EIP-AGRI Focus Group

Sustainable mobilisation of forest biomass

MINIPAPER 2: Forest ownership types

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1. Introduction

Forest ownership in Europe is as diverse as the species of trees that grow and the people that live on the continent. Even within regions, ownership types and structures vary enormously. Therefore, we begin this mini-paper by setting out a variety of categories under which to consider different forest ownership types. Next, we discuss several key issues affecting owners and draw conclusions from these discussions. Finally, we list a number of research needs and ideas for innovation related to the various issues. For further context, readers are directed to Mini-Paper #1 on 'actors and stakeholders'.

This mini-paper makes two major contributions to the wider Focus Group:

- Provides basis for discussions within other mini-papers by describing existing ownership landscape; that is, shows the Focus Group what type of structures its dealing with and gives it a 'working glossary' for discussions
- Outlines key ownership issues and subsequent research needs

2. DISSERTATION

In this section, we describe different types of ownership, before moving on to discuss several issues relevant to owners.

2.1 TYPES OF OWNERSHIP

Forest ownership types may be defined in several different ways. These include: the legal form of ownership; socio-demographic and social characteristics of the owners; and, their goals and attitudes for forest management.

2.1.1 Public vs private

In global statistics, a basic distinction is made between public and private forest ownership. The Food and Agriculture Organisation of the United Nations (FAO) provides common, international-level definitions for forest resources and forest ownership [1]. These are used for the regular global Forest Resources Assessments (FRA).

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FRA defines **public forests** as forests owned by: the State; administrative units of the public administration; or, institutions or corporations owned by the public administration. Public forests are therefore often divided into state, provincial and municipal/communal forests.

Private forests are defined as those owned by individuals, families, communities, private co-operatives, corporations and other business entities, private religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.

In contrast to public communal forests owned by the local political entity, community/common forests are owned by a group of private individuals, typically from a historical local community. This form of **common ownership** is often defined by law which makes it a special ownership category outside municipalities and voluntary co-operations, because they may be referred to as "semi-public" ownership in some countries. Besides community forests there is a range of other joint, philanthropic or charitable ownership. These have a goal to deliver social or environmental benefits rather than the maximisation of financial or timber returns. This may also be considered semi-public. Since they aim to provide public benefits (ecosystem services such as biodiversity, amenity, recreation or community-related benefits such as employment for disadvantaged people), these are sometimes officially recognised in the form of charitable registration. In exchange for tax exemptions and access to charitable funding, restrictions can be in place to limit the rights of the owners to use profits and to dispose of assets.

National statistics often use **different categorisations** which make it sometimes difficult to integrate national ownership tables into a common scheme. Countries not only use different sub-divisions but even the basic category of public and private are not always understood in the same way. Church, municipal and community forests are considered public in some countries while others file them under private. In contrast to the FRA definition, countries such as Bulgaria, Czech Republic, Latvia, Portugal, and Slovenia, file municipal forests under "private" in their national statistics, to distinguish them from State forests. Some countries classify their communal or municipal land (Finland, France) neither as public or private but under "other types".

Countries also use different interpretations with respect to whether **community forests** should be seen as public or private. In Switzerland, for example, forests owned by the citizen communities (people who have old citizen rights to that municipality; *Bürgergemeinden;* the former "common" resources) are regarded public. In contrast, Austria, Norway, Portugal, and UK see common forest land as a private category. In FRA those would be private as well.

2.1.2 Industrial vs non-industrial

The conventional distinction between industrial and non-industrial forest owners refers to their assumed goals and ways of forest management and is often equated to the distinction between large-scale and small-scale forest ownership. It is assumed that **"industrial"** or large (public or private) forest holdings pursue a systematic and professional forest management, usually with profit motivation and following a sustainable forest management model which would avoid over-

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exploitation but also underutilisation (orientation at the maximum allowable cut or sustained yield).

Non-industrial forest owners (NIPF) often have smaller properties that are sometimes traditionally connected to farm holdings. Forest management then follows the goals, needs and capacities of the farms which may differ from larger forest holdings in terms of management goals (tree species), models (even-aged or uneven-aged), harvesting techniques (machinery) and regularity of management. Depending on the farm-forest owners/managers' preferences or capacities, these forests are sometimes underutilised, but different forms of joint management could overcome these problems and increase the profitability of small-scale forest management through management operations such as joint harvesting and/or joint marketing of timber.

2.1.3 Traditional vs non-traditional

Different categorisations have been used with respect to owners' goals and motivations. These include distinctions between profit vs non-profit oriented, timber vs nature oriented, production vs protection oriented, or active vs passive owners. Owners are variously described as multi-functionalists, recreationalists, conservationists and economists. Several classification schemes exist but there is no singly accepted scheme.

When discussing goals and motivations of forest owners, traditional owners are often contrasted to so-called "new" or **non-traditional forest ownership types**. These new forest ownership types are often attributed as owners:

- living in cities and/or with an urban lifestyle – "urban forest owners[1]";
- living far from their forest and/or not on a farm – "absentee forest owners";
- or simply not managing and/or not living on a farm or forest holding: "non-farm/non-agricultural" forest owners.

The concept of new forest *ownership types* should not be confused with new forest *owners*. The latter would just have established or acquired their forest recently, and may be highly motivated as well as ripe for influencing.

Non-traditional forest owners typically have no connection to agriculture, have different goals and values than traditional owners and have often reduced skills and knowledge about forest management. Their forests are often very small, and as a result, these owners do not regularly manage their forests or only use them to retrieve their fire wood.

2.2 KEY ISSUES

2.2.1 Land Ownership & Rural Exodus

The trend of people migrating from the countryside to urban centres shows no signs of changing. Indeed, this exodus is expected to increase in the future. Several factors are contributing to this movement, including: work in traditional farming/forestry sectors isn't considered attractive;

[1] NOTE: 'Urban forest owners' should not be confused with 'forests located in urban areas'

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more mechanisation of agriculture means less manual labour required; services in rural areas (e.g. broadband coverage, recreation facilities, etc.) are falling further behind urban counterparts; and price stagnation of forest products in recent years, etc. The list is endless and indicates that less forest owners will live in the countryside and/or close to their forests.

In the UK, for example, many smaller woodlands are on farms with owners who don't appreciate the value of their woodlands. Timber values have been poor for many years and only over the last 10 years—with the advent of the wood-fuel market—have values risen. Many forest owners also have difficult memories of unscrupulous timber buyers in the past who have taken the best timber and left a mess. This is less of an issue now, but their memories are long. A significant number of new owners come from urban lifestyles and lack a fundamental understanding of woodland ownership/management. If properly informed, however, they can be keen to learn and often have the means to pay for advice. There are also opportunities as young farmers inherit the family farm and may be open to making more of their woodlands.

2.2.2 Structures to Support Owners

Structures to support forest owners vary nationally, regionally and with the profile of the owner. A single agency/organisation can provide several services/supports to forest owners. It may be argued that meaningful interaction between the owner and one or more of these support structures is key to mobilising the timber resource. Interaction with these structures is generally voluntary and may be initiated by the owner or by the support service.

Support structures are also important in the context of climate change and the need to have rapid response systems in place to deal with issues[2]. They are also providing front-line support in relation to pests/diseases outbreaks. Support structures include:

- **Advisory services**: These can range from State or semi-State services to fully private and can be provided free of charge or on a fully commercial basis. An example would be the free State-funded advisory and development support provided to new and existing forest owners in Ireland by Teagasc [2]
- **Training services**: In situations where forest owners wish to carry out forest operations they need to be adequately trained to do so. This can be provided by the State or equally by private training providers who train to an approved level e.g. UK NPTC standards. Certified training is normally a pre-requisite for insurance e.g. chainsaw operation. The cost of training, however, can be a barrier
- **Private consultants**: Most countries have well-developed professional consultancy services. These are generally provided at commercial rates. However, amongst smaller forest owners it can be *ad hoc* and is generally focussed on regulatory requirements (e.g. Management Plans) while on larger forest estates there may be ongoing relationships with consultants
- **Forestry contractors** provide a range of services and often are the link between the forest owner and the timber buyer (consultants can also provide this link). An adequate

[2] An example would be the Teagasc forestry advisory service in Ireland which was rapidly mobilised to support forest owners following the damage from Storm Darwin in 2014.

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supply of skilled and insured contractors with appropriate equipment is essential for the effective operation of the supply chain

- **Forest Owner Groups** have been operating in various countries across Europe and range from those whose primary aim is knowledge transfer to those who focus on advocacy to more commercially focussed groups who manage timber sales and operate associated businesses e.g. ESCOs
- **Forest Owners Organizations (FOO)** which have a huge role in private forest owner's activity, mainly representing their needs, mobilizing the creation of grouped management initiatives, advising and supporting at management and operational level, but also on training and awareness raising activities.

The 'Ward Forester' project in the UK, is an example of owners' support structures [3]. This initiative has assigned a forest manager to gain the benefits of economies of scale with 'one to many' advice, joint operations and marketing. However, the individuals in the group do not need to work together as a co-operative. One barrier to success has been the uncertainties around public funding support and bureaucracy.

Another example is the Portuguese Forest Intervention Zones (ZIF), which are large-scale geographic delimitated areas (above 750 hectares), specially designed for smallholding territories, which have as fundamental objectives the promotion of a more efficient forest planning, management and risk prevention of the small private forest areas that integrate them. Since the creation of the legal framework in 2005, 181 ZIFs have been established, with a total area of more than 900,000 hectares and involving the voluntary participation of more than 23,000 forest owners.

2.2.3 Gathering Motivations of Different Owners

Moving beyond "types of owners", we can add depth to discussions on how to mobilise forest biomass by capturing the varying motivations/interests of owners. For example, heritage and family connections, economic, environmental, etc. As outlined in the preceding section (2.1), various nuanced motivations may be at play, depending on the individual as well as on the ownership structure he/she is involved in.

For professional forest owners, the key motivation will be economic. However, for non-professionals, it may be necessary to provide an evidenced financial case for mobilising their biomass, which is often difficult as many of the woods are small and with difficult access. Often pure economical costs outweigh the benefits, and it is hard to persuade them otherwise. Farmer forest owners, for example, will be influenced by their peers so the importance of 'leading by example' should not be underestimated. The key often is to work on developing appropriate markets that suit the volumes and material coming from these woodlands. Although low value, the wood-fuel market has been a useful trigger for many farmers and landowners by enabling them to become self-sustainable with respect to energy, where they substitute imported fossil fuels with local wood.

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3. CONCLUSIONS

- Forest owners' cooperation is a strong force in Europe in a variety of forms due to differences in history, culture, and political/economic framework conditions. Such diversity enables the continuous adaptation to changing local and regional circumstances and contributes to sustainable forest management across Europe
- Forest owner cooperation and support services are the only way to secure in the future efficient and stable wood supply from areas with many small forest holdings enabling competitiveness of the forest sector in Europe and, at the same time promoting rural development and social networks. The actual support used will vary with owner's circumstances and location. With increased urbanisation of owners, the structures need to evolve to support this
- In many parts of Europe there is a clear potential to support stronger economic cooperation among forest owners, motivating and engaging them more actively in the wood supply chain
- Core funding is required, which would present a long-term opportunity to work towards sustained woodland owner associations. Membership could be incentivised by the State, and by making the association a conduit for reduced bureaucracy, permissions, sustainability verification and grants

4. RESEARCH NEEDS & IDEAS FOR INNOVATION

1. A **state-of-the-art description about changes over past 50-100 years** in the ownership of private forests in different European countries (as a baseline for future research). This would include all type of numerical data like: ages, size of forest holding, number of owners per holding, were the owners live, level of education, occupation, etc. The FACESMAP COST Action is a good start [4]. See also the example from Sweden in Appendix A. To compliment this, we require research focused on "What will the situation be in year 2040?", and "What effect will the situation in year 2040 have on the European timer market?"
2. **Tools to support different ownership types** *(link to mini-paper on 'Tools')*:
    a. Forest management plans (FMP) for small-scale forestry cover several different tasks; first, as decision support for the forest owner but also as communication links between the owner and other actors. A small-scale FMP typically describes the initial forest state and management proposals in the short term. Traditional FMPs lack long-term projections, systematic analyses of different management options, multi-criteria decision analysis of (contradictory) objectives concerning, for example, nature conservation and timber production. Such components are, on the other hand, included in recently developed forest decision support systems (DSS), such as the Swedish Heureka system [5]. Forest DSSs are frequently used by large and medium sized forest holdings but have great potential to also be used also by non-industrial owners. One example is the recently introduction within Swedish forest owners' associations of "forest owners' strategies" based on Heureka analysis of individual forest holdings.
    b. Potential to use some of the more useful remote sensing tools that are now becoming available. For example, Stand Mensuration and Tree Health monitoring

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are now available and could cut the cost of this work as well as attracting new interest in an owner's woodlands [6]

c. Develop forecasting models that include and simulate forest owners' behaviour; such models could encourage owners' engagement in the process and as a side-benefit capture some of their motivations. It would also lay the foundation for new metrics to assess non-industrial forest ownership in traditional forest inventory

3. **Existing Ownership Organisations**: How have owners in different parts of Europe been brought together already? This could be organisationally or virtually, to better obtain economies of scale in all different areas from advice, operations, monitoring, permissions, and marketing and other added value opportunities. In many parts of Europe there is a real tradition of Forest Owner Associations with all the economies of scale, communication and other collaborative benefits that can bring. It might be good to look at what makes them work, how best to establish them, what format works best and what incentivises owners to join? There is an interesting Bavarian case of Flurneuordnung which aims to de-fragmentise the small and scattered forest parcels – as an effect, the owners also become more aware of their property and become more interested and active
4. **Existing Owner Supports**: Adequate and appropriate support structures for forest owners are crucial factors in ensuring the successful mobilisation of forest biomass. A range of such supports exist across the regions/countries and some research has already been done on the impact of elements of this support (e.g. different types of forest owner groups). Bearing in mind the varying forest structures of the different regions and profiles of forest owners, it would be useful to identify successful support models (or combinations of support) and the key factors that led to the success. In the context of this Focus Group success is defined as regions where forest biomass mobilisation has been successful across the profile of forest owners. This would also help identify 'black spots' and other areas requiring intervention
5. **Goals, needs and behaviour of non-traditional forest owners:** Basic knowledge exists in many countries on values and attitudes but little on their specific goals for their forests, their needs of support and what this means for forest management. How goals and behaviours of non-traditional forest owners affects actual forest conditions and different policy goals: A broader research approach which does not focus only on wood mobilisation but is oriented at their support needs would be useful because experience shows that a narrow instrumental approach is often not effective. There is likely no more than a handful of core motivations. Such information could provide the context for how best to mobilise forest owners who do not see any economic reasons to manage their holdings (e.g. appeal to sense of civic pride or potential to be viewed socially as contributing to green energy). This could also explore the connection between local patterns of non-industrial private owners' management practices and the socioeconomic characteristics of the local context. Further, it may lead to approaches to fight abandonment and mobilise land (mobilizing land as a first stage of mobilizing biomass)

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Further research needs coming from practice, ideas for EIP AGRI operational groups and other proposals for innovation can be found at the final report of the focus group, available at the FG webpage **https://ec.europa.eu/eip/agriculture/en/focus-groups/sustainable-mobilisation-forest-biomass**

5. REFERENCES

[1] FAO. 2012. Review of forest owners' organizations in selected Eastern European countries, by G.Weiss, I.Guduric and B.Wolfslehner. Forestry Policy and Institutions Working Paper No. 30. Rome.

[2] Teagasc: Agriculture and Food Development Authority, Ireland; https://www.teagasc.ie

[3] Ward Forester: www.wardforester.co.uk

[4] Forest Land Ownership Changes in Europe: Significance for Management And Policy (FACESMAP); COST Action FP1201; http://facesmap.boku.ac.at

[5] Wikström, P., L. Edenius, Elfving, B., Eriksson, L.O., Lämås, T., Sonesson, J., Öhman, K., Wallerman, J., Waller, C., Klintebäck, F. 2011. The Heureka forestry decision support system: An overview. Mathematical and Computational Forestry & Natural-Resource Sciences. 3(2): 87-94.

[6] Rezatec: Analysing Earth Data; www.rezatec.com

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Appendix A: Example of National Ownership Statistics

SUMMARY

The distribution of productive forest land by ownership classes for Sweden in year 2012 is:

- 50% individual owners
- 25% private-sector companies/corporations
- 14% state owned companies
- 6% other private owners
- 3% state
- 2% other public owners

In year 2012 there were 329,541 forest owners, of whom 38% females, 61% males and for 1% there were no information on gender. The number of forest entities (owned by single owners) in year 2012 was 229,802, of which 68% were locally owned, 25% were owned by non-residents and 7% owned partly by non-residents. The table below shows the number of forest owners by gender, age class and size class.

Tabell 2.4 **Antal skogsägare (fysiska personer) med fördelning på kön, åldersklass och storleksklass produktiv skogsmark, år 2012**[1]
Number of forest owners (owned by single owners) by gender, age class and size class of productive forest land, year 2012[1]

Kön/åldersklass *Sex/age class*	Areal per ägare med fördelning på storleksklasser (hektar produktiv skogsmark) *Area per owner by size class of productive forest land, hectares*								
	1-5	6-20	21-50	51-100	101-200	201-400	401-1 000	1 001-	Summa *Total*
	Antal ägare *Number of forest owners*								
Kvinnor *Female*									
0-19	49	46	43	27	18	.	.	.	194
20-29	831	567	320	229	150	.	.	.	2 179
30-49	8 759	8 266	5 867	3 698	2 174	917	271	55	30 007
50-64	9 721	12 325	10 680	7 012	4 215	1 800	478	77	46 308
65-74	5 922	7 916	6 878	4 365	2 541	1 114	331	43	29 110
75-	3 585	4 955	3 984	2 336	1 355	576	199	21	17 011
Summa *Total*	28 867	34 075	27 772	17 667	10 453	4 474	1 302	199	124 809
Män *Male*									
0-19	48	52	59	44	19	14	.	.	242
20-29	935	827	599	373	249	104	.	.	3 145
30-49	11 105	12 340	10 374	7 140	4 612	2 139	687	142	48 539
50-64	13 374	18 435	17 442	12 531	8 035	3 687	1 173	245	74 922
65-74	8 792	12 194	11 214	7 588	4 720	2 043	721	130	47 402
75-	5 126	7 136	6 263	3 822	2 167	941	333	51	25 839
Summa *Total*	39 380	50 984	45 951	31 498	19 802	8 928	2 966	580	200 089
Kvinnor och män *Female and male*									
0-19	97	98	102	71	37	22	.	.	436
20-29	1 766	1 394	919	602	399	163	.	.	5 324
30-49	19 864	20 606	16 241	10 838	6 786	3 056	958	197	78 546
50-64	23 095	30 760	28 122	19 543	12 250	5 487	1 651	322	121 230
65-74	14 714	20 110	18 092	11 953	7 261	3 157	1 052	173	76 512
75-	8 711	12 091	10 247	6 158	3 522	1 517	532	72	42 850
Ålder/kön okänd *Age/gender unknown*	2 280	1 369	497	238	125	95	28	11	4 643
Summa *Total*	70 527	86 428	74 220	49 403	30 380	13 497	4 296	790	329 541

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