legislation, availability of different support mechanisms (mostly the EU funds), new markets (e.g. bionergy; recreation), development of technologies and IT tools for forest management, as well as different cooperation forms change also situation in private forest sector. Even if it is not physical changes in ownership structure, changes in a motivation and attitude will originate also changes in behaviour of forest owners and create new owner groups.

²² www.silava.lv/22/section.aspx/View/13

Trends in forest ownership: New forest ownership through...	Significance*
• Privatization, or restitution, of forest land (giving or selling state forest land to private people or bodies)	1
• Privatization of public forest management (introduction of private forms of management, e.g. state owned company)	0
• New private forest owners who have bought forests	2
• New forest ownership through afforestation of formerly agricultural or waste lands	2
• Changing life style, motivations and attitudes of forest owners (e.g. when farms are given up or heirs are not farmers any more)	2
• Urbanisation	2

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

4.5. Gender issues in relation to forest ownership

Information about gender issues was obtained from the SLS data base (Vilkriste, 2004; 2007) and opinion polls during 2001 – 2008 where data and information on male and female forest owners were compared to find similarities or differences between gender groups. First information obtained from the survey of 2001 is following:

- average age of owners is 51 year (for male - 49; female – 55);
- proportion of female owners is 32%, but among active forest owners – only 20%;
- female forest owners have smaller forest properties in average than male forest owners.

Data base of the SLS provided information about structure of owners in 2004:

- 56% were male and 44% were female forest owners;
- 62% of private forest land belonged to male and 38% to female forest owners;
- average age of owners was 54 years (female – 57 and male 52 years);
- average forest area for male owners was 9.3 ha and for female – 7.6 ha.

Three years later data base of the SLS testified that due to the ownership changes owners have become “younger” and the proportion of female forest owners has increased per 1%.

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 Latvia

5.1.1. Management of the state forests

The largest part of the state-owned forests is managed by the JSC LVM established in 1999. The shareholder of the LVM is the Latvian State in the person of the MAL. The main focus of the LVM's activities is to ensure sustainable forest management, increase ecological values, as well as the biological diversity of forest. The LVM is also maintaining tree nurseries, producing seeds and plants and dealing with hunting, fishing, recreation and tourism; building roads, supporting education, research, information of society and other projects. All of the forests that are managed by the LVM are certified on the basis of the FSC system. The LVM pays the state a duty for using its capital, taxes to the state and municipality budgets.

In accordance with accepted strategy nature protection is the main target in 21% of total area; 5% of total land area is managed for recreation and nature education, and 74% of

the total area is planned for timber production (LVM, 2011). The allowable cut for 5 year period for the LVM was approved by the Cabinet. For the period between 2001 and 2005 allowable cut was 15.6 million m³ and for 2006 – 2010 it was stated for 20.5 million m³. During the economic crisis in 2008, the sales from private forests decreased (Figure 1). As the forest sector has an important role in Latvian economy, for stabilizing the national economy and to support the national woodworking industries and rural employment during the economic crisis period, allowable cut was extended by the Cabinet to 24.5 million m³. After the crisis the volume of felling decreased and sales volume of roundwood in 2010 was 5.9 million m³. Selling of roundwood in auctions started in 2003 and in 2010 reached 69% from total sales (LVM 2011). Still part of timber was sold under the provisions of long term logging contracts. All activities are based on the open tenders of roundwood deliveries, harvesting and transport services.

Nature Conservation Agency under the Ministry of Environmental Protection and Rural Development is responsible for forest management in the national parks, reservations or other places where the primary target is nature protection. Scientific research forests shall be utilised for the establishment and maintenance of long-term scientific research sites. From 2014 these forests are managed by UAL and LSFRI "Silava" based on the Regulations on forest management and supervision of scientific forests²³. Other state organisations and municipalities are responsible for management of their forest property. Ltd "Rīgas meži"²⁴ (LLC "Riga Forests") is a commercial enterprise owned by the Riga City municipality and manages 4.6 thousand ha of forests.

²³ <http://likumi.lv/doc.php?id=260782>

²⁴ <http://www.rigasmezi.lv>

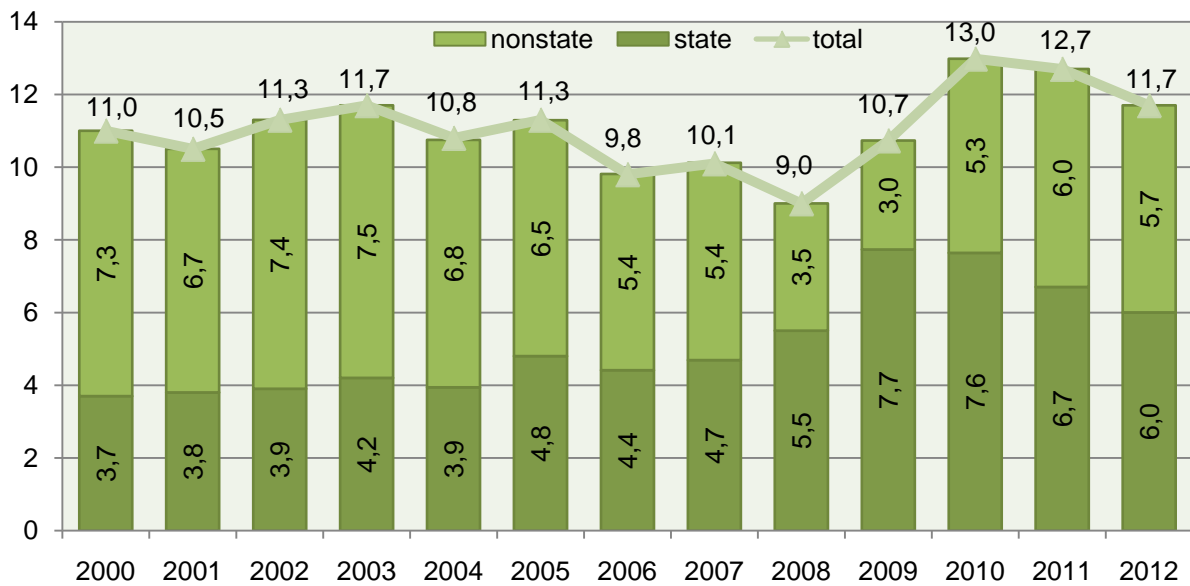


Figure 1: Felling amount (million m³) in the state and non-state forests 2000-2103 (the SFS data)

5.1.2. Management of private forests

Management of private forests owned by legal persons was not studied in detail. In most cases forest professionals are involved in planning and organisation of forest management activities. Interesting case is management of Lutheran church's forest by special Forest fund²⁵. It was established in 2011 to increase effectiveness of management of 2517 ha of forests which belong to 145 parishes all over Latvia.

First cooperative society of PFO was established in 2011²⁶ and now manages about 2000 ha of forest. Today there are six co-op companies of forest service providers and four of them conform to the Requirements of conformity assessment of cooperative societies of agriculture and forestry services²⁷. These societies provide forest management services for their members as well as for other owners. There are about 15-20 small local associations or organisations of PFO who provide services for members and other owners. Development of cooperation of PFO is ongoing, but today relatively small part of PFO use services provided by cooperative organisations.

Surveys of PFO give evidence that most forest properties under 100 ha are managed by owners themselves, only in a few cases by lawful possessors. About 86% of owners make decisions by themselves and 10% together with family members. Only about 15% of owners reported use of forest management services. Fuel-wood collection is one of the dominating activities in private forest sector and about 80% of owners did it, mostly for self use. In 2008 more than a half of owners did not plan any forest management activities for nearest five years. Average forest area for this group was 6.1 ha. (Vilkriste, 2008).

Detailed analyses of timber harvesting activities was done for properties in different forest size classes. Potential amount of timber from stands in harvesting age is about 21 million m³, and 5.7 million m³ are located in properties of size class from 5 to 20 ha (Jansons, 2010). According to the latest research about 46% of owners had carried out some forest management activities in their properties during 2005-2012. Harvesting activities took place in 90% of forest properties above 50 ha in the last decade, while there are a lot of properties under 5 ha without any forest management and no interest to do it (Zariņš, 2012).

²⁵ www.lalb.lv/lv/?ct=noteikumi_instrukcijas

²⁶ www.mezsaimnieks.lv

²⁷ <http://likumi.lv/doc.php?id=254754>

5.1.3. Forest management plan (FMP)

In Latvia regulations on FMP²⁸ is in force from January 1, 2015. According to this document a FMP shall be developed on the basis of the forest inventory data and it will be mandatory for forest area more than 10 thousand ha. The Law on forests says it shall be a duty of a forest owner or a lawful possessor to perform, in the forests of his ownership or lawful possession, a forest inventory at least once in 20²⁹ years, and to submit these materials to the SFS. Forest inventory and forest management planning shall be performed by persons who have specified professional qualifications.

Forest inventory data are missing for about 6% of private forest area, mostly for properties under 5 ha (Zariņš, 2012). Today in most cases forest inventory data go by the name of a FMP. Forest owners not always consider a FMP as an important information source and tool that helps to manage their properties even if it is information on some permitted or requisite activities within inventory data. Only 7% of owners consider a FMP as a very important tool for forest management planning (Vilkriste, 2008).

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

5.2.1. Non-clear cutting forest management

Management with selective cuttings has been known for long period of time and there were a lot of regulations already from the Soviet times. Today conception of non-clear cutting forest management is based not only on economic calculations, but takes in account environmental considerations, increases biological diversity and follows principles of nature friendly management.

The amendments in the Law on forests and the Regulations on tree felling in the forest in 2012 removed some restrictions and made non-clear cutting forest management more liberalised. Two decades ago only a dozen owners were interested in selective cuttings, today situation is under changes. The SFS statistics shows that in 2013 about 6% of total amount of timber from private sector (physical persons) came from selective cuttings.

The research on different cutting methods is still ongoing, and consensus among researchers and forest specialists about the most suitable methods in non-clear cutting forest management does not exist. Therefore it is difficult to work out detailed guidelines or handbook for PFO on selective cuttings. Owners who want to manage their forests without clear cuts by themselves have to have knowledge and comprehension about forest and its growing principles to understand recommendations or have an advice from specialists.

Surveys show that PFO give the highest rate to forest as bequest (4.6 points from 5). The second most important forest function is firewood collection and third – investment and economic safety. The lowest rate is for forest as income source (2.4 points), but nature protection is rated with 3.6 points. Current management tendencies and attitude of PFO to different forest functions give evidence that group of owners who prefer non-clear cutting management may increase. Management with selective cuttings is topical for different owners groups with small, average and large properties. There are a lot of owners who used to live in their forest properties and do not want to see a clear cut area. Large part of PFO does not depend only on income from forestry. In this case selective cuttings provide small, but regular income and can increase also the value of forest. Owners who want to do everything by themselves can perform selective cuttings due to less amount of work needed.

²⁸ <http://likumi.lv/doc.php?id=264224>

²⁹ before 2012 it was at least once in 10 years

CASE STUDY 1: NON-CLEAR CUTTING FOREST MANAGEMENT

To support the development of responsible forest management of privately-owned forests, PDF established forest management demonstration territories. Today five properties in different regions in Latvia are open to visitors.* The purpose of these territories is to show practical examples of environmentally friendly and economically viable forest management. Every year new sample objects are created in the demonstration territories. Currently demonstration sites have an educational and experience exchange platform for PFO, forest specialists and consultants, students and pupils.

During 2010-2013 the PDF organised about 20-30 seminars per year, in average 30 people in a group. There were also individual visitors and groups and a number of visitors exceed 600. Currently there are limited funds for the project implementation and number of visitors in the demonstration areas decrease to 150-200 per year. Questionnaires of visitors were done and results showed that there were only about 5-10% of owners without or with minimal knowledge in forest management.

Director of the PDF holds a view that demonstration sites are visited mostly by PFO who already have tried to manage without clear cuts and need more knowledge and ideas. It is very important for them to meet like-minded owners and have discussions with specialists. During a decade owners of demonstration plots have become as local authorities and can advise other owners independently. Today probably 50 to 100 owners in whole Latvia have enough knowledge and practical experience to become relevant local leaders for neighbouring owners as well as important discussion partners for forest specialists.

Director of the PDF considers that main obstacles to carrying out selective felling are lack of experiences and understanding; lack of support from extension and educational system and lack of cooperation of PFO, especially when it comes to preparing small volumes in timber. Also traditions, industry lobbying and previous forestry practice (clear-cuts) hinder wider use of selective cuttings. At the moment also the EU programs support traditional management activities and no funds are available for implementation of non-clear cutting forest management.

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* www.pdf.lv/lv_LV/ko-mes-daram/alias

5.3. Main opportunities for innovative forest management

5.3.1. Increase of effectiveness and income from harvesting

There is a great potential of energy wood in Latvia and also a need to increase the use of it to reach goals of the energy policy. The 2010 Sustainable Development Strategy of Latvia³⁰ for a period till 2030 states that the share of renewable resources (RES) in energy production should reach 42% by 2020 and 60–65% by 2030. In this respect wood as the RES has the highest potential, but today only part one of potential energy resources from private forests is used.

Logging residues can potentially be collected on about 66% of the total forest area. The LSFRI “Silava” experts have calculated that from each 100 m³ of timber it is possible to gain about 25 m³ loose of energy wood. Moreover, the above volume of wastewood for energy uses will not affect sustainable forest management since the residues are collected only from fertile sites in commercial forests, excluding high value or protected

areas. Experts of the Latvian Biomass Association “LATbio” have estimated that at the current annual harvest the potential amount of energy wood to be recovered is 6 to 9 million m³ per year, and about 0.5 to 2 million m³ from non-used agricultural lands and roadsides. Together with the waste from wood processing it is possible to produce about 30 TWh of energy, which is nearly twice as high as the actual consumption of thermal and electric energy in Latvia (Energy wood, 2012).

The research on most effective methods is still continuing, and forest researchers, specialists and consultants take active part in this process. Informative and educational materials for owners are prepared in frames of different international research and cooperation projects. There are also local service providers who are interested to find solutions for more effective technologies in small scale forestry. Development of forest biofuel market and involvement of PFO in it will increase not only utilisation of forest harvesting residues, but encourage also level of thinnings, reconstructive cuttings, as well as afforestation of abandoned agricultural lands.

In common with non-clear cutting management, use of harvesting residues for energy is not novelty in forest management,

³⁰ www.varam.gov.lv/lat/pol/ppd/?doc=13857 (in English)

but it is necessary to take in consideration that today both activities are related with new knowledge, requirements and approach in forest management. As the large part of private forest area originated from previous overgrown agricultural lands, the quality of timber is not so high as in managed lands. Possibility to get income also from harvesting residues can help to influence a non-active owner group to start management.

Increasing demand for recreation and tourism activities is great opportunity to diversify income also from small forest properties. The best option in this strategy is management with selective cuttings. About 63% of forest owners harvest also different non-wood forest products, mostly for own needs (Vilkriste, 2008).

5.3.2. Development of technologies and use of IT

Large part of PFO, especially with small size forest areas, in most cases is not capable to pay for services provided by big harvesting companies. However the demand for different forest management services for reasonable price exists and this facilitates development of a new service provider group, mostly farmers who already run small business or provide forest management services for locals. It is a challenge to work up farm or other technique to be profitable in small and fragmented properties with undeveloped infrastructure and considerably high proportion of wet lands.

The project on use of light technique in private forests to promote nature friendly

management and use of all-terrain vehicles (ATV) with specially designed equipment in forest management was supported by the FDF in 2009. Last publications show that support chains for harvesters for work in swampy lands are designed. Examples on improvements of technique can be found also in different seminars during discussions with service providers, but in general Information about such kind of activities is very scope and limited.

It is a rapid development of different IT tools and software programs for forest planning and management. There are several programs for forest planning and decision making worked out in the Forest faculty of UAL in the research group of precise forestry³¹. Today it is possible not only to calculate harvesting amounts, timber value, but also calculate ecological value, evaluate risks and work out nature protection plan by using different programs. Ltd Silvita is dealing with software development not only for forest management, but also for providers of different forest services.

Interviews with leaders of both groups point that IT products are different – from simple ones clear for small scale forest owners to complicated ones used by advisory and management companies. Today number of PFO who independently use IT tools is quite small. Mostly IT products are used by large scale owners, juridical persons or in few cases by local forest owner organisations. Portal www.mezabirza.lv is available for everybody who wants to sell or buy roundwood, cutting area or property in an auction.

³¹ <http://it-mezs.itf.ltu.lv/?pid=61>

CASE STUDY 2: FOREST EXCHANGE – www.mezabirza.lv

The Internet site for selling cutting areas in the Internet auction was created in 2010 by forest and IT specialists (Ltd SilvITa) in cooperation with local forest owner association “Barbale”. After one year of operation close to 100 cutting sites were sold. Fee for registration of the site for auction and bids in auction were set, but there were no additional payments. Registration of sellers and buyers were done to secure safety.

Director of the site has a view that auctions are used by clever owners those who want to get a good price and to be sure that harvesting will be done by responsible companies. There are no special requirements for information required for auctions as only the one set by legislation. Due to the need to place information on the website owners in most cases use services of local owner organisations or other specialists. Even if the number of users of auction is not high to compare with all deals in private forest sector, information about auctions (starting price, general characteristic of stand and end price) is available for everybody and it is important source for other owners not to be cheated and calculate correct price for their deals.

Demand of users changes during time and today previous website was improved and available as stock exchange – www.mezabirza.lv where owners can sell not only harvesting site, but also roundwood or forest estate. There are also some other improvements and possibilities, for example, program for calculation of roundwood after measuring trees with electronical tree caliper.

Information for contacts: Janeks Kamerovskis, Ltd Meža birža

5.4. Obstacles for innovative forest management approaches

Statistic data on forest management tendencies in private sector, results of surveys of PFO and discussions with experts lead to conclusion that it is hard to point out single barriers for non-use of effective and innovative forest management. In practise it is a mixture of several reasons and causal relationship of factors.

From viewpoint of PFO the biggest hindering factor is economic factor. Income of forest management activities in small properties does not always cover direct and indirect costs. PFO have to have some financial resources to start harvesting activities or investments for longer time period if activities are not related to timber production. Still a lot of PFO are without, with minimal or not sufficient knowledge to make decisions by themselves, plan and implement requisite activities. There is a need to have a consultant or an expert, but free of charge advice is not available for consultations in owner’s property.

Viewpoints of forest professionals differ from PFO’ ones. It is indisputable, that economic factors exist and they are considerable. However, there are a lot of possibilities to reduce costs – the EU funds, tax reductions, and cooperation in use of forest services or timber sales. Two main reasons are mentioned to explain non-use of available possibilities – lack of knowledge and attitude of PFO. In respect to knowledge it is necessary to point out that extension and

advisory system is available for PFO, there are a lot of informative materials in the Internet and also free of charge seminars with relatively low attendance level. It is possible to conclude that the biggest obstacle to implement proper management in private forest sector is attitude and lack of understanding of notable part of PFO.

Mentality and experience of the Soviet times make cooperation process quite difficult. It is also noticed that notable part of PFO does not trust forest specialists and dealers of timber, as well as to service providers. The results of surveys also provide proof for this statement. In 2003, about 10% of PFO involved in timber marketing considered they were cheated, but there was no reason for this opinion (just position – it could be higher price; no evidence, but I am sure for it, etc.) (Vilkriste, 2003). In several cases for the same reason PFO do not trust advisors, too. Elder owners (quite large part of PFO) have had bad experience from collectivisation in the Soviet times and this can be the main reason for negative attitude to any cooperation. Surveys show that one of important factors to have forest property is to “be owner” (Vilkriste, 2003; 2008). It is the problem of the state to change attitude of owners and make them interested in forest management to provide timber resources for industry and sustainable forest management.

There are also a lot of active PFO interested in management of their properties and part of them also in providing forest management services. One of the most important problems mentioned by this group is lack of support to small scale business activities. Opinion poll of

leaders of local organisations of PFO shows that organisations would be interested to provide also advisory service to owners' in case it will be financing it (Trojanovska, A., Vilkriste, L., 2012). Requirements of support available for educational and other activities

are not feasible for small organisations and businesses. The research shows that peer-to-peer learning has a growing role in information and education of PFO, but there are no support mechanisms to facilitate it (Vilkriste, 2008; 2011).

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. Forest Policy and legislation

FP was approved by the Cabinet in 1998. The main aim of FP is to ensure sustainable management of forest and forest lands. The strengthening of property rights provides owners with long-term and secure economic independence in their forests. Ownership is regulated by the laws of the Republic of Latvia, which guarantee all owners equal rights and prescribe equal responsibilities, the inviolability of property rights and the independence of economic activity. After restitution of independence all properties were given back to their previous owners and their legatees. There are no specific laws or regulations which support development of ownership of any specific ownership group. FP defines that further fragmentation of forest properties is not permissible, including in cases of inheritance of private forests.

Forest management is regulated by the Law on Forests³² which took effect on March 16, 2000 (last amendments in on 2013). The purpose of this Law is to regulate sustainable management of all the forests of Latvia, by guaranteeing equal rights, immunity of ownership rights and independence of economic activity, and determining equal obligations to all forest owners or lawful possessors. The law applies to the forest and forested land, and it applies to the owners or legal holders of forested land, as well as to

other individuals who make use of the products. There are several regulations under the law mandatory for all owners, also in case when management of forest is voluntary.

A lot of changes in forest legislation were done after regaining independence and joining the EU. Requirements for forest management became more democratic, nature oriented, well-founded on latest research results and adapted to situation. Legislation defines not only requirements, but includes also special norms to change owners' behaviour and improve management of forest in general.

The most important principles of FP related to forest land are prevention of reduction of forest covered by setting limits on the transformation of forest lands and facilitation of afforestation of marginal agricultural and other lands, through the use of existing state mechanisms. If forest land is transformed, it is an obligation of the proposer of the transformation to compensate the State for the losses caused by destruction of the natural forest environment. Until January 2013 Regulations for transforming forest land defined rules for the way in which applications for transformation are submitted, reviewed and approved, and the procedure for calculating and compensating the losses that are caused to the state as a result of the transformation. Now it is regulated by Regulations for deforestation³³. Decrease of attraction of CO₂ can be compensated also by planting or sowing new forest (but not plantation) in the same amount as deforested area, but at least 0.1 ha.

There is no need for special permission for forest land transformation in case of deforestation from 2013. Local government can allocate rights to owner to make building or establish agricultural lands and ask the SFS to calculate compensation for it. In case of use of mineral deposits responsible institution for permission is the State Environmental Service of the Republic of Latvia. Deforestation takes place also in case

³² <http://likumi.lv/doc.php?id=2825>

³³ <http://likumi.lv/doc.php?id=253624>

of building different infrastructure objects. By information of the SFS specialists deforestation has a tendency to decrease. About 385 ha were deforested yearly and 100 ha of forest were planted to compensate it in 2013³⁴.

6.1.2. Afforestation

Afforestation is regulated not only by the Law on forests and its requirements. Afforestation of non-used agricultural lands is important issue for the forest and agriculture sector and today both sectors try to stand up for their interests and use different policy implementation tools for it. Uncertainty exists about availability of land for afforestation and effective use of land between experts of both sectors and also within specialists of each sector. In last 5 years there were changes in legislation which affect also process of afforestation.

Before 2009 there was a requirement for transformation permission from agricultural land to forest land and it had to correspond with targets of territorial planning. Today the Regulation on classification and change of target on use of immobile property³⁵ is associated with the Immoveable Property State Cadastre Law³⁶. Experts of agriculture sector worried for decrease of land available for agriculture production - there are about 2 million ha of agricultural land, but about 18% from land available for agriculture production³⁷.

Recommendations for amendments on Law on Agriculture and Rural development³⁸ to support use of agriculture land for agriculture purposes are in process.

Land that can be used for afforestation is about 200-368 thousand ha and a part of it is already undergrown. About 5% of PFO reported afforestation in survey of 2001, but two years later this number doubled. Survey shows that 40% of PFO have in average 6 ha of not used land for afforestation and the largest part of them (69%) had idea for afforestation (Vilkriste, 2003). Statistics of the SFS shows that total afforested area from 1999 to 2013 is 20.2 thousand ha, inter alia 39% are plantations. Starting from 2004 state and the EU support afforestation and graph 2 shows that availability of financial support considerably increases level of afforestation.

In compliance of Regulations on forest regeneration, afforestation and plantation forests³⁹ owners can afforest land if it is not in conflict with requirements of planning of territory development and is accepted by local government. Also Law on melioration⁴⁰ has restrictions for land use and establishment of forest or plantations in land with drainage systems. Presented information shows that afforestation is associated not only with investments of finance and work, but also with notable bureaucracy. It can be reason why one part of owners does not want to register existing forest or forest plantations.

³⁴ www.lvportals.lv/print.php?id=263906

³⁵ <http://likumi.lv/doc.php?id=139503>

³⁶ <http://likumi.lv/doc.php?id=124247>

³⁷ www.lvportals.lv/likumi-prakse/261704-latvijas-lauksaimniecibas-zeme-tikai-lauksaimniecibas-attistibai/

³⁸ <http://likumi.lv/doc.php?id=87480> (in English)

³⁹ <http://likumi.lv/doc.php?id=247349>

⁴⁰ <http://likumi.lv/doc.php?id=203996>

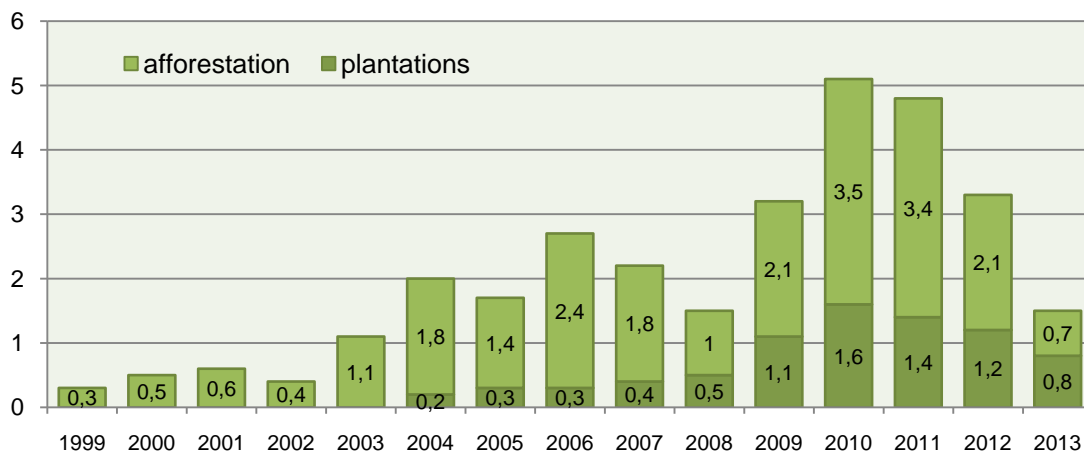


Figure 2: Forest establishment (thousand ha) in Latvia 1999-2013 (the SFS data)

If an owner registers afforested area as a forest, further this area is under the regulations of the Law on Forests. In case the area is approved as a forest plantation, currently there are no rules for the management and harvesting and payment of compensation for deforestation is not in force. It is also difference related tax payment on a property. Tax reductions exist for forest land, while owners of plantations have to pay tax for agriculture land higher than for forest land. The Law on Immovable Property tax⁴¹ assesses tax rate for agriculture land 1.5% of cadastral value of the land. An additional immovable property tax in the amount of 1.5% shall be applied to agricultural land which is not being farmed.

Now PFO have rights to decide how to register afforested area. According to legislation all stands which correspond to certain criteria will be automatically recorded as forest by the employees of the SFS from January 2015. In case a land owner wants to change it back to agriculture land compensation has to be paid⁴².

6.2. Influences of policies in forest management

6.2.1. Promotion of forest regeneration and tending

A lot of efforts are done to encourage regeneration and tending in private forest

sector. Improvements are achieved with the help of legislation and financial support. Statistic data on management tendencies is an evidence for effectiveness of policy implementation tools.

Prohibition to main felling if previous clear cut areas were not regenerated according to the requirements of forest legislation in time was one of the first steps in improving management in private forest sector in 2000. Each constraint provokes changes in behaviour of PFO. On the one hand situation with regeneration improved, but on the other hand there was also a negative impact due to the gap in legislation. Separation of clear cut areas as independent property started, but this process was stopped by changes in the law in 2003, when restrictions on main felling applied to all properties designed of first one. Restrictions are not the best driving force, and tax reductions for forest land were introduced in February 2003⁴³. There has been no tax for immovable property for stands of coniferous and hard wood for 40 years, soft wood for 20 years and alder for 10 years in case the clear cut areas are regenerated or forest established in accordance with the requirements. Also Law on Personal Income Tax⁴⁴ has norms that support regeneration of forests. Reforestation costs in the amount of 25% if an agreement regarding reforestation has been entered into with the forest owner or the legal possessor accordingly are not object for tax. Even if

⁴¹ <http://likumi.lv/doc.php?id=43913> (in English)

⁴² www.auseklis.lv/?cat=557&expand_article_id=8915

⁴³ <http://likumi.lv/doc.php?id=71296>

⁴⁴ <http://likumi.lv/doc.php?id=56880>

there were about 11 thousand ha of area in private sector not regenerated in time at the end of 2013, forest specialists consider that situation with regeneration is improving all time.

Before 2004 tending of young stands in private sector did not exceed 10-15% from the amount of total tending (figure 3). In 2009 the amount of tending in private forest sector doubled to compare with 2008 and reached 13 thousand ha. Last information shows that tending was done in 45 thousand ha in 2013. This growing trend is the result of the EU subsidies available from 2009. Total amount of subsidies for improvement of forest value (tending is one of supported activities) is close to 13 million EUR. Data of the RSS show that there were already 6821

applications for more than 11.5 million EUR on July 2014. The demand for funds exceeds provided resources. In the beginning of January of 2014, 941 applications were without required financing, totally 1.2 million EUR.

It is important to note that applications for the EU funds were evaluated by specific criteria and arranged in a line according to the points they got in the evaluation. Additional points were for properties where regeneration was done artificially, owner is member of forest owners' organisation and forest is certified. Such kind of conditions supports not only one specific activity, but management of private forest sector in general, as well as cooperation.

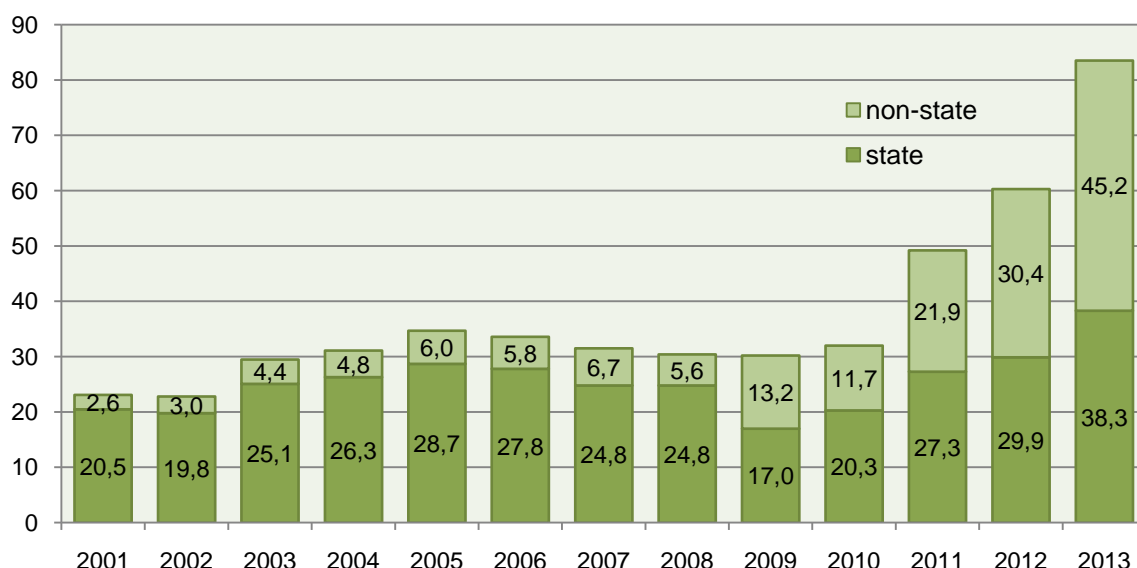


Figure 3: Tending of young stands 2000-2013, thousand ha (the SFS data)

6.2.2. Support for nature protection

Requirements for environmental issues in forest management activities are settled in the Law on Forests and are under regulations. There are also some other laws and regulations related to nature protection actual to PFO. It is written in the FP that in order to carry out ecological and social functions, an owner may require additional management restrictions in their forest. If the carrying-out of state-prescribed ecological and social functions results in additional restrictions on economic activities and creates significant economic losses, then the owners have the right to receive compensation.

Before 2013 PFO could apply for once-for all payment for restrictions. There were 313 owners compensated for restrictions in forest management activities⁴⁵. For a certain period of time also fixed compensation (60 EUR/ha) was used. The Law on Compensation for Restrictions on Economic Activities in Protected Territories⁴⁶ is effective from June 2013. An annual support payment for restrictions on economic activities in protected nature territories of European significance (Natura 2000) and micro

⁴⁵ http://www.daba.gov.lv/upload/File/DOC/Kompensacijas_20130220.pdf

⁴⁶ <http://likumi.lv/doc.php?id=256138> (in English)

reserves are paid from the resources of the relevant EU funds. Compensation for restrictions on economic activities in protected territories of national and local significance shall be allocated from the State or local government budget. Compensation amount⁴⁷ is determined by the Cabinet. Current amount of compensation in forest land is from 43 to 157 EUR per ha in a year (43 EUR if tree harvesting is forbidden in clear cut; 128 – tree harvesting is forbidden in main felling; 157 – any activity is forbidden).

Forest experts have a viewpoint that compensations are notable and can support PFO in protection of nature values. The SFS data show that economic activities are forbidden in 7333 ha of private forests, final felling in 9360 ha and clear cut in 100057 ha in 2014. Totally about 8% of private forest area has restrictions for pointed economic activities.

However not all restrictions for PFO are compensated. LFOA reported that 14% of the private forests belong to some type of restricted areas and 138 thousand ha are a part of NATURA 2000 areas⁴⁸. It is a view that PFO have to be compensated for all restrictions without reference to classification of territories. Principle has to be simple – equal compensations for equal restrictions. Only such approach can facilitate PFO to participate in protection of nature values. In Latvia national legislation currently implies more provisions than certification requirements in other countries.

6.3. Policy instruments specifically addressing different ownership categories

6.3.1. Forest extension and advisory system

One of objectives of FP is to ensure the knowledge and skills needed to improve the FP, legislation and practice and to ensure

sustainable forest management by promoting the development of forest education, forest research and exchange of information within the forest sector. FP goals in forestry education are related to the state support to private forestry with extension and consultations in connection with the ensuring of the long-term functions of forestry. The state's task is to create an institutional system that ensures the carrying out of these state functions in the forest sector.

The SFS Law⁴⁹ effective from January 2000 obligated the function to provide information and consultancy to PFO on the forestry issues. In the beginning the PFO could get professional advice at each of 197 local forest district offices, employing at that time totally 831 forest rangers and 400 different forestry specialists (Vilkriste, 2012). Demand for consultations was growing and the SFS employess provided close to 95 thousand consultations in 2005 (Vilkriste, 2012). Largest demand was for consultations in owners' properties (Figure 4).

Development of extension and advisory system of the SFS started already before its implementation. Two years during Latvian – Swedish project "Training of forestry extension agents" about 40 employees got requisite knowledge and worked out proposals for extension system. Surveys of PFO were organized already after the first year of operating. Results of opinion polls were studied to improve performance of the SFS, designed various tools for extension activities for different groups of PFO based on their needs and characteristics, as well as training programs for forest specialists involved in advisory were worked out. Generally PFO were satisfied with free of charge advisory services, but they demanded also practical services (Vilkriste, 2000; 2003; 2005). Part of PFO was not satisfied with the system of that time when they were served only in local forestry office where property was situated. It was quite embarrassing for owners living in cities or outside the region of property.

⁴⁷ <http://likumi.lv/doc.php?id=260422>

⁴⁸ www.cepf-eu.org/vedl/Baltic%20Forestry_Latvia_26062013.pdf

⁴⁹ <http://likumi.lv/doc.php?id=14594>

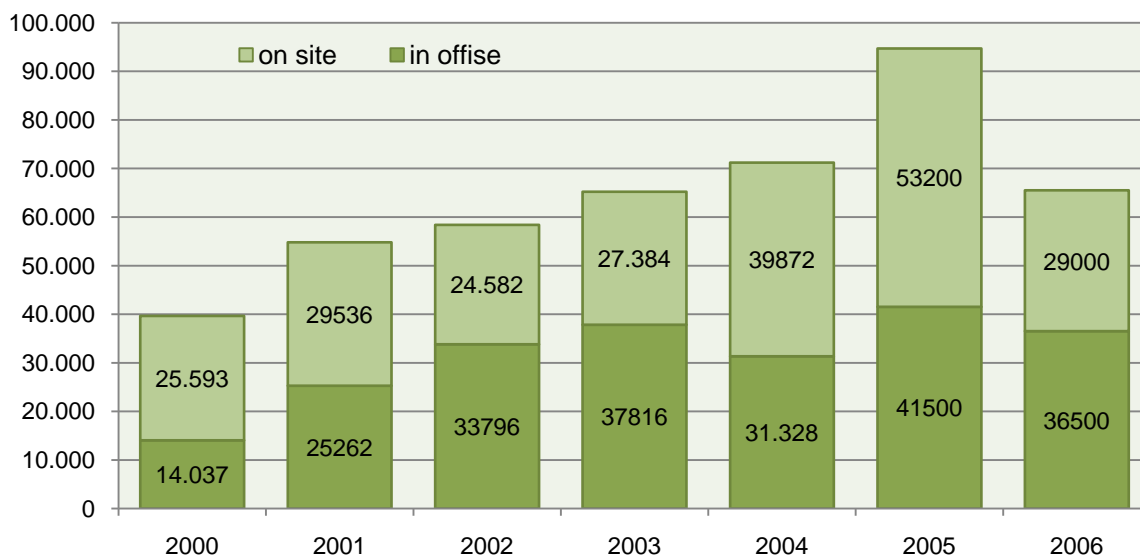


Figure 4: Number of consultations given by the SFS (2000 – 2006)

Optimization of the SFS took place in 2006. It led down to 23 regional forest offices with 118 local forest offices and 8 service points. The Consultancy Service Centre (CSC) as structural subdivision of the SFS was established in July 2006 to advise the forest owners not only on routine forestry matters, but also helped them get financial support from the national and the EU funds for promoting forestry and offer high quality services in forest management and utilization. In the second year of operation the CSC came up with 245 pay consultations, in 2008 this number reached 494 cases. Different services in the forest management were provided to 2000 PFO in 2007, a year later this number reduced to 1506 ones. In the first year demand for preparing cutting sites and documentation was dominating, later services and consultations regarding EU funds overran (Vilkriste, 2010).

In 2008, each head forestry area has established a separate forestry, which operates on one-stop-shop principle and serve PFO whose property is located in the forest district area. Customer Service Division which serves all owners without reference to their living place was established in the Head Office of the SFS in Riga. Due to oncoming territorial reform in Latvia new optimization of the SFS was done. Annual report of the SFS of 2010 demonstrates that today the SFS consists of 10 head forestry offices and 29 local forestry offices with totally 680

employees. Today education of PFO is not the topical priority of the SFS.

As a result of changes in the organizational set-up and downsizing the SFS the function of forest extension was separated from the SFS and given over to the Forest Advisory Services Centre (FASC) in 2010. In The FASC continues functions of the previous CSC as an affiliate of the Latvian Rural Advisory and Training Centre. Outside the Central Administration there are 19 regional offices and training centre “Pakalnieši” with about 40 employees who offer advisory and services to PFO. Price List for the paid services for the FASC as well as the SFS is regulated by the Cabinet.

Number of forest specialists involved in consultancy and also service providing in last decade decreases considerably. According to the surveys the PFO knowledge and awareness of forestry-related matters have substantially increased with the demand for extension and advisory services decreasing in recent years (Vilkriste, 2012). Today forest experts and specialists have diverse and inconsistent viewpoints on changes done in the extension system. Viewpoints differ not only among organisations, but also among specialists within one organisation (Vilkriste, 2011; 2012). New research is necessary to obtain information on changes in different owner categories to improve extension and advisory system.

6.3.2. Forest extension tools

Outside consultancy and advisory plenty of extension tools were designed in the first years of operating of the SFS. Taking into account that most of PFO were without or with minimal knowledge in forestry and when the extension system was introduced first time special attention was devoted to cooperation with **mass media**. Number of published informative and educative articles on the forest related issues in the regional and local mass media had increased from 430 publications in 2000 to more than 600 in 2003. Top level was reached in 2004 when more than a thousand different articles were published. Special training courses for local journalists were organized to reduce imperfections in materials produced by them. These experiences create current trends in use of mass media and trained forest specialists to prepare articles and information for different owners groups – simple information for small ones and detailed for group of active ones. Quarterly newspaper “Ciekurs” is published by the FASC and available also in the Internet. Special magazine “Saimnieks” is published for average and large scale farmers and required specific information for their audience.

Regional foresters were active also in cooperation with **TV and radio**. In 2001 and 2002 more than 100 broadcasts with participation of specialists of the SFS were fixed. Today number of such kind activities decreases considerably, but there are some special films or broadcasts supported by the state. Surveys of PFO demonstrated that TV and radio were not topical information source and it was one of reasons why this information channel was not developed.

Notable amount of various leaflets, info pages, factsheets and brochures were published or printed in the first years of operating of the extension system. More than

70 different informative materials for PFO were produced in 2002. Today amount of **printed material** decreases considerably for several reasons. The FASC still continues to update and publish factsheets for topical issues. In the last decade a lot of informative materials (brochures, guidelines, books) are prepared by different organizations outside the SFS and the FASC or are output of different forest related projects. Most of materials are available in **the Internet**, also mostly all printed ones. Even if printing is expensive, there is a need to do it. Surveys provide information that printed literature is topical for elder PFO and they are a large and important part of all owners.

First **educational forest trails** were designed in 2002 and a year after there were 46 trails with total length up to 200 km. Trails are an important support in organizing seminars. **Seminars** of PFO were very popular in the first years of extension work. The annual public report of the SFS in 2000 reported 545 seminars with 7607 participants. Already after 2 years the number of seminars increased for 30%, but the number of participants for 37 %. It was small growth in the quantity of seminars in further two years, but the quantity of participants was decreasing. In average there were only 10 forest owners per seminar in 2004 (Figure 5). Later the number of seminars organized by forest specialists decreased considerably. In 2007 the SFS reported about 47 seminars and the CSC about 43 seminars. Activity level in both organizations increased in 2008, when accordingly 120 and 123 seminars were organized. Number of participants of the CSC seminars had exceeded 4 000. Most of these seminars were organized in the classrooms with regard to the EU funds. Today the training courses and seminars are organised on a limited basis only, and the attendance shows that in this respect there is no need to increase the offer.

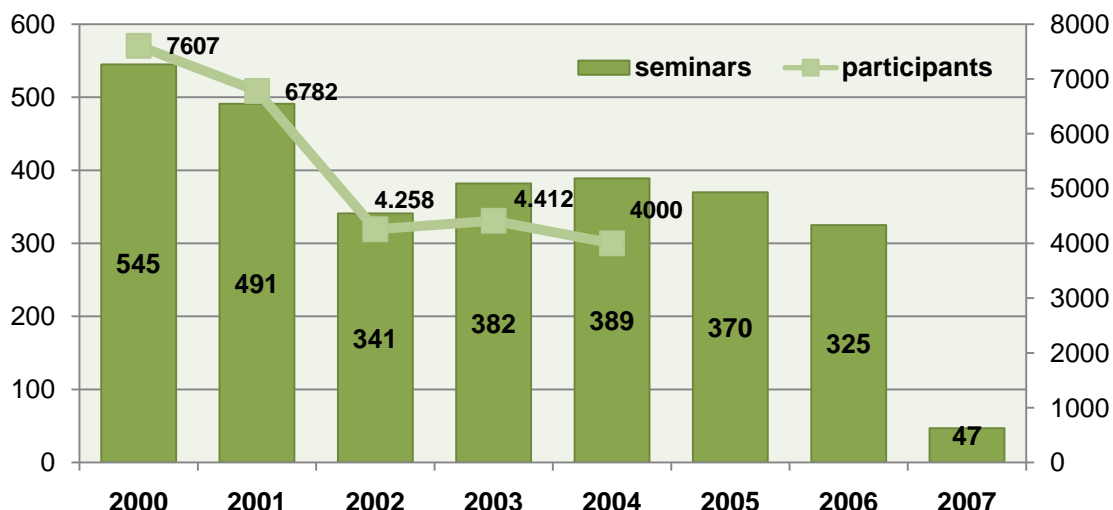


Figure 5: Seminars organized by the State Forest Service (2000 – 2007)

To promote the best forest management practices special competition for PFO was firstly arranged in 2001. In 2002 and 2003 there were more than 500 forest owners who reported correspondence to the criteria settled out by the jury. Starting with 2004 interest of owners to participate in this activity had decreased. Also attempt to organize demonstration areas for education purposes in properties of PFO had a failure.

Attitude of PFO to different extension and education tools were studied from 2001 based on the results of surveys. A lot of findings were taken in account in operating the extension system under the SFS and are topical also today. However some of lessons learned are without use. For example, active PFO demand seminars after office hours or on weekends, but such kind of activities is offered very rarely.

Largest part of extension activities including consultations were covered from the state budget during 2000-2006. Changes in the state advisory system are covered from special funds, but currently there is no special state budget for education activities of PFO. Informal learning of PFO depends on the wish of different organizations to raise funds (Vilkriste, 2008). The FASC as well as a few organizations of private forest owners are active users of this possibility. Currently several seminars and trainings are organized also by specialists of different organizations (LSFRI "Silava", PDF, business companies) or within the frames of different projects.

6.3.3. Development of cooperation

There were several attempts to support cooperation of PFO from 1994 in Latvia (top to bottom approach was used). The third attempt to facilitate cooperation of PFO was done in 2004-2006 with the support of the EU. According to the requirements for establishing organisations of PFO (PFOO) set by the Cabinet⁵⁰ minimum number of members was 15 and available support was 10000 LVL⁵¹ (required co-financing 10%). All costs initially had to be covered by the organisation. According to the Latvian Information Technology Company Lursoft database, before 2004 there were already eight PFOOs. As of July 2012, totally 59 PFOO were on the list of the Lursoft. The RSS data show that in 2004-2006 the EU financial support to the PFOO reached LVL 527878⁵², but only 60% of available amount was used. Later research demonstrates that during 2004-2009 not all organisations had used resources in effective way and most of them were not operating a few years after establishment (Trojanovska & Vilkriste, 2012). Surveys of PFO gave evidence that only a small part of owners is interested in cooperation. More than a half of PFO did not know anything about cooperation, about 7% expressed negative viewpoint. However 16% of PFO have positive attitude to cooperation,

⁵⁰ <http://likumi.lv/doc.php?id=141195>

⁵¹ 1 LVL=0,7028 EUR

⁵² LVL 1 = EUR 0.7098 (Bank of Latvia)

only a few owners are interested to be involved in it (Vilkriste, 2008). Focus group interviews and survey of active PFO were organised to study attitude to cooperation more in detail; 10% of this respondent group were already members of PFOO (SKDS, 2008).

Latvian Forest Owners Association⁵³ (LFOA) informs that today there are about 10 active organisations, providing also some extension and advisory services to the local PFO. It is to be noted, that the local PFOO are relatively small with the number of members from 10 to 50. Usually they are active in the local municipality within the radius of some 30-40km. In most cases the PFOA have good cooperation with the local service providers of forest management and the PFOA leaders act as locally authorized agents for decision making in forestry matters (Vilkriste, 2011). There is no detailed research on PFOO in the last decade.

First cooperative of forest owners was established in 2012 and today there are 6 cooperatives of forest management service providers. Available reduction of the income tax is important support to the development of forest cooperatives. Today cooperative societies and local associations are important forest service providers. The research shows that their role on informal education of PFO and peer-to-peer learning increase, even if it is not judged by specialists of forest sector (Trojanovska & Vilkriste, 2012; Vilkriste, 2011).

6.4. Factors affecting innovation in policies

6.4.1. Lack of information on private forest sector

However research on structure of PFO and their management tendencies is ongoing, the studies are based on collection of statistics and its change. Information about number of owners in different forest size classes is available, but there is no available information on gender, age or residence place of PFO from 2008. Changes are established, but information about “newcomers” or “leavers” is

not analysed. Information on management activities in each group of size class is available, but characteristics of owners who do or do not do certain management activity is missing.

The latest research includes surveys only of active PFO group selected from limited data base, mostly from the owners who had used the services of the SFS in the last years and left their contact information in the office. It is hard to plan effective policy implementation instruments in the situation when target group is not known. Probably at the moment there is no need for innovations in policy, and most important task to the state is to stimulate effective use of the EU funds.

Although methodology for monitoring changes in private forest sector exists, it will be difficult to use it in future. Not only lack of financial resources limit these research projects. Due to Personal Data Protection Law⁵⁴ information about owners personal data from the different data bases are restricted. Constantly larger part of landowners today is not accessible because norms of Forest Law and Civil Law allow prohibiting entrance in owner's property and number of notes of warning “Private” increases.

6.4.2. Conflicting views

A considerable part of PFO was elderly people living in the rural areas. They had objections against making longer distances to meet the forest officers and limited opportunities of specialist visits to their holdings. It is also hard for them to accept that the habitual and comfortable extension system had changed. The opinion poll of 2007 showed that PFO did not know and care much of the organizational changes in the extension system and were in favour of the previous system and easy availability of services. Frustration was in the situations where the pay services were offered by the same person who earlier offered gratis consultations. It could be claimed that the reorganized system of forest extension was more convenient for non-resident and absent PFO living in urban centres rather than those living in the countryside next to their holdings.

⁵³ www.mezzaipasnieki.lv

⁵⁴ <http://likumi.lv/doc.php?id=4042>

It is necessary to note that free of charge and easily accessible extension system did not result in activities of all owners and it was not cost and result effective to continue it. After changes in the state extension system a lot of private companies and organizations are ready to supply advisory and services if they were demanded. There was no cause for concern that professional advisory would be out of reach of PFO.

The opinion poll of 2012 revealed the forestry expert views and evaluation of the current situation in forest extension differ. It is to be

noted that the respondents of each organisation worked with different PFO' target groups and, hence, their views on the needs and wishes of PFO differ. It should also be pointed out that the respondent opinions on the activities and capacities of other organisations were to some extent biased and not always fair. Viewpoints on different issues differ not only within organizations, but also among the top managers or decision makers and the field personnel contacting the PFO in their daily work (Vilkriste, 2011; 2012).

7. Literature

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8. Annexes

8.1. Tables with detailed description of 10 most important publications

Tables of 10 most important publications are ordered by the time – from newer to older publications or reports. All listed publications are self-depended research projects even if the same methodology is used for some of them. The latest reports and publications include also some comparison with results from previous studies. Listed publications provide information on PFO and management tendencies in the private forest sector. Most of the research results are used practically, for example, developing Conception of National forest program, establishment of forest extension and advisory system within the SFS, predicting harvesting activities in private forest sector. Several papers are produced based on the results of mentioned studies and published in international level, e.g. IUFRO small scale forestry conferences. However publications in English contain limited information to compare to the research reports in local language.

Full reference of study/publication	Vilkriste, L (2002). <i>Forest Policy implementation in private forest sector</i>. Ph.D. thesis. Latvian Agriculture University, Jelgava, 111 p.
English language summary/abstract	The main goals of the research are to evaluate the compliance of actual management in private forest sector to the goals set in FP and propose the improvements. Proposals based on information obtained from the analysis of forest management tendencies, assessment of different FP implementation tools (e.g. legal regulations, extension) and results of opinion polls of PFO. The paper presents results of the studies from 1996 to 2001. For the first time in Latvia methodology on opinion poll of PFO was designed and implemented in 2001 and information on PFO and their management tendencies obtained. Polling includes two types of owners – active PFO (interviewed during their visits in local forest offices; 1638 interviews) and average PFO (selected according methodology from the data base of the SLS and interviewed in their residence places; 264 interviews). Also data from pilot surveys of 136 respondents from 1996 and 1997 was used to analyse situation. The appraisal was done using nonparametric tests as t-test and various criteria. Differences in the analysis of results are considered significant at 5% of the level of significance ($p=0.05$). Significant interconnections are observed among several indicators of groups of active and average PFO. The surveys indicated that difference between the active and average owner and their management tendencies is significant and mainly determined by size of the forest holding; sex, age, and residence place of owner. Also owners' choice of different information sources and extension methods for acquiring knowledge are determined by their own and property characteristics, as well as practical experiences in forestry. Current tendencies of forest management in private forest sector do not always correspond to the goals of FP.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> University <input type="checkbox"/> Public Research Insitiute <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below) <input type="text"/>

Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Political science, economics, sociology
Methodical approach	Questionnaire survey, qualitative interviews
Thematic focus	<p>ownership change (incl. on changes in</p> <input type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership
Main results should be given here if not yet included in the summary.	<p>Results of the survey indicate that market of forest properties has started developing, which leads to the change in ownership. About 10% of PFO informed about their wish to sell property, and the same amount wanted to increase their forest area. In active PFO group this indicator reached 41%. Every third respondent has in average 2.6 ha of abandoned agricultural land. PFO give the highest grades for non-economic aspects of forest use (forest as creator of ownership, potential heritage, nature protection), nevertheless forest management tendencies are influenced by economic motives. Urbanised PFO have different forest management tendencies and motivation system. 88% of owners have used extension services to get an advice. Current extension system of SFS is based on the needs of PFO.</p>
Weblink	
Additional information	<p>Summary of Ph.D. thesis is available in English: Vilkriste, L. (2002) Forest Policy Implementation in Private Forest Sector. Summary of Dissertation. Latvia Agriculture University, Forest faculty. 44 p</p>

Full reference of study/publication	Vilkriste, L (2003). Opinion poll of forest owners. Report, State Forest Service, Riga. 50 p.
English language summary/abstract	The report summarises results of the opinion polls of PFO in 2003 where 420 owners were interviewed in their residence place and 1260 in different local forest offices during their visits to forest specialists. Information on social portrait of owners and characteristics of properties; attitude and motivation of owners; management of properties; use of extension services and assessment of current extension system; knowledge and viewpoints of owners on different forestry issues; ways of obtaining information and knowledge are presented in the report. Obtained information was compared with the results of similar survey of 2000-2001, as well as comparison between groups of average and active PFO was done. The paper also includes guidelines and recommendations to specialists and extension agents for improvement of forest extension services. Results from opinion poll in 2003 approve previous findings on the factors influencing forest management and decision making of PFO.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input checked="" type="checkbox"/> Public Research Institute <input type="checkbox"/> Private Research Institute <input checked="" type="checkbox"/> Other (please name below) <input type="text" value="the Latvia State Forest Ser"/>
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input checked="" type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Sociology, forestry
Methodical approach	Analyse of data base; questionnaire survey, qualitative interviews; opinion poll
Thematic focus	<input type="checkbox"/> ownership change (incl. on changes in quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership
Weblink	

Full reference of study/publication	Vilkriste, L. (2004) <i>Analyses of Structure of Private Forest Owners and Holdings and Development of Methodology for Monitoring Changes in Ownership Structure</i>. Project Report, Latvian State Forest Research Institute "Silava". 38 p.
English language summary/abstract	The research on private forest sector was concentrated on two main areas: forest property and forest owner. First after Latvia gained independence in 1991 methodology to analyse data base of forest owners and properties was designed and formed the basis for one of the classification systems of PFO. Owners were divided in four groups based on the following patterns: one owner has only one forest property (Group 1); one owner has several properties (Group 3); property belongs to the owners' group and there are no more properties for the group members (Group 2); "chain" of owners and properties (Group 4). The indicators for classification of owners and their holdings were developed by the method of data classification based on size of the forest holding; age, gender and residence place of an owner.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input checked="" type="checkbox"/> Public Research Institute <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below) <input type="text"/>
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Sociology
Methodical approach	Analyse of data base
Thematic focus	<input type="checkbox"/> ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input type="checkbox"/> policy instruments addressing ownership

<p>Main results should be given here if not yet included in the summary.</p>	<p>By the SLS data base there were 148925 PFO and 163029 forest properties in 2004. The biggest is Group 1 – 70% from the total number of owners and 62% from private forest area. The average size of forest property in this group was 6.7 ha. Group 3 was the second largest – 19% from the total number and 23% from area; average forest area per owner - 22.6 ha. Distribution of PFO in groups by various criteria allows to forecast possible changes in structure of ownership and will help to analyse changes in the future. Difference between male and female owners and their properties was noticed.</p>
<p>Weblink</p>	

Full reference of study/publication	Vilkriste, L. (2005) <i>Latvia's private forest owners: a case study. Proceedings of IUFRO Conference "Small-scale Forestry in a Changing Environment, May 30 – June 4. Kaunas, p.159-166.</i>
English language summary/abstract	The role of private forest sector as timber resource provider is increasing and information on the motivation, wishes and needs of PFO is necessary to ensure proper forest management. The paper describes methodology of opinion polls and principles of classification of PFO in different groups and presents main results of opinion polls from 2000 to 2004 and viewpoint of totally 3582 PFO. Those polls provide information on owners' social portrait, issues of the interest for the owners, the sources of information and ways of improving knowledge, their knowledge on forestry and forestry related questions etc. The surveys of PFO indicated the following – the choice of different informative sources and extension methods for acquiring knowledge is determined by their own and their property characteristics, as well as PFO' practical experience in forestry. Difference between active and non-active PFO and their management tendencies is mainly determined by the size of forest holding, gender and age of PFO and their residence place. Data from the surveys provide the basis for improvement of forest extension system in Latvia.
Language of the study/publication	English
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input type="checkbox"/> Public Research Institute <input checked="" type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below) <input type="text"/>
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Economics, sociology, silviculture
Methodical approach	Analyses of data base, questionnaire survey, qualitative interviews
Thematic focus	<input type="checkbox"/> ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership

<p>Main results should be given here if not yet included in the summary.</p>	<p>Some interesting findings: more than 70% of PFO live close to their forest holdings; the average forest property size for active PFO group was 2...3 times bigger than the average forest property size in the region; 80% of active PFO were male; socio-economic conditions of PFO had changed during the last years; 73% of respondents had chainsaws and 37% - farm tractors which can also be used in forestry. The owners' knowledge and experience have an impact on their desire to improve and obtain competence in forestry. 60% of PFO with prior forestry knowledge and experience and only 30% of PFO without are interested in further information and education.</p>
<p>Weblink</p>	
<p>Additional information</p>	<p>It is first publication in English where information from opinion polls and data base was united and changes in ownership described. The second publication which also contains data from previous studies: Vilkriste, L. (2006) Role of private Forest Owners in Latvia – Support or Hindrance to Developments” Ed. S. Wall. Proceedings of IUFRO Conference. COFORD & GMIT, Galway. p. 526–538.</p>

Full reference of study/publication	Vilkriste, L. (2007) <i>Analysis of Factors Influencing Development of Private Forest Sector</i>. Project Report, Jelgava, Forest Faculty, LAU. 44 p.
English language summary/abstract	Target of the research: to provide state and nongovernmental organizations with objective information about situation in private forest sector and changes in ownership structure and improve methodology for coming opinion polls of PFO. Previously designed methodology was used to analyse the SLS data base of forest owners and forest properties of 2007 and results were compared with the similar data from 2004. Based on number of properties per owner and number of owners per property owners were divided in 4 groups. Indices like gender, age structure, residence place, forest size class were analysed. Telephone interviews and visits to forest owners in their residence place were used to state situation and improve methodology for coming opinion poll in 2008. Pilot survey approved that it was not possible to get credible and representative information on situation in the private forest sector from telephone interviews. About 150 owners were randomly selected from the data base and visited in their properties; totally 82 inquiries were used for qualitative analysis.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> University <input checked="" type="checkbox"/> Public Research Institute <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below) <input type="text"/>
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Sociology
Methodical approach	Analyse of data bases; telephone interviews; qualitative interviews in owners residence place
Thematic focus	ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership

<p>Main results should be given here if not yet included in the summary.</p>	<p>In period from 2004 to 2007 total number of forest owners increased for 3% and reached 145505. In the same period total forest area in private sector decreased by 2.6% and average size of forest property from 7.5 to 7.1 ha. The number of owners in group who have only one property decreased by 7%, but number of owners with several properties increased by 5% (consolidation). About 79% of PFO had properties smaller than 50 ha (37% from total private forest area). Proportion of female forest owners was 46%. Average age of forest owners - 54 years. Data gave evidence that in the group of bigger properties proportion of male was higher than average. About 75% of PFO lived close to property or in region where property is located (20-30 km). Decrease in the average age of owners was one of evidences about changes in the ownership structure. In 3 year period about 27% of owners are registered as newcomers. In average annually about 10% from total number of PFO change their status of being or not being owner or buying/selling additional forest property.</p>
<p>Weblink</p>	

Full reference of study/publication	Vilkriste, L. (2008) <i>Analysis of Factors Influencing Development of Private Forest Sector</i> Project Report, Jelgava, Forest Faculty, LAU. 50 p.
English language summary/abstract	Target of the research: to enhance management of private forest sector accordingly goals of FP and provide information about situation in private forest sector, motivation and wishes of private owners, their problems in forest management and factors influencing forest management. Respondents were selected from the SLS data base by special methodology to obtain information about average forest owners. Group of owners living in big cities (~ 20%) was excluded from the opinion poll. Interviews with owners were done in their residence place and 324 inquiry forms were used for quantitative and qualitative analysis. The poll provides information about social portrait of owners, forest management tendencies and influencing factors, motivation, knowledge on different forest topics, use of forest extension services etc. Results of opinion poll correspond to indicators from the data base of the SLS and it is possible to maintain that results from the poll represent average PFO and general situation in private forest sector. Results can be used in developing forest extension system, analyse and work out FP implementation tools, as well as forecast potential timber supply for forest industry.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input checked="" type="checkbox"/> University <input type="checkbox"/> Public Research Institute <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below) <input type="text"/>
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	sociology
Methodical approach	Questionnaire survey, qualitative interviews
Thematic focus	<input type="checkbox"/> ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership

<p>Main results should be given here if not yet included in the summary.</p>	<p>Main conclusions: annually about 10% of properties change ownership; there is no evidence that property rights are given to youngest generation; importance of economic value of forest decreases; forest specialists are main source for obtaining information; tendency that forest management decisions are made together with family members (not only owner) increase; number of owners who wants more freedom and less regulations in forest management increases; wish to obtain knowledge decreases; no interest in cooperation is presented. The research approved findings on factors influencing forest management from previous projects (2001; 2004). About 20% of respondents declare that there is no and will not be any economical benefit from property; about 20% plan some income in nearest years, but 54% do not plan any activities. About 80% confirm forest related activities in the past (almost all – firewood collection; 26% - harvesting). 66% of respondents mention that they do not have any knowledge and experience in forestry. Quantitative analysis points out that owners have limited knowledge on tax issues, selective cutting and bioenergy issues. 74% do not have comprehension on requirements of normative acts and laws. About 40% know about environmental demands.</p>
<p>Weblink</p>	<p>www.llu.lv/projektu-apskate?projekti_id=839</p>
<p>Additional information</p>	<p>The results of research from 2007 and 2008 partly are presented in several publications in English during 2009-2012 by Vilkriste L. (see the reference list).</p>

Full reference of study/publication	SKDS (2008) <i>Experiences of forest owners, their attitude and estimations related forest management. Report. Marketing and Public Research Centre (SKDS), Riga, 80 p.</i>
English language summary/abstract	The main topics of study are related to experiences and problems of PFO in forest management and owners' estimations on different forestry issues. Qualitative research is based on two focus groups discussions (8 and 7 owners) and quantitative survey is based on telephone interviews by CATI method of 405 respondents. Scope of questions is oriented to active and comparatively experienced owners. View point of owners on timber market; cooperation and wish to participate in associations; insurance, cooperation with different state organisations, restrictions and problems in forest management; and suggestions for improvements of legislative acts is presented.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input type="checkbox"/> Public Research Institute <input checked="" type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below) _____
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other _____
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Silviculture, sociology
Methodical approach	Focus group interviews; qualitative interviews; opinion poll
Thematic focus	ownership change (incl. on changes in <input type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input type="checkbox"/> policy instruments addressing ownership
Main results should be given here if not yet included in the summary.	Group of respondents is characterized by following data: 24% of respondents or their family members have forest related education, 65% - experience in forestry and 11% without knowledge in forestry. Economical motivation is not only for being an owner. Biggest problems in forest management are damage by storms and snowbreaks (66%), damage caused by beavers (58%) and other animals (54%).
Weblink	

Full reference of study/publication	Domkins, A. (2009) <i>Monitoring of economic situation in forest sector. Project Report. Jelgava, MeKA. 112 p.</i>
English language summary/abstract	The goal of the project is to support the growth in productivity of forest enterprises and maintain ability of export. Mainly the research is concentrated on various aspects of wood processing industry and its development. Private forest sector as important source of timber is also analysed. Information from about 800 respondents about economic activities in forest management provides an idea about factors influencing owners in decision making. It is possible to make prognoses how possible changes in the timber market and normative acts can impact timber supply from PFO. Contact information of respondents was provided by forestry extension organisations. The answers of opinion poll were analysed for 2 groups of respondents: who plan harvesting activities in current year (324 respondents) and others (583 respondents).
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input type="checkbox"/> Public Research Institute <input type="checkbox"/> Private Research Institute <input checked="" type="checkbox"/> Other (please name below) <input type="text" value="Forest and Wood Product Res"/>
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	economics
Methodical approach	Analyse of statistic information; opinion poll of forest owners
Thematic focus	ownership change (incl. on changes in <input type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership

<p>Main results should be given here if not yet included in the summary.</p>	<p>Only 12% from respondents did not realise any harvesting. Main reasons to harvest: firewood and timber for self use (38%), it is planned according to the forest inventory (29%) and need for money for household (21%). Proportion of owners who sell growing forest decreases. In 2009 about 28% of respondents sold growing forest; 35% sold timber in market, but the rest used timber for own needs. In most cases harvesting was done by owners. About 1/3 maintained that they had bought different forest services, most often - marking out and making a sketch of the cutting area and the pre-harvest inventory of the cutting areas; about 1/3 mentioned reforestation and tending, as well as thinning.</p> <p>About a half of respondents do not plan harvesting activities for 2010 and low price of timber is mentioned as the main reason for that. Increase about 15 euro/m³ could change attitude for 38% of respondents. About 1/3 of respondents who have mature stands mentioned lack of infrastructure as main obstruction for nonbeing activities. 1/3 of respondents plan harvesting, but 35% of them do not mention more than 100 m³. More than 500 m³ was mentioned only by 12% of respondents.</p> <p>About 29% use the EU support for forest management (75% for tending of young stands; 23% for afforestation). About 80% of respondents have agreements with hunting clubs.</p> <p>Forest specialists are the main source for obtaining information about forest management issues (84%). Special literature was mentioned by 26% and the Internet by 20% of respondents.</p>
<p>Weblink</p>	<p>www.llu.lv/projektu-apskate?projekti_id=892</p>

Full reference of study/publication	Jansons, J. (2010) <i>Assessment of potential contribution of private forest sector to Latvia wood processing industry from 2011 to 2015. Project Report.</i> Salaspils, Latvian State Forest Research Institute "Silava", 33 p.
English language summary/abstract	Tasks of the project: to summarize information on ownership structure in different forest property size classes (> 5 ha; 5 – 10 ha; 10 – 50 ha; 50 – 300 ha; > 300 ha); to analyse information on forest management activities in an each group; to analyse structure of forest resources (species; age classes) in each forest property size group for owners who implement or do not implement forest management activities; work out methodology and calculate potential harvesting amounts by dominant species in the forest regions for period 2011 – 2016. Review on the Forest Law and normative acts affected management of private forest management in 2009 and 2010 is presented. Viewpoint of 650 respondents (active forest owners) on different forest management activities and decision making are presented.
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input checked="" type="checkbox"/> Public Research Institute <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below)
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	Silviculture
Methodical approach	Analyses of data bases of State Land Service, State Forest Service, State Forest Register on ownership structure, forest resources, forest management activities. Questionnaire (telephone interviews (CATI))
Thematic focus	<input type="checkbox"/> ownership change (incl. on changes in <input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.) <input checked="" type="checkbox"/> motives and behaviour of ownership types <input type="checkbox"/> new management approaches <input checked="" type="checkbox"/> policy instruments addressing ownership

<p>Main results should be given here if not yet included in the summary.</p>	<p>Forest properties under 5 ha occupy 12% of private forest sector area, but are represented by 52% of PFO. Most of these properties do not have forest inventory and activity level of forest management is comparatively low. About 50% of forest properties are in a size group from 10 to 50 ha. The consolidation process of forest properties has a tendency to expand. The proportion of properties above 50 ha increased from 7.4% in 2004 to 20% in 2010.</p> <p>Interviews with respondents show that less than 10% of owners who have forest property less than 10 ha are planning forest management activities in next 5 years. In the size group from 10 to 50 ha number of active owners this indicator is about a half. It is possible to maintain that the level of forest management activities increased with the size of a forest property.</p> <p>Timber volume of mature stands in the private forest sector is about 21 mill m³. The greatest number is concentrated in properties with area from 20 to 50 ha. Interviews of respondents give evidence if nothing changes in the timber market annual cutting amount in the private sector can be 4.5 mill m³, but there is light tendency to scale down forest harvesting activities. In most cases this solution is explained as a wish to have financial security for themselves and family.</p> <p>The opinion poll demonstrates the motivation of owners in decision making. The main reason to plan harvesting was the necessity to make cleanings and thinnings, inter alia after windstorms and snow breaks. Only 1/3 of respondents mentioned a need for money for households and about 10% for other purposes. Most often lack of mature stands (35%) and no need for additional income (33%) is mentioned as reason not to plan harvesting activities.</p> <p>About 70% of respondents have knowledge about EU support for forest management activities. About 10% of owners in size class under 20 ha had asked for this support. In size class groups from 20 to 100 ha and above 100 ha these indicator are 24% and 50%. The main reason not to ask for a support is dissatisfaction with the conditions of use of EU funds. Type of activities presents evidence about interest of forest owners. More than a half of owners who use support mentioned increasing of the economical value of forest property and about 1/3 – afforestation of abandoned agricultural lands. More than a half of respondents pointed out tending of young stands and about 20% - afforestation of non-used lands asked about need of future support.</p>
<p>Weblink</p>	<p>www.llu.lv/projektu-apskate?projekti_id=940</p>

Full reference of study/publication	Zariņš, J. (2012) <i>Assessment of forest management activities and processes of land consolidation in private forest sector. Project Report. Salaspils, Latvian State Forest Research Institute "Silava", 29 p.</i>
English language summary/abstract	<p>Three main tasks of the project are to analyse changes in ownership structure (private and physical persons), forest resources by species and age classes and forest management activities in different size classes of forest properties. Also telephone interviews of 1207 respondents about harvesting plans for coming years were organized. Analysis of the data bases present evidence that in 2012 about 20% of private forest area belongs to juridical persons. Number of private forest owners (physical persons) decreases by about 900 in the year. Total number of owners decreases from 148925 in 2004 to 137888 owners in 2012. There is a tendency that the proportion of properties in the size class above 50 ha increases about 3.5% in the year.</p> <p>About 6% of private forest properties are still without forest inventory. Analysis of the data base of forest resources by dominant species and age classes indicates that it is great proportion of white alder stands in the active owners' properties. The highest proportion of available resources is in the group of owners with properties from 20 to 50 ha. The report presents maps with the regional distribution of available forest resources, in. al also over mature stands. Since 2005 about 46% of owners have organized forest management activities in their properties. Forest owner group with properties from 20 to 50 ha is the most active .</p> <p>Available volume of forest resources was analysed separately for the group of owners who did management activities and who did not do them. Telephone interview shows that planned harvesting amount by private persons in 2012 can be from 5.3 to 7.7 mill m³.</p>
Language of the study/publication	Latvian
Type of organization conducting the study (in case of multi-institutional studies multiple answers allowed)	<input type="checkbox"/> University <input checked="" type="checkbox"/> Public Research Insitiute <input type="checkbox"/> Private Research Institute <input type="checkbox"/> Other (please name below)
Type of funding used (multiple answers allowed)	<input type="checkbox"/> Private Industry <input type="checkbox"/> Private other <input checked="" type="checkbox"/> National <input type="checkbox"/> Public Sub-National <input type="checkbox"/> Public EU/cross-national Europe <input type="checkbox"/> Public International beyond Europe <input type="checkbox"/> Public other
Regional scope	<input type="checkbox"/> Sub-national <input checked="" type="checkbox"/> National <input type="checkbox"/> Cross-national Europe <input type="checkbox"/> International beyond Europe
Theoretical approach	silviculture
Methodical approach	Analyses of data bases on ownership structure, forest recourses, forest management activities of State Land Service and State Forest Service. Questionnaire (telephone interviews (CATI)) about planned forest harvesting activities for 2013.

Thematic focus	<p>ownership change (incl. on changes in</p> <p><input checked="" type="checkbox"/> quantitative terms, emerging new ownership types, etc.)</p> <p><input type="checkbox"/> motives and behaviour of ownership types</p> <p><input type="checkbox"/> new management approaches</p> <p><input type="checkbox"/> policy instruments addressing ownership</p>
Main results should be given here if not yet included in the summary.	<p>The research gives evidence that the change of ownership is still ongoing. Decrease in number of private persons and increase in the proportion of bigger properties shows about tendency. Information from the data bases shows that there are 15% of private forest sector area (61% of private forest owners) below 5 ha, but the biggest proportion (39%) is properties from 10 to 50 ha. Thinnings dominated in smaller properties, but clear cuts in bigger forest properties. Great part of forest owners has also agricultural land.</p>
Weblink	<p>www.llu.lv/projektu-apskate?projekti_id=966</p>

8.2. Forest ownership structure and management of private forests

8.2.1. Consolidation in private forest sector

Table 5: Percentage distribution of number of PFO and forest area by forest property size classes (the SLS data)

Size class	Number of owners, %			Forest area, %		
	2004	2010	2012	2004	2010	2012
< 10 ha	76,8	78,4	78,5	35,5	26,6	24,7
10-20 ha	14,9	12,7	12,6	27,8	19,3	17,9
20-50 ha	7,5	7	7,1	29,3	22,7	21,5
> 50 ha	0,8	1,8	1,8	7,4	31,4	35,9

8.2.2. Forest management activities

Table 6: Number of PFO and percentage of PFO implemented forest management activities (2005-2012) in different size classes (the SFS data)

Size class, ha	Number of PFO	Main felling	Tending	Windfall	Harvesting, total
< 5	58979	14	13	9	28
5-10	23384	33	26	24	56
10-20	16639	46	34	35	69
20-50	9242	64	45	50	82
50-100	1525	81	64	66	92
100-200	351	88	77	72	93
200-500	121	94	87	88	97
500-1000	23	100	100	91	100
> 1000	9	100	100	100	100



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