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CENTRAL-EAST AND SOUTH-EAST EUROPEAN
REGIONAL OFFICE – EFICEEC-EFISEE

Forest Land Ownership Change in Austria

COST Action FP1201 FACESMAP Country Report

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

Forest Land Ownership Change in Austria

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.

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

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

COST is implemented through the COST Association, an international not-for-profit association under Belgian law, whose members are the COST Member Countries.

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

BMLFUW	The Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management
BOKU	The University of Natural Resources and Life Sciences, Vienna
CPR	forest common pool resource regimes
EFICEEC	EFI Regional Office for Central-East European Countries
FACESMAP	Forest Land Ownership Changes in Europe: Significance for Management and Policy
FAO	Food and Agriculture Organization of the United Nations
FOA	forest owners' association
FRA	Forest Resource Assessment
INNOFORCE	The EFI Project Centre 'Innovation and Entrepreneurship in Forestry'
UFOs	Unknown Forest Owners

1. Introduction

Forests cover around 47.6% of Austria's territory (3.99 mio ha out of 8.4 mio ha land). Forest area has been increasing since the first inventory period (44% forest cover in the 1960's) (BMLFUW 2015). This trend is caused by afforested agricultural land and it is decreasing (growth rate of 4.300 ha/year recently). With a total population of around 8.1 mio citizens, it means roughly 0.5 ha of forests per citizen. Two thirds of Austria's population is living in cities.

Much stronger than the increase in forest area is the increase in growing stock: While in the 1960's, Austrian forests had 780 mio m^3 of wood (over bark), this is around 1,135 mio today.

Half of Austria's forests are properties below 200 ha, many of them farmers. Private forest owners hold 80% or 2.6 million ha of the forestland. Public forests are mostly owned by the Republic of Austria, managed by the Federal Forests SC (around 15% of total forest land in Austria). There is a mix of traditional and non-traditional small scale forest owners in Austria. One aspect of the ongoing structural change in the agricultural sector in Austria is the increase of non-farm forest owners, also called absentee, urban, non-traditional or "unknown" forest owners (UFOs) – as the forest extension services often have no contact with them.

There are approximately 145.000 forest owners in Austria. 1.5% of these own more than half of all forestland, with an average size of about 1.200 ha, about 99% of all proprietors hold less than 200 ha of forestland and almost 40% hold less than 3 ha.

In a representative forest owner survey and by applying a cluster analysis, Hogl et al. (2005) have found seven types of private owners, ranging from more traditional and agriculture-connected to less traditional owners with less agricultural background: farmer forest owners (some 20% of owners), part-time farmers (also 20%), small-towners with rural background (12%), forest owners previously employed in agriculture (16%), farm leavers (10%), urban forest owners (9%) and owners without connection to agriculture (13%). In sum, one third of owners have practically no connection to agriculture or forestry. For them, working in and deriving income from their forests is of little importance. The authors summarise these under the term of "new forest owners".

In professional debates, the trend for increased shares of new forest owners is seen as being problematic in the view of underutilisation of the forest. If owners are not interested or have no time and capacities for management, wood is not utilised for industrial use with implications for the strong Austrian timber and paper industry as well as for producing wood energy.

Fewer implications are seen for recreational use or for nature conservation goals.

2. Methods

2.1. General approach

The country report aims to give a comprehensive overview of forest ownership issues in the country, based on a mix of methods. These include a review of literature and secondary data and 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 describes the state-of-knowledge in Austria 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. The data and case study analyses provided in the country reports will be analysed in subsequent stages of the COST Action.

2.2. Methods used

In the data collection, a mix of appropriate methods is applied. For practical reasons the methods of data collection are divided into three groups:

1) Literature reviews to answer qualitative data and give overview assessments;
2) Statistical data, e.g. from national forest inventories
3) Data from previous national or regional studies on forest ownership as far as they exist, for answering quantitative questions on new forest ownership
4) Expert interviews/consultation for answering qualitative data, give overview assessments, and provide case examples; own expert knowledge.

Besides of scientific studies and statistical data, also own expert knowledge was used for writing this report as well as expert consultations. In addition, the following parts were written on the basis of expert consultations: part II, chapters 3 and 4 (Prof. Gottfried Holzer, BOKU; Dr. Stephan Probst, Neudorfer Rechtsanwälte; Dr. Christian Urban, LBG and BOKU; Mag. M. Erasimus, NÖ Landwirtschaftskammer; Mag. Mario Deutschmann, Land- und Forstbetriebe Österreich; Dr. Peter Herbst, Kärntner Agrarbehörde), chapter 7 (Martina Dötzl, Statistik Österreich) and chapter 9 (Dr. Peter Herbst, Kärntner Agrarbehörde).

3. Literature review on forest ownership in change

The COST Action national representatives undertook a review and compiled information on changes in forest ownership in their countries based on peer reviewed and grey academic 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 was 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 ten most relevant publications were selected from the collected literature and described according to a pre-determined format and included as the Annex to this report. All available literature was reviewed for this report but only those which are referenced in the text are listed in section 7.

The literature review considers the following questions:

- Which research frameworks and research approaches are used by researchers?
- What forms of new forest ownership types have been identified?
- Do any of these have specific forest management approaches?
- Which policies possibly influence ownership changes in the country and which policy instruments are directed at the needs of new forest owner types?

3.1. Research framework and research approaches

Forest ownership has traditionally been studied from a business economics perspective (e.g, Sekot, 2001). Only recently also other approaches discovered private forest ownership as a study object, including sociological and policy science (e.g., Hogl et al. 2005), market studies (e.g., Schwarzbauer, 2005) and innovation research (e.g., Rametsteiner et al. 2003). While business economics still focus their work on traditional large and small forest holdings, the newer social science approaches also look at new forest owner types, their motives and behaviour. A certain special focus thereby is put on their attitudes towards wood production and related forest management services by service organisations because national and EU policy has a strong interest in wood supply (wood mobilisation).

Studies are almost exclusively done at the University of Natural Resources and Life Sciences, Vienna. Contributions are done at the Department of Economics and Social Sciences and by various institutes: Institute of Forest, Environmental and Natural Resource Policy (forest owners motives and behaviour, policy instruments), Institute of Agricultural and Forest Economics (business economics), Institute of Marketing and Innovation (market studies), and Institute of Production Economics (wood logistics). An important impulse was given by a research group at the Institute of Forest, Environmental and Natural Resource Policy which is also part of the European Forest Institute. This research group started as EFI Project Centre INNOFORCE and is now institutionalised as EFI Regional Office for Central-East European Countries (EFICEEC). Other organisations include the joint research centre Kompetenzzentrum Wood K-plus GmbH (market studies) and the University of Applied Sciences Wiener Neustadt (marketing strategies for forest management services).

The funding is partly national (national studies as well as the financing of the EFI Regional Office EFICEEC), partly European (EC DG AGRI for the tender on Prospects for the market supply of wood and other forest products from areas with fragmented forest-ownership structures).

The research approaches include sociological, policy science, economics and market studies (for an overview see Weiss et al., 2007). Quantitative surveys of forest owners as well as qualitative methods (in-depth interviews, focus group discussion) are used. The surveys mostly cover the whole of Austria but include also regional case studies.

The major results are typological studies of private forest owners that include non-traditional owner types (Hogl et al. 2005). These types form a sequence, ranging from forest owners with a strong agricultural background to forest owners with no agricultural background at all. The types without agricultural background markedly differ in their behaviour in various respects, e.g. in their use of the forest or in their interest in forest-related information. When looking at private forest owners' attitudes towards wood production and the possible use of forest management services from service organisations, they fall into two rough groups: farmers and non-farmers (Weiss et al. 2006). The main instruments applied by policy practice to reach and influence small forest owners are advice and cooperation models. The institutional actors, however, hardly orient their public relations activities towards new/non-traditional forest owner types and their different characteristics in comparison to the traditional owners (Rametsteiner et al. 2003; Weiss et al. 2010; Stern et al. 2013).

For a critical assessment, it can be said that all themes of the COST Action FACESMAP are covered by previous studies in Austria, however, not all in detail. One result of the previous studies is that little is known about new or non-traditional forest owner types, both in research and practice. The main gaps seem to be the following:

1. New management approaches with a view to non-traditional owner types hardly exist in practice.
2. There are hardly any policy instruments oriented at new or non-traditional owner types. In general, there is little knowledge about new types of forest owners, which kind of forest management they would wish, and which instruments would effectively reach them.

3.2. New forest ownership types

A main result is the detailed typology from Hogl et al. (2005) which based on a representative survey and by means of cluster analysis presents seven types of forest owners: Farmer forest owners 20%, Part-time farmers 20%, Small-owners with rural background 12%, Forest owners previously employed in agriculture 16%, Farm leavers 10%, Urban forest owners 9%, Forest owners without connection to agriculture 13%.

Unfortunately, and because of the method used, the forest area cannot be given for these types, nor a trend or regional differences. The study says, however, that the trend is increasing shares of non-traditional (non-agricultural) types.

The study distinguishes "new ownership" from traditional ownership by a number of structural attributes: living in cities or in rural areas ("urban owners"), how far they live from their forests ("absentee" owners), if they manage a farm ("non-farm owners"), and other characteristics regarding their relation to agriculture, including if they grew up on a farm, if they have an agricultural education, and if they work in the field of agriculture and forestry (Hogl et al. 2005). This and the related study by Weiss et al. (2006) says that non-traditional owners do not regularly harvest timber but they often use the forest for their own fire wood. The main difference in their behaviour across all owners is between farm owners and non-farmers: Farmers are more income oriented, non-farmers value more the social values of their forests (Weiss et al. 2006).

3.3. Forest management approaches

Two main approaches are discussed in practice: a joint management of (small) forest properties (forest owner cooperatives or associations) and third party management services such as management planning, harvesting and marketing (Weiss et al., 2006). In fact, these approaches are however rather oriented towards traditional owners and hardly take into account the characteristics of new owner types. According to expert interviews (Weiss et al. 2010), the following measures are most important in practice: 1. Personal, individual high quality on-site assistance and advisory service for fragmented forest owners; 2. Public relations work to emphasize and improve the value and image of forestry in public opinion; 3. Improving and enforcing of GIS-systems for exact quantification of wood potential for Austria; 4. Transparency in timber supply

chain; 5. Establishing new communications path to provide specific prepared information for each fragmented forest owner type.

3.4. Policy change / policy instruments

The appearance of the “new ownership” types is explained by social change rather than by policies (Hogl et al. 2005). The main mechanisms are agricultural change and a change in lifestyle.

There are hardly any policy instruments directed at new forest owner types. As said under point 3 on forest management approaches, wood mobilisation measures are mostly directed towards traditional owner types, although other types are also meant to be covered (Weiss et al. 2010). For traditional institutional forestry actors it seems difficult to see the different social characteristics of urban (non-traditional) owners. Therefore, the success/effectiveness is very limited.

The main problem perceived is the good supply of the forest industry with raw material, and the main challenge connected to new or fragmented owner types is “how to reach them” with mobilisation campaigns or forest management services (Weiss et al. 2010). Therefore, these new types are often called UFOs (“Unknown Forest Owners”). In simplified form, the main solution applied or aimed at in policy practice is advisory services. Forest policy representatives believe that they are successful with their advisory services and see limitations in their budgetary and personnel capacities (interviews and workshop result, Weiss et al. 2010). Besides of their limited resources, the main hindering factor is seen in the lack of property and forest site data which hampers management and mobilization activities (Weiss et al. 2010). The activities planned are: Implementing GIS-Systems to realize potential harvestable forest stands (Database); Increase of personal on-site assistance and advisory services (Trust and Information, Realisation); Improvement and intensification of forest cooperation and chamber network; Setting workshops and awareness activities (Trust, Information and Realisation); Public relations work (Weiss et al. 2010). Researchers strongly recommend developing very specific measures when addressing non-traditional owner types because of their distinct values and goals connected with their properties (Hogl et al. 2005; Weiss et al. 2006; Weiss et al. 2010).

4. Forest ownership

The aim of this chapter is to give a detailed overview of forest ownership in the Austria. The most detailed information at 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. To make this information more comparable still, the information is also collected in an international format that 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 how far the national categories and definitions may be transformed into the international FRA data structure and the extent to which there are inconsistencies between them.

4.1. Forest ownership structure

4.1.1. National data set

Private forest ownership dominates in Austria with around 81% (Table 1).

Table 1: Forest ownership structure in Austria 2010 (source: BMLFUW, 2015)

Ownership	ha	%
Private forests under 200 ha	1.778.024	48.20
Private forests over 200 ha	784.347	21.26
Common rural property	402.746	10.92
Communal property	76.420	2.07
Provincial governments property	69.002	1.87
Austrian Federal Forests SC and other public forests	578.556	15.68
Total	**3.689.095**	**100**

Remark: Private forests include church forest ownership.

The first three categories of the classification are considered to be private forest owner types. Church forests are included in the first two lines. The category of common rural property is a traditional form of joint ownership by local farm stead's. It can be regarded an old common land ownership type although modernised. It is in fact a semi-private category as it is protected by law and administered by a specific authority.

Public forests are traditionally categorized in Austria into the three administrative levels: communal or municipal (local governments), provinces, and national. On national level, almost all forests are managed by the Austrian Federal Forests SC (Österreichische Bundesforste AG) and only smaller shares are under other administrative sectors (e.g., the ministries of defence and of transport).

In the quite simplified overview, it seems that the national data were transferred into the FRA categories in an appropriate way (Table 2), although the classification schemes differ slightly. The here used English term of "Common rural property" is the FRA term of private forests owned by "local communities".

Table 2: Forest ownership structure according to the Forest Resource Assessment (FRA)

FRA 2010 Categories (2005)	Forest area (1000 hectares)	(%)
Public ownership	751	19.45
Private ownership	3111	80.55
...of which owned by individuals	2124	54.99
...of which owned by private business entities and institutions	607	15.72
...of which owned by local communities	380	9.84
...of which owned by indigenous/ tribal communities	0	0
Other types of ownership	0	0
TOTAL	**3862**	**100**

4.2. Unclear or disputed forest ownership

In the province of the Tyrol, it seems that between 1950's and 1970's in many municipalities, forest and agricultural land of municipalities was unlawfully given to agricultural communities. This had been criticised by the highest Austrian court (Verfassungsgerichtshof) in 1982 and 2008 (Rechnungshof 2010). In total it is about an area of some 2000 ha. The case has been settled by law in 2014 (Amendment of the Tyrolean Agrarian Law – Tiroler Flurverfassungslandesgesetz) which is currently being implemented. In the new regulation, the relation between the agricultural communities (that have use rights in the forests) and the municipalities (who are the property owners) is newly defined: the forest land is transferred to the municipalities but the management is done by the communities.

4.3. Legal provisions on buying or inheriting forests

4.3.1. Legal restrictions for buying or selling forests

In Austria, there are restrictions for buying/selling agricultural and forest land at least in two respects: buyers should be farmers, and farms or forest parcels should not become too fragmented.

1. Buyers must be farmers or must have an adequate education in order to be able to manage the agricultural or forestry land appropriately (landwirtschaftliches Grundverkehrsrecht). Details differ between the federal provinces (Grundverkehrsgesetze). The aim of this regulation is to maintain the agricultural or forestry use of the land. The EU influenced this regulation recently in that way that an acquisition cannot be forbidden if the buyer can prove the management by a tenant. The regulation is not undisputed and there seems to be a trend to a more liberal regulation/interpretation. In practice, each transfer has to be approved by a commission (Grundverkehrskommission). One principle is that a priority is given to neighbouring farmers if they are interested to buy before a buyer without education may buy (Interview Urban). Neighbours may through this hinder the acquisition by a non-farmer; if they want to buy the land they only need to pay what is normally seen as adequate and not more, even if the non-farmer would have paid more (Interview Probst; Erasimus). Furthermore, there are restrictions for foreigners buying agricultural land or forest.

2. Another restriction, in some provinces, is that farms are not allowed to sell off parcels if the remaining farm holding would be too small to be profitable/able to support a family (e.g., Tiroler Höfegesetz, see also next item). Specifically for forest land, the Austrian Forest Act provides that forest parcels may not be divided into parcels too small for a regular management (Forstgesetz, §15 Waldteilung). This minimum area is specified in the provincial laws mostly around 1 ha. (Literature: Lienbacher 2012; Holzer 2012)

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

In Austria, there are special regulations on inheritance of agricultural land (including forests). In general, Austrian law says that – in those regions where this has been done by tradition – traditional farm holdings ("Erbhöfe") should not be divided but given as a whole to only one heir (so-called Anerbenrecht in contrast to Realteilung). Specific regulations are given in the laws of the federal provinces. These special regulations on farms differ from general inheritance rules and are therefore called "special inheritance rules" ("Sondererbfolge"). The aim is to maintain farm holdings big enough to support a farm family and to be profitable as a full farm. (Wikipedia: Anerbenrecht, Realteilung)

This regulation implies that the passed on farm is not valued by market prices but less (earning capacity value, Ertragswert) so that the inheritor is able to pay out the other apparent heirs. Forest land, if part of a farm, is included into this regulation (Interviews Urban; Probst). Pure forest holdings, however, are not subject to this regulation at the moment; there are suggestions to include also family forest holdings (Interview Erasimus). It may be possible also that part of the forest land is divided among the heirs if

these parcels are not seen as being part of the "core farm" (they are called wandering parcels – „walzende" Grundstücke; Interview Urban). It is a common practice that if the farm is given to one heir, single forest parcels are given to the other heirs as compensation. The above mentioned principle from §15 FG (Waldteilung) applies as well: the passed on forest parcels should not be smaller than 1 ha. If the estate is given as an entity, they are taxed by a lower value, if cut off parcels are passed on, their full value (including the stocking timber) is taxed.

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

4.4.1. Changes between public and private ownership

In Austria there is no relevant change between public and private ownership. The Austrian Federal Forests SC (Österreichische Bundesforste AG) buy and sell forests to a small extent (around 1000 ha per year but without much change of their total area). So does also, for instance, the City of Vienna. Smaller changes happened as described under point 2.

4.4.2. Changes within public ownership categories (devolution)

Within public ownership categories (e.g., state, public administration or corporations owned by public administration) the only significant change was the re-organisation of the Austrian Federal Forests into a public company (stock company) in the year 1997, 100% owned by the Republic of Austria (Bundesforstegesetz 1996, BGBl. Nr. 793/1996).

4.4.3. Changes in private ownership categories

Within private forest ownership: There is not a very active forest land market in Austria. The major change is the growing share of "new" or "non-agricultural" forest owners. The agricultural sector has been undergoing structural change in recent decades; many farms have been closed and the share of farms operated on a full-time basis has decreased in favour of part-time farmers. When a family gives up its farm, a 'new' type of forest ownership is established, in which the forest is no longer directly connected to agriculture. About 80% of Austrian farms count forests as part of their land. But the number of farm enterprises decreased from about 400,000 in 1960 to about 220,000 in 1999. There is also a clear trend towards part-time farming: in 1960 two-thirds of Austrian farms were operated on a full-time basis and one-third was operated part-time; this ratio is now reversed (Statistics Austria 2001). (Hogl et al. 2005a: 325). A cautious look into the future is discussed in Hogl et al. 2005b: 15% of the surveyed farmers say that they already know that their farm will not be maintained in future.

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).

The relevance of these drivers in the Austria context is presented in following table.

Trends in forest ownership in the Austria: New forest ownership through…	Significance*
• Privatization, or restitution, of forest land (giving or selling state forest land to private people or bodies)	**0**
• Privatization of public forest management (introduction of private forms of management, e.g. state owned company)	**1**
• New private forest owners who have bought forests	**1**
• New forest ownership through afforestation of formerly agricultural or waste lands	**0**
• Changing life style, motivations and attitudes of forest owners (e.g. when farms are given up or heirs are not farmers any more)	**3**
• Other trend, namely: /	

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

CASE STUDY 1: PRIVATIZATION OF PUBLIC FOREST MANAGEMENT

Re-organisation of the Austrian Federal Forests into a public company (stock company) in the year 1997: Austrian Federal Forests SC (Österreichische Bundesforste AG).

CASE STUDY 2: CHANGING LIFE STYLE, MOTIVATIONS AND ATTITUDES OF FOREST OWNERS

Based on a representative survey and by means of cluster analysis, seven types of forest owners are identified in the study of Hogl et al (2005a, b). These types form a sequence, ranging from forest owners with a strong agricultural background to forest owners with no agricultural background at all.

Strong agricultural background:

- Farmer forest owners 20%
- Part-time farmers 20%

Intermediary types:

- Small-towners with rural background 12%
- Forest owners previously employed in agriculture 16%
- Farm leavers 10%

No agricultural background:

- Urban forest owners 9%
- Forest owners without connection to agriculture 13%

These types noticeably differ in their behaviour in various respects, e.g. in their use of the forest or in their interest in forest-related information. There is an increasing need for forest policy-makers and extension services to recognize changes in the ownership pattern in the design of programmes and instruments to address effectively their target groups (Hogl et al 2005a, b).

4.5. Gender issues in relation to forest ownership

There is a full sample of Austrian agriculture and forestry businesses from Statistik Austria 2010 (Österreichische Agrarstrukturerhebung 2013 www.statistik.at/dynamic/wcmsprod/idcplg?IdcService=GET_NATIVE_FILE&dID=142150&dDocName=071011).

The latest survey data is from 2010 and includes the owners of the businesses by gender, age and size of property. The corresponding report was published in 2013, without disaggregated gender data. However, the data can be obtained from Statistik Austria (Direktion Raumwirtschaft, Land-und Forstwirtschaft) as a "separate analysis" (Sonderauswertung).

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

This section is concerned with forests owned by organizations such as conservation and heritage NGOs, self-organized community-based institutions and other philanthropic ("characterized or motivated by philanthropy; benevolent; humane" OED) organizations. The management objective for these forests is usually to deliver social or environmental aims with maximisation of financial or timber returns as a secondary concern. Most owners are corporate and may invoke at least an element of group or participatory decision-making on management objectives and high ethical standards. It is possible for such ownership to be entirely private. However, the provision of public benefits (services (e.g.

biodiversity, amenity, recreation etc.) which are free for everyone to enjoy or provide benefits to local communities (employment for disadvantaged people etc.) are sometimes recognised in the form of charitable registration. This in turn puts restrictions on the rights of the owners to use profits and to dispose of assets in exchange for tax exemptions and access to charitable funding.

For Austria assessment is as follow:

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

Forests owned by NGO with environmental or social objectives

There are a few cases where nature conservation groups bought forests for managing for conservation goals. WWF in cooperation with the city of Marchegg bought a piece of riparian forest which is a nesting area of storks. In the 1980's, the WWF also campaigned for "freeing" riparian forests at the Danube river as part of their protests against building a hydroelectric power station near the city of Hainburg (campaign "Au freikaufen"). In this case, 400 ha private forest was purchased. Usually, the nature conservation groups do not aim to purchase areas but rather campaign or initiate projects to be financed, owned and run by others. Also in this case, WWF did the campaign and transferred the money to an association founded to manage the forest for nature conservation purposes. (Source: G. Weiss, 2004, Innoforce internal report)

Forest co-operatives/forest owner associations

In Austria, some pioneer forest owner associations were founded in the 1950's and 1960's. A major trend started in the 1980's and 1990's. The original aims were mostly to joint marketing of timber, sometimes the focus was also on the realisation of joint forest roads or the development of management plans for their forests. The associations were often initiated by the forest authorities or chambers of agriculture. The foundation of associations is supported by public subsidies. The organisation differs between the federal provinces of Austria. In Styria, for example, they are organised on three levels: local (municipal level) and regional (district level) communities under the provincial main organisation. In other provinces, local forest owners cooperatives also exist independently from the provincial forest owners associations. In Upper Austria, for example, the local cooperatives are either focused on the joint work in the forests or in the joint purchase of forest machines. The provincial association focuses strongly on the joint marketing of the timber. They roughly market 15% of the harvested timber in Austria. The communities or associations also organise training courses or information events such as excursions or regular evening meetings ("Stammtische"). (Source: G. Weiss, 2004, Innoforce internal report). Furthermore, farmers' cooperatives have also been founded to run rural biomass based district heating plants (Weiss 2004).

The associations are mostly active in the business activities, less in interest representation which is traditionally done by the Chambers of Agriculture. The typical associations (Waldverbände) are in fact service organisations of the Chambers.

4.7. Common pool resource regimes

Commons - forest common pool resource regimes (CPR) are resource regimes where property is shared among users and management rules are derived and operated on self-management, collective actions and self- organisation (of rules and decisions). Examples of traditional CPR regime are pastures, forestland communities in Sweden, Slovakia, Romania, Italy and other European

countries and irrigation systems in Africa or Asia. The number of new common property regimes is growing and it is a challenge for this Action to transfer knowledge and skills of traditional CPRs to new CPRs and vice versa. An example of a new (quasi-) CPR regime is the community woodlands in UK, established in last 20 years mainly in Scotland and Wales. Our interest in “traditional” and “new” common pool resources regimes (CPRs) in European forest is based on the understanding that robust resource regimes are critical for sustainable forest management regardless of the property rights. Ongoing practice shows that local land users may also be CPR regime if they have the rights to determine management rules even though they may not own the land itself. Thus proper rules on management (harvesting, decision making and conflict resolution mechanism, cost/benefit sharing, sanctioning etc.) are key for sustainable use of CPR regimes.

In Austria, a special form of ownership is the common rural property. Historically, this goes back to the commons before this type of common property was transferred into Roman Law categories. It is a joint ownership of a local community of farms – the property is connected to the farm stead, not the persons. These properties are a kind of semi-public property because they are specially regulated by law and supervised by special authorities (so-called agrarian authority, Agrarbehörde). There are two names used for this: In the mountain areas, they are called “Agrargemeinschaften” and they often include mountain pastures and/or forest. In the Eastern part of Austria, they are called “Urbarialgemeinschaften”.

*For further information, the expert in Austria certainly is: D.I. Mag. Peter Herbst, Kärntner Agrarbehörde.

5. Forest management approaches for new forest owner types

5.1. Forest management in the Austria

When looking at the main ownership categories in Austria, as presented under section II, the forest management may be described as follows:

Private forests below 200 ha (owning around 50% of Austria's forest area):

- Forest owners of properties below 200 ha own the largest share of Austrian forestry enterprises. They mostly manage their forests as part of an agricultural enterprise where the income from forestry plays either a substantial or negligible role for the income. These forest owners are supported by the Chambers of Agriculture who employ forestry experts who support silvicultural planning with their expertise. In addition the Chambers support the foresters in administrative matters such as access to national or European subsidies. The forest operations, i.e. harvesting and marketing are done either by the forest owners or by contracted local/regional enterprises. Marketing is supported by the Chambers and by consultancy businesses.
- An exception is the small-scale forest owners owning only very small forest properties. They are usually not actively participating in the timber market, mostly because they are engaged in other professions and are only part-time farmers or no farmers at all. The forest products are usually consumed by the owner – mostly fire wood.
- New forest owners are not actively participating in the market. They have interest in forestry for a variety of reasons which not necessarily align with timber production. Due to the insignificance of the economic value and the possible frustration due to technological limitations may lead (and leads) to negligence of the forest property.

Private forests over 200 ha (21%):

- Forest owners of properties larger than 200 ha derive significant income from timber production and associated goods and services. They are organized by private professional associations who exert political influence at a high level (voluntary association of land owners on provincial levels, with an umbrella organisation on national level, Land- und Forstbetriebe Österreich). The enterprises have a specialized work force for forest management harvesting and their marketing of timber is mostly included in well-established cooperations or networks.
- Forestry is a highly traditional business. A wave of mechanization more than 3 decades ago was a fundamental change. Not only is the harvesting strongly mechanised (e.g. by use of harvesters) but also are the main forest operations such as harvesting in most forest holdings largely outsourced to entrepreneurs. Since then the changes have been rather incremental.

Common rural property (around 10%):

- These forest holdings are jointly owned by local farmer communities. They usually have the size which allows professional management by support of a trained forester. They are supervised and receive support by the agrarian and/or forest authorities. The farmers often do the harvesting work themselves or the work is outsourced.

Communal property (around 2%):

- Municipalities only rarely own forests. One larger forest owner is the city of Vienna who conducts are very specialized forest management with primarily public management goals, including nature conservation and recreation nearby the city itself, and watershed management in the drinking water reserve forests in the nearby mountains.

Provincial governments property (around 1%):

- The only significant provincial forest owner is the province of Styria who own a larger forest holding with commercial as well as nature conservation management goals as they own the core area of the recently established National Park Gesäuse.

Austrian Federal Forests SC (around 16%):

- The Austrian State Forest Enterprise (Österreichische Bundesforste AG) is a joint-stock company with a single shareholder, i.e. the Republic of Austria. The share of marginal-productive forests (protection forests) is rather high as a consequence of the history of the enterprise which means that the majority of the forests are in mountainous areas. Protection forests in the mountains with low economic value but high significance for protection against natural hazards were traditionally owned by the monarchy because of the mineral resources found there (salt and ore mines). A part of the technical forest operations is outsourced to enterprises. This decision is based on a stringent economic evaluation and gives room to highly specialized companies.

Basically, forest management is done by the owners. This applies to practically all categories, including: small and large private ownership and public ownership. Small farm forest owners do the management planning and the operations themselves; larger holdings (if the owner is not a trained forester and does it him- or herself) employ professional foresters to manage their property. They also often have some employed workers although nowadays the forest work is usually outsourced to entrepreneurs. The forest law even requires that forest holdings from a certain size have to be managed by trained and state approved foresters (Förster / Forstwirte mit Staatsprüfung).

Private forest owners receive support through advisory services and subsidies by the forest authorities as well as the chambers of agriculture. All forest owners are obliged to be member of the chambers of agriculture which are active as an obligatory interest group in the policy-making process but also offer advice.

A further special supportive structure is the forest owners' associations (FOA) which exist in all federal provinces of Austria (known under different names such as Waldwirtschaftsgemeinschaft, Waldverband, or similar; see short description under section II). They support private forest owners in the forest management planning, harvesting and particularly in the marketing of wood. Owners need to become member of these associations in order to have access to their services. In the year 2013 (an average year), some 2.5 mio m^3 timber have been marketed through the FOAs which is around 15% of the total harvested or marketed wood (around 18 mio m^3 per year). FOAs in Austria are quite successful and steadily growing in terms of membership and marketed wood.

The FOAs typically approach and receive members among traditional farm forest owners. New or "urban", "non-traditional" forest owners to a much smaller extent become member as they often think their property is too small, they do not know about the possibility, do not trust them or they are simply not so interested in active forest management.

At the moment, acc. to Weiss et al. (2006) only 16% of the forest owners are members in a forest owner association or cooperative, another 17% might consider joining, but 65% say they have no interest at all (Table 3; Weiss et al., 2006).

Table 3: Membership of private forest owners in an association or cooperation in Austria (Weiss et al, 2006)

Level of Interest	**%**
Member of a forest owner cooperative (WWG)	16
Becoming a member "could be considered"	17
No interest	65

Despite the idea of FOA is connected with smaller forest properties, the share of membership in FOA grows with the size of the forest holdings (Table 4). This indicates that FOA are an instrument for effective forest management (specifically for timber sales) which is rather used by "active owners". Especially very small owners are often not actively managing their land (Weiss et al., 2006). Even bigger holdings choose to sell their timber together with other forest holdings (Source: G. Weiss, 2004, Innoforce internal report).

Table 4: Membership in forest association and forest owner cooperation differentiated into different ownership sizes (source: Rametsteiner, Kubeczko 2003)

	Less than 10 ha	10-100 ha	100-500 ha	500-1000 ha	Over 1000 ha
Membership	16%	47%	35%	60%	62%

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

In Austria, new forest management approaches – particularly when connected to small or fragmented forest ownership – are dominatingly discussed from the perspective of wood mobilisation. Besides of that, the issue of nature oriented forest management (or close-to-nature forest management) is also always discussed in different ways from different interest groups, however, this is not specifically linked to non-traditional or new forest owner types. We therefore report here in particular to the wood mobilisation issue. The material is largely taken from the Austrian case study report prepared for the EC DG AGRI tender study "Prospects for the market supply of wood and other forest products from areas with fragmented forest-ownership structures" (Schwarzbauer et al. 2010).

Overview on wood mobilization measures in Austria, including the results from interviews and the focus group discussion (Table 5).

Table 5: Measures for wood mobilization in Austria (Schwarzbauer et al. 2010)

Measure	Applied by	Effect / Intention	Success
Personal, individual high quality on-site assistance and advisory service for fragmented forest owners.	Forest owner cooperation and forest advisory institution; other forest owners, private forest personal, timber traders, forest consultants,	Raising trust and awareness of possible potential, reducing prejudices, providing harvest and management services (full service or part services)	Very successful if enough resources are provided and applied by forest owner cooperations and forest advisory institution, less successful if provided by other forest owners or personal because low cost effectiveness.
Public relations work to emphasize and improve the value and image of forestry in public opinion.	forest – timber industry cooperation, forest owner cooperation	Establishing a positive public opinion of forestry and timber harvest,	Trend of last 10 – 15 years shows a positive impact of PR.
Improving and enforcing of GIS-systems for exact quantification of wood potential for Austria.	Forest owner cooperation, forest technical cooperation, forest – timber industry cooperation	Providing data for planning and management.	Successful as support for personal on-site assistance.
Transparency in timber supply chain	Forest owner cooperation, forest advisory institution	Intensifying transparency, securing payment and income, reducing prejudices, uncertainties and mistrust	Successful
Establishing new communications path to provide specific prepared information for each fragmented forest owner type.	Forest owner cooperation, forest advisory institution	Raising awareness of potential and harvest and management possibilities, reducing uncertainties, prejudices and mistrust.	Successful, individual and personal service is most appreciated by small fragmented private forest owners

The study concludes: “The main solution proposed and applied by the institutional actors (mainly the forest owners interest groups – the chambers of agriculture with their forest management associations) is to increase the available information on the forest resources for each owner, and the communication of this information to them. For that, they call for increased personnel resources to reach the owners on the ground. Because this position of the institutional actors is mainly based on their knowledge on traditional owners it may not work for non-traditionals, who may have totally different motivations regarding the resources in their (small) forest lands. In order to increase harvests among non-traditional forest owners, it is necessary to do research on their attitudes and motivations.” (Schwarzbauer et al. 2010; highlighting done for the COST country report).

5.3. Main opportunities for innovative forest management

Opportunities are seen in many ways but specifically in the focused orientation on the aims and needs of the different forest owner types.

Low input forest management: This includes the option to do a forest management which aims to reach forest structures which need as little work input as possible in order to keep stable (reduced input forest management). Such a management would be appropriate for all owners who have not strong interest in a regular forest management, including both traditional (farm) as well as non-traditional (new) forest owners.

New organisational models: A few new organisational models already exist or are discussed. They include the service offers by the FOAs such as: joint timber marketing, organisation of harvester work, forest operations by entrepreneurs, or taking over the whole forest management (from forest management planning until harvesting and marketing of the timber; often called “full services”). Still, these offers are typically addressing traditional forest owners and are not specifically adapted to new owner types.

Special aim forest management: There may be opportunities to develop totally new management approaches for non-timber goals. New forest owners may be more interested in doing activities oriented at other forest ecosystem services, including recreational, artistic, social, nature conservation, non-timber products, or other goals. This is by now not discussed in Austria.

5.4. Obstacles for innovative forest management approaches

One set of barriers are those seen by the forest practitioners/advisors/policy makers: They refer to the limited profitability of forest management that goes along with the fragmented of forest ownership. These barriers include limited knowledge of the land owners about their property (property borders, harvesting potentials, services offered to support in the management, marketing channels, etc.) but also limited knowledge of the advisory services about the owners, their properties, timber resources and motivations. In the end, this includes also limited personnel and budget capacities of the advisory services in order to be able to approach the forest owners (Schwarzbauer et al. 2010: p. 61).

Another set of barriers can be identified in the limited awareness of the advisory services about the different goals and needs of new or non-traditional forest owner types. This was concluded by the authors of the mentioned study on the basis of their interviews and focus group discussions. In order to increase harvests among non-traditional forest owners, it seems necessary to do research on their attitudes and motivations (Schwarzbauer et al. 2010: p. 65).

CASE STUDY 3: FOREST ASSOCIATION STYRIA – INNOVATIVE APPROACHES TO WOOD MOBILISATION

The Forest Association Styria offers a number of wood mobilization services, including the traditional joint wood marketing (yearly turn-over of about 70 mio €), the organization of joint harvesting operations (e.g. harvester), or forest management planning. Innovative services are, for instance, a “forest management plan – light” or the forest management contracts.

A) Forest management plan “light” (Waldpraxisplan): This forest management plan is a simplified FMP which is specifically oriented at small forest owners and gives only the necessary information required to know about the resources, harvesting potential and tending needs as well as to plan for measures. It includes a map of the forest resources and a management concept including management measures, costs and revenues. It is not too costly and therefore not a big barrier to do the investment into the plan. By showing the harvesting needs and potentials it gives the forest owners a trigger to start active management.

B) Forest management contracts: The association offers to take over the full management of a forest, including management planning, monitoring, and organization of harvesting and tending measures as well as timber sale. This work is done through a company which was founded by the association (with the name Forest Association Styria Ltd.).

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

Policy and ownership are related in various ways. Firstly, policies directly or indirectly influence ownership development or even encourage or create new forms of ownership. Secondly, policy instruments are emerging in response 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

In Austria, there any no policy instruments to stimulate privatisation, decentralisation, or nationalisation of forests.

The regulations related to inheritance rights with the aim to hindering fragmentation are described under section II of this report.

The EU policy instruments for afforestation of agricultural land apply. Subsidies are given to afforest lesser productive agricultural land, among others, to reduce overproduction but also to increase cost-effectiveness. There is a growth of forest land due to afforestation or natural succession of forests on agricultural land of about 4.300 ha per year in average (source: Russ 2011; Austrian Forest Inventory, ÖWI 2007/09).

There are also no policies creating new legal forms of ownership.

6.2. Influences of policies on forest management

According to the Austrian Forest Act, forest management planning in private forests is voluntary. There are subsidies for supporting forest management planning, in particular in smaller forest properties and for forest owners cooperatives. Furthermore, advisory services such as the Chamber of Agriculture do support forest owners through their advisory services. Larger forest holdings do have management plans as a standard planning instrument.

The main policy relevant for forest management in Austria is the national forest act because forestry is under national jurisdiction. Provinces are allowed to issue further additional regulations, a possibility which is, for instance, used in the mountainous provinces of the Tyrol and Vorarlberg. They provide for a stricter supervision of forests and offer specific support (subsidies, advisory services).

Policy instruments to influence the goals of forest management include such with the aim for close-to-nature forest management (advise, subsidies for natural regeneration and natural composition of tree species, etc.), active management of mountain forests (protective forests) as well as wood mobilisation (support of the formation of forest cooperatives).

In case of general restrictions of forest management in protective forests or Natura 2000 areas, there is no compensation. Compensation are given if site- specific restrictions are imposed (e.g., in nature conservation areas) and/or on the basis of voluntary contracts (e.g., increasingly used for the purpose of nature conservation).

6.3. Policy instruments specifically addressing different ownership categories

There have been a few studies that were financed by the ministry (BMLFUW). As described under section III, there are hardly any measures directed towards the needs of new owners. Only in rare examples, such approaches were used, for instance, near Wiener Neustadt, Lower Austria, where all owners of a larger forest complex (Steinfeld) were officially approached in order to motivate them for joint activities in improving the forest condition. Information letters and public gatherings were used.

Only recently, a campaign was launched in national daily newspapers, addressing all types of owners, asking if they want their forest to be “managed by the bark beetle or professional foresters/advisors”. The campaign, however, was not done by the

public authorities but by the forest owner association (Waldverband Österreich).

The association of small forest owners has been supported by subsidies that co-financed the forming of the group, forest management planning, purchase of forest machines as well as office equipment (forestry subsidies according to Austrian Forest Act).

6.4. Factors affecting innovation

Barriers in the adaptation of forest policies to different ownership categories may lie in the specific needs of different owner types: while larger forest holdings do primarily timber production (lack of adapting nature conservation goals such as in Natura 2000 areas), farm forest owners have their specific goals such as using the forests as a savings bank. New forest owners, again, have different goals such as fire wood use and are not interested in a very active management of their forests.

Further barriers are the traditional orientation of forest policies and advisory services at timber production. Other policy goals and the needs of non-traditional owner types are hardly realised by forest policy actors.

CASE STUDY 4:JOINT FOREST IMPROVEMENT IN STEINFELD, LOWER AUSTRIA

In the Steinfeld near Wiener Neustadt, Lower Austria, a joint campaign by the forest authority and the chamber of agriculture approached all owners of a larger forest complex (Steinfeld) in order to motivate them for joint activities in order to improve the forest condition. Information letters and public gatherings were used. The campaign particularly addressed also new, urban, small forest owners, for instance, by giving information on the social and cultural values of forests. This meant huge effort but also a considerable response by the owners.

CASE STUDY 5: WHOM DO YOU WANT TO MANAGE YOUR FOREST? THE BARK BEETLE OR A FOREST EXPERT?

The forest owner association Waldverband Österreich launched a campaign in national daily newspapers, addressing all types of owners, asking if they want their forest to be “managed by the bark beetle or professional foresters/advisors”. A contact is given for how a forest expert of the Waldverband can be contacted. The same is used on the internet portal of the Waldverband (http://www.waldverband.at/), leading to a few short topical articles on the possible risks (e.g. bark beetle or other damages in forests) and chances of forests (why to manage them) and a contact form in order to arrange a free of cost advisory meeting.

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8. Annex

8.1. Tables with detailed description of 8 most important publications

SELECTED REPORT/PUBLICATION - 1	
Full reference of study/publication	**Kvarda, E. (2004) *Non-agricultural forest owners in Austria – a new type of forest ownership*. Forest Policy and Economics, 6, 459-467.**
English language summary/abstract	This article aims to present two separate studies conducted in the past two years in Austria, in order to draw attention to the latent transformation of the ownership structure of forest owners and their interests in forests and forestry. In small-scale forests, changes in ownership are inseparably linked to the structural development of agriculture and are revealed by the shift of forest ownership from farmers to non-farmers through inheritance or other property transfers. As a consequence, the general trend is an increasing number of 'non-agricultural forest owners'. These so-called 'non-agricultural forest owners' or 'non-traditional forest owners' live in more urban areas, having non-agricultural professions and are relying on other sources of income than primary production. The results of a qualitative study indicated that the forestland from 'non-agricultural forest owners' is viewed from a more socially oriented perspective with concern for enjoyment and utilization of timber for own needs and by coming generations. The question, how many 'non-agricultural forest owners' in Austria exist is still not answered. However, it can be assumed that the amount of this type of forest owners could increase.
Language of the study/publication	English
Type of organization conducting the study	University
Type of funding used	Public EU/cross national Europe
Regional scope	National
Theoretical approach	Theory of Planned Behaviour, Typological study.
Methodical approach	Quantitative survey
Thematic focus	Ownership change Motives and behaviour of ownership types
Main results should be given here if not yet included in the summary.	Fragmented ownership structures are seen as a major problem and a hindrance for increasing the use of timber resource. Difficult to consult the 'non-agricultural forest owners', because some of them even do not know where their forests are or form a wrong idea of forests and forestry. The most important objectives of the majority of the forest owners in traditional forest and afforestation areas are natural protection, contribution to biodiversity, enhancement of the landscape and recreation. However, the income from wood, supply of timber for private use and the forest as an asset for the next generation are more important for the forest owners in the traditional forest area. Policy instruments (subsidy programmes, consultation services, technical help, etc.) should be 'tailored' to the specific needs of different types of forest owners, because the traditional consulting instruments and services only concerned on timber production does not fit any longer to most of the forest owners' interests.
Weblink	http://www.sciencedirect.com/science/article/pii/S1389934104000188

SELECTED REPORT/PUBLICATION - 2	
Full reference of study/publication	**Rametsteiner E. und K. Kubeczko (2003) *Innovation und Unternehmertum in der österreichischen Forstwirtschaft*. Schriftenreihe des Instituts für Sozioökonomik der Forst- und Holzwirtschaft, Band 49, Wien.**
English language summary/abstract	Innovation and entrepreneurship in the Austrian forest sector: The objective of this study is to describe the actual situation of innovation and entrepreneurship in forestry in Austria and its determinants. An emphasis is placed on innovation performance and the institutional system that is impeding or supporting innovation behavior. The research approach taken keeps a narrow focus on forest enterprises and on innovation that improve the economic viability of individual forest holdings. As being part of a broader comparative work with other countries from the Central-East European region (done in the framework of the EFI Project Centre INNOFORCE) this study is the comprehensive country analysis for Austria.
Language of the study/publication	German
Type of organization conducting the study	University
Type of funding used	national
Regional scope	National
Theoretical approach	Innovation systems analysis
Methodical approach	Quantitative and qualitative surveys: representative forest owners/managers survey on innovativeness (400 questionnaires) quantitative survey of institutional actors on various administrative levels (180 questionnaires) and qualitative interviews with representatives of the institutional system
Thematic focus	Innovativeness of forest owners/managers, preconditions for innovativeness and entrepreneurship, innovative behavior, supporting and hampering factors
Main results should be given here if not yet included in the summary.	There are weak preconditions for innovativeness of forest owners (e.g. fragmentation of ownership). Innovativeness strongly depends on the size of the forest property (larger forest holdings are more innovative). There are a number of weaknesses in the innovation system (institutional actors), including a weak innovation orientation of forest policies, and disconnectedness from the national innovation system.
Weblink	-

SELECTED REPORT/PUBLICATION - 3	
Full reference of study/publication	**Hogl, K., Pregernig, M., Weiss, G. (2005) *What is New about New Forest Owners? A Typology of Private Forest Ownership in Austria*. Small-scale Forest Economics, Management and Policy, 4(3), 325-342.**
English language summary/abstract	With structural changes in agriculture, new types of forest owners have become increasingly important. This article develops an empirically-based typology of forest owners in Austria. Based on a representative survey and by means of cluster analysis, seven types of forest owners are identified. These types form a sequence, ranging from forest owners with a strong agricultural background to forest owners with no agricultural background at all. The latter exhibit markedly different behaviour in various respects, e.g. in their interest in forest related information. The increasing number of 'new' forest owners raises important questions for forest policy, especially how policy instruments can reach these owners and how extension services can address them.
Language of the study/publication	English
Type of organization conducting the study	University
Type of funding used	National (Austrian Federal Ministry of the Environment)
Regional scope	National
Theoretical approach	Sociology, typological study
Methodical approach	Quantitative representative telephone survey, principal components analysis, interviews, cluster analysis
Thematic focus	Ownership change Motives and behaviour of ownership types
Main results should be given here if not yet included in the summary.	Steadily decreasing interdependences between forest ownership and agricultural enterprises. Considerable number of forest owners do not fit into the traditional picture of farmer forest owners. Revealed that Austrian forest owners are a diverse social group which can be statistically divided into at least seven distinguishable types The effectiveness of traditional informational instruments, which have been designed to primarily address 'traditional' forest owners, is called into question with regard to new owners.
Weblink	http://link.springer.com/article/10.1007%2Fs11842-005-0020-y#page-1

SELECTED REPORT/PUBLICATION - 4	
Full reference of study/publication	**Weiss, G., A. Malschinger, C. Bach, C. Mannert, O. Pavliska, E. Riegler, L. Sulzbacher (2006) *Bewirtschaftungsdienstleistungen für neue Waldbesitzertypen*. Gemeinsamer Ergebnisbericht von BOKU und FH Wiener Neustadt an das BMLFUW.**
English language summary/abstract	Forest management services for new forest owner types: The study has the aim to assess the potentials for forest management services for small (new) forest owners in Austria, including new forest owner types (acc. to Hogl et al. 2005). The forest management services comprise planning, harvesting as well as marketing by various service organisations (e.g. forest owner associations). On the basis of studying forest owners goals and motives, a marketing concept for relevant forest services is developed.
Language of the study/publication	German
Type of organization conducting the study	University, University of Applied Sciences
Type of funding used	National (Austrian Federal Ministry of the Environment)
Regional scope	National
Theoretical approach	Owners motivations and behaviour, marketing approach
Methodical approach	Quantitative and qualitative surveys of forest owners; marketing concept
Thematic focus	Motives and behavior of ownership types in relation to offered services for forest management by third actors
Main results should be given here if not yet included in the summary.	Motives and behavior of owners make it difficult to offer third party services. This is true for both, traditional and new forest owner types. The former have their own ideas and traditional way of working and cannot be changed easily in their behavior, the latter often have not much knowledge but also not much trust in third organisations to enter their forest. The main groups to look at are farm forest owners on the one side, and non-farm owners on the other. Their motivations differ fundamentally and any marketing concept should be oriented at these two different basic ownership groups. On the basis of the study, a concrete marketing strategy and concept was developed for new forest owner types, a novelty in Austria.
Weblink	-

SELECTED REPORT/PUBLICATION - 5	
Full reference of study/publication	**Weiss, G., K. Hogl, E. Rametsteiner, W. Sekot (2007): *Privatwald in Österreich – neu entdeckt*. Schweizer Zeitschrift für Forstwesen 158, 9: 293-301.**
English language summary/abstract	Private forest property in Austria – newly discovered: Around 80% of the Austrian forest area is private property. Recently, in addition to traditional and business economic research, sciences for sociology and innovation have also discovered the private forest property as a research subject. With respect to different property types, it is shown that the Austrian forest belongs more and more to non-traditional forest owners who show little interest in forestry. For years the actual wood production decreases significantly where rationalisation (large forest properties) or adjustments of the timber production to price fluctuations (small forest properties) are taken as counter measures. In general, the intensity and type of innovation activity strongly depends on the size of the property.
Language of the study/publication	German
Type of organization conducting the study	University
Type of funding used	-
Regional scope	National
Theoretical approach	Business economics, sociology and innovation research
Methodical approach	Literature review - overview study
Thematic focus	Private forest ownership – typology, innovativeness, forest management
Main results should be given here if not yet included in the summary.	Typology of private forest owners ranging from traditional to non-traditional owners (taken from Hogl et al. 2005). Revenues from timber production are decreasing when taking real prices. Larger forest holdings react with rationalization of operations, small forest owners react in accommodating the time of when to harvest. (Results by W. Sekot) Larger forest holdings are more innovative than smaller holdings (taken from Rametsteiner and Kubeczko 2003)
Weblink	-

SELECTED REPORT/PUBLICATION - 6	
Full reference of study/publication	**Stern, T., Weiss, G., Bostrom, C., Huber, W., Koch, S., Schwarzbauer, P. (2013*) Identifying measures for wood mobilisation from fragmented forest ownerships based on case studies from eight European Regions*. Jahrbuch der Österreichischen Gesellschaft für Agrarökonomie, 22(1), 19-28.**
English language summary/abstract	The paper deals with the identification of appropriate measures for increasing the market supply of wood from fragmented ownership structures. Case studies have been carried out in eight European regions. The analysis resulted in a categorization of three types of dominating market conditions and three different types of forest owners. It has been found that in general a significant number of fragmented forest owners show a strong and positive reaction with wood price changes. On the other hand it seems that in all regions there is a growing group of forest owners who are not participating in wood markets at all. When selecting wood mobilisation measures it is important to consider the regional market conditions and the forest owner type to be addressed.
Language of the study/publication	English
Type of organization conducting the study	University
Type of funding used	Public EU
Regional scope	Cross-national Europe (Saxony, Austria, Rhône-Alpes, Sweden, Catalonia, England, Hungary and Estonia).
Theoretical approach	Political science, sociology, market studies
Methodical approach	Case studies, literature review, expert interviews & focus group discussions.
Thematic focus	Ownership change Motives and behaviour of ownership types New management approaches
Main results should be given here if not yet included in the summary.	Wood mobilisation measures aimed towards fragmented forest owners is extremely dependent on region, market condition and forest owner type. Most efficient mobilisation may be achieved by a combination of measures selected according to the regional situation, mainly including the market type as well as the distribution of forest owner types and their objectives. Higher supply of wood from fragmented private forest ownership can be expected under rising wood prices.
Weblink	http://oega.boku.ac.at

SELECTED REPORT/PUBLICATION - 7	
Full reference of study/publication	**Weiss, G.. Huber, W., Schwarzbauer, P. (2010)** ***Prospects for the market supply of wood and other forest products from areas with fragmented forest-ownership structures. Case study: Austria.*****Commission of the European Communities, Rue de la Loi, Brussels, European Union, 82.**
English language summary/abstract	Austria is one of eight European regions represented in case studies within the project "Prospects for the market supply of wood and other forest products from areas with fragmented forest ownership structures". Private forest owners hold 80% or 2.6 million ha of the forestland and in the majority of cases the forest holdings are a part of farm enterprises. There is a mix of traditional and "nontraditional" small scale forest owners (<200 ha) in Austria. One aspect of the ongoing structural change in the agricultural sector in Austria is the increase of unknown forest owners (UFOs). One third or 55.310 forest owners are organised in 8 regional cooperatives of the Austrian Forest Owner Cooperative. These organised forest owners represent 866.500 hectar forests with a growing stock of 3.06 million m^3.
Language of the study/publication	English
Type of organization conducting the study	University
Type of funding used	Public EU
Regional scope	National
Theoretical approach	Political science & economics
Methodical approach	Literature review, expert interviews & focus group sessions.
Thematic focus	Ownership change Motives and behaviour of ownership types New management approaches Policy instruments addressing ownership
Main results should be given here if not yet included in the summary.	The reasons for the lacking use of the wood resources are manifold: First of all, Austria is a mountainous country which often implies high logging costs, and it is a developed country, which implies high salaries for forest workers. In sum, harvesting is not always profitable. This is, however, by far not the only reason for the lacking harvest, particularly relevant in small scale ownership: This type of ownership implies that the owners often are not educated or trained for forest management and do not have economic-oriented goals for their forest property. In sum, in both traditional and non-traditional ownership categories, not the full potential is used, for different reasons: While in traditional farm forest ownership, the reasons lie in limited interest, capacities and an often found "savings bank" attitude, in non-traditional ownership, there are additional reasons connected to the fact that these owners do not have much interest in deriving income from their often small forest parcels.
Weblink	http://ec.europa.eu/agriculture/analysis/external/supply-wood/austria_en.pdf

SELECTED REPORT/PUBLICATION - 8	
Full reference of study/publication	**Koch, S.P., Schwarzbauer, P., Stern, T. (2013)** ***Monthly wood supply behavior of associated forest owners in Austria - Insights from the analysis of a micro-econometric panel.*** **Journal of Forest Economics, 19, 331–346.**
English language summary/abstract	This paper examines the wood supply from non-industrial private forest owners in Austria. The main novelty of this study is threefold. First, the underlying dataset is based on monthly wood supply. This enables an analysis of seasonal supply behavior, which is found to be different in relation to the size of the forestland. Second, it represents an original study with a dataset from a Central European country whose forest owners are apparently much more fragmented than their Scandinavian or North American counterparts. And third, the study introduces a windfall variable that effectively corrects for a market-relevant storm event. With respect to methodology, a random effects Tobit model is applied. Additionally, a Chamberlain-like term is included in the regression to deal with a possible bias generated through the correlation of regressors and unobserved heterogeneity.
Language of the study/publication	English
Type of organization conducting the study	University
Type of funding used	National (Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management)
Regional scope	National
Theoretical approach	Economics
Methodical approach	Econometric Modelling (Tobit framework)
Thematic focus	Motives and behaviour of ownership types
Main results should be given here if not yet included in the summary.	Aim was to understand the key drivers behind the decision to harvest wood to make a prediction about the future (short-run) wood supply. The influence of the seasonality changes with the size of the forestland. Compared to units with large areas of forestland (>100 ha), smaller units (<100 ha) are affected much more by the agricultural business cycle since these rather traditional NIPF owners still generate a higher share of income through the cultivation of agricultural land than through the sale of their wood. This generates an active wood harvest during the winter time and a lesser one during the agricultural harvest season(i.e. late summer/beginning of autumn). This is the first study that uses a data set of Central European NIPF owners whose structure is usually much more fragmented in comparison to regions that have a much lower population density. Findings suggest that NIPF owners have a similar sensitivity toward prices. A price elasticity of close to one is often reported. Interest rates, on the other hand, serve a negligible role in this study while in others its impact appears to be decisive. Differences in the NIPF owner culture (traditional vs. investment-oriented) are possible explanations for that finding.
Weblink	http://www.sciencedirect.com/science/article/pii/S1104689913000251

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