COST Action FP1201
Forest Land Ownership Change in Europe: Significance for Management and Policy (FACESMAP)
2012-2016

Changing Forest Ownership in Europe – Main Results and Policy Implications

POLICY PAPER

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Executive Summary

The European Union has no explicit forest policy, so steering measures that affect the use of forested land belong to a range of other sectoral policies and is largely in the hands and responsibility of the Member States. Key success factors to enable policy coordination include a uniform knowledge base across and beyond the member states, and acknowledged ways for how to incorporate relevant forest policy expertise in designing and monitoring sectoral programmes on Pan-European, EU and national levels.

The present policy paper concentrates on the implications of changing forest land ownership on European policies. Based on scientific collaborative work by forest ownership researchers from 30 countries, stakeholder interaction and several regional and European workshops between 2012 and 2016, we summarize the new insights of ongoing and expected changes in forest owner types, the most relevant change patterns, and related advice for forest management and policy.

The main observed forest ownership change patterns were privatisation and restitution; buying forest land on market; afforestation; and changing lifestyles of land owners. All these changes lead to a growing diversity of different forest owner types and thus imply a need for revisions to policy instruments and forest management approaches, such as forest owners' associations, advisory and innovation systems, and types of support and management services offered to owners.

One notable observation is that a trustworthy strategy for policy measures will require the acknowledgement of intermediary forest owner types between public and private owners. Emerging common or community ownership forms, in particular, may play a growing role in provision of multiple ecosystem services and fostering sustainable rural livelihoods. In order to raise awareness on common and municipality ownership of forests, a stronger inclusion in surveys, studies and statistics is recommended.

A second observation is that the increasing diversity among forest owners, which has for decades been seen mainly as a threat to sufficient timber supply for forest-based industries, could rather be seen as strength and an asset in pursuing resilience in changing climate and fulfilling the diversifying societal expectations from forests. These include, alongside wood raw material, non-timber forest products, biodiversity, carbon sequestration, nature-based tourism, and health and social benefits from natural environments. In order to realise this potential, we see a need to develop new forest management approaches ranging from minimal intervention management to the production of new specific goods and services from forests. For making such development possible, new organisational and institutional solutions may be necessary, such as specific co-operations or associations for different owner types, or new ownership forms or new service organisations.

A collaborative synthesis process among European forest ownership researchers and stakeholders yielded recommendation for policy, practice, education and research as well as a range of topical research, development, and innovation needs, which are introduced at the end of this paper. In summary, we see a need for a better recognition of the different characteristics and needs of different ownership types in policy designs, forest management models, education, training and research. Specific research topics are listed but we also make the point that the issue of ownership should be included more strongly in any forest-related research because of its profound implications for management and policy response.

1 Background and aims of this policy paper

The European COST Action FP1201 FOREST LAND OWNERSHIP CHANGES IN EUROPE: SIGNIFICANCE FOR MANAGEMENT AND POLICY (FACESMAP) ran from 2012 to 2016 and brought together the state-of-knowledge in the field of forest ownership research across Europe by means of literature reviews, expert reports on country situations, specific topical analyses by small researcher groups, field visits, and close interaction with stakeholders on European and local levels. The objectives of the Action were:

(1) To analyse attitudes and constraints of different forest owner types in Europe and the ongoing changes

(2) To explore innovative management approaches for new forest owner types

(3) To study effective policy instruments with a comparative analysis approach

(4) To draw conclusions and recommendations for forest-related policies, forest management practice, further education and future research.

The work builds on expertise from 30 participating countries, collaboration with stakeholders including the UNECE-FAO Forest and Timber Section and the Confederation of European Forest Owners, and exchange with practice in three European and seven local level workshops.

This policy paper is a practice oriented summary of insights from all the work within the Action, including all activities and outputs as well as specific synthesis discussions among the Action participants. Rather than giving a full overview of the state-of-knowledge, we have the ambition to highlight the new insights that emerged from the joint work and discussions.

A draft version of the paper was distributed among stakeholders and was discussed in a stakeholder workshop on June 7, 2016, in Brussels. It was finalised by the group of authors from the Action with consideration of the Action findings and the feed-back from the stakeholder workshop and discussions at the FACESMAP Final Conference, Sept. 7-9, 2016, in Vienna. Responsibility for the text rests fully with the Action representatives (the authors).

2 Selected findings on forest ownership

2.1 A number of neglected forest ownership types: beyond public and private

Besides the most often discussed public and private forest ownership types, we find that there is a range of **more intermediary types** which differ significantly in terms of constitutional basis and objectives, and are worth recognizing in development programmes and policy processes in future.

- **Municipal forest ownership**: Although it may be argued that these are a sub-category of public ownership, they are often claimed to be distinct because of the closeness of the management (communes) to the multiple local beneficiaries (citizens). More than 10% of all public forests in Europe are in municipal ownership.

- **Common property regimes (CPRs)**: Such types of ownership exist in many European countries and in various forms, including traditional commons with a more or less unbroken history of 500 years or more, typically to be found in Austria, France, Italy, Romania, Slovenia, Spain and Switzerland. As an outcome of land reforms in the 18th and 19th centuries, community-owned or -managed forests were established in e.g. Poland, Hungary, Slovakia and Sweden, and also very recently in the UK.

- **Third sector ownership**: Social, environmental or other non-profit organisations increasingly acquire forest for special management objectives that often are in the public interest. Religious institutions are also expanding their land holdings because of restitution, e.g. in Romania, Serbia, and Slovakia. However, the availability of data for this type of ownership is patchy.

- **Investment funds**: Forest may also be seen as financial investment, and in this case (e.g. in Romania, Latvia, Finland and the UK) investment funds purchase forest land for intensive management and they market shares of forest funds to private investors. They can be compared to earlier development in the USA, i.e. TIMOs (timber investment management organizations and REITs (real estate investment trusts).

- **Forest co-operatives and forest owner associations** usually do not imply joint ownership of land but a kind of self-organised management for the benefit of their members. Their scope and objectives depend on their individual statutes, but it can be said for all that the cooperation itself provides opportunities for knowledge exchange among the members, more efficient and effective forest management, and facilitating implementation of policy programmes. They exist in 26 of the countries involved in the Action, and in pool a significant share of owners in some countries such as in Sweden where half of all forest land owned by private individuals is associated to one of the four major forest owner associations. Meanwhile, in the former socialist countries, which have been undergoing restitution and privatization, forest owner associations are seen as promising organizational structures to channel state support with the aim of technology transfer towards sustainable and profitable forestry under the new regime.

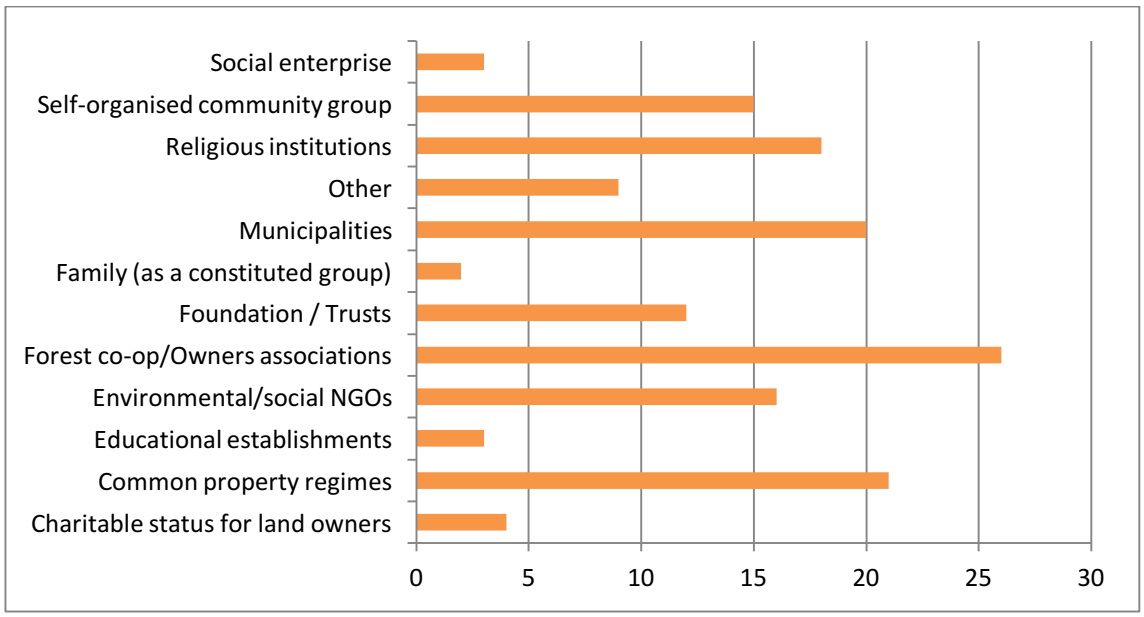

Figure1. Forms of joint ownership/management as reported within the FACESMAP country reports (n=28) (Živojinović et al., 2015).

2.2 Increasing diversity of forest ownership types: "new" forest owner types

There is an **increasing diversity of forest ownership types** in both legal terms but also when looking at the owners' motives and behaviour. New ownership types have often been coined "urban" or "non-traditional" owners, but in fact a multiplicity of contrasting types have been set up in policy practice and research, including the following:

Table 1. Examples for contrasting old vs. new forest owner types

resident owners	non-resident, absentee owners
farmers	non-farmers
active owners	passive owners
rural owners	urban owners
traditional	non-traditional

Although many researchers have tried to bring this diversity into a simpler and common typology, this is not feasible at a European scale: non-resident, urban, non-traditional or non-farmers are not the same but may all be of relevance for specific forest management or policy decisions.



2.3 No common typology of forest ownership types: typologies need to be created to fit the specific problem at hand

Typologies of forest ownership types **depend on the purpose of the typology** or the problem for which a typology is needed: to describe forest ownership structures; to understand their motives and goals; to explain their behaviour in terms of timber harvesting, delivery of public goods, forest management approaches, involvement in forest owner associations, and entrepreneurship; and also with the aim to develop service offers or to influence them with policy instruments. Primary types may therefore be as following, but they always overlap and have one or several "other" categories:

Table 2. Examples for dichotomical forest owner types

economists	multi objective owners
timber producers	environmentalists
income oriented	recreationists
optimizers	satisfiers
innovative	conservative
investors	indifferent

2.4 Diversity of policies in relation to ownership development

Countries differ greatly in how far they have policies to **influence the ownership structure**. A few relevant legal provisions in various countries are as follows:

- Restrictions related to buying or selling forests (e.g. to limit fragmentation, pre-emptive rights for neighbouring farmers, or limits for buying forest by foreigners);
- Specific rules related to inheritance (or marriage), in order to limit fragmentation or related to community forests;

In many countries, we found cases of **unclear or disputed ownership**, either related to restitution processes (in EE countries) or related to weak or lacking land registers and cadastres (e.g. Portugal, UK).

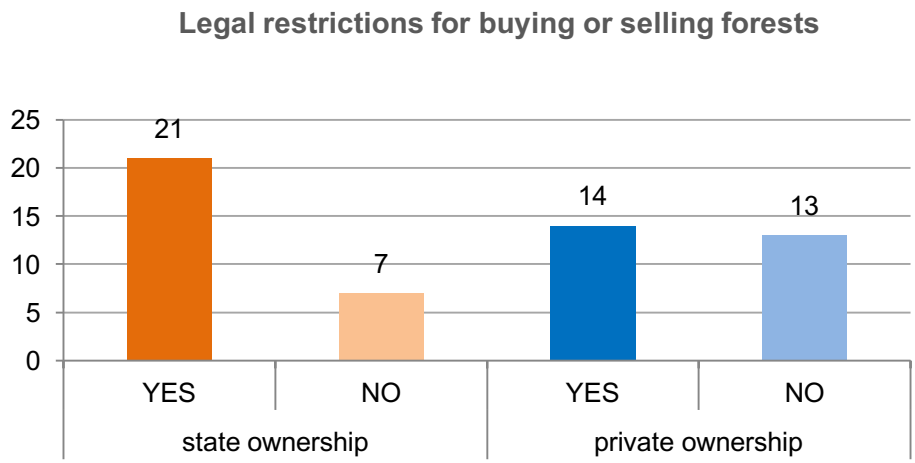

Figure 2. Existence of legal restrictions for buying or selling forests in state and private forests in 28 countries (data source: FACESMAP Country Reports, Živojinović et al., 2015)

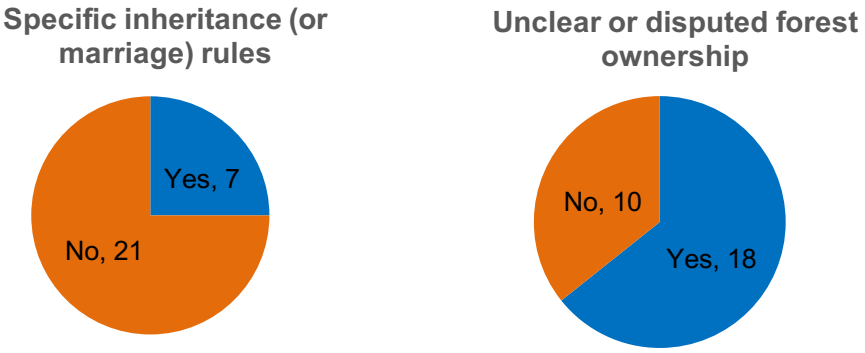

Figure 3. Existance of specific inheritance rules; and unclear or disputed forest ownerhsip in 28 countries (data source: FACESMAP Country Reports)

There is little knowledge, though, on the effectiveness of such restrictions or inheritance rules. In a few countries, specific policy programmes have been initiated for a consolidation of fragmented ownership structures: In Finland a specific regulation in the forest act was recently included for joint forest ownership and co-owned forests have been piloted in Flanders, Belgium. In Bavaria, a land consolidation programme was successfully implemented.

2.5 *Complex property* rights: trend for liberalisation of forest management, land markets and advisory services

The allocation of property rights to forest owners differs strongly across European countries. There is a tendency towards access restrictions for the public in private forests in Southern European countries, contrasting the so-called „everypersons' rights“ in the North. Furthermore, there is a tendency towards stronger official control of forest management in former socialist ESEE countries versus greater freedom of private forest ownership in the West of Europe. Overall, however, there is a certain **trend to liberalisation** in both East and West, including public forests re-organisation, privatisation and decentralisation (e.g., Germany, UK) and a market liberalisation of advisory services (e.g., Finland, Romania). While forest laws seem to become more liberal for forest owners, EU and national nature conservation polices may add further restrictions for forest management.

Poorly functioning forest land markets are seen as obstacles to the forest sector development in some countries. When designing any policies for market regulation/deregulation, trade-offs between different policy aims need to be balanced. State intervention in land markets often has the aim of land consolidation but functioning land markets may also direct forests into the hands of actively interested owners.

In addition to formal institutions, informal institutions also influence the property rights of owners. These informal institutions include the common understanding of owner rights by both owners and the public. The **feeling of ownership** (or psychological ownership) towards the forest holding is an important element influencing forest management decisions and the behaviour of forest owners. We find that various user groups (i.e. near-by cottage owners, local berry-pickers etc.) feel a certain ownership towards the landscape or forest land that they do not legally own. This observation calls for better contemplation of various property rights and responsibilities beyond traditional legal land ownership when aiming to design effective policy instruments and to safeguard wide societal benefits from private forests – from timber supply to amenity values.

3 Trends of change in forest ownership in Europe

A two-stage expert evaluation within the FACESMAP community has yielded a country-based assessment of forest ownership changes in the whole of Europe. We asked national experts to assess four different “trends of forest ownership change” during the last 30 years on the basis of comparative data and expert knowledge.

3.1 Restitution and privatization

In the expert survey, we asked for an assessment of the significance of privatization and/or restitution of forest land (time period: 1985-2015).

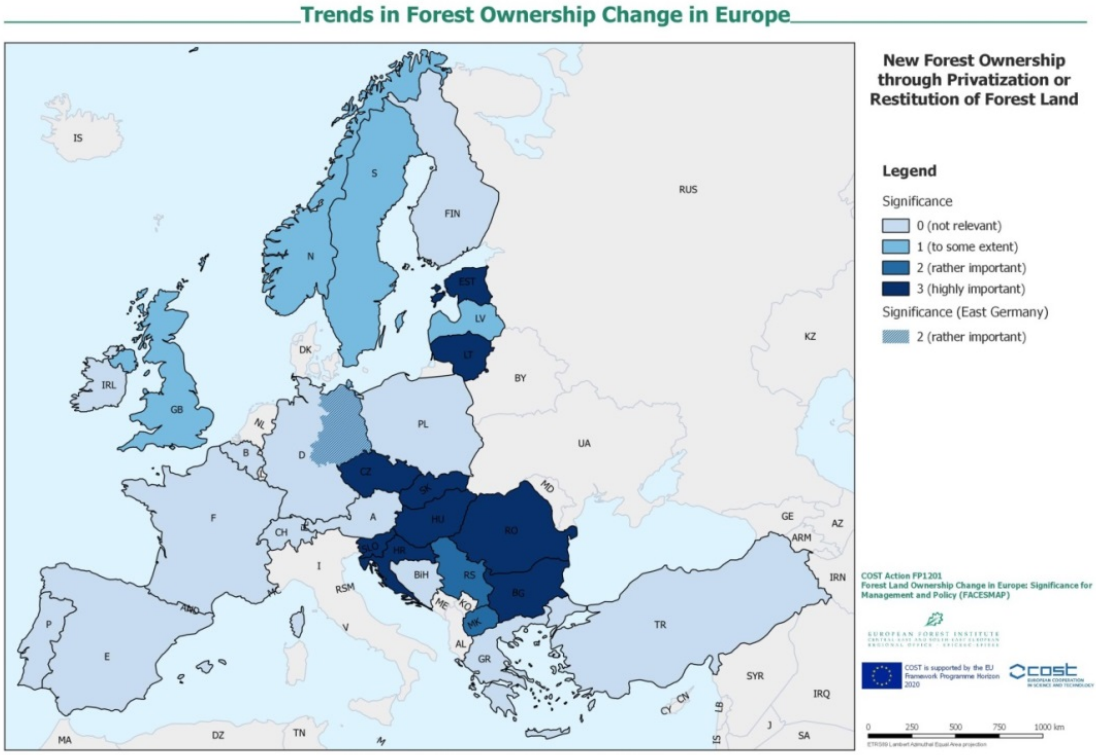

Figure 4. Map of forest ownership change through privatisation or restitution of forest land (data source: FACESMAP Country Reports)

The restitution of forests in CEE-ESEE countries had very diverse goals and was implemented quite differently (example: no restitution of forest land in Poland). It is still ongoing in many countries of this region. Until now it caused profound changes in forest ownership structures in most countries of this part of Europe (share of private forest owners raised in many countries from zero to more the 40 or 50% such as in Lithuania or Romania).

Privatization of state forests has also taken place in **other European countries**, but with no high percentages (Norway, Sweden, UK).

3.2 New ownership through market exchange

New (private) forest ownership by means of buying was assessed on the basis data if available or expert knowledge otherwise.

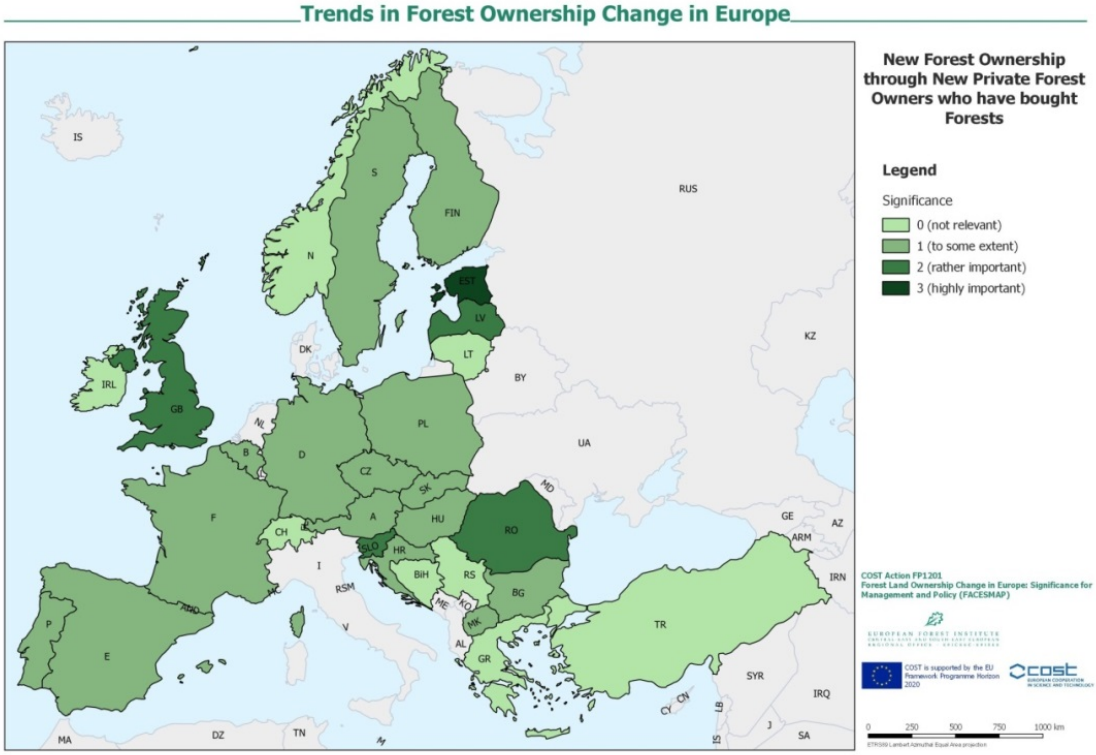

Figure 5. Map of forest ownership change through buying of forest land (data source: FACESMAP Country Reports)

The mobility of forest land on the markets differs greatly across countries. Besides a lively market in some **ESEE countries** after restitution, some **Western European countries** (e.g. UK) have higher turnover than others. Sometimes, the buyers are foreign investors (e.g., in EE countries such as Estonia) or investment funds (e.g. in Finland, Romania, Latvia). In some other countries, such as Sweden, Germany and Poland it is more characteristic that existing owners or their heirs buy in order to enlarge their properties.

3.3 New forest ownership through afforestation

Afforestation or natural succession of abandoned agricultural land creates new forest ownership whereby the owners may have had other forest parcels before or not. The picture presented here is based on statistical data available and expert assessment.

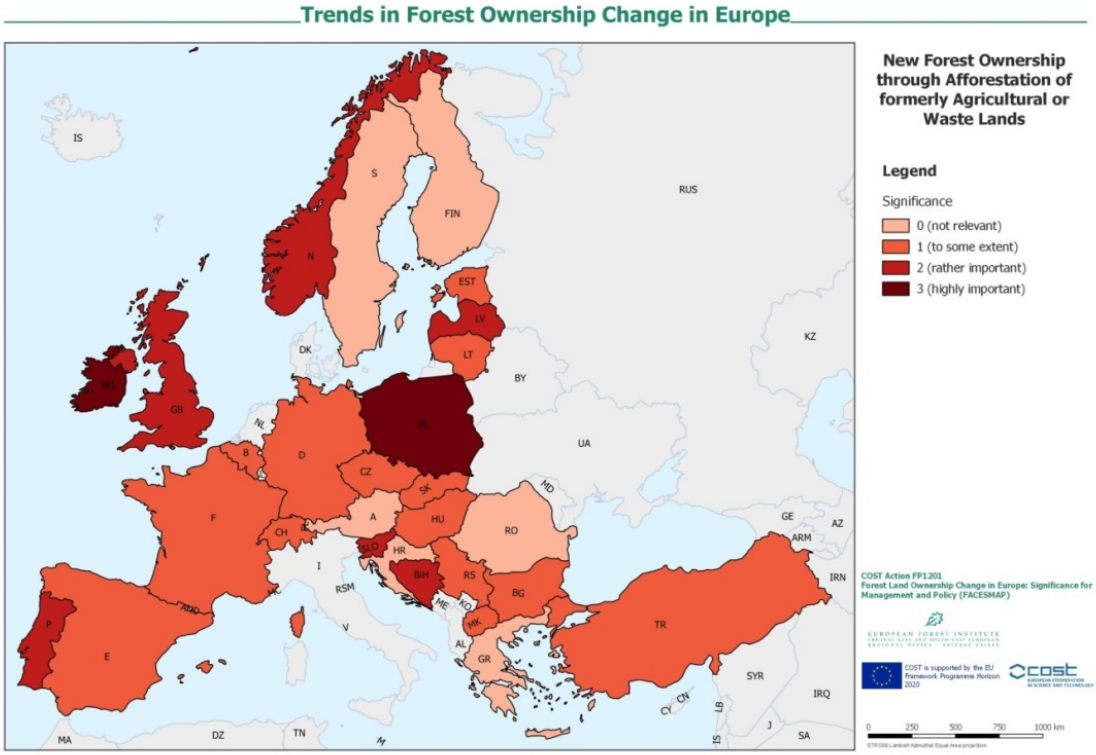

Figure 6. Map of forest ownership change through afforestation (data source: FACESMAP Country Reports)

Active afforestation is mostly relevant in the Western part of Europe (particularly Ireland and UK) and Eastern Europe (particularly in Poland or Latvia). In many Central or South European countries, but also in Norway, **natural succession** of abandoned land or where agriculture is not profitable any more increases the forest area as well.

3.4 New forest ownership types through changing lifestyles, motivation and attitudes

We aim here to picture the trend to urban or non-traditional/non-farm forest owners, with often different or new goals and motivations for their forests, for instance, non-economic goals, or total abandonment of forest management. This trend is often coined "urbanisation".

Indicators identified behind these changes include less farming, ageing population, depopulation of rural areas, as well as new objectives and goals for forest management when, for instance, the forest is not seen as an income source any more. It is the most relevant trend in Western European countries.

All in all, we see the **same trends of urbanisation ongoing across all of Europe**, however, to different extent and being in different phases. In Sweden, for instance, it is reported that much of this development has already taken place before the recent 30 years (the time period our survey refers to) while in ESEE countries this is rather ongoing as most of the restituted land owners are non-traditional by definition as they did not own any forest land during the socialist period.

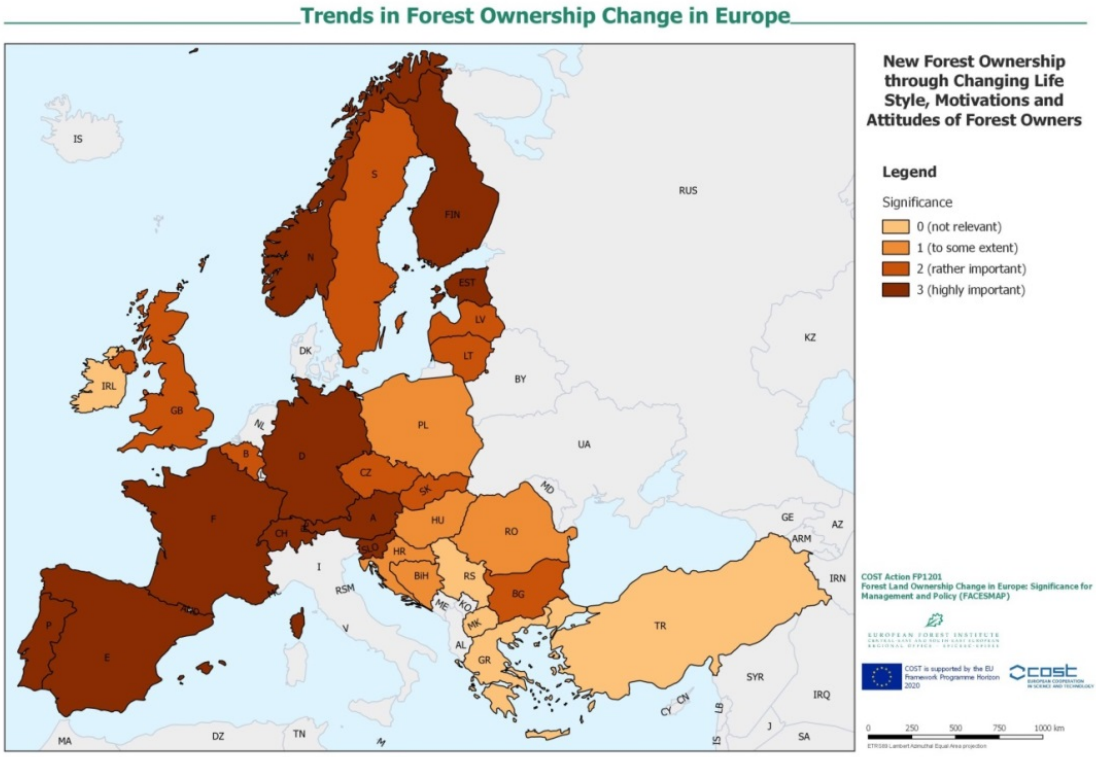

Figure 7. Map of forest ownership change through changed lifestyle, Motivations and Attitudes of forest owners (data source: FACESMAP Country Reports)

In Ireland and the UK, this trend is not seen as significant as the forest owners are mostly new owners anyway (afforestation).

4 Issues and problems identified around forest ownership

4.1 Lack and inconsistency of statistical information and forest owner surveys

There are several issues which drastically limit a European level analysis, to inform policy decisions or to lay the ground for strategic planning of policy instruments. A European overview and comparison across countries is hindered by the fact that **national statistics differ strongly** between countries. Thus very limited data are included in the global forest resource assessment (FRA) or the FOREST EUROPE database. The main national differences relate to:

- different definitions and methodologies in terms of forest owner types (e.g. in some countries municipal forests and/or common forest ownership are considered as private, in others as public);
- different definitions of forest area (and other wooded land);
- different time periods and certain gaps in the statistics;
- numbers of variables assessed;
- lack of forest cadastre in some countries (e.g. Portugal, UK).

A first attempt to collect the existing knowledge on private forest ownership in Europe was undertaken by UNECE/FAO in the ECE region (2005) which showed significant data gaps. An analysis of data from a renewed and more refined survey is currently ongoing in a joint endeavour of UNECE/FAO and the COST Action FACESMAP, which considers both official-statistical data sources as well as scientific surveys. This new study, however, cannot fill gaps if such data do not exist in the countries. Another attempt to bring together existing knowledge was done by the European Forest Institute with its "Forest ownership map of Europe", showing the distribution of private and public forest ownership, detailed on a regional level. This map aimed for a higher resolution of the public/private divide, however, does not include other information related to the owners and forest management.

Although clear definitions of public and private ownership categories exist for international data collection, the aggregation of national data is a challenge that is not yet fully resolved. Due to national definitions and traditions, ownership categories are grouped differently in the country statistics than required by international bodies, or definitions are interpreted differently. Problems occur with a number of specific categories, including: municipal forests (as distinguished from State forests and thus seen private in some countries); common/community owned forests which are in fact semi-public due to special regulations and thus categorized either as private in some (e.g., Austria) or public in other countries (e.g., Switzerland); and church forests (are allocated to public or private in different countries or given as a separate category).

Harmonisation efforts are recommended in the framework of the relevant international processes and through bringing together international and national experts. Furthermore, coordination between international or inter-governmental structures and EU bodies seems purposeful as they may need different kinds of data for different goals (e.g., forest resources assessment vs. policy planning such as for the EU Rural Development Programme).

An example: information on forest owners' gender structure

Here, we want to highlight one specific attribute of private forest owners, which is rarely discussed but relevant in practice: gender. This example illustrates on the one hand the

diversity across Europe, and the differing quality of available information on the other. The **share of female forest owners** differs greatly across countries, from e.g. 3% in Bosnia and Herzegovina to e.g. almost 52% in Lithuania.

Overall, gender disaggregated data of forest ownership is poorly comparable and partly incomplete in Europe. In some countries, there are no official data regarding the number of female forest owners (e.g. Portugal). However, the data available (incl. qualitative information) show that because of changes in heritage practices, restitution, and other societal changes, the group of female forest owners has increased across Europe, currently estimated to be about 30% in average of all small-scale forest property holders. From the limited studies available we can assume that female owners may have different preferences for their properties, different capacities to manage their forests, or different information and support needs than male owners.

Table 3. Share of female forest ownership in the 16 countries (out of 28) of the COST Action that could provide figures (data source: FACESMAP Country Reports)

Country (region)	**Individual private forest owners**
	Proportion of female owners (%)
Austria	31
Bosnia & Herzegovina	**3**
Estonia	44
Finland	38
France	30
Bavaria, Germany (single)	33
Thuringa, B-W, NRW, Germany	Ca 20
Ireland	Ca 17
Latvia	44
Lithuania	**51.6**
Macedonia	4-8
Norway	25.1
Slovenia	48.7
Sweden	38
Switzerland	Ca 20
UK	17-27

4.2 Poor understanding of forest owners' goals and behaviour

In both science and practice, we can hardly speak of a good and comprehensive understanding of forest owners' goals and behaviour. This knowledge is largely restricted to an average knowledge of their timber utilisation, and restricted to national situations and related to broad categories of owners, e.g. large vs. small-scale owners, or institutional vs. private owners.

Knowledge on owners' goals and behaviour varies widely across Europe. Scientific studies have not been done in all European countries and official surveys exist only in very few countries (e.g., Finland, Sweden). No forest owner surveys have been done at European level. The available studies, however, provide highly relevant insights into motivations of owners for forest management and how they could better be reached through communication means and advisory services.

Important insights include that monetary incentives may alter their behaviour in certain situations but that the deeper motivations are for most owners non-economic motivations and rather relate to their identity as owners and to family-related and social values. The majority of owners (i.e., within traditional as well as non-traditional categories) do not have narrow economic but rather multi-functional attitudes towards their forests and forest management. This has profound implications for the design of policy instruments that currently seem to assume owners to apply economic-centred forest management. Beyond this very general insight on forest owners motives, the research results furthermore suggest that the different characteristics of the diverse owner types should be considered in any policy programmes and with regulatory, monetary as well as informational-persuasive policy instruments alike.

Only a few studies have been done on new or non-traditional forest owners. Overall, **neither traditional nor non-traditional owners are in any way homogeneous**, and knowledge gaps relate to both of them. More information is needed on one hand on the linkages between owner's lifestyles and behaviour, and on the other hand on owners' goals relating to the variety of private and public goods and on the effects their forest management has on the provision of ecosystem services.

Stakeholders agreed with the postulation that policies should better respond to different preferences and needs of the various owner types – such as industrial or non-industrial, large or small, traditional or urban, farm or non-farm owners etc. These distinctions may be less relevant for forest management restrictions but certainly for supporting instruments such as advisory services or subsidies.

4.3 Limited knowledge on effects of policies on different forest owner types, and lack of specific policy instruments

On the basis of our knowledge about the great heterogeneity of forest owners with regard to their diverse goals and motives of ownership and forest management, we must **assume a heterogeneous picture of the effectiveness of different forest-related policies** and applied policy instruments. How do the different owner types respond to wood mobilisation or biodiversity conservation goals? How should policy instruments be designed to effectively reach them? Some work has been done in relation to wood mobilisation issues, but hardly related to other policy goals. Only recently have some spatial analyses advanced in combining ecological information on biodiversity values and social information on forest owners' attitudes towards forest conservation. Spatial propensity analyses, combined with participatory workshops, may be beneficial in targeting conservation, timber production, and other forest use priorities as well as marketing of respective policy measures across landscapes and to different owner segments.

There are indications that suggest that bottom-up and participatory approaches to advisory services are particularly well suited to reach and motivate owners, in combination to regulatory and financial means. For example, forest owners' associations have been successful in disseminating information and offering trusted services to forest owners on the local level, thus fostering wood mobilisation and active forest management. Urban forest owners' clubs, virtual social media communities, and other peer learning networks are, at least if facilitated by forest professionals towards an active and diverse use of forests, examples of participatory vehicles that may be cost-efficient as they make use of mutualinspiration by peers and thus require less state money to reach effects.

A relevant fact is also that interest groups exist primarily for state forests and for private/family forests but less for other ownership types. As a result, less common types such as municipal or community forests are hardly represented in policy processes on national or European levels. This may imply that the role of those ownerships is not properly considered or understood when designing policy programmes. Community and municipal forests may be relevant in particular for providing multiple ecosystem services and offering forest-use opportunities, such as recreation, wild food, health and social benefits for wider groups of people.

As a consequence of the limited knowledge on the plurality of forest owners, and the restricted understanding of forest owner motives and behaviour, only limited sets of policy instruments are applied in practice. Specific instruments addressed to different owner types do hardly exist. Although certain regulations need to be non-discriminative for all owners, there is ample space for specific offers to different groups, for instance, when communication activities and semi-public advisory services are concerned. Our findings in FACESMAP suggest that when streamlining the policy portfolio with emphasis on effectiveness and coherence, **attention needs to be paid to the policy response by new and emerging forest owner types**.

4.4 Need for more comprehensive understanding of the evolution of and design options for advisory services

Knowledge transfer and exchange between forest owners is based on a range of organisations, services and media, but a **holistic understanding of forest-related advisory services is lacking**. The existence of more traditional, top-down 'extension services', privatised advisory services, and peer-to-peer self-help groups varies with geography and political history. There are pros and cons to each approach, and it is valuable to understand the types and interactions of knowledge services as a whole – in the way that AKIS looks at Agricultural Knowledge and Information (or Innovation) Systems in a holistic way. This has rarely been done for forestry. While communication is important, it may not be the kinds of communication that policy has conventionally relied on.

While there is a trend to more and diverse public interests in the forest, advisory services and budgets are often cut at the same time. From our experience, it seems that new or specific public policy goals such as wood mobilisation or biodiversity conservation can only be reached with **appropriate investments into communication and advice**.

An effective advisory service not only depends on the amount of public budget but also its suitability and relevance to i) the policy goals and ii) the target groups. It seems that traditional advice services are less able to effectively reach the diverse groups of forest owners. The trends in Europe are the delegation of state extension services to advisory systems. This situation may be mitigated by diversifying i) the tools and methods of providing advice (e.g. Internet, or peer learning to complement the traditional face-to-face expert guidance), and ii) the providers of advice (e.g. deregulating advisory services, or offering starting grants to market-based advisory services).

An example for an interesting recent development is Finland, where a discontinuation of the obligatory forest-management fee and a related membership obligation has forced forest management or forest owners' associations to improve their service portfolio and marketing. Simultaneously, the field became more open to various service providers (e.g. private entrepreneurs) who offer more customized and specialized services for those owners who want, e.g., higher return of capital or new forest management systems such as uneven-aged management.

The European Forest Strategy 2013 encourages Member States to support forest advisory systems for awareness-raising, training and communication. The Forest Strategy could be a frame for a systematic assessment of advisory systems in the Member States and options for further development. As of today, a comparative analysis of advisory services has not yet been done and mutual learning across borders is rare. Advisory systems have largely evolved historically and have hardly been developed in a systematic and strategic way.

5 The future of forest ownership – key challenges

5.1 Are we able to see the diversity of forest owners as a strength and opportunity?

In the work of the COST Action FACESMAP, we have found that in policy practice, real forest owners are often contrasted to an ideal type and the diversity of forest owners is often seen as a problem from the policy and forest industry perspective. As a consequence, the impulse is to change or educate them, or to offer incentives to change their behaviour in the right direction. At the same time, there is a strong lack of understanding of forest owners' goals and motivations, and as a result these attempts are often not very successful.

In order to open up new ways of thinking and new solutions, we encourage a shift of view to a more **positive way of seeing the diversity of owners**: Instead of expecting that all owners should fulfil all different policy goals, it seems if only some of the owners fulfil some of the goals that would often be sufficient. With the diversity of owners – who are inclined towards different goals – this diversity suddenly appears as a strength, not a weakness. If we could match those owners with predominating economic goals with wood production goals, and those with environmental orientation with biodiversity conservation goals, we would achieve a better policy success overall. With a mosaic of different forest management styles by different owners across the landscape, the forest could become more diverse and resilient in an ecological and an economic sense at the same time.

Such thinking seems adequate both from a policy perspective and from a land owners' perspective. Forest-related policy goals are in reality quite diverse – they include biomass production, climate change mitigation and adaptation, biodiversity conservation, recreation, and many more. This new approach would not aim to reconcile all these

goals at the same time and on the same areas and for all owners, but to find those owners who are best inclined to follow certain goals. At the same time, this would take land owners more seriously, and would offer them a palette of options and solutions. With the prerequisite that we would know more about the diversity of owners and accept this diversity, this would allow new smart policy solutions AND a better service of owners at the same time.

5.2 Better awareness and knowledge of the plurality of forest owners!

The current discourse on forest owner types rests very much on a **false dichotomy** of traditional and non-traditional owners, farm and urban owners, residential and non-residential owners and the like. Such simple distinctions do not exist in reality and, furthermore, there is only a **vague understanding of any of these types**. On the one hand, it is true that these categories differ profoundly, but on the other hand, the categories are oversimplifying, and thus misleading. The concepts of “non-traditional”, “non-farm”, “non-residential” or “urban” owners firstly suggest falsely that they are homogeneous in themselves or that there would be continuous continuums between two extremes, and secondly suggest that we know the other, normal or standard type of owners very well – which is also not true.

For improving the situation, we would need better knowledge on different owner types through better statistical information, specific studies, as well as awareness raising activities among policy-makers and stakeholders. One means for improving the visibility of specific owner categories would be to represent them better in statistical data – for example, municipal and community forests. We would also need to accept that owners are diverse, and that it may be more useful to offer a range of policy tools and instruments for owners to choose from – for instance, for economic or ecological oriented owners.

5.3 A chance for improving the effectiveness of policies!

What does the diversity of forest owners mean for the fulfilment of policy goals? From our insights it seems that a better knowledge of forest owners’ goals **may be the key** to solving many of the problems in the implementation of forest-related policies!

Many forest-related policy goals are not satisfactorily fulfilled and the problems reportedly often connect to a **restricted acceptance by forest owners**. For illustration, let us look at two representative policy fields:

- **Biomass mobilization**: An increase of sustainable wood harvest and market participation by forest owners has been on the political agenda for a while and numerous campaigns and studies have been launched, without much improvement of the situation. The problems are often connected with a fragmentation of forest ownership and with an increase of non-traditional or urban forest owners with limited capacities and/or interest in wood production. This problem is one of the major drivers for funding forest owner research. The studies often conclude that the problem is multi-dimensional, that the issue of land ownership is central, that there are many different owner

types and that no easy recipes exist.

Recommendations include, among others, enhanced and improved advice services – directed at different owner types (see, for instance, “Good practice guidance on the sustainable mobilization of wood in Europe” by the EC, FOREST EUROPE and UNECE/FAO 2010, and the study on “Prospects for the market supply of wood and other forest products from areas with fragmented forest-ownership structures” of the EC, DG AGRI 2011). Also the current EIP-AGRI Focus Group 20 on Sustainable mobilization of forest biomass deals with “fragmentation, organization and motivation of forest owners” as one of the major challenges for forest biomass mobilization.

From the COST Action FACESMAP we conclude that successful examples may look quite different, depending on national specific situations: In Finland, a strong top-down and industry-driven system was challenged as being too rigid and changed to a more liberal, decentral and bottom-up approach in the advice system. In Scotland, with a lack of a strong central advisory body, several independent organisations developed that offer specific advice for the different owner categories. In Bavaria, a land consolidation programme had the side-effect that owners re-engaged in more active stewardship of their land or sold it off if they rather felt it as a burden.

Systematic studies on the effectiveness and success of different advisory systems with regard to different owner types are lacking still. But our results suggest that a more holistic encouragement of the advisory system, which links formal and informal, private and public, and top-down with peer-led, might be a more effective way of encouraging good forest management.

- **Biodiversity conservation**: Implementation studies of Natura 2000 uniformly indicate the conflicts with forest owners as one of the central problems in the policy implementation (see, for instance, the ERA-net Biodiversa study BeFoFu “Beech forest for the future”, or the upcoming EFI study on “Natura 2000 and forests – assessing the state of implementation and effectiveness”). Problems sometimes relate to a non-management of the forest (passive forest owners), but more often with conflicting management interests, i.e. wood production and income generation. Very limited knowledge, however, exists with regard to the consequences of both situations (non-management or timber-oriented management) on the conservation status of those forest areas. Furthermore, studies hardly consider the role of different ownership types and owners’ goals and motivations on the acceptance of the policy and the implementation of measures. On the basis of relevant literature and case studies it can be assumed that owners with different goals (e.g., income, multiple goals, recreation, experience and protection of nature, etc.) have also different attitudes towards conservation measures.

From the UK and other countries, case studies are reported where forest land has been acquired by non-profit organizations or other actors specifically for community-oriented, nature conservation oriented or multi-purpose management. According to what we have seen in the COST Action FACESMAP, these cases show that specific ownership types may be an option or solution for specific societally important forest management goals, at least to some extent and

in certain circumstances. Knowledge on the potential of such initiatives or the conditions for such solutions is, however, very limited.

The idea of tailor-made policies for different owner types seems promising as the diversity of owner types is increasing and it seems that these types increasingly represent different societal groups with their different goals. A long-term trend can be assumed in which society's and forest owners' goals are more and more converging.

From this view, an active support for forest land mobility on the market would be advisable. This could include support for creating new ownership forms with public or community goals (common, community, non-profit organisations, nature conservation or climate change trusts, etc.) but also joint ownership or management of timber-oriented ownership. The COST Action FACESMAP country reports include evidence of such specific forms of ownership. The UK example includes a number of possible policy instruments for land market mobility, including specific tax rules connected to forest acquisition and ownership, or regulatory instruments such as the "community right to buy" of public forest lands.

5.4 Making forest management more appropriate for different owner types

Do we need new forest management approaches for forest owners? To what extent are the so-called "new" forest owner types new? From the work in our Action we can conclude that new owner types are emerging with sometimes new management goals (e.g., non-income oriented or environmental goals), attitudes (e.g., regarding forest functions), and skills and capacities (e.g., in their involvement in decision-making or harvesting work). When owners have such new goals, preconditions and contexts, we have to assume this brings also new preferences for forest management, new knowledge types, and new preferences for information and communication.

So, yes, **new forest management approaches are required for different owner types** and it seems they have not yet been developed profoundly. The new ways of management may not necessarily mean absolutely new silvicultural techniques but definitely the appropriate application to specific situations and preferences of owners. We furthermore should not just think of silviculture or harvesting but also organisational solutions of the forest planning and work or even new business models (e.g. alternatives for property management services with varying levels of outsourcing).

From the plurality of new owner types we should assume as many new management approaches. Let's look at two controversial examples:

- **Minimal intervention, self-sufficient management model**: Forest owners with minimal income expectation from their forest but the aim to simply keep the forest stable and without a need to pay extra costs would ask for a model where management interventions are reduced to a minimum and which should only cover the costs. Such a management orientation seems to be a new case for a management design.
- **Creative new uses of forest resources**: Enthusiastic forest lovers without forestry background but a rather hobby-oriented but still entrepreneurial attitude towards their forest may be interested to do something new with their forest land. Innovations in their forest management may relate to developing new forest structures for recreational or aesthetic purposes, new products or services for their own use or for the market. Examples are known where fresh and successful market

products have been developed in such conditions (see, for instance, innovative examples of non-wood forest products from the StarTree project: birch sap and sparkling birch wines in Finland and Latvia, fruit wines in Scotland, herbal tea in Wales, boar bristle brushes in Latvia, etc.).

Organisational and institutional solutions are important in addressing these challenges. The range of potential solutions is broader than simply forest owners' associations or co-operation:

- First, one-fits-all or standard solutions may not be appropriate for all. As forest owners differ, and when existing organisations do not sufficiently care of different owner types, it might be promising to think of **specific co-operations for different owner types** which would better understand the members and would thus be able to support those owners with their specific needs. Examples from practice include the Finnish confederation of non-resident forest owners (http://www.etamol.fi/etusivu/), forest owner associations for female forest owners (e.g. the Black Woodpecker in Sweden) and a number of specific owner organisations in Scotland (such as the Small Woods Association; the Community Woodland Association).
- Second, new organisational or institutional solutions may include **new organisational models** for forest management, **new ownership forms** (see above), or **new service organisations**. In Sweden, the competition for timber (biomass) has made the forest industry very active in providing services including advice and information to small-scale forest owners. The Metsään.fi online service offers opportunities for city-dwellers and other absentee forest owners to be better able to manage their forests. A national action plan for e-information and pedagogical tools is in progress in France, which takes into consideration new forest owners – the aim is both to better identify and know them, and to better meet their expectations.

Advisory services and systems have an important role in developing new solutions and supporting forest owners. Different knowledge sharing approaches work best for different types of owners, and our study suggests that a **diverse and interconnected system** may be most useful. We have found good examples of services and organisations developed specifically for new owner types: for example, the owner associations developed for those to whom forest has been restituted in Romania; or the associations for community woodlands in Scotland and Wales. In each case these associations have linked well with government support, but they do not always integrate well with private or state forest services.

6 Summary of recommendations and research needs

The joint work of researchers from 30 European countries has shown that the diversity of forest owners is much greater than commonly assumed in policy, practice and research. This lack of understanding forest ownership relates to the legal forms (e.g., limited knowledge about forms and distribution of common, community or non-profit ownership) as well as to owners' goals and motivations (particularly but not exclusively of non-traditional owner types).

New owner types are emerging with sometimes new management goals (e.g., non-income oriented or environmental goals), attitudes (e.g., regarding forest functions), and skills and capacities (e.g., in their involvement in decision-making or harvesting work). Owners are diverse, and it would be advisable to develop a range of policy tools and instruments for owners to choose from. Emerging new owner types call for new ways of management, not necessarily requiring new silvicultural techniques, but certainly their innovative and appropriate application to specific situations. We furthermore should not just think of silviculture /harvesting but also organisational solutions of the forest planning and work or even new business models (e.g. alternatives for property management services with varying levels of outsourcing). The Action shows the need for better knowledge about owners through better statistical information and specific studies on national and European levels, as well as awareness raising activities among policy-makers through seminars, workshops and the like.

Recommendations for forest-related policies:

A variety of organisational, market and institutional tools, preferably concurrent but at least not conflicting are important in addressing these challenges. New organisational or institutional tools may include new organisational models for forest management, new ownership forms, or new service organisations, but without a viable market for forest based products and services, expectations will likely fall short. More reliable and regularly updated statistical information is needed, and evaluation of policy responses by owners, and impact, should be gained. In order to open up new ways of thinking and new solutions, we encourage a shift of view to a more positive way of seeing the diversity of owners: instead of expecting that all owners should fulfil all different policy goals, success could result if only some of the owners fulfil some of the goals. Policy tools, including incentives and advisory services, would be tailored to this diversity of ownership.

Recommendations for forest management practice:

More independent services and business models should be developed to nurture diversity and give owners more understanding of their options. There is a widespread tendency for forest advisory services to assume that the owners, especially the new owners, are not knowledgeable. Whilst they may not have a degree in forest management, they will certainly be knowledgeable about some aspects of the forest and their motivations for managing it; and will have learnt something from neighbours and

fellow owners. Many owners also learn through practice, and adapt their practice to circumstances. We see a need to build more on such practice, and to develop communication from practice to policy.

Recommendations for training and education:

Social scientists have for decades been calling for strengthening the social education and skills of foresters, and the combined findings of our COST Action only enhance that conclusion. In addition, forestry trainees and graduations will require skills in facilitation and communication, spatial literacy, and abilities to understand co-benefits of forests and an integrated vision of forestry within a wider land use context.

Recommendations for future research:

A plurality of approaches is recommended, alongside co-production action research that could enhance understanding of owners' genuine goals and foster innovation uptake. We see that the diversity of owner types has profound impact on forest management and on the fulfilment of any policy goals, a fact which is only rarely included in research so far. Any research connected to forest management and its relation to society and policy would therefore need to include the aspect of ownership. In addition to research into owners and their management practices, we conclude that the issue of ownership should be included more strongly in any forest-related research because of its profound implications for management and policy response.

Specific research, development and innovation needs:

1. Improved scientific and practical knowledge on forest owner types and structure and their preferences and needs

- Types of forest owners
    - Better understanding of the diversity of legal forest ownership forms with attention on special forms such as municipal as part of public ownership, old and new forms of common or community ownership, social ownership forms such as charity or other non-profit organisations, and special commercial forms such as investment funds.
    - Better understanding of social and demographic characteristics of forest owners, such as age and gender structure, including their specific preferences, behaviour and needs.
- Forest owners' values, goals, preferences and needs
    - Better understanding of different forest owners' values, goals and preferences, and a review and critical assessment of classification schemes.
    - Better understanding how different forest owners' values, goals and preferences relate to the various societal demands and forest-related policy goals.
    - Better understanding of how to approach and reach different forest owner types in terms of value systems, forest-related goals and motivational factors.

- Better understanding of different forest owners' support needs in decision-making, management and stewardship of their forests, including commercial and non-commercial goals.

- Forest ownership structures and trends
  - Share and geographical distribution of forest owner types, including legal, demographic as well as motivational types.
  - Review of past development and current trends of forest owner types and structure, including driving factors and
  - Influence of legal regulations and policies on the development of forest owner types, including direct instruments such as inheritance laws, tax regulations, land consolidation programmes, etc. and indirect effects of policies.

2. Improved knowledge on forest owners' behaviour, its determinants and implications for forest management and policy goals and development of practical solutions

- Forest owners' behaviour and its determinants
  - Conceptualisation of forest management approaches of different forest owner types within cultural, personal and property/farm- or forest holding related context.
  - Better understanding of how different forest owners' behaviour depends on their values and preferences, their institutional, economic, natural and social environments and existing support structures and policy instruments.

- Impacts of forest ownership forms on forest management and policy goals
  - Better understanding of how different forms of forest ownership management approaches impact on forest management and forest conditions.
  - Impact of different forest management approaches on the fulfilment of policy goals from various policy fields such as wood production, climate change adaptation and mitigation, biodiversity conservation, recreational values and other amenities and uses of forests.
- Innovative management approaches for special forms of forest ownership and new owner types
  - Innovative forest products or uses, new organisational forms of forest stewardship or novel business models for special forest ownership forms and new forest owner types.
  - New forms of governance for forest ecosystem services, or new forms of organisation of owner-society relations

3. Better understanding of and new models for advisory systems, support structures and forest owner policies

- Forest owner advisory systems and support structures
    - Better understanding of the historical development and variety of advisory systems and support structures, including public organisations, forest owners' interest groups, associations, cooperatives and other forms of cooperation, higher education extension services, R&D institutions, education and training organisations, etc.
    - Conceptualisation and mapping of types and forms of advisory systems on European scale and their strengths and weaknesses, including public and private forms, compulsory and voluntary membership types, one-for-all organisations or specific advisory services for different ownership forms or owner types.
    - Novel forms of support structures such as urban owners' and female owners' organisations or peer-to-peer groups, etc.
- Consolidation of fragmented ownership patterns
    - Conceptualisation and mapping of forms and models of forest owner cooperation on European scale and their strengths and weaknesses, including from loose forms of information exchange such as peer-to-peer groups, to shared machinery ownership and forest management and timber marketing cooperation, to contractual and legal forms of joint management or land ownership.
    - Good practice examples and novel forms of forest owner cooperation and joint management or land ownership across Europe and their cultural and institutional contingency and requirements.
    - Mapping and evaluation of policy initiatives for mobilizing inactive forest owners and/or consolidation of fragmented ownership patterns.
    - Factors that influence and ways to mobilize forest land markets.


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