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**D 5.3. Analysis of innovation related policies on European and national levels relevant for NWFP**

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## Executive summary

The analysis of innovation related policies on European and national levels relevant for NWFP (Deliverable 5.3) focuses on existing legislation (legal policy instruments), binding or non-binding, which affect innovation in the use of Non Wood Forest Products (NWFP) and Multi-Purpose Trees (MPT) for both the EU as well as the national levels. Thus, the analysis covers international and EU policies as well as the countries in which regional cases are carried out in STARTREE (9 case study regions). We have analysed relevant regulations, financing instruments for innovation, diversification and sustainable rural development and informational instruments such as statistics, planning and extension services. In conclusion, innovation policies in the forest sector do very much intersect with other policy areas such as forestry policy, forest based industry policies, rural and regional development policy and also renewable energy policy.

First, at the EU level, all these policies are coordinated by formally existing central coordination bodies, namely the European Commission and the Committee of the Regions. The related policy documents are reflecting increasing mainstreaming of forestry issues with the policy goal of fostering “innovativeness”.

Second, at the national level we have discovered only in a third of the countries covered in our study an inclusion and mentioning of “innovativeness” as an economic tool. There, it should foster forestry and the production of NWFPs for the creation of new jobs, the founding of new businesses and the change towards a greener and diverse economy. However, these tend to be rather “divided” between the sphere of forestry legislation and the sphere of innovation and development legislation (Separated into forest management, timber production versus high-tech R&D innovation and foremost bigger sectors which compose of larger companies and (multi-)national enterprises). Rural development policies are the relevant ones for NWFPs, although, being typically oriented towards the agricultural sector in the narrow sense, they are not often taken up in forestry and/or for NWFPs. Finally, however, we can show that there are increasingly integrative policy approaches in the existing national forestry policies, particularly in the case of Wales, Scotland and Finland.



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## 1 Introduction

Non-wood forest products (NWFP) tend to be rather omitted in hitherto scholarly debates on innovation processes in the forest sector (e.g. Buttoud et al. 2011, Rametsteiner et al. 2005, Rametsteiner and Weiss 2006a, Rametsteiner and Weiss 2006b, Kubeczko et al. 2006, Weiss 2011). However, there is large potential for NWFP to support rural development and income of land owners and rural enterprises (Niskanen 2006; Niskanen et al. 2007).

A policy is a principle or a written document to guide decisions and achieve rational outcomes. In its phase of definition it is a “statement of intent”; which later comes to the agenda and is to be implemented as a specific procedure or document. Such definitions reflect a broader perspective than the one in regular Political Science, dealing with “public policies”, commonly embodied in “legislative acts, constitutions, juridical decisions and policy programmes”. Thus, in the broadest term the term policy may apply to governments, their representative and their administrative bodies, economic sector organisations and groups, but also individuals.

Thus far, one would tend to presume that “policy instruments” are simply understood as “tools” for policy. However, “policy instrument” is not a straight forward “objective” concept, because “instruments are not stable over time and across space whether in terms of rationales goals or means (Flanagan et al. 2011, 707). This has to be kept in mind when analysing policies. In his review of policy instrument approaches in “What is a Policy Instrument? Policy tools, Policy Mixes, and policy-implementation styles”, Howlett (2005) distinguishes between “substantive” policy instruments and “procedural” policy instruments. Substantive policy instruments are the ones which directly intervene into social and economic live, procedural instruments, seek to affect the participation of selected actors in the governance process itself. We focus in this report on substantive policy instruments. While this report takes a descriptive approach, the further analysis of the policies is left to the later stages of the project when this basic overview of policies is complemented with expert interviews

## 2 Objectives

The objective of this report is to analyse existing legislation (legal policy instruments) affecting Innovation in NWFP at EU as well as at the national levels. The policy analysis on European and national levels includes all policies relevant for innovations in the use of multi-purpose trees (MPT) and NWFP with a special focus on innovation and rural regional development policies. The work covers international and EU policies and the countries in which StarTree regional case studies are carried out. It analyses relevant regulations, financing instruments for innovation, diversification and sustainable rural development and informational instruments such as statistics, planning and extension services. The data collection is carried out in cooperation with WP 4, Task 4.1, but while WP4 looks primarily at NWFP specific regulations the analysis in WP5 particularly focuses on the innovation policies. Task 5.2 analyses the policy contents while the study of their implementation on the ground is included in the later Tasks 5.3 and 5.4. The work is carried out by BOKU in collaboration with the hosts of the regional case studies with regard to the national policies (CSRs).



### 3 Scope and methods

The information on the national levels was collected through a data protocol (see Deliverable 1.2 “Compilation of protocols for case study data collection”). The above described instruments are to be found in legislation on forestry (Acts or Codes on Forests and National Forest Programmes), in legislation on rural but also regional development and in legislation on innovation. **Definition of innovation:** All the following definitions were relevant for data collection on policies relevant to innovation:

- Innovation (sense 1) the action of innovating; the introduction of a new thing; the alteration of something established (Oxford English Dictionary)
- Innovation (sense 2) a result or product of innovating; a thing newly introduced; a change made in something; a new practice, method, etc. (Oxford English Dictionary)
- Innovation is the introduction of novelties to the market (Rametsteiner et al. 2005).
- Innovation is the doing of new things, or the doing of things that are already being done in a new way (Schumpeter 1947).
- Innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations (OECD 2005, so-called “Oslo Manual”).

**Innovation policies** are not limited to sectoral policies or the economic domain. They can be influenced by various other policy domains, such as industrial policy, policies for science and technology, education, health, ICT and other sectoral policies. For our field, particularly rural development policies may be of relevance (e.g. the LEADER instrument supporting bottom-up innovations) or regional development policies that support cluster organisations, innovation centres, technology parks, etc.

**Innovation support** can also take many forms and may be introduced with or without the explicit aim of fostering innovation. The following six categories of **innovation support measures** are distinguished for this report (Weiss et al., 2010):

**1. Research and Development:** This incorporates innovation support in a narrow sense, i.e. financing of basic and applied research, development of new products or processes, pilot projects, demonstration projects and support for the commercialization of innovations. Support for Research and Development generally aims at innovations new to the sector, i.e. products, processes, marketing and organisational methods that have not been introduced to a particular sector in a particular country before. Throughout the document analysis the following sub-categories of Research and Development will be applied:

- Enterprise research, i.e. support for applied research in the enterprise or as cooperation between enterprise and science organisations,
- Development of new products, processes, marketing methods, organisational models by enterprises,
- Pilot projects and demonstration projects,
- Commercialization of new products by enterprises.



**2. Diffusion of innovation:** This includes support for the adoption of new goods, services and processes which have already been proven by an enterprise in a sector in a specific country. It excludes support for standard managerial processes or late adoption (e.g. species diversity support, road building in forestry or standard IT in SMEs). Throughout the document analysis the following sub-categories of diffusion support will be applied:

- Diffusion of products (for example subsidies for bio-energy installations; support of the introduction of recreational facilities),
- Diffusion of processes (for example investment support for the acquisition of new machineries/technologies, incl. advanced information technology for production or logistics, etc.),
- Diffusion of marketing methods (e.g. addressing new customer groups, market segments),
- Diffusion of organisational models (e.g. financial or informational support for the establishment of cooperation).

**3. Human resource development:** The innovation capabilities of a firm, a sector or an economy among others strongly depend on the availability and quality of human capital, i.e. individual know-how, skills and motivation of enterprise owner and employees, level of qualification and competencies of employees. Further, the access to and exchange of information and knowledge influences the innovation propensity as well. The following activities are examples of how to strengthen the human resources required to adopt an innovation:

- Integrating innovation into educational curricula,
- Strengthening further/vocational training,
- Providing for employment of scientists and engineers in particular fields,
- Integrating support for innovation into extension services,
- Promoting mobility of high-skilled personnel,
- Promoting mobility of people between science and practice.

**4. Strengthening interaction/managing interfaces:** Firms do not innovate in isolation. Rather a range of other actors/ organizations contribute in different ways to innovations, e.g. other firms/competitors, research organisations, extension services, interest groups, etc.. Policy may foster innovation by strengthening the interaction between different key actors in the forest sector, among others through:

- Promoting horizontal co-operation – between forest holdings,
- Promoting vertical co-operation – along the forestry wood chain,
- Promoting public – private partnerships,
- Promoting co-operation across sectors,
- Promoting university/research institutions – enterprise co-operation,
- Promoting interaction with users (customers and consumers).

**5. Demand creation for innovation:** The demand side is crucially important for the promotion of innovations. Policy may not only promote innovations by supporting the input-side but also by inducing



demand for innovation. This is often applied in the case of environmental/sustainability innovations. The following activities may be implemented to strengthen the demand for new products or services:

- Reorientation of public procurement policy (creating consumer demand or new marketplaces),
- Support for lead users, or public agencies acting as lead user,
- Clear demand expression through communication.

**6. Improving the institutional environment:** General framework conditions including institutions such as laws, regulations, standards, taxes or access to financing have a crucial influence on firms' decisions to innovate. Changing framework conditions are often not within sectoral policies. The following list comprises a selection of policy activities to improve framework conditions for innovation:

- Institutional reforms, e.g. change of forest law, property rights reform, support for the establishment of new organisations,
- Adaptation of tax laws, e.g. corporate taxes,
- Improving access to finance, e.g. by providing guarantees,
- Adaptation of standards and norms, e.g. in the food or the pharmaceutical sectors.

This report is based on extensive background work, desk research as well as information and data collected through document search, literature review interviews. The material was analysed via qualitative content analysis for its relevance to innovation. The following sections are outlining the results divided according to the EU and the national levels.



## 4 NWFP Innovation related policies at EU Level

### 4.1 The Forest-based Sector Technology Platform (FTP)

Starting from 2007, FTP represents one of the European Technology Platforms relevant for innovation today. It has helped to bring together technological know-how, industry, administration and financial institutions to support the European Research and Innovation Area for the **forest sector**<sup>1</sup>.

The European Forest Technology Platform (FTP) serves also as an exchange platform, dealing with all issues around forest-based economy such as wood-based bioeconomy and wood technology. In its renewed FTP Vision 2030, amongst the vision targets, it explicitly states for the fulfilment of consumer needs: “Added value from new markets for non-wood forest goods (mushrooms, berries, clean water) and services (recreation, tourism, climate change mitigation) has increased ten-fold.”(FTP 2013a, p.7) In its central document, the “Strategic Research & Innovation Agenda 2020” (SRA), NWFPs are specifically included as possibly innovative products on several places/under different headings (FTP 2013b). The innovative NWFPs come under the Strategic Objective 1 in its Annex (Research and Innovation Areas): “Development of innovative products for changing markets and consumer needs”. The SRA defines 5 primary forest-based value chains: forestry, wood products, pulp and paper products, bio-energy as well as so-called “specialities”. NWFP appear under the first (forestry) in the view of “soft forest values” as well as under the last (specialities) which looks, among others, at bio-based chemicals. Under the forestry value chain, the Research Area 1-6 is defined named Commercialising soft forest values. These are understood as non-wood forest goods and services contributing to, for instance, recreation, tourism, health, and the environment. The Research Area 1-9, under specialities, is called “Green” specialty chemicals aims to create a new forest-based value chain based on wood, pulp, other residues, but also non-wood goods and herbs.

The Forest-based Technology Platform is contributing to the coordination of research efforts by owners and industries, the European Commission and Member States, and should play a significant role in strengthening the sector’s innovative capacity. It has a very strong innovation orientation and can be seen as an important driver of innovation in the sector whereby its attention seems to be strong with commodities and larger-scale industrial opportunities, but not so much on smaller commercialisations, smaller firms, or non-commodities.

### 4.2 The Forest Action Plan (2007-2011)

The EU Forest Action Plan (COM(2006)302) was the main instrument for the implementation of the EU Forestry Strategy (1998). In general, responsibility for forest policy lies with the Member States, the Community can contribute positively to the implementation of Sustainable Forest Management and the multifunctional role of forests. The EU Forest Action Plan covered activities in 2007-2011 with the goal to contribute to long-term competitiveness, enhance and protect the environment, contribute to quality of life and improve coordination and communication.

Key Action 3 of the FAP focused on the valuation and marketing of non-wood forest goods and services and foresees the following activities:

<sup>1</sup> See <http://www.forestplatform.org/en/about-ftp> (last access 2014-08-27)





- to promote studies and pilot projects on valuation, compensation and innovative marketing of forest goods and services (by Member States), and
- to form an ad hoc working group of the Standing Forestry Committee (SFC) on non-wood forest goods and services (NWFGS) (to be done by Commission; active participation by the Member States)

According to its evaluation study<sup>2</sup>, the EU FAP has been successful in increasing the awareness and research on NWFGS as follow-up activities. However, while there were a lot of ongoing activities within this topic (at the international, EU and Member State levels), there has been very limited adoption in terms of policy measures or instruments for valuation and marketing of NWFPs.

The EU-Standing Forestry Committee (SFC)<sup>3</sup> allowed for sharing information and practices between Member States, Commission and key stakeholders. There have been several activities and studies conducted both at the EU, pan-European and Member State levels, but these studies refer mostly to the many forest functions and how they can be valued. Sometimes also compensation possibilities were explored, but there seemed to be less investigation and awareness of marketing and new financing mechanisms. Furthermore, there were several international processes supporting visibility of non-wood forest goods and services and ecosystem services (not only from forestry but also from agriculture). The NWFPs were discussed and studied, and there was raising awareness of NWFPs because of the initiatives at international level on payments for ecosystem services. Importance of sustainable management of non-market forest goods and services are reflected in a number of EU policy documents (e.g. biodiversity, energy policy and climate change debate), but there are fewer implementation actions ongoing.

### 4.3 The new EU Forestry Strategy

The new EU Forestry Strategy for forests and the forest-based sector (COM(2013)659 final), first adopted in 2005 by the Commission, has served as a reference document for i.e. forestry measures in Rural Development and also as a basis for the EU Forest Action Plan (see above).

The new forestry strategy mentions NWFPs on p.2, in a paragraph which emphasises the important role of Forest biomass: “Forest also provide a large range of other products, such as cork, resins, mushrooms, nuts, game and berries.”, further under its “guiding principles”: “Global forest responsibility, promoting sustainable production and consumption of forest products” (ibid., p.3), in section 3.3. “Eight linked priority areas: value for everyone”, it reads “Thus, forest-based biomass, together with non-wood forest products, which are gaining market interest, provide opportunities to maintain or create jobs and diversify income in a low-carbon, green economy” (ibid, p.8)

The new Forestry Strategy is related to several EU policies and objectives, in particular: agriculture and rural development, environment, climate change, biodiversity, plant health, research and innovation, trade, industry and energy. Its related working document (SWD(2013)342 final) includes very specific references to research and innovation (p. 62ff.): Accordingly, research and innovation are considered as one of the keys to overcome new social, environmental and economic challenges. It mentions Horizon 2020 (see below) related to forestry as one important policy tool (ibid. P. 63) and also measures to strengthen the coordination between EU and Member States via different instruments, in particular COST, ERA-Nets, a Joint Programming Initiative (JPI), or an Article 185 Initiative: Article 185 of the Treaty of Lisbon enables the

<sup>2</sup> See [http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/forest-action-plan-2012\\_en.htm](http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/forest-action-plan-2012_en.htm) (last access 2014-08-27)

<sup>3</sup> Founded in 1989, the Committee represents the forestry administrations of the EU Member States.



Community to participate in new joint research Programmes undertaken by several Member states, as well as to participate in the dedicated implementation structures.

#### 4.4 Horizon 2020

Horizon 2020<sup>4</sup> replaced FP7 as the next EU Framework Programme for Research and Innovation. It is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's competitiveness, running from 2014 to 2020. The new programme for research and innovation is part of the drive to create new economic growth and jobs. Horizon 2020 aims at a transition to a sustainable and competitive European economy based on renewable and resource-efficient raw materials and energy sources. Thus it aims to facilitate the transition to a sustainable society and will have many implications for the forest sector. It was published in June 2011 (COM(2011)808). Innovation, sustainable use of renewable resources and social cohesion are key elements in the EU strategic documents, Europe 2020 – smart, sustainable and inclusive growth – initiative (COM(2010)2020), the Resource Efficiency Roadmap (COM(2011)571), as well as in the Raw Materials Initiative (COM(2008)699) and the strategy on tackling the challenges in commodity markets and on raw materials (COM(2011)25) and Innovating for Sustainable Growth: A Bioeconomy for Europe (COM(2012)60).

Within Horizon 2020, the Framework Programme for Research and Innovation 2014-2020 (COM (2011) 808 and COM(2011) 809) is of utmost importance for innovation. The programme recognises the “Forestry Action Plan” (see above), and under the societal challenges, which the new framework programme will address, it pinpoints **forestry** – together with the agriculture and fisheries sector and the bio-based industries – as a major sector underpinning the bio-economy, and it mentions forests under climate action, resource efficiency and raw materials from the viewpoint of ecosystems resilience. The objective under Horizon 2020 related to forestry is to ensure the long-term sustainability of the sector research in a series of areas is necessary including dealing with pests and diseases and climate change, the development of wood products and biomass, the implementation of adequate production practices and systems. Adequate socio-economic analysis and foresight exercises are also necessary to ensure that contributions of the sector to the rural economy and society at large are well understood and catered for. (see SWD82013342final, p. 63)

#### 4.5 The EU Lead Market Initiative

The **Lead Market Initiative** (COM(2007)860) included demand-based measures –regulation, public procurement, standardisation and supporting activities – to lower barriers in order to bring new products or services onto the market. There are at least three Lead Market Initiative areas relevant for the forest sector and NWFP and MPTs: sustainable construction, renewable energy sources and bio-based products. With the Europe 2020 strategy, and the resource efficiency initiative, efficient resource use as well as the need for innovations in this field is underlined. The processes can be seen to increase demand for natural resources – including finding ways to promote more use of renewable, low-carbon resources, such as forest-based resources – and consequently also increasing the need for defining the sustainable use of these resources in a consistent way. The Lead Market Initiative, raw materials initiative etc. have been discussed with the AC-FBI stakeholders in the events arranged by the Commission in the framework of the innovative and sustainable F-BI Communication (COM(2008)113). The Commission has briefed these

<sup>4</sup> [http://ec.europa.eu/research/horizon2020/index\\_en.cfm](http://ec.europa.eu/research/horizon2020/index_en.cfm)



developments, as well as the state of the play of the economic situation of the F-BI, to the SFC in 2009-2011. Otherwise the EU FAP concentrates more on the supply side, while the role of forestry to the Europe 2020 strategy goals would call for a holistic approach to raise awareness of the general public and the key decision makers about the sector and its sustainable development – thus about the importance of ensuring resilience of forest ecosystems, sustainable use of forest resources, economic basis for developing the rural livelihoods as well as innovations in the processing and services sectors, and the contribution of forests for society at large (incl. human health, recreation etc.).

#### 4.6 The instrument of LEADER

LEADER (Liaison Entre Actions de Développement de l'Économie Rurale, meaning 'Links between the rural economy and development actions') is a local development method which allows local actors to develop an area by using its endogenous development potential. The LEADER approach is the fourth axe of the **EU rural development Gateway (2014-2020)**<sup>5</sup>, formerly EU Rural development Policy 2007–2013, all within the EU CAP (Common Agriculture and Rural Development Policies).

- IV: LEADER: introduction of possibilities for innovative governance through locally based, bottom-up approaches to rural development (see regulation (EU) No 1305/2013)<sup>6</sup>

In the first (founding) Council Regulation, the respective LEADER-requirement demanded that some of the funding must support projects based on experience with the Leader Community Initiatives (as defined in LEADER+, the follow-up initiative, 2007-2013) (see regulation (EU) No 1305/2013, repealing Council regulation 1698/2005). The whole "Leader approach" to rural development involves highly individual projects designed and executed by local partnerships to address specific local problems. It introduces possibilities for innovative governance through locally based, bottom-up approaches to rural development<sup>7</sup>.

The Rural Development Programme (RDP) is an EU-policy tool and funding mechanism used by Member States for implementing EU rural development policy in a specified territory. An RDP territory can cover an entire country or a specific region. There are over 90 RDPs operating in the EU and each of these RDPs is designed to ideally provide the particular type of rural development support that is needed in its territory. Every RDP has a budget from the European Agricultural Fund for Rural Development (EAFRD). The RDP budget is used to help Member States fund actions associated with the different themes/axes of EU rural development policy, namely: Improving the competitiveness of agriculture and forestry; Improving the rural environment and countryside; Quality of life in rural areas and diversification of the rural economy; and 'LEADER' rural development methods. Within it, three LEADER Focus Groups (FG) were launched in November 2009 with the objective of examining LEADER implementation throughout the EU to identify examples of good practice that could be developed into recommendations to improve the implementation of LEADER. The Groups reported to the LEADER Subcommittee and fed their results into other activities related to the implementation and improvement of EU rural development policy by the European Network for Rural Development (ENRD). The three FGs were composed of representatives of National Rural Networks, Local Action Groups, Managing Authorities and NGOs, all under the co-chairmanship of different NRNs or organizations. Another Focus Group on Better Local Development Strategies was launched in May

<sup>5</sup> See [http://enrd.ec.europa.eu/enrd-static/policy-in-action/cap-towards-2020/rdp-programming-2014-2020/en/rdp-programming-2014-2020\\_en.html](http://enrd.ec.europa.eu/enrd-static/policy-in-action/cap-towards-2020/rdp-programming-2014-2020/en/rdp-programming-2014-2020_en.html) (last access 2014-08-27)

<sup>6</sup> The other axes are I: "improving the competitiveness of the agricultural and forestry sector; II: improving the environment and the countryside"; and III: "improving the quality of life in rural areas and encouraging diversification of the rural economy"

<sup>7</sup> See [http://ec.europa.eu/agriculture/rur/leaderplus/index\\_en.htm](http://ec.europa.eu/agriculture/rur/leaderplus/index_en.htm) (last access 2014-05-06)



2011 and aims to work on the two key aspects of local development strategies - creation and implementation.

#### 4.7 European Innovation Partnerships (EIPs)

European Innovation Partnerships (EIP) are tools for the development of research and innovation actions. There are no specific “NWFP activities” ongoing, but innovation in NWFPs would fit within its range and objectives: In its Innovation Union Communication of 6 October 2010, the Commission has put forward a proposal to launch European innovation partnerships. The objectives of the European innovation partnership (EIP) are twofold: addressing societal challenges and, in so doing, enhancing Europe's competitiveness, against the background of globalisation and current fiscal constraints. The concept provides for a strategic approach to innovation, which has its origins in the Europe 2020 strategy. One EIP on agriculture sustainability and productivity has been launched (COM(2012)79 final) and another EIP on raw materials (COM(2012)82 final).

Increase in innovation in the forestry sector can contribute to assist countries to recover from the economic crisis and boost their economies in terms of economic growth and creation of new jobs, in particular in rural areas. Research in business/economic development and financial aspects to achieve the optimum path towards developing a successful competitive forest sector is also essential. Through the European Innovation Partnership on Agricultural Productivity and Sustainability<sup>95</sup>, actions could be undertaken to push the technological transfer from science to forest practice, providing more systematic feedback about practical needs from forest to science, and fostering a competitive forest sector that achieves more from less and works in harmony with the environment. The EIP on Raw materials<sup>96</sup> will contribute to innovative solutions with a view to increasing the availability of raw materials for Europe, including wood. An independent expert group was set up in 2013 by the European Commission to assess progress and evaluate the overall performance of the European Innovation Partnerships (see regulation (EU) No 1305/2013, repealing Council regulation 1698/2005. Art 53).

#### 4.8 Conclusions

Only little or very little NWFP and MPT specific policies exist at EU-level. They are included in the broader context. EU related innovation policies touch upon many sectors, in the fields of forestry, NWFP and MPTs particularly rural development policies may be of relevance, such is the LEADER instrument to support bottom-up innovations, but also regional development policies that support cluster organisations, innovation centres, technology parks, etc.

In sum: there are many sectors that touch upon the topic, suggesting that a more procedural and systemic approach could be needed in the future. The tools for such an approach can be found in aspects of, for example, forest owners' education and advice support, environmental education, inter-disciplinary research, integrated views on Sustainable Forest Management (SFM), ex-ante impacts assessment methods and a strong focus on innovation support in the above mentioned policies. All these approaches can be strengthened at EU and national (as well as regional and local) levels. National Forest Programmes (NFPs) and the EU Action Plan could have (and can in the future) be a framework to develop these approaches. The sharing of good practices at EU level about National Forest Programmes (NFP) implementation could build capacities for innovation at multiple levels. The following section will deal with the policies at the national levels.



## 5 Innovation related policies at national level

### 5.1 Austria

In Austria, relevant policies are found within the sectoral policy on forestry on the one side, and in rural development policies on the other. Besides these, there are further policies that might be relevant for the development of NWFPs (food, medical or pharmaceutical sectors), however, hardly with regard to innovation support measures.

The **Austrian Forest Act** (1975), amended in 2002, is the most important national legal policy-instrument concerning forests. It regulates the collection of NWFPs but does not mention innovation in forestry or NWFPs. However, the **Austrian National Forest Programme**, an output of the Austrian Forest Dialogue in 2005 and developed by 80 related institutions and organisations includes related themes. It is not directly legally binding but serves as the informative policy-base for policy activities in the Austrian forest sector. Its seven thematic areas are related to the six “Pan-European Criteria for Sustainable Forest Management”. Its third Thematic Area “Productivity and Economic Aspects of Austrian Forests” includes principle 9 “Sustainable supply of the economy with forest products and services” which contains under its goals goal No 20: “Developing local strategies based on public private partnerships, with a view to securing employment and innovation.” Especially its related policy measure No 3.1.5 “Opening up of new income sources: potentials and market analysis in the fields of (...) non-wood forest products and services” can have potential impacts in the sector.

Within the **Austrian Programme for Rural Development 2007-2013**, the **LEADER instrument** plays an important role when it comes to diversification of the agricultural and forestry sector. LEADER has not been used strongly in forestry, however, in Styria the following two regions have a specific topical relevance for forestry: LEADER – Region Land of the Stone Pine, and LEADER – Region WoodWorld Murau. The former specifically focuses on a tree species, the Swiss Stone Pine (*Pinus cembra*), and aims to develop all kinds of products, including wood and non-wood. It can thus be seen as a “multi-purpose tree”. A few further programmes also aim at a diversification of agriculture. One is the national level public programme **Gourmet Region Austria** (initiated by the agricultural ministry), under which the Gourmet region Game from Gesäuse is a Styrian example, taking wild game as their gourmet product. Other activities include the **Nature Parks** which run a label on “Nature Park Specialities”, similar activities in National Parks, e.g. the National Park Gesäuse, and a range of related marketing activities around the **Styrian Chamber of Agriculture** and related organisations (labels “Goodies from the Farm Gate”, “Christmas Trees from Styrian Farmers” and “Farm Holidays”).

### 5.2 Finland

The **Finnish National Forest Programme 2015** does not explicitly mention innovation but includes under its six main priorities relevant priorities such as:

- “Protecting the biological diversity and environmental benefits of the forests”,
- “Promoting the use of the forests as a source of culture and recreation” or
- “Strengthening skills, expertise and acceptability of the forest sector”



under the latter it explicitly mentions in policy measure 5.2: “Research and development in support of business and entrepreneurship, to further develop the sector”.

More explicitly the Finnish **Natural Resources Strategy of the Ministry of Agriculture and Forestry 2002** includes objectives pertaining to hunting and products collected from forests in the development of business activities and by households. More precisely under Goal 5 “Extensive, innovative and eco-efficient use of renewable natural resources is promoted”, the related measure indicates “Skills and innovation in the forest sector are developed through further reinforcement of research, education and international activities.” In terms of innovations to the market, its goal 6 “High quality and safety of the production as well as products derived from renewable natural resources is secured, and these constitute an important competition and success factor” indicates as the related measure: “Market-oriented and other practices are developed to increase the consumer confidence in the sustainability of Finnish forestry and high-quality forest products.”

Finally, “**State of Finland forest 2012**” (Parviainen and Västilä 2012), based on the Criteria and Indicators of Sustainable Forest Management is not a policy instrument but serves as a base for policy decisions in Finland. It presents the state of the art of the Finnish forest sector. The document includes under its six criteria one (no.3.): “productive functions”. Here, 37 species of edible wild berries and 200 species of edible mushrooms are listed. Under the latter 23 are declared as being marketable. The document also affirms that the overall economic value of NWFPs is small compared to the sale of wood products.

### 5.3 Germany

At the national policy level, the German **Federal Forest Act** (1975) does not mention innovation nor does the **Forest Strategy 2020** (Federal Ministry of Food Agriculture and Consumer Protection 2008), which incorporates major findings of the National Forest Programme (carried out since 1999). Due to its federal structure, the Federal Republic of Germany implements rural development policy through **rural development programmes (RDP)** established at the level of the *Länder*. In this respect, 14 regional programmes have been approved in relation with a **National Strategy Plan** for rural development (Note: Niedersachsen and Bremen as well as -Brandenburg and Berlin present joint programmes) coordinated by the German Federal Ministry of Food, Agriculture and Consumer Protection. Key objectives include: “Improving the competitiveness and efficiency of agriculture, forestry and food sectors”. However, there are no mentioning of NWFPs in specific. The general goals in the National Strategy Plan are:

- Harmonization of the support to agricultural structure from Bund and Länder
- Securing the participation of all regions in the concentration and coordination of EU, federal and regional (Länder) programmes, thus to improving the efficiency of the use of public funds. The Specific regional objectives for rural development policy are defined in the fourteen Rural Development Programmes.

In terms of innovation policy at national level, the main responsibility for national R&D policy lies at the Federal Ministry of Education and Research (BMBF). All fields of research are divided among ministries, e.g. Federal Ministry for Environment, Nature, Conservation has the competence for NWFPs. A first attempt in the recent decade to better coordinate policy instruments among the involved ministries was the German **High-Tech-Strategy of 2005**. The updated German **High-Tech strategy 2020** aims to create lead markets, to intensify cooperation between science and industry, and to further improve the framework conditions for innovation. Its five strategy areas are:

- Climate/Energy



- Health/Nutrition
- Mobility
- Safety
- Communication

Furthermore, the German Science-Industry Cluster Platforms ([www.clusterplattform.de](http://www.clusterplattform.de)) and also the German Horizon 2020-initiatives (<http://www.horizont2020.de>) in coordination with the above mentioned EU-policies are important policy tools for fostering innovation. There are no mentioning of sectors like the forestry sector or the forest industries in the platforms or the initiatives.

## 5.4 Italy

The Italian **Law on Forest and Mountain Areas** (RDLn.3267/1923) from 1923 is the basic policy document regulating property rights and productive functions. Later, the Italian **Forest Framework Law** (227/2001) aims at conjugating the national forest policy with EU-policies and international commitments. Both do not mention innovation in the sector. However, the national **Framework Programme for the Forestry Sector (PQSF) from 2008 leans on** the EU FAP (Forest Action Plan, see above). The Italian National Framework Programme establishes also a national, permanent body for the definition, coordination and information on forest policies called “Standing Forest Board”, similar to the SFC in the FAP. Under key action 3 “to support the diversification of goods and services of the non wood value chain” it relates measures 311 “Diversification toward non-agricultural activities” and 313 “Support to small and medium enterprises”, relevant to innovation. Furthermore, key action 17 : “to improve the quality of wood and non food forest product at national level, and to support their use”. For the implementation the measure 3b, on national funds and under the regions, the Ministry foresees interventions for incentivize management association, innovation in promotion and diversification of wood and non wood forest products and services.

## 5.5 Serbia

In Serbia, important legislation on forestry was adopted in the 2000s: the Law on Forest (2010) and the Forest Development Strategy (2006). By adopting the Forestry Development Strategy of, a process of preparation of other very important documents that affect the forestry policy has been opened - such as the Law on game and hunting, the National Forestry Action Plan and other strategic documents such as the National Renewable Energy Action Plan, both are not adopted yet and do exist as drafts. Strategy of Implementation of Cleaner Production in the Republic of Serbia was adopted during this time.

Under the Serbian Innovation Law the Innovation Serbia Project, funded by the World Bank is the current relevant policy initiative for Serbia (<http://www.innovationfund.rs/innovation-serbia-project/> last access 2014-05-06). Its objectives are to:

- Support the emergence of an innovative entrepreneurial sector
- Address missing elements of the Serbian innovation system likely to be vital for improving the competitiveness of the enterprise sector and Serbia’s long term growth prospects



- Contribute to an improvement in the general awareness of the role of technological development and innovation in the economy

Its components are:

- Capacity building of the Innovation Fund
- Implementation of financial instruments supporting enterprise innovation (Mini Grants and Matching Grants Programs) by the Innovation Fund
- Provision of technical assistance to selected research and development institutes (RDIs) implemented by the World Bank.

## 5.6 Slovenia

The Slovenian **National Forest Programme** (2007) cites among the “factors which reduce economic incidence of forests” one problem: *“low level of innovation in the marketing of other functions of forests, related to non-wood forest products and services provided by forests”*.

In the chapter on “Assessment of development potential” reports that:

“In the promotion of the economic role of forests and development of rural areas, investment should be made primarily in knowledge which would lead people to *better innovativeness and entrepreneurship* and more added value, based on wood as a material, on non-wooded forest products and service roles of forests, which should be more exploited in comprehensive development of the society, in particular of rural areas.” The **OECD-Innovation Policy Platform** (<https://innovationpolicyplatform.org/content/slovenia> last access 2014-05-06) reports for Slovenia as *Emerging technologies*: Emerging areas of research and technology in Slovenia, which are reflected in the CoE and CC priorities, include ICTs, nanotechnology, health and life sciences, process technologies and effective use of energy. And for *Green innovation*: An action plan for the implementation of cradle-to-cradle principles is based on the concepts of eco-effectiveness, eco-efficiency and closed-loop economy. The data of the report stems from 2012.

## 5.7 Spain

In Spain, forest planning is articulated in the **Spanish Forest Strategy** (1998) and the **Spanish Forest Plan** (2002). The **Spanish Forest Strategy** lists in the chapter titled “Encouraging the economic and social profitability of the forests” a number of NWFP (cork, resin, pine nuts, mushrooms, chestnuts) and related elements are analysed with the vision of identifying the structural problems and indicating possible solutions. For instance, regarding the cork industry the initiative aimed at extraction, processing and marketing is indicated: *“the modernisation of the existing installations, which have obsolete machinery, (...) to cover the demand of the production”*; the increase of *“the number of cork preparation facilities in the production zones, and modernisation of the existing ones (...)”*; the *“promotion of cork based insulation products (...)etc. .* For the aromatic and medicinal plant industry, the documents refers that the policy to encourage the biological resource must involve: *“research into the chemical composition of the numerous chemotypes there are (...) ;”dissemination of information on cultivation and marketing (...) ; “installation and modernisation of first processing industries(...), to provide a market for the ample production by the sector”*; *“encouragement of producer association training and promotion of contacts with the industries that use the plants and essential oils”*.





The Spanish **Forest Plan** includes some objectives that touch upon innovation in the sector:

-The stimulation for the improvement of the forest production as an economic alternative and incentive to the rural development, especially in marginal and mountain areas.

In the section “Socioeconomic and cultural actions” a part is dedicated to the forest products in which the most important NWFP for the Spanish economy are listed: cork, resins, fruits (especially pine nuts, chestnuts, hazelnuts, walnuts, and almonds), mushrooms, medicinal and aromatic plants, and honey. Furthermore, a number of measures are recommended in order to develop the sector. The main actions have to be carried out at *Autonomous Communities* level. Among the measures are the following:

- the promotion of forest products as natural renewable resources;
- the realization of studies on productive potentiality and market ;
- the impulse to the legislation on sustainable use of forest products, as well as the simplification of administrative procedures;
- the revision of the fiscal and juridical framework regarding forest property, in order of promoting the compensation of externalities;
- the improvement of the storing and commercialization infrastructures for forest products.

## 5.8 United Kingdom, Wales and Scotland

The United Kingdom has *four separate but interdependent National Forest Programme* (NFP) processes. NFP is a part of the ordinary forest-policy of the regions in UK. England, Scotland, Northern Ireland and Wales, have each developed their own strategy towards sustainable forest management.

Amongst those, the **Scottish Forestry Strategy** from 2006 recognises the economic potential of NWFP in supporting business development activities. The *Forestry Commission Scotland* elaborated a dedicated document named “**The Scottish Government’s Policy on Non-Timber Forest Products**”, in response to an increasing interest of NWFP in the last years. As stated in the document “*there is now a wide range of businesses generating significant economic activity, which deal in a variety of products from wild mushrooms to essential oils.* (<http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/forestry-strategy>, last access 2014-05-06). It also includes a “Supporting Business development strategy”. The strategies are edited by the **Forestry Commission Scotland**.

**The Welsh Strategy for Woodlands and Trees** 2009 has the vision of ensuring “high-quality woodlands that enhance the landscape, and are appropriate to local conditions and have a diverse mixture of species and habitats. Having “A competitive and integrated forest sector” was one of four strategic themes set in the strategy. In this strategy innovation is explicitly mentioned in connection to timber: “Adding value to the timber currently available is just as important as increasing overall output. Wales already has a track record of investment and innovation in developing new uses for wood and acting as an early adopter for new technologies developed elsewhere.” (Forestry Commission Wales, 2009,p. 37) with the purpose to use more Welsh-grown timber. The related goals are to:

- Encourage and support investment in longterm woodland management, and adaptation and innovation to meet new opportunities.



- Encourage research and development work to support innovation, development and
- knowledge transfer on: harvesting, handling, processing and product development.
- Provide advice to growers on the timber properties of different species.
- Help the sector to stimulate demand for woodland products from Wales.
- Provide accurate information on the impact on future timber supplies of the long-term changes to Welsh woodlands. (ibid. p.37)

In Wales, the management of Woodlands is closely related to other land uses. Productive private woodland management in Wales is based around the conifer plantations established by estate owners during the twentieth century. The problem identified is that Conifer planting (other than shelterbelts) was generally seen by farmers as an alternative to agriculture, not part of it, and the Common Agricultural Policy (CAP)

support payments provided a powerful incentive to overgraze farm woodlands, leading to habitat loss and lack of regeneration. The current policies and strategies aim at overcoming such deficiencies.

## 5.9 Conclusions

At the national level, in some policies on forestry, also measures promoting innovation are mentioned. This is the case when measures for “ensuring employment and innovation” are promoted (Austria), “innovative and eco-effective use of natural resources” (Finland) or the “diversification of goods and services” (Italy) is stated explicitly as policy aims. In other countries, innovation policies at the national level are taking place in the realm of economic innovation alone, by this we mean “not intersecting” with forestry or NWFPs: In these countries the report draws on so-called national “High-Tech Platforms”, “Science-Industry Platforms”, nation-wide “Innovation Projects” or the reports from the OECD-Innovation Policy Platform. Such is the case for Germany, Serbia and Slovenia. However, none of those innovation-initiatives has direct mentioning of forestry and forest related NWFPs. The national policy programmes who integrate both spheres, by this we mean policy programmes which conceive innovation as a process taking also place in smaller sectors such as forestry, are explicitly to be found in the UK Forestry strategies in Scotland and Wales, and also in the Finnish natural resource strategies.



## 6 Conclusions and outlook

The topic of innovation policy in the forest sector intersects with other policy areas such as forestry policy; forest based industry policies, and rural and regional development policies.

On the one hand, at EU level, these policies have an existing formal central coordination body: the European Commission and the Committee of the Regions. As has been shown above, this is reflected in the related policy documents, because they are currently increasingly mainstreaming also forestry with innovation.

On the other hand, at the national levels we have detected in a third of the countries under examination the inclusion of “innovativeness” as an economic tool that shall foster forestry and NWFPs. The related policies aim are the creation of new jobs, the foundation of new businesses or the change towards a greener and diverse economy in both –still very often separated- realms: The sphere of forestry legislation or the sphere of innovation legislation. Whilst the former is concentrated on forest management and timber production, the latter remains concentrated on high-tech industries, high-tech R&D and bigger sectors which compose of large companies and multinational enterprises. Within innovation and development policies, those on rural development are the relevant ones for NWFPs. These, being typically oriented towards the agricultural sector in the narrow sense, are often not been taken up much by forestry, and only to a minor extent are utilized for NWFPs, although a few examples exist.

However we have detected tendencies towards an increasingly integrated policy approach as has been shown for the national policies of Wales, Scotland or Finland.



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