EIP-AGRI Focus Group
Sustainable mobilisation of forest biomass

MINIPAPER 1: Involvement of actors / stakeholders in regional initiatives for forest biomass mobilisation

Authors

Roland Schreiber (Coord.), Nuala Ní Fhlatharta, Henri Husson, Franz Thoma, Gerhard Weiss, Mark Prior, Jesus Martinez, Tomas Nordfjell, Nike Krajnc.

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Introduction

Forests are a major biological resource of Europe and fulfil multiple functions in ecological, economic and social dimensions. Besides preserving diverse landscapes, ecosystems, natural cycles and the biological diversity, they also represent the backbone for production and employment in forestry and numerous industries that all use wood as primary raw material. The collectively termed 'forest-based sector' embraces manifold material (or 'solid'), energetic and chemical uses of wood. It represents a major pillar of the economy that is comparable in size to other large producing sectors. It plays a vital role in sustainable growth, rural employment and climate change mitigation, which is being recognised more and more, yet still lacks understanding and proper consideration in regional policy making and public conscience.

The sector's forecasts for the coming decades predict a substantial increase of the demand for wood in all its sub-branches. 'Solid' uses will grow steadily. Novel chemical uses of wood emerge and start to gain momentum. The highest growth rate however indicates the bioenergy segment: wood energy plays a critical role in Europe's future renewable energy supply and the achievement of climate protection objectives. It is today the quintessential renewable raw material accounting for around 65-70% of total renewable energy output, and will continue so beyond 2020 until other renewables have reached comparable scale. These trends are expected to lead to a relative scarcity of wood, stronger competition and dynamic structural shifts in the forest sector, which is bound to a stable and secure supply of the common raw material. It is how-ever broadly acknowledged that forest utilisation could be increased considerably, because current harvesting levels are generally below the margin of sustainable allowable cuts.

Europe's forests, being the backbone of this sector, hold a considerable unused potential of wood resources. Research progress is being made in understanding the available wood potentials both at national and European level, yet these figures remain mostly theoretical and cannot assess the technically accessible, mobilisable amount of wood under market conditions.

The forest owners are the key actors in wood mobilisation and have to be addressed in the first place as it is their forest and requires the willingness to engage in an increased forest harvesting and related uses.

But there are other actors needed to ensure and guarantee a sustainable supply with the resource forest biomass. The Mobilisation of forest biomass includes mainly the following aspects that have to be considered:

- Economic and technical aspects
- Ecological aspect
- Social aspects

This paper is dealing with the involvement of actors inside and outside of the forest based sector to meet the increasing interest of societal groups on forest management due to the importance of forest functions (integrated approach). By involving actors outside the sector we include their values and experiences and gain their acceptance. Following the innovation systems approach (helix model) we need interaction between the relevant groups to achieve better solutions by joint learning, i.e. innovations, innovative approaches and measures.

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Type of actors and stakeholders

The topic of this paper is multi-actors involvement. Therefore the important actors have to be identified. Following the three criteria for sustainable forestry (economic, ecological, social criteria) the relevant actors are described according to their priority criteria.

Forest owners and Forest Owner Associations

The European forests belong to private, communal and state forest owners with quite different property sizes and goals with respect to the forest management. In many countries forest owners receive support either by counselling services provided by the forest administration or financial incentives.

Depending on their respective knowledge and capacities forest owners are either managing the forests on themselves, with and without employed forest workers or they make use of a broad spectrum of services.

These services are offered by forest owner associations, forest extension services, training centres, vocational schools, forest harvesting and logging companies, forest management companies, forestry advisers and consultants and research organisations. These services are privately financed or provided by government offices (i.e. forest administration) either free of cost or for a small charge.

European forest owners consider all three sustainability criteria when managing their forests as the forests are the basis of their livelihood and have to secure income over generations. Nevertheless individual forest management objectives can have an emphasis on one of the three criteria.

Forest based industry

The forest based industry is the important factor in the forest-based value chain where forest based products are processed further in sawmills, pulp and paper mills considering the aspect of cascade use of this valuable resource or as a general rule at the end of the product cycle are used for energy purpose in households or Combined Heating Plants (CHP).

Due to the dependency on forest biomass the forest based industry has to give priority more to the economic aspects and the safeguarding of jobs (economic and social-criteria).

Governmental authorities and organisations

Governmental authorities and organisations (i.e. regional and local authorities, forestry and environmental offices) guarantee the law enforcement of existing forest acts. Research institutes and education organisations provide the needed basis for decision (i.e. studies, inventories) and support the target group oriented knowledge transfer.
Societal demands for the sustainable provision of ecosystem services gain more and more importance. Outdoor activities like sport and general recreation take place outside and inside the forests and lead quite often to conflicts between the forest management and visitors/recreation seekers or even between the different recreational groups.
In between are the government offices, local authorities and planning bodies that are dealing with planning and multiple uses of available infrastructure and law enforcement. Besides the possible conflicts between people seeking recreation on forest roads and harvesting activities, issues of road haulage and exits onto roads have an important influence on forest biomass mobilisation.
Following the existing forest and nature conservation acts governmental organisations have to keep a focus on all sustainability criteria.

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Non-governmental organisations (NGOs)

Non-governmental organisations are the representative of their members and contribute towards the political programmes or the development and setting of forest management standards through certification schemes (i.e. FSC, PEFC and chain of custody). Right now the forest cover in Europe is already certified, 31 % to PEFC- and 31 % to FSC-standards.
According to the number of outdoor activities there is also a many-fold of actors and associations that represent the interests of their members (i.e. environmental organisations, certification bodies, hiking or sports club). This opens opportunities and challenges for forest owners to create an added value through recreation, tourism etc.
Depending on their subject of lobbying NGOs can prioritise either ecological (i.e. nature conservation) or social aspects (i.e. recreation).

Why do we need to involve actors and stakeholders?

Today's increasing societal demands on forests, the utmost importance of forests for the society to mitigate climate change and the concern for the environment has led to criticism on a mainly economic oriented forest use. The classic field of forestry is therefore requested to adopt a more integrated approach to guarantee and incorporate ecological and social functions, balance the impacts of forest use and extend its 'portfolio' with the provision of other goods and services (i.e. multifunctional forestry). In most European forest integrative forestry is already standard.

In response to this societal demand, forest governance comprises aligned social, economic and official state driven activities to guide and control peoples' interaction with forests and has become the leading approach in international forestry in this context. Forest governance initiatives work towards a balanced compromise between all parties.

Many actors in the wood sector (producers, mobilizers, users) intervene in mobilization. If increased forest harvesting is desired to meet current and future market demands, it is essential to overcome the still existing lack of collaboration of actors along the value chain and between public and private sector.

A functioning interaction of the different actors within the forest based sector (forestry, industry, research, training and education) and between policy-makers and forest owners will contribute towards the set objective of sustainable mobilisation of forest biomass.

Following the innovation systems approach a collaboration of the three groups (1) government, (2) industry and (3) research and training ("triple helix model") leads to better solutions by joint learning, i.e. innovations, innovative approaches and measures. In the expanded model ("quintuple helix model") with the public (or customers) and the environmental groups two more actors are included.

The common denominator is true sustainable forest management. We need to involve all stakeholders to gain acceptance for additional wood mobilization and increased demand for amenities (carbon storage, biodiversity, water harvesting preservation, recreation, hunting, etc.).

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Economic and technical aspect

Along the value chain of forestry and forest based industry a number of actors are needed to overcome existing barriers and to enable to process the mobilised forest biomass from the forest stand to the forest based industry. Without a functioning chain of custody all efforts on mobilisation of forest biomass are in vain.

The use of forest biomass must be economic viable with shorter supply chains to be competitive with other materials or raw materials. However the optimisation of the costs of mobilisation has to consider other requirements like the consideration of social and environmental aspects, which might lead to higher harvesting costs. Considering this the forest owners (producers) should benefit from a fair price for their wood according to the quality of their products and the compliance with standards to be able to finance a sustainable management of their forest.

Ecological aspect

To apply an integrated approach in forestry means to consider all aspects. The involvement of actors from the environmental organisations or offices will guarantee that forestry measures can take ecological concerns into consideration.

Forest work (transformation, improvement and maintenance of forests) must take account of the specificities of the territories. Here a diversity of silvicultural choices is a guarantee of biodiversity conservation.

Often there is a lack of clear indicators (i.e. stand structure, number of dead trees, etc.) that could help to make the discussion about forestry more objective. Here a discussion about forestry measures and a common agreement how the forest management should be operated could lead to a solution that helps to minimise environmental damages. This could be supported by an independent forest certification.

But forests fulfil a broad spectrum of ecosystem services and the discussion cannot be limited to environmental sound harvesting and biodiversity alone. Forests and the renewable resource wood contribute to many other aspects like mitigation of climate change (carbon sink, substitutional effects).

Societal aspect

Involvement of other actors outside of forestry will help to achieve a higher acceptance of forestry. Similar to the ecological aspects a permanent exchange with different societal groups will help to consider their demands in the forest management.

Timber harvesting must be explained to other forest users, sustainable management of forests transforms the landscape by respecting the paths.

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How to involve stakeholders

Beyond the technical improvement of 'classical' forest management, novel wood mobilisation approaches require inevitably a wider inclusion of stakeholders' opinions in forest policy making. In particular stakeholder groups that are not related to forestry (e.g. environment or recreation interest groups) have to be involved by participatory approaches. So far the Initiatives within forestry have often remained isolated among those, because they solely focused on technical issues of wood mobilisation or innovation in forestry.

Europe's forest regions are generally determined by ecological forest formations, yet they also belong to and represent an important element of socio-cultural regions. Such local initiatives can function as a gatekeeper to a broader range of stakeholders and a multiplier of innovative solutions within a region. For example tourism can serve as a vehicle to transport forestry issues and provide the ground for more awareness of the forest sector and its contribution towards sustainable development of a region.

Therefore numerous initiatives emerge throughout Europe, where multiple stakeholders aim to promote regional identity in various domains of economy, social well-being and/or conservation of their cultural and historical landscape.

In France, certain territorial approaches are exemplary in order to associate elected representatives, actors in the wood-based sector, bio-economy paper, conservation associations and forest users. But the forgetting of forest traditions must often be reminded of new generations of actors and above all trust between actors must be permanent.

Regional initiatives

Regional initiatives are often driven by different actors and demands and therefore do have different objectives. These initiatives have different names and are often called round tables, dialog forum, regional learning laboratories (SIMWOOD project) or regional travel laboratories (COST Action FACESMAP) etc. These initiatives can amongst others be used to promote sustainable forest biomass mobilisation.

The two examples of Ireland and Bavaria show how actors inside and outside the forestry sector are cooperating in regional initiatives.

Example Irish wood producer group

As part of a Teagasc (state agency) programme, the Wexford Wood Producers started as a small discussion group facilitating meetings and field trips with approximately 55 members, most of whom were inactive forest owners. Upon discussion with other SIMWOOD partners, it became obvious that the producer groups needed to become more proactive in coordination of members' forestry to plan, manage, harvest and market more efficiently to overcome the lack of coordination of forest and market operations for small, fragmented forests in Ireland. The second learning from the SIMWOOD partners were the limitations that the smaller, parochial producer groups bring and that to be effective and sustainable, producer groups need to have a very large membership. After the installation of a large biomass boiler in the region with a demand for 12,000 tonnes of woodchip to fuel it, the supply had to be secured through local, sustainable supply chains. As a result, a number of groups were motivated to discuss collaboration and in 2014, four local groups merged to form the Irish Wood Producers.

Example Mountain Forest Initiative (BWO) in Bavaria

The Mountain Forest Initiative ("Bergwaldoffensive" – BWO) is a part of a widespread program of the Bavarian state government against the global climate change. The measures of the BWO are specially designed for private and communal mountain forests, where the size of the single properties is usually very

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small. The central parts of the BWO are projects in specially identified areas with an elevated risk for degradation as a result of climate change. The local forest authorities are planning the single measures (i.e. natural regeneration, tending and road construction) and set them into action together with the forest owners in this region. Putting together different owners is increasing the efficiency and reducing the costs. A project manager of the local forest authority is taking care of the BWO-project from the planning until the completion and is a contact person for forest owners and stakeholders. The involvement of all concerned stakeholders on project level is implemented in BWO-advisory boards which consist of politicians, forest owners, local authorities and other organisations (i.e. hunters, farmers, conservationists). The BWO-advisory board is the key factor of the success of the BWO.

Cluster initiatives

These initiatives are usually driven by actors out of the same sector (e.g. forest based sector, environment, tourism etc.). The intention is not to invent or establish new structures, but the strengthening of already existing structures by providing support for improved cooperation between the actors in the cluster.

Example French Cluster

In 2010 in Aquitaine, clusters have been established to structure the logistics chain of woody biomass (through the AFO European program EEI "Activation of private forest owners to improve the supply of forest energy") in order to increase the supply of forest fuels and to change the behaviour of forest owners.

A roadmap of producers was signed between public and private actors, in order to balance productivity, fertility, sustainable management, to ensure the economic balance of the actors and to develop a common offer.

Since 2012 the national programme "MOVAPRO" extended and broadened those results, and intends to develop a guide to help decision-making to develop the levers and reduce the barriers of the sustainable wood mobilisation in stands in dead end in small scale forests by working on the value chain.

Centres of Competence

In these centres existing information and know-how is compiled in order to transfer relevant technical sectoral information to actors inside and outside the respective sector. The centres can have different appearances and could be an information centre for the broad public or in-house training or a specialised centre dealing with certain technical issues like renewable resources combining different industrial sectors.

Example CNPF (France)

For example the CNPF (National Centre of forest ownership) in France is a public body that contributes to the development of French forests through advisory and coordination activities, research, training and dissemination of knowledge. The CNPF integrates 18 regional delegations - Forest Ownership Centres (CRPFs) - which are key actors and arms of regional forest policies on all issues related to the management of private forests. It includes 400 salaries approving 33,500 forest management plans (3,400,000 hectares).
Its RDI Department (IDF) carries out many projects and actions aiming to optimize the interfacing between Research and practitioners, and the cooperation between the national expertise at national level and the local and regional experiences. Mobilization of forest biomass is one of its priority axe, in the Contractual Commitment signed with the Ministry of Agriculture.

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Proposals for research needs from practice

Recommendations for further research emerged to improve engagement

- The EU Member States could support the research on the set-up of innovative forest actions including the test of such a forest action. The research gap is related to the facilitation of forest owner associations with joint management and marketing (Ščap et al 2016). This recommendation can be regarded as a request to fund research, but it is also a policy need prior to the research gap.
- Analyse and identify options for cooperative management in small scale forestry. The EU Member States or the regions involved could support owners of small forests or the creation of groups representing owners of small forests. As an example, forest owners of small scale forests in Bavaria (< 5 ha) could be activated to have joint efforts for their forest management purposes.
- Analyse the need for land consolidation schemes and the required prerequisites (i.e. land registers). In regions with fragmented and scattered forest plots and ownership the possibility of land consolidation initiatives and schemes should be evaluated. These initiatives proved to be quite successful in Bavaria in terms of mobilisation as all involved forest owners benefit from economic viable size of their forest land (merged plots), better access due to new built forest roads and intensified communication about forestry. This has an effect on the identification of forest owners with their forests. In the course of the land consolidation process forest owners that were not interested in forestry could sell them to the neighbours. In this context obstacles like missing land registers could be established.
- Analysis and identifications of means how stakeholder involvement works in different regions, in particular how they are involved in forest operations and how potential new stakeholders can be involved (new products and services). Investigation under what conditions cooperation amongst forest owners works – new group of stakeholders with economic interests and how to achieve the economic balance between the involved actors
- Analyse and identify individual options for cluster initiatives / regional development to strengthen forest based sectors to overcome the miss-match of supply and demand – new products, new consumers/stakeholders (link to the market)
- Analysis and Identification of means for and how knowledge transfer to stakeholders should be designed to achieve forest biomass mobilisation

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Proposals for innovations

Operational Groups are action and result-oriented groups, where all the actors involved need to work on concrete, practical solutions to a problem or innovative opportunity. Taking this into consideration out of the described situation for stakeholder involvement the following ideas are developed:

- Means to support the facilitation of forest owner associations in member countries as self-help associations to support forest owners in the sustainable and future-oriented adaption of forests to the climate change in addition to wood utilisation and marketing.
- Models for improved forest management in small scaled forests (land consolidation, establishment of land registers, cooperatives)
- Evaluate existing participative approaches (i.e. Regional learning laboratories, helix model) in EU-member countries to involve stakeholders concerning the possible options to increase synergies through existing supporting EU-programmes and funds (i.e. Regional development funds).
- Review of already existing measures to raise the awareness of forest owners for the important role their forest fulfil in terms of Ecosystem services. In this context existing communication tools for knowledge transfer and dissemination can be evaluated.

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**

Project example: Innovation in forest stakeholders´ integration (Galicia, Spain)

Galicia is the main forest region in Spain in terms of forest products output (50% of Spain) and forest coverage percentage (68%). 98 % of the forests belong to private forest owners. Yet, so many barriers hinder the forest sector development, namely small holdings, wildfires, low productivity, depopulation, lack of innovation, forest associations failure, and so on.

Therefore a group of foresters came up with the idea of developing a forest management support model, which will coordinate and strengthen all forest stakeholders by carrying out a set of actions and local development projects aimed to achieve an optimization of forest resources use. For this purpose an Operational Group has been put together in Galicia in order to orchestrate all forest stakeholders under a local scope in order develop the forest resources under consideration of all sustainability criteria.

The model works at a local scope, municipal level, dealing with all stakeholders all together: landowners (98% of Galicia forest land is private), community-owned forests, public bodies, researchers, entrepreneurs and businesses. A structured set of rules to guide and monitor the forest resource development is the key element of the project.

Summing up the idea rests on: extremely close and permanent stakeholders´ attendance, structured set of rules guiding development, multi-party extreme synergy and collaboration, close results monitoring, transparent management, and self-governance.

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This model gets implemented subsequently in a GIS-based comprehensive tool, which must be managed by a forester operating locally in the territory, combining on-the-ground and bureau duties, delivering a great deal of services to forest stakeholders from technical support to project feasibility studies, grant management or land-owner grouping.

Expected results will be monitored and a variety of follow-up ratios allow us to gauge what is the success level of each action or project, in terms of: forest land coverage improvement, wildfires damages decrease, employment generation, businesses start up, capital entrance, just to quote a few.

Conclusions

Forests are a major biological resource of Europe and fulfil multiple functions in ecological, economic and social dimensions. Besides preserving diverse landscapes, ecosystems, natural cycles and the biological diversity, they also represent the backbone for production and employment in forestry and numerous industries that all use wood as primary raw material.

The forest owners are the key actors in wood mobilisation and have to be addressed in the first place as it is their forest and requires the willingness to engage in an increased forest harvesting and related uses. But there are other actors needed to ensure and guarantee a sustainable supply with the resource forest biomass taking economic and technical, ecological and social aspects into consideration.

This paper is dealing with the involvement of actors inside and outside of the forest based sector to meet the increasing interest of societal groups on forest management due to the importance of forest functions (integrated approach). By involving actors outside the sector we include their values and experiences and gain their acceptance.

Following the innovation systems approach (helix model) we need interaction between the relevant groups to achieve better solutions by joint learning, i.e. innovations, innovative approaches and measures. This can be achieved with regional and cluster initiatives and the centres of competence aiming at the described exchange of values and experience and to gain acceptance for forestry.

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