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Executive summary

This report documents the findings in the selected in-depth case studies concerning institutional changes and their potential impacts on the NWFP sector in the region. According to the consulted expert stakeholders, several issues are seen as critical for promoting the development of NWFP sector:

- Improving coordination of policies across countries and domains, both at the EU level and at national/sub-national levels.
- Extending the agricultural production regime to NWFP
- Improving legal and policy framework for NWFP at national and sub-national levels.
- Clarifying and raising awareness among the population about NWFP harvesting rights.
- Raising awareness on NWFP among the civil society and decision-makers.
- Enhancing research and development activities oriented at the promotion of the sector, and transfer of knowledge from science to business and policy makers.
- Increased effort oriented at sector promotion and advocacy.
- Promotion of networking and cooperation among different stakeholders involved in or related to the NWFP supply chains.
- Education and training of different actors in the NWFP supply chains.



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1 Introduction

Within the StarTree project, the main task of WP4 was the study of institutional framework surrounding NWFP production, harvesting, trade and use. In D4.1. we explored formal institutional framework – that is, formal policies, regulations and policy instruments that govern the sector at different scales (European, national, sub-national) using document analysis. D4.2. specifically focused on exploring the business environment for the operation of NWFP enterprises. In D4.3. we focused, in turn, on studying the informal institutions that exist at local level in the 10 in-depth case study regions, and also on the perceptions of the expert stakeholders about the problems and opportunities that the institutional provides to the sector. In this deliverable, D4.4., we explore how and which institutional adjustments can be made in order to overcome the constraints and opportunities that were identified by the stakeholders to enhance the competitiveness of the NWFP sector. The study also includes a discussion of the roles of public and private sector actors in order to understand their influence on the process of institutional change. The implications of the proposed institutional changes on the sector (employment and prices) are more thoroughly described in D3.3. that reports the findings of the Delphi survey.

The final deliverable D4.5. includes policy recommendations that have been derived based on all the work WP4 has done within the project.

2 Material and methods

Material for this deliverable has been collected by applying three different and complementary methods:

1. Expert questionnaires (conducted within Task 3.4), which included the questions addressing
 - a. Stakeholder perceptions on institutional framework (e.g. problems, opportunities, success factors);
 - b. Alternative changes in the institutional framework; and
 - c. Roles of public and private actors in institutional change.
2. Delphi survey (2nd round), which was partially based on the results of the expert questionnaires especially with regard to the proposed modifications of the institutional framework, and included the following components:
 - Policy questions on forest ownership, forest management, traceability, suggested changes in the institutions;
 - Representation of sectorial interests;
 - Implications of proposed alternatives on prices and employment in the sector.
3. RSG meetings (3rd RSG meetings), which were intended to discuss the outcomes of the Expert questionnaires and Delphi survey with the regional stakeholders.

Table 1 illustrates how these methods have been applied across the case studies. As it can be seen, only in Catalonia the three methods have been rigorously applied as indicated, in most case studies, however, only one or two methods have been applied. We recognise this as an important limitation of the current study. Yet, the results presented in the current report are based on the case studies, where (1) at least Delphi survey has been conducted, and (2) either an expert questionnaire has been conducted (as in Finland, Castilla-Leon, Catalonia, Serbia, Slovenia, Italy) or otherwise the WP4 included experts able to provide the necessary inputs for the study (Romania).



Table 1. Source of material for case study analysis.

Case study	Abbreviation	Expert questionnaire	Delphi survey (2 nd round)	RSG meeting
Finland	FIN	Yes	Yes	No
Latvia	LAT	No	No	Yes
Romania	ROM	No	Yes	No
Slovenia	SLO	Yes	Yes	No
Serbia	SER	Yes*	Yes	No
Turkey	TUR	No	No	No
Italy	ITA	Yes	Yes	No
Spain – Castilla-Leon	CL	Yes	Yes	No
Spain – Catalonia	CAT	Yes	Yes	Yes
Portugal	POR	No	No	No
UK – Wales	WAL	Yes	No	Yes
UK – Scotland	SCO	Yes	No	Yes
Germany	GER	Yes	No	No
Austria	AUT	Yes	No	No

We specifically exclude the case studies where Delphi survey was not implemented, as it does not allow us to identify the impacts of proposed changes on the sector, neither those case studies where expert questionnaires were conducted, as they served as the basis for identifying the challenges and proposed adjustments to the institutional framework.

3 Results

3.1 Stakeholder profiles

During the expert interviews, altogether 37 stakeholders in 9 regions have been consulted. Table 2 shows the profiles of interviewed stakeholders in each case study. One can see that the majority of the interviewed stakeholders were representatives of public administration (e.g. public servants or policy makers), followed by the representatives of forest owners or managers.

Table 2. Profiles of interviewed stakeholders. For abbreviation of case studies, see Table 1.

	FIN	SCO	SLO	ITA	GER	CAT	CL	WAL	AUT	Total
Forest owners or representatives	1		1						1	3
Forest managers or representatives				3					1	4
Public administration	1	2	5		2	2	2	1		15
NWFP associations	1	1		1						3
SME	1			1			1	1	1	5
NGO		1	1					1	1	4
Researchers				2		1				3
Total stakeholders	4	4	7	7	2	3	3	3	4	37



In terms of covering the different non-wood forest products, the majority of the interviewed stakeholders addressed the NWFP in general and many have stated that the problems are common to different NWFP. One has to bear in mind, however, that the focus of all the case studies except Germany, was on products such as mushrooms, berries, herbs and moss. Germany was the only case study that focused exclusively on game as a NWFP, even though the stakeholders discussed broad NWFP issues as well. Moreover, only one additional stakeholder focused exclusively on game (Slovenia), and one focused on cork (Catalonia) (see Table 3).

Table 3. Number of stakeholders addressing different products in the case studies.

	FIN	SCO	SLO	ITA	GER	CAT	CL	WAL	AUT	Total
Game	1	0	1*	0	2	0	0	0	0	4
Cork	0	0	0	0	0	1*	0	0	0	1
Mushrooms and truffles	3	0	0	6	0	2	2	0	1	14
Berries	2	0	0	1	0	0	0	0	0	3
Herbs	1	0	0	0	0	0	0	0	0	1
Plant-based NWFP	0	0	0	0	0	0	0	1	0	1
NWFP in general	1	4	6	5	2	0	3	3	3	27

Note: * denotes that the stakeholder focused exclusively on this product.

3.2 Alternative changes in the institutional framework

3.2.1 General overview

During the expert interviews, stakeholders were consulted regarding improvements that can be made in the institutional framework to overcome the problems in the sector and to further diversify the sector and improve its competitiveness. Altogether over 200 statements have been provided, 167 of which correspond to clear proposals for the modification of the institutional framework. Stakeholders from Slovenia were the most active expressing proposals for the modification of the institutional framework, followed by the stakeholders of Castilla-Leon (Spain), Italy and Finland (see Table 4).

Table 4. Distribution of statements across case studies and stakeholder categories.

Stakeholder category	AUT	CAT	CL	FIN	GER	ITA	SLO	SCO	WAL	Total
Forest owner or representative (FO)				7		6		6		19
Forest manager or representative (FM)								9		
NWFP association (ASS)	1			5			9			15
NGO	3						5	2	5	15
Public administration (PA)		10	20	4	2		26	1	3	66
Researchers (RES)		6				9				15
SME	5		9	10		4				28
Total statements	9	16	29	26	2	28	40	9	8	167



Topic-wise, statements have mainly focused on the proposals that would benefit the sector as a whole, followed by proposals addressing different aspects of harvesting NWFP (see Table 5).

Table 5. Statements according to the topic and stakeholder category.

Topics	ASS	FM	FO	NGO	PA	RES	SME	Total
forest ownership	1		1		3		1	6
forest management and planning	3	1	1	1	3	2		11
production (incl. cultivation)	1		1		2	5	1	10
harvesting	8		5	4	16	1	6	40
trade and use	1		2	1	5		5	14
entrepreneurship and business operation	3	1		2	7	1	3	17
whole sector	2	7	5	7	30	6	12	69
Total statements	19	9	15	15	66	15	28	167

For each of the statements, we have also identified key words that best describe the statement content. Crossing this information with the topics, we obtain a good picture of the types of statements that have been expressed (see



Table 6). We observe that the majority of the statements related to the institutional changes that would benefit the whole sector are related mainly to raising awareness among civil society and different stakeholders (e.g. public administration, politicians) about NWFP and different problems facing the sector, improving the overall legal framework and policies addressing NWFP, enhancing research on different aspects of NWFP, improving the promotion of the sector by means of e.g. advocacy groups, as well as promoting education and training for the different actors related to the NWFP value chain.

In relation to proposals addressing predominantly harvesting, the largest number of statements was related to the need to clarify or re-establish harvesting rights, especially for commercial harvesting (stressed especially by Slovenian and Italian stakeholders); as well as improve the general awareness of population regarding harvesting rights (e.g. UK, Spain, Slovenia).

With respect to entrepreneurship and business operation, stakeholders identified the need for financial support measures. Statements referring to trade and use of NWFP mainly focus on the need for coordination of activities among stakeholders, as well as issues related to food security (mainly at EU level), and marketing activities. On the topic of forest management and planning, stakeholders mainly claimed additional support for the incorporation of NWFP in silvicultural plans.



Table 6. Representation of statements by keywords and topics.

Keywords / Topics	entre-preneurship	forest management & planning	forest ownership	harvesting	production	trade and use	whole sector	Total
awareness			1	7			10	18
business support	3					1		4
control					3			3
cooperation	2		1	2			1	12
coordination						3		9
education and training	3	2			3	2	8	18
financial measures	7	2		2	3		3	17
food security						3		3
forest management		7						8
harvesting rights			1	14				15
information					2	1	1	8
innovation	1				1		1	4
labelling							1	2
legislation			3	3	2		10	18
marketing						3		4
research	1				2		9	12
sector promotion							1	10
sign posting				1	1			2
Total general	17	11	6	40	10	14	69	167

If we look at the distribution of the statements according to the topics and countries, we observe from that the proposals concerning the whole sector were the most common in almost all consulted case studies (see Table 7), except for Finland – whose stakeholders focused predominantly on trade-related issues, and Slovenia and Scotland – whose stakeholders were more concerned about harvesting rights (see also Table 8).

Table 7. Distribution of statements by topic within case regions.

Topics	AUT	CAT	CL	FIN	GER	ITA	SLO	SCO	WAL	Total
entrepreneurship	0%	19%	0%	27%	0%	4%	10%	22%	0%	10%
forest management	0%	13%	0%	4%	0%	14%	8%	11%	0%	7%
forest owners	11%	0%	7%	0%	0%	0%	5%	11%	0%	4%
harvesting	0%	13%	10%	19%	50%	25%	40%	44%	25%	24%
production	0%	25%	7%	4%	0%	4%	5%	0%	0%	6%
trade	11%	0%	3%	31%	0%	0%	10%	0%	0%	8%
whole sector	78%	31%	72%	15%	50%	54%	23%	11%	75%	41%
Total statements	100%									

Table 8. Distribution of statements by case study within topics.

Topics	AUT	CAT	CL	FIN	GER	ITA	SLO	SCO	WAL	Total
entrepreneurship	0%	18%	0%	41%	0%	6%	24%	12%	0%	100%
forest management	0%	18%	0%	9%	0%	36%	27%	9%	0%	100%
forest owners	17%	0%	33%	0%	0%	0%	33%	17%	0%	100%
harvesting	0%	5%	8%	13%	3%	18%	40%	10%	5%	100%
production	0%	40%	20%	10%	0%	10%	20%	0%	0%	100%
trade	7%	0%	7%	57%	0%	0%	29%	0%	0%	100%
whole sector	10%	7%	30%	6%	1%	22%	13%	1%	9%	100%
Total statements	5%	10%	17%	16%	1%	17%	24%	5%	5%	100%

3.2.2 Proposals at the European level

3.2.2.1 Coordination of policies across countries and domains

At the European level, the major issue which was brought up by the stakeholders addressed coordination of policies across countries and across domains:

- The Novel Food Regulation: the rules on how to interpret the regulation should be uniform in Europe and clearly guided (FIN/SME);
- Health and nutrition claims must be the same across the whole Europe (FIN/SME);
- Coordination of policies at EU level is needed (IT/SME);
- Inter-sectoral solutions for mushroom trading (SLO/PA);
- Transversal dialogue regarding standards (CL/SME).

In Delphi survey the question of **coordination of trade** of NWFP was inquired in question 3.6, where stakeholders were asked whether the issue of tradable species should remain a national prerogative, or whether there should be a unique list of NWFP tradable species at EU level. In general, no uniform recommendation can be drawn from stakeholder responses, as stakeholders in Slovenia and Serbia agreed that the tradable species should remain under a national control, whereas the stakeholders in Italy tended to support that the EU should promote a unique common list of tradable wild mushroom species with the related commercial classification and qualitative standards. Stakeholders from Romania and Spain expressed divergent opinions, as can be seen from D3.3., Table 5.6., question 3.6.

Coordination of food quality controls was inquired in question 3.7, where the stakeholders were asked about the most appropriate measures to ensure quality control that would not hamper competitiveness of enterprises trading with wild mushrooms. Stakeholders in Finland and Italy unanimously agreed that all the economic actors involved in the supply chain should be free to handle or sell any wild mushrooms. The company selling has the responsibility of the product quality check. Voluntary certification should be promoted instead of compulsory control. Stakeholders in Serbia agreed, on the contrary, that all the economic actors involved in the supply chain should have a license (through compulsory training) to handle or sell only wild mushrooms that are difficult to be recognized, while common traded wild mushroom species (i.e. boletes, chanterelles, morels etc.) should be checked by the company. The selling company has the responsibility of the product quality check. Slovenian stakeholders agreed that all the economic actors involved in the supply chain should have a license (or proofed compulsory training) to handle or sell any [wild mushrooms and related products. The selling company has the responsibility of the product quality check (see D3.3, Table 5.6, question 3.7).



Promotion of an EU-wide framework on wild forest products was inquired in the Delphi survey in question 5.1 (see D3.3., Table 5.8). Most stakeholders, with the exception of Romanian and Finnish stakeholders almost unanimously agreed that this indeed is a necessary step for improving business development and competitiveness of the sector.

3.2.2.2 Extending the agricultural production regime to NWFP

The second biggest issue that has repercussions at the European level has been brought up by various stakeholders in different countries is the issue of **extending agricultural regime and the associated support to NWFP**.

In Delphi survey this issue has been addressed in question 3.4: Companies purchasing wild mushrooms from commercial (professional and non-professional) pickers are today not considered business of the primary sector, which means they have limited access to the Common Agriculture Policy funds (i.e. funds for infrastructure, machineries, associationism, consultancy, process innovation, management innovation, product promotion, etc.). The company purchasing wild products should be considered business operator of the primary sector, regardless products are generated from land they do not own or rent. The stakeholders in all countries except for Finland (who disagreed with the statement) and Slovenia (where the agreement was not unanimous), almost unanimously agreed with this statement. Moreover, stakeholders believed that enabling the purchasing company to be considered business operation of the primary sector is likely to improve the employment, without affecting the prices (see D3.3., Table 5.6, question 3.4).

3.2.3 *Proposals at national and regional levels*

3.2.3.1 Raising awareness among the civil society

Raising awareness about NWFP and the problems of the sector among the civil society and public administration was an issue that was brought up in several statements (see



Table 6), and was addressed by different categories of stakeholders from Finland, Italy, Catalonia, Castilla-Leon and Austria. Specifically, the following categories of statements were identified:

- General awareness of the sector (10 statements – FIN, IT, CAT, CL, AUT)
- On access to resources and harvesting-related issues (7 statements – SCO, WAL, SLO, IT, CL): what the rights and legal rules are etc., good practices among pickers and good behavior in the forests, possible overexploitation.
- Awareness of forest owners (CL)

The Delphi survey contained a question on **the means for public administration to raise awareness of recreational pickers about harvesting rights and edible species**. Four alternative statements were presented to the respondents:

- (a) Through *leaflets* about edible species and food security (paid from general taxation);
- (b) Through *mandatory courses* about edible species and food security only for the people that want to pick. The course allows to obtain the harvesting license (paid by the picker);
- (c) Through *mandatory courses with final exam* about edible species and food security only for the people that want to pick. The course allows to obtain the harvesting license (paid by the picker);
- (d) *No additional awareness* rising activities are necessary.

Most stakeholders agreed that alternative (a) is the best mean for raising awareness of recreational pickers (only the Finnish stakeholder opted for alternative (d)), and all the other alternatives were almost unanimously rejected by the stakeholders (see Table 5.5. in D3.3. question 2.8).

The Delphi survey also included a question about **financing awareness raising activities** for triggering the consumption and use of wild mushrooms specifically. The respondents in Italy and Slovenia tended to agree that consumer awareness should be driven predominantly by the market (that is, companies selling their products should finance their customer awareness), whereas the respondents in Serbia and Romania inclined towards supporting the idea of public authorities financing general consumer awareness about pros and cons of wild mushroom consumption from general taxation revenues (see Table 5.8. in D3.3, question 5.8).

3.2.3.2 Improving legal and policy framework for NWFP

Statements related to improving the legal and policy framework for NWFP address different specific issues:

- Explicit incorporation of broader material outputs of forests in forest policies (WAL/NGO);
- Improving related policies, such as tax and labour laws at national level (CL/PA);
- Coordination of legislation across neighbouring regions within the country (IT/FM) or across neighbouring countries;
- More detailed regulations (AUT/NGO);
- Legislation related to land ownership (SCO, CL, AUT);
- Regulations concerning harvesting: deregulation of hunters exemptions (GER/PA), creation of regulatory framework for mushroom picking (CAT/PA), regulation of foreign labour (FIN/PA)
- Adapt regulations to truffle cultivation (CAT/RES)

In relation to the promotion of national (or sub-national) plans for wild forest products, like wild mushrooms, in Delphi survey we asked whether the **promotion of a national plan for wild mushrooms** was considered useful by the stakeholders in the case studies. Only the Italian and Slovenian stakeholders almost unanimously agreed that this would be a useful action, which in addition would likely to have a positive impact on employment and negligible impact on prices. The remaining stakeholders (Romania,



Serbia and Spain) also thought that this was a good idea, but there was more divergence in their opinions (see D3.3. Table 5.8, question 5.7). In all regions, the impact on employment was estimated as positive, whereas the impact of prices varied across the regions.

3.2.3.3 Clarifying harvesting rights

One of the major issues where suggestions were given concerns harvesting rights – either related to their re-definition and/or clarification, specifically concerning commercial exploitation. These issues were especially critical in Slovenia – where the predominant suggestion was that of assigning the harvesting rights for NWFP harvesting (mainly mushrooms and berries) to the forest owner and introducing a system of harvesting permits; and in Italy, where alternative harvesting rights configurations were proposed (e.g. homogenisation of harvesting regulations across regions, liberalisation of harvesting).

The Delphi survey contained a whole array of questions regarding different aspects related to harvesting of NWFP (see questions 1.1, 2.1, 2.2., 2.3, 2.4, 2.6 and 2.10 in D3.3.). For the majority of these statements, the opinions of the stakeholders were rather divergent, so we only discuss here the issues on which some sort of convergence has been identified.

First, regarding the general perception of harvesting rights for NWFP – should they belong to the public vs. to all the forest owners vs. only to the forest owners who actively manage their forest for wild forest products or otherwise establish the property over NWFP by signposting their land. There is a slight convergence that the NWFP should be public goods, but the variation in opinions across stakeholders and case studies is remarkable (see D3.3, Table 5.4, question 1.1).

Second, regarding the differentiation of limitations and permit costs between commercial and recreational pickers of wild forest products, specifically wild forest mushrooms, the alternatives that were presented to the respondents were the following:

- a) wild mushroom harvesting should be allowed without limitations and free of charge both for recreational and commercial pickers;
- b) wild mushroom harvesting limitations should be introduced though the harvesting remains free of charge for all the pickers (recreational and commercial);
- c) wild mushroom harvesting limitation should be introduced through the implementation of permit system equal for all the pickers (recreational and commercial). The professional and recreational permits have the same cost;
- d) wild mushroom harvesting limitation should be introduced through the implementation of permit system to differentiate recreational from commercial harvesting, where recreational harvesting has a maximum allowance from 1 to 10 kg per day per person, while commercial harvesting has no harvesting limits. The professional permits will cost proportionally more than the recreational ones (on average);
- e) wild mushroom harvesting limitation should be introduced through the implementation of permit system to differentiate recreational from commercial harvesting, where recreational harvesting has a maximum allowance from 1 to 10 kg per day per person, while commercial harvesting limits range from 30 up to 300 kg per day per person in order to reduce the risk of informal trading among pickers that may even source wild mushrooms from abroad. The professional permits will cost proportionally more than the recreational permits.

The Finnish and Spanish stakeholders converged on the alternative (e), whereas Romanian stakeholders tended to agree on the alternative (c). Italian stakeholders tended to incline towards the alternative (a), whereas Serbian stakeholders were divided between alternatives (a) and (b), and Slovenian stakeholders were divided between the alternatives (a), (d) and (e). All in all, the issue of whether to differentiate commercial and non-commercial harvesting remains open.



Third, one of the options to differentiate commercial from recreational harvesting is by establishing harvesting reserves for commercial harvesting. This would allow to reduce the competition over the resources and ensure NWFP availability for recreational pickers, and also would be in line with the traceability requirements set by the EU Food Law (Reg 178/2002). Stakeholders were asked their opinion in a Delphi question 2.2. With the exception of Finnish and Italian stakeholders, the stakeholders from Romania, Serbia, Slovenia and Spain agreed that the creation of harvesting reserves would be an acceptable measure, and it would likely have a positive impact on employment and negligible impact on price (see D3.3, Table 5.5., question 2.2). The creation of such reserves, however, should not be done without consulting forest owners, even in case of fragmented landownership, as the answers to the question 2.3. of the Delphi survey indicate (see D3.3., Table 5.5, question 2.3).

Fourth, all stakeholders in all case studies also unanimously agreed that in case permit system for harvesting of wild mushrooms is implemented at regional or national scales, the revenues generated from the system should be used to cover the operational costs of the permits and also channelled as incentives to forest owners/managers to enhance the productivity of wild mushrooms in the forest (see D3.3, Table 5.5, question 2.4).

Fifth, regarding who should be able to obtain a commercial picking permit, the stakeholders in Serbia and Slovenia unanimously think that any national dweller should be allowed to obtain a commercial picking permit, Romanian stakeholder also tended to incline towards this option, whereas the Italian stakeholders converged on the statement that commercial picking should not be regulated. Spanish stakeholders had a mixed opinion – some thought that any national dweller should be allowed to have a commercial license, whereas others considered that only the residents of the municipality should be allowed to harvest NWFP commercially (see D3.3., Table 5.5., question 2.10).

3.2.3.4 Additional financial measures to support the sector

Stakeholders brought to the attention several issues related to the financial support of the sector:

- Support for cultivation activities (e.g. truffles) (CAT/RES)
- Rights to agricultural subsidies (in line with the claims expressed in Section 3.2.2) – (CL/SME)
- Specific financial support measures for NWFP (IT/RES, IT/FM, CL/PA)
- Support for forest management in general (CAT/PA) or for Natura 2000 sites (SLO/NGO)
- Introduction of financial rent to forest owners related to game exploitation (SLO/PA)
- Incentives to NWFP sector from rural development plan (SLO/FO)
- Financial incentives and support for establishing companies (SLO/PA and PA, SCO/NGO, IT/FM)
- Modification in tax measures (SLO/PA, FIN/SME)
- Modification of business accounting for SMEs working with NWFP (FIN/SME)

In Delphi survey, financial measures were not specifically inquired, beyond specific issues related to financing specific activities (e.g. training, awareness raising, enhancing production of wild forest products). These questions are discussed in the respective sub-chapters separately.

3.2.3.5 Enhancing research and development activities oriented at the promotion of the sector

Stakeholders addressed the issue of **knowledge gaps** related to different aspects of NWFP value chains – starting from the lack of information on the sustainable harvesting levels for different species (SCO/ASS), which makes it difficult for some stakeholders to endorse harvesting activities (e.g. WAL/NGO); to knowledge about the economic value and economic potential of NWFP (WAL/PA), which may preclude the



implementation of adequate support measures for the sector (WAL/PA). The role of knowledge production for sector innovations has also been highlighted, especially in relation to knowledge transfer activities from the scientists to entrepreneurs (FIN/ASS). Research efforts related to new raw materials were also mentioned, especially product development and market research (FIN/ASS).

3.2.3.6 Sector promotion and advocacy

The issues that were highlighted by the stakeholders under the topic of sector promotion include the following items:

- The need for political support to the sector (CL/PA) and minority products (CL/SME)
- A need for a NWFP strategy (AUT/SME)
- Promotion of NWFP through rural development plans (SLO/FO)
- Establishment of development centers (SLO/PA and FO)
- Utilization of NWFP by public sector (AUT/SME)
- Implementation of pilot projects in state forests (AUT/SME)
- Actions promoting specific products (e.g. mushrooms, cork, game) (CAT/PA and PA, GER/PA)
- General actions promoting forest as multifunctional environment (ITA/RES)

In the Delphi survey, we posed several questions related to the consolidated actions promoting the sector.

We posed a specific question concerning **who has ability and will to promote the interests of the wild mushroom sector** in the case study region, in view of making policy and regulatory reforms (question 5.11). The responses are reported in D3.3. Table 5.8), and they highlight specifically that according to the consulted stakeholders, the most powerful agents in this respect are associations of enterprises, formal representatives of businesses such as “... medicinal and aromatic plants producers”, followed by public administration at local level, and research organizations.

Another question related to the representation of the sector in the Delphi survey concerned the opinion of the stakeholders on **the plausible solution to promote changes in policy and regulation directly by the interested stakeholders**. Respondents were presented with three alternatives:

- (a) Creation of a permanent technical table/committee where the stakeholders can promote changes only through their representative organization. All the proposals will receive an answer.
- (b) Creation of a permanent platform (on-line and/or physical) where everybody can promote a change but the proposals are weighted by the typology of the promoter (i.e. a private citizen has low weight, while associations have higher weight). All the proposals will receive an answer.
- (c) Creation of a platform (on-line and/or physical) with a limited opening time where everybody can promote a change but the proposals are weighted by the typology of the promoter (i.e. a private citizen has low weight, while associations have higher weight). All the proposals will receive an answer.

Alternative (a) gained more support from the stakeholders in Finland, Romania, Serbia and Slovenia, whereas the Italian stakeholders did not support it. The Italian stakeholders tended to support alternative (c), whereas the Spanish stakeholders’ opinions were divided between these three alternatives. The responses are reported in D3.3. table 5.8, question 5.12.

3.2.3.7 Promotion of networking and cooperation among different stakeholders related to NWFP sector

Cooperation of activities among the multiple actors related directly and indirectly to NWFP were mentioned multiple times by different stakeholders (see



Table 6). Statements in this group related to the following issues:

- The need for wider stakeholder involvement in decision-making (e.g. consultations with stakeholders concerning harvesting regulations) (AUT/NGO, SLO/PA, SCO/ASS)
- Strengthen the involvement of forestry actors in regional Leader programs (GER/PA)
- Promotion of cooperation and networking among SMEs (FIN/SME and ASS, SLO/PA, CL/PA, ITA/RES)
- Strengthening cooperation among forest owners (SLO/PA, SLO/NGO)
- Reinforcing cooperation and partnerships between private and public bodies (CAT/PA)

In the Delphi survey, we posed a question about **how to trigger cooperation among different stakeholders** involved in the wild mushrooms market (see question 5.10). Five different response options were offered to the stakeholders:

- (a) Associations should be self-financed by associated members that carry all the costs and responsibilities.
- (b) The public authority should cover all the costs of the association start-up (min 2 and max 5 years), if they reach a certain number of members (in case of non-economic actors) or a certain level of representativeness (i.e. 20% of the national annual turnover of the sector, in case of SME or other economic actors).
- (c) The public authority should cover only the cost of the association startup (min 2 and max 5 years) (i.e. notary costs, advisor costs, etc)
- (d) The public authority should loan the cost of the association start-up through a specific fund. The loan should be given back within a limited number of years.

In general, there was no agreement on any of the alternatives, except for the fact that the last alternative was in generally viewed as the least desirable by all stakeholders from all the case studies. Spanish stakeholders tended to support the alternative (a), whereas this alternative did not gain support among Italian stakeholders, who tended to opt for the alternative (b). Alternative (c) gained more popularity among Slovenian stakeholders. Serbian and Romanian stakeholders were divided among the alternatives (see D3.3. Table 5.8, question 5.10).

3.2.3.8 Enhanced coordination of regulations addressing the sector

Stakeholders called for improvements in coordinating activities within the public administration (CL/PA) in order to eliminate inconsistencies and incompatibilities between different regulations for different activities in the sector (CL/SME), enhance interregional coordination, standardization and coordinated development of regulations and control (CL/PA, IT/FM, IT/ASS), and improve coordination between agricultural and forestry management at national and regional level (CL/PA). Coordination of information regarding harvesting rules was also called for (SCO/PA).

In Delphi survey, the issue of **national coordination of harvesting regulations of wild mushrooms** have been addressed in question 2.6. The stakeholders in Finland, Italy, Romania and Slovenia almost unanimously agreed that the State should limit Regions in promoting local adaption of the law regulating the harvesting of wild mushrooms in order to allow coordination and equity, while Spanish stakeholders expressed more divergent opinions. Such limitations are expected to have a positive impact on employment, and negligible to no impact on prices (see D3.3., Table 5.5., question 2.6).

3.2.3.9 Education and training of different actors in the NWFP value chain

Education and training activities were emphasized for different segments of the value chain – starting from production to entrepreneurship and public administration, and these issues emerged in almost all case studies (IT, WAL, SCO, CL, CAT, FIN, SLO).

Concerning the **forest management and production step**, suggestions included re-educating forest owners/managers (SCO/ASS, CL/PA) or mycological groups (IT/ASS), improving the transfer of knowledge on NWFP production to forest owners/managers (SLO/FO), as well as assisting forest owners with the production activity of NWFP (e.g. truffle cultivation, CAT/RES).

In the Delphi survey, we asked whether public administration should guarantee that forest owners, managers or technicians receive adequate training on specific management techniques that improve the production of wild forest products (question 1.4). Most of the stakeholders (with the exception of the Finnish one) agreed that this would be a good measure (see Table 5.4. in D3.3., question 1.4). Moreover, they stated that employment in the sector is likely to increase thanks to this measure, whereas the impact on the price is expected to be rather negligible.

The importance of **training of harvesters/pickers** has been brought up by several stakeholders in Slovenia (NGO and PA). One suggestion concerned linking harvesting permits to mandatory training (SLO/NGO), as it is already the case in Serbia. An Italian stakeholder (SME) also suggested substituting the figure of a mycologist (an agent who confirms the suitability of mushrooms for human consumption) by training of the personnel who deal with mushrooms.

The Delphi survey also contained a question regarding **the organization of training for commercial pickers** (see question 2.7). Respondents were presented 4 alternatives:

- (a) Training should be delivered to formal and informal commercial pickers through *leaflets/booklets* about commercial species, qualitative standards and harvesting best practice (organized and paid by companies);
- (b) Training should be delivered to formal and informal commercial pickers through *mandatory courses* about commercial species, qualitative standards and harvesting best practices. The course allows to have a license to pick (training organized and *paid by companies or public administration*).
- (c) Training should be delivered to formal and informal commercial pickers through *mandatory courses* about commercial species, qualitative standards and harvesting best practices. The course will be *paid by the picker* and it allows to have a license to pick (organized with fee by public administration).
- (d) Training should be delivered to formal and informal commercial pickers through *mandatory courses with an exam* about commercial species, qualitative standards and harvesting best practices. The course will be *paid by the picker* and it allows to have a license to pick (organized with fee by public administration).

None of these options have received an overwhelming support among the stakeholders who participated in Delphi survey (see Table 5.5. in D3.3, question 2.7). The respondents in Italy and Romania showed slight inclination towards the alternative (a), whereas the stakeholders in Slovenia rather favored the alternative (d). Spanish stakeholders were divided between alternatives (b) and (d). Alternative (b) was almost unanimously the least preferred among the stakeholders (with the exception of the Spanish ones).

Stakeholders also emphasized the role **of information provision and training for enterprise establishment** – e.g. by providing better guidance to entrepreneurs on how to establish companies in specific NWFP sectors (e.g. cosmetics or chemical industry) and the opportunities there are in the sector (FIN/ASS,



ITA/FM, WAL/PA), by training entrepreneurs to broaden their thinking (e.g. focus on multiple-use idea (FIN/PA), and also by providing specific training in enterprise management and internationalization of enterprises (CAT/RES). Public administration was also seen in need for a training in dealing with NWFP (CL/PA).

In the Delphi survey we inquired about the details of **the organization of training courses**, namely by asking if the respondents agreed that public administration or private trainers should provide courses for a small cost to any economic actors involved in the supply chain, while public authorities support the costs for controller's training (question 3.5). All respondents in Finland, Italy, Romania, Serbia, Slovenia and Spain almost unanimously supported this idea, and also agreed that this will likely to have a positive impact on employment, and rather no impact on price of the product (see D3.3. Table 5.6, question 3.5).

3.3 Roles of public and private actors in institutional change

According to the consulted stakeholders, public administration at different levels as well as private actors have roles to play in promoting the institutional change in the region. Table 9 provides an overview of the types of agents that are perceived to have the responsibility to promote the sector and lead institutional change in their regions. We see from the table that at national and sub-national levels, Ministries of agriculture and forestry (or alike), together with regional government and forestry administration, supported by forest services and forest centers are seen as the key players in promoting institutional change. These are to be supported by research organisations (forest research institutes and universities). Among private or private-public actors, the key position of forest or landowner associations is highlighted, followed by producer and business association, professional services and forest business partnerships. In general, businesses – both large and small – as drivers of institutional change are acknowledged by stakeholders, and as well as actors from related sectors (e.g. nature tourism, game and hunting). This opens up scope for establishing wide partnerships at local scale among different types of actors.

Table 9. Agents mentioned as being responsible for promoting institutional change (number of times agents have been mentioned).

Category of agents	FIN	ITA	CAT	CL	SLO	SCO	WAL	AUT	GER	Total
EU level										2
EFSA, EU authorities	2									2
National level										19
Central government	2			1				1		4
Ministry of Forestry and Agriculture	1			2	5			1		9
Other ministries (e.g. Ministry of Labour, Ministry of Finance)	1			1						2
Public administration (in general)				1				3		4
Regional level										27
Regional government	1	3	1	2			2			9
Provincial and municipal administration				2	1					3
Local institutions	1			1						2
Forest administration (e.g. Forestry Commission)			1			4	3			8
Regional actors in general	2	1					1		1	5
Other public organisations										34
Research community (institutes and universities)	3	2			2					7
Forest centers and Forest service	1	3	2		6			1		13



Police and forestry inspectorates				1	2				3
Chamber of agriculture and forestry					2		1		3
Chambers of commerce and of small businesses	1				2				3
LEADER groups, LAGs			2					1	3
Development centers	2								2
Other actors									50
Forest owners and forest owner associations	2	1	2	3	3	1	2	1	15
Forestry companies and forest industries					1		2		3
Business support services (incl. consultancy)		2			2				4
Associations of harvesters				1	2	1			4
Game management organisations / Hunting associations	1				2				3
Nature tourism organisations	1				1				2
Community woodlands association						2	1		3
SMEs	2						1		3
Producer and business associations, professional services and forest business partnerships				3	2		2	1	8
Private actors in general	2						2		4
Forest Stewardship Council UK							1		1



4 Conclusions

This report documents the findings in the selected in-depth case studies concerning institutional changes and their potential impacts on the NWFP sector in the region. According to the consulted expert stakeholders, several issues are seen as critical for promoting the development of NWFP sector:

1. **Improving coordination of policies across countries and domains, both at the EU level and at national/sub-national levels.** Coordination of policies and regulations at supra-national level (e.g. EU) is especially relevant for products that are traded at international markets (e.g. mushrooms), and consequently in case regions where such trade plays an important role (e.g. Italy, Castilla-Leon). National and sub-national policy coordination, in turn, is important for every NWFP and nearly in every region, to eliminate inconsistencies and incompatibilities between different regulations for different activities in the sector, enhance interregional coordination and control, as well as improve coordination between agricultural and forestry management. There is also a need to promote an EU framework on wild forest products.
2. **Extending the agricultural production regime to NWFP** to be able to benefit from a full range of support measures available to agricultural producers. For example, stakeholders consider that companies purchasing wild mushrooms from commercial pickers should be considered a primary producer of the primary sector, as defined by the art 3, paragraph 17 of the Reg. 178/2002, and not as commercial activity, as it is now.
3. **Improving legal and policy framework for NWFP at national and sub-national levels.** In several case regions, stakeholders have claimed clarifications regarding land ownership and NWFP harvesting rights, especially as we witness increasing trend of foraging for wild forest products across Europe. Cultivation or semi-cultivation of non-wood forest products (e.g. truffles, chaga mushroom) also calls for modification of existing regulations (e.g. Catalonia, Finland).
4. **Clarifying and raising awareness among the population about NWFP harvesting rights.** The issue of unclear harvesting regulations have been brought up in several case studies – especially in case regions where foraging for wild forest products is not extremely extended among population or where roaming regulations are otherwise complex (e.g. Wales), and hence, stakeholders in these case studies call for information campaigns to improve the knowledge of harvesting rights among the general population. Similarly, the differences in regulation of commercial vs. recreational harvesting have also been brought up.
5. **Raising awareness on NWFP among the civil society and decision-makers.** One of the biggest problems that stakeholders mentioned was related to the lack of awareness about NWFP among policy-makers on the one hand, and population on the other hand. Policy-makers seem to lack information on the profitability of the activity and its potential contribution to rural and regional development. Society (including SMEs), on the other hand, seems to lack information on the broad spectrum of NWFP that can be potentially utilized (e.g. research shows that most foragers harvest only a few NWFP species), as well as on the opportunities for income generation from these products.
6. **Enhancing research and development activities oriented at the promotion of the sector, and transfer of knowledge from science to business and policy makers.** R&D activities are especially needed to identify sustainable harvesting limits for the majority of NWFP species as well as the economic value and economic potential of NWFP. SMEs also claimed for improved transfer of knowledge from science to practice, especially regarding product design and market research.
7. **Increased effort oriented at sector promotion and advocacy.** Many stakeholders stressed that one of the biggest constraints for the sector is the lack of specific advocacy groups to defend the interests of the diverse NWFP sector at national and European levels. With a few exceptions (e.g.



advocacy groups for cork), such advocacy groups either do not exist or are still in the emerging stage. Associations of enterprises as well as public administration and research organizations are, according to the stakeholders, the best suitable actors to take on this role.

8. **Promotion of networking and cooperation among different stakeholders involved in or related to the NWFP supply chains.** Networking and cooperation are especially relevant for SMEs, as well as among forest owners, and public and private bodies (e.g. territorial stakeholders), as the lack of such cooperation was considered an important hindering factor for sector development.
9. **Education and training of different actors in the NWFP supply chains** – starting from forest managers/owners to harvesters/pickers and NWFP entrepreneurs. For example, stakeholders consider that public authorities should guarantee that forest owners, managers and technicians receive adequate training on specific management techniques that improve the production of wild forest products. Such training can be done with a small cost for economic actors involved in the supply chain.

