



Spurring INnovations for forest eCosystem sERvices in Europe

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D3.2 DEMAND FOR POLICY SUPPORT REPORT

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Executive summary

Forests provide multiple ecosystem services, for which the societal demand is increasing. On the European level, there is an ongoing scientific and political debate does the current legislative regime provide adequate support for provision of these services or not. This is an issue tackled by this report, which also recognizes the complexity and the coordination needs between forest-focused and forest-related policies, especially in the period of strong EU policy changes, signified by the EU Green Deal and the updated EU Bioeconomy Strategy. The report also strives to address concrete policy mechanisms that are needed for European policy framework to support the supply of these services. The report tackles the needs and operating realities of practitioners across Europe, whose work is focused on securing the supply of these services. The preparation of the report comprised out of three steps. The first step was a 'Bottom-up' analysis focused on eleven case study areas that looked at policy factors affecting implementation of their innovative mechanism that strive to enhance provision of multiple forest ecosystem services, with input from more than three hundred persons. The second step was a 'Top-down' analysis of EU-level stakeholders (27 interviews), focused on identifying supporting and hindering factors for the provisioning of forest ecosystem services, and on the issue of policy coordination. The third step was a focus group exercise (21 participant), where the local and the EU-perspective were joined, in order to participatively propose designing of concrete policy mechanisms that would secure provision and enhancement of the multiple forest ecosystem services in Europe. From the 'Bottom-up' analysis, it was evident that there is no 'one size fits all' types of solutions; but rather a three-fold grouping of cases across Europe can be found; (I) Payment of environmental services cases, which aside being capital-intensive, require clear compatibility with national and EU-legislation, especially in relation to compliance with state-aid rules; (II) market oriented innovations, which aside facing typical market barriers such as taxation, depend on adherence to forest-focused legislation in context of management changes that they might introduce; (III) voluntary and legislative innovations which need strong high-level political and strategic support, be it top-level state administration or EU-level support. The 'Top-down' analysis has re-affirmed existence of two coalitions of actors: one focused on forest use and another focused on its conservation. These two coalitions have fundamentally different perspectives on how forests in Europe should be managed. They both agree that EU-policy level should do more for provision of forest ecosystem services and they both agree that over-arching policy is needed to tackle the issue of policy coordination. However, they don't agree on how this should be achieved; the pro-conservation sees The European Green Deal as this over-arching policy, while for pro-use side sees this role for the

upcoming Forest Strategy. Each group sees the policies of the other group as the more dominant ones and as increasing the division among the stakeholders, with little prospect that even improved dialogue can lead to real coordination on the EU-policy level. However, they both see possibility for reconciliation of these divergent policy preferences on the level of practical forest management, one that would holistically tackle different societal demands and multiple ecosystem services as its objectives. Other issues that were raised were lack of scientific data and transparent reporting from the member states, general need for more research on forest ecosystem services, coordination on national level and clarifying competency over forestry (EU-level, national or shared competency). They both agree that multifunctionality of forests is important and could be supported by a payment scheme. For the pro-forest use side, such scheme should be market-based, voluntary and country-specific. For pro-conservation side, such scheme should be in a form of EU-subsidies that are conditional on actual changes in the forest management practices, and they should focus on biodiversity and carbon storage. From the focus group section of the report, both the EU and the local level stakeholders recognized that EU-forest policy is to a large extent set by policies of other related sectors and that there is a need for their (better) coordination. They also all agreed that there are too many regional differences within Europe, and that it would be difficult (or even undesirable) to combine them all into a commonly shared criteria for a EU-level payment for environmental services scheme - but they all agree that such mechanisms should be publicly funded, and that it should be conditioned on additionality. There is also an agreement that there is insufficient level of knowledge on multitude of forest ecosystem services by many important groups of stakeholders, especially at the top policy level, and that their large-scale and robust valuation and monitoring systems are needed. The report ends with a series of policy-level recommendations.

Contents

1. Overview and Background.....	1
2. Materials and Methods: A three-step approach.....	2
2.1 Step 1: Bottom-up perspective.....	2
2.2 Step 2: EU-level interviews.....	5
2.3 Step 3: Focus group.....	7
3. Results.....	9
3.1 Bottom-up Approach.....	9
3.2 EU-level interviews.....	13
3.3 Focus group.....	23
4. Discussion and conclusions on policy support.....	28
5. References.....	32
6. Annexes.....	34
Annex I: Table 1. Summary of factors on case-study level.....	34
Annex II: EU-level interview questions.....	38
Annex III: Focus Group Concept Note.....	40
Annex III: Focus Group Agenda.....	41
Annex IV: Focus Group Summary Tables.....	42

1. Overview and Background

Multiple forest ecosystem services (FES) and the benefits which forests provide has gained increasing interest over the last decades as society's interest in these services grows. Despite the growing demand for FES (recreational activities, wood and non-wood products and climate benefits), there is an ongoing discussion as to whether there is sufficient policy support for the provision of these services in Europe (Winkel and Sotirov, 2016; Torralba et al, 2020). The SINCERE project aims to align the provision of forest ecosystem services (FES) by landowners and forest managers with societal demands. To do this, SINCERE follows a multi-actor approach, bringing experts, practitioners and policymakers together in order to *“understand how the current European multi-level forest-policy framework supports the IM under implementation, including an analysis of key supporting and inhibiting factors..., and ... explore innovative policy-coordination mechanisms in cases where policy fragmentation is an obstacle for the development of the IM under implementation”* (SINCERE Grant Agreement Annex I Part A, p 105).

This report focuses on three questions:

1. What are the supporting and hindering factors related to policy coordination that promote or hinder provision of FES?
2. Does the current European policy framework support FES sufficiently?
3. What policies mechanisms are needed for the European policy framework to support FES?

To answer these three questions, a three-step approach was followed, including (I) 'bottom-up' perspective based on consultations with Innovation Action Partners from case studies involving the views of local stakeholder, 'top-down' perspective based on in-depth interviews with EU-level policy-makers and forest stakeholders, and a focus group discussion bringing participants from step one (practitioners) and step 2 (EU-level stakeholders) together in one joint forum to connect both perspectives. The box below describes the procedure as described in the DoW, and which was implemented in the task.

As stated in the Description of Work (DoW):

This task analyses multi-level policy coordination with regards to its interaction with IM to support the provision of FES. Two complementary perspectives will be brought together. First, based on the bottom-up perspective followed in T3.2, T3.3 will systematically explore supporting and hindering factors related to policy coordination that either promote or inhibit the innovation work in the case studies. This will be done through in-depth consultations with the local and regional practice partners in the distinct case studies using specifically the Co-Design Event (M2.5, month 12) and the second General Assembly (M6.4, month 24). Second, a complimentary (supra-)national policy analysis of supporting and hindering factors drawing on interviews with policymakers and supra-national stakeholders will be conducted. Both analyses will focus on the amount of support that the European multi-level and multi-sector policy framework generates for promoting the enhanced provision of FES, including incentives that distinct sectoral policies provide as an aggregated whole, and will explore critical factors for better coordination of these activities. In a third step, these perspectives will be synthesised a focus group discussion (M3.5, month 34). This event brings together policymakers and practical innovation partners to a) compare and align the perspectives on the need for policy coordination between policymakers and innovation partners on the ground, and b) discuss ways to

overcome critical inhibiting factors related to policy disintegration that inhibit IM. The focus group will give emphasis to a creative conversational atmosphere to discuss a European policy system to incentivize the provision of forest ecosystem services, addressing the inhibiting factors identified during the first two steps. The direct exchange between policy stakeholders and practitioners will create a substantial opportunity for increased mutual understanding and joint proposals for policy adjustments. This effort results in a Demand for Policy Support Report (D3.2, month 36), which will be fed into the final round of the Regional MAG Meetings (M2.10, month 36). Subsequently, T3.3 will contribute to the Synthesis of Implementation (D3.3, months 38, 42) and will directly inform the policy-oriented activities envisaged under T4.3.

2. Materials and Methods: A three-step approach

A three-step approach was followed. First, a bottom-up perspective was taken up through in-depth consultations with the local and regional practice partners in the distinct case studies. Second, a complimentary EU-level policy analysis was conducted by means of interviews with policymakers and stakeholders (“top-down” approach). Both analyses focused on the amount of support that the European multi-level and multi-sector policy framework generates for promoting the enhanced provision of FES, including incentives that distinct sectoral policies provide as an aggregated whole. The third step in this analysis is a focus group discussion, which aims to synthesise, compare and align the perspectives between policymakers and innovation partners on the ground

2.1 Step 1: Bottom-up perspective

2.1.1 Data sources

Data was collected through:

- i. A policy exercise conducted during regional Multi-Actor Group (MAG) meetings, the Annual SINCERE meeting in 2019 as well as at the annual meeting of Confederation of European Forest Owners (CEPF);
- ii. A qualitative survey answered by the case-study leads; and
- iii. Interviews with Innovation Actions (IA) leads.

During 2018, at the first regional Multi-Actor Group (MAG) meetings, and during 2019, at the second MAG meetings, a 45-minute ‘policy exercise’ was conducted. During this policy exercise, participants were firstly asked to each name and explain two supporting and inhibiting policy factors for the development of FES-related innovation of the respective case-study. Secondly, duplicate factors were removed and the rest of them grouped, whereafter factors were ranked by participants, and lastly, the five most highly ranked supporting and inhibiting factors were further discussed by the participants in the light of how their modification can improve the FES-focused innovation of the case-study. These meetings has a total of 275 participants, almost all of which were from different stake-holding organizations

In the January 2019, during the annual SINCERE meeting, a similar type of exercise was repeated. However, this time, after all the case studies were presented, participants (total of 50) of the conference listed and ranked:

- i. The most important supporting policy factors,
- ii. The most important inhibiting policy factors,
- iii. The most important action to improve the case-studies, and
- iv. The most important EU-level policy influences.

The policy exercise was repeated at the annual meeting of CEPF with its member organizations (total of 24, 20 of which are national associations of private forest owners) in June 2019.

Complementary to the policy exercise, an exhaustive qualitative survey explaining the context, setting, actors involved, and innovation and its implementation plan was completed by each case-study lead in 2018 and 2019. This survey is a part of the is a 'screening tool' of WP3 for assessing the IA progress, and represents data for the Screening reports (MS17), Self-assessment protocol (MS18) and IA implementation plans (M16). Eight IA leads were furthermore interviewed at the end of 2018 / beginning of 2019. During the interviews, the IA leads were asked to describe their innovative mechanisms, describe how national and EU-level policies affect its development, and also to explain how different innovation-development factors affect the development of their innovative mechanisms, including stakeholder relations, access to financing and organizational culture - based on reviews of Van Lancker et al. (2016) and Lovrić et al. (2020). Several-pages long summaries of interviews (most important statements and explanations of interviewees) were prepared and sent to interviewees for verification.

2.1.2 Data analysis

Data that has been collected for this step consists of (i) meeting notes from the various meetings that have informed the task as described above, (ii) transcripts of interviews and (iii) their summary notes, (iv) questionnaires with both quantitative and qualitative sections and (v) tables with contextual and policy factors. The first task in the analysis was to compile data per individual case. The second step was to re-arrange data by broad topics, i.e. (I) contextual setting of the case, (II) its legislative and policy framework (III) its stakeholders, (IV) description of the case's innovative mechanism and (V) organization of the IA lead. The data was then inductively coded within a single case and broad topic - i.e. sections of data that had the same meaning were joined together and re-labelled with a joint description of what they are about. These original 'sections' of data were usually one or two sentences or bullet-points. This procedure was iteratively repeated until re-arranging data did not produce any new data codes. The codes generated by individual topic within a single case were then compared across all cases, and new, more general codes were designed - ones which are present in multiple case-study areas. This procedure was performed on all data - except the one from final interviews with the IA leads. These interviews primarily served as a validation test of the generated codes, where all of them were discussed in the context of individual IAs. The interviews also tested the possible effects of general-level innovation development deductive factors from the open-innovation concept (Van Lancker et al., 2016, in case that the inductive analysis has missed to capture some important factor). After the data from interviews was analysed, final factors describing the case-studies were designed – and are presented in Table 2. Brief description of

the individual cases can be seen in Annex I, and the summary of the factors defining them are presented in its Table 1.

Table 2: Important factors inhibiting or facilitating innovations related to FES

Factor group	Factor	Explanation
Policy factors	Support from most relevant sectoral policy	Main elements of the innovative mechanism are supported by explicit reference in main sectoral policy or at the main legislative acts governing the area where the mechanism is implemented
	Problems with national policy coordination	Presence of contradiction between different national legislative acts governing the innovative mechanism that severely hinders its implementation
	Lack of compatibility with state-aid rules	Incompatibility of payments system within innovative mechanism with state-aid rules. Governed by EU-level legislation on what constitutes states aid.
	Need for EU-level strategic policy support	Support from EU legislation (such as rural development policy) for the innovative mechanism and forest ecosystem services as a prominent factor increasing local-level political and stakeholder interest. For countries out of EU, this refers to strong political / strategic support from the top state administration
Other factors	Clash between stakeholders	Strong divergence in opinions on the innovative mechanism by key stakeholder groups
	Interest of stakeholders	High interest of stakeholders in the innovative mechanism of the case-study
	Radically new innovation	The innovative mechanism represents a radically new innovation, new in the area and not implemented with the same main features in other areas
	Capital intensive innovation	Innovative mechanism requires high level of capital (mostly financial) to be implemented
	Strong leadership	High level of engagement and personal ownership of the development of innovative mechanism by case-study lead
	Culture of innovations	Culture of supporting innovation in the organization to which case-study lead is affiliated to
	History of development	The innovative mechanism has a long history of development before the SINCERE project started

	High ambition	The innovative mechanism aims to introduce strong changes in the case-study area. Incorporates significant change in management regime and policy framework governing the area
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Next, a matrix was designed where the columns are the factors from *Table 2*, rows are the case-study areas and the entries in the matrix are presence or absence of the respective factor in the respective case. This matrix was then subjected to multiple correspondence analysis (Greenacre 1984), a method for visualizing the rows and columns of a table where entries are categorical data – analogous to the principal component analysis (Abdi and Williams, 2010) for continuous data, resulted from the data analysis.

2.2 Step 2: EU-level interviews

2.2.1 Data collection

Data collection in the second step was done through semi-structured interviews with forest stakeholders and EU-level policymakers. The interviews were conducted during June-July 2019 and repeated in June-August 2020. It was decided to conduct a second round of interviews as the political scene at EU level changed: a new European Commission came into place in 2019, the Green Deal and the Biodiversity Strategy were adopted, the COVID-19 pandemic and the economic effects of the response to the pandemic, and the continuous, more visible effects of climate change all served as external shocks, affecting the interests and behaviour of different stakeholders.

In 2019, 13 interviews were conducted, while in 2020, 14 interviews were conducted, mainly with the same interviewees as in the first round. The interviews were conducted virtually (via Zoom or Skype) and per telephone calls. The average length of the interviews were 45 minutes. Interviewees include a selection of representatives from the European Commission, forest owners (both private and public) and industry organisations as well as environmental NGO's and conservation groups. The interviews were semi-structured, in that a fixed list of questions were developed prior to the interviews. The question sequence was however adapted to the flow of the conversation, and questions for expanding on or clarifying certain issues were additionally asked. (See Annex II for the list of interview questions)

The data collected from the interviews consisted of interview notes and transcriptions of the interviews.

2.2.1.1. Selection of interviewees

Regarding policymakers, representatives in the respective Directorate-generals (DGs) in the European Commission responsible for forests and forest related matters were interviewed, depending on their availability during the interview period.

In terms of stakeholders (forest owners, industry, NGO's and conservation groups), the European Commission and Parliament's Transparency Register¹ was consulted. This register provides a database of organisations and institutions interested in EU policies. Organisations/institutes are divided into different categories (amongst others: 1. Think tanks, research and academic institutions; 2. NGO; 3. In-house lobbyists and trade/business/professional associations; 4. Organisations representing local, regional and municipal authorities, other public or mixed entities, etc.). The goals and interests of each organisation/institution is also expressed in this register. The register allows to search entries by keywords. The following terms/combinations were entered into the register: *Forest; Forestry; Ecosystem; Ecosystem Services*

The organisations/institutions were then selected for the shortlist based on their expressed interests (forest or forest related policies, FES).

A snowball technique was further used to select interviewees. The interviewees were also asked during the interviews if they could suggest/recommend any other interviewees with a similar or opposing view from their own.

2.2.1.2. Aim of interviews

The aim of the interviews was to identify **supporting and hindering factors for the provisioning of forest ecosystem services** (FES). It focused on the amount of support that the European multi-level and multi-sector policy framework generates for promoting the enhanced provision of FES, including incentives that distinct sectoral policies provide as an aggregated whole. It explored **critical factors for better coordination** of these activities.

2.2.2. Data analysis

The recorded interviews were fully transcribed, resulting in overall 196 pages of interview transcripts. The transcripts were subsequently analysed through coding using qualitative data analysis software

¹ <https://ec.europa.eu/transparencyregister/public/homePage.do>

(MAXQDA®). For each interview the notes and transcribed interview were firstly summarised to identify reoccurring themes. These themes were then developed into the initial coding system. During the first round of coding, the initial codes were complimented with further codes, developed from the text through descriptive and discourse analysis approaches. The extensive list of codes was then grouped to form categories addressing the aim of the interviews (identifying **supporting and hindering factors** related to FES, and exploring **critical factors for better coordination**) as well as identifying other overarching patterns relating to EU forest policy relating to FES.

2.3 Step 3: Focus group

The aim of the focus group was to bring practitioners and policymakers together to discuss possible solutions to overcome the hindering factors identified in rounds one and two. Results from the preceding rounds show a clear increase in the appreciation for multiple FES in political agendas, research and funding, as well as policy documents (such as the Green Deal). However, the dominant perception is that there is a need for more political support to incentivize the provisioning of FES. The aim of the focus group was therefor set to assess the level of support that the current European multi-level and multi-sector policy framework generates for promoting the enhanced provision of FES. The focus group discussed the question: *How could future European policies/instruments to support the provision of multiple forest ecosystem services and related innovations look like?*

On 14 December 2020, a focus group discussion took place in a virtual format (see the agenda and concept note in Annex III). All SINCERE Innovation Action partners were invited, as well as all interviewees of the second step. In total 21 participants joined in the discussion. Prior to the discussion, the participants were asked to indicate their main preferred policy preferences corresponding to “narratives” which had been developed based on the interview data and the Cultural Theory (Thompson et al 1990; Sotirov and Winkel 2016), corresponding to possible ways to design a European policy framework to incentivize multiple FES and related innovations (choosing maximum two of the narratives). The narratives were:

- A. Nature first: effectively conserve Europe’s forests for their environmental benefits**
The main problem is that European forests are under stress due to climate change and forest management that is mostly interested in economic exploitation, while society demands conservation and multiple ecosystem services. A European policy framework needs to guarantee that forest biodiversity is conserved and other environmental services are provided; this includes the need for effective regulation and better implementation of agreed policies on biodiversity, climate change, forest management practices and consumption of forest resources to ensure that the needs of many are not sacrificed by the economic interests of few.
- B. Innovations first: allow the transition towards a market based “ecosystem services bioeconomy”**
Forests provide many ecosystem goods and services, and forest managers and owners are since a long-time managing forests sustainably for the respective demands by society and economies. If demands of society and conditions for management are changing, the imperative for policy making should be to incentivize efficient, market-based innovations from bottom up. Forest owners and managers must be provided with the necessary freedom to innovate on forest ecosystem services markets that should be characterized by real demand and supply – no further strong interventions by the state are needed, only fair conditions for new business models need to be provided.
- C. Incentives first: Correct market failures through an effective Payment System for Forest Ecosystem Services**

Forest management is under pressure due to climate change and partially contradicting demands arising from the economies and society. European forest policy must support the provision of ecosystem services, seek for synergies, and the resolution of trade-offs, through financial incentives to adapt forests to climate change. More specifically, a Payment Systems for Forest Ecosystem Services is needed; this system could be rooted at the European level, but should create flexibility for implementation in the respective national and regional contexts.

D. Societal participation first: increase transparency, participation and mutual learning to define locally rooted solutions for sustainably managed forests

Forests are a key resource that has since ever been at the focus of many societal demands. A European forest policy must ensure that forests are managed for those multiple demands, by encouraging transparency, participation, and inclusion of society in forest policy and management approaches. Mutual learning between experts and society, and bottom-up participatory processes and agreements are needed to ensure that Europe's forest provide maximum ecosystem services for societies also under conditions of constant change.

Following a presentation of the research findings in SINCERE presented in this report, these preferences were then used to divide the 21 participants into three groups of seven participants each, depending on their selection of the narratives, in order to group like-minded participants together. It was also ensured that the groups are represented by both practitioners and EU-level participants. The three groups were:

- Group 1 – mostly based on the “Incentives first” narrative
- Group 2 – mostly based on the “Innovations first” narrative
- Group 3- mostly based on the “Societal participation first” narrative.

The “Nature first” narrative was only selected by two participants and as they chose this narrative in combination with the “Incentive first” narrative, it was decided to merge these two narratives into the “incentives” group. Although the participants were informed that the group divisions were based on their selection of the narratives, the groups were deliberately given generic names (Group 1, 2 and 3), and not that of the narratives, as to avoid influencing or steering the discussion in a certain direction

The objective of the breakout groups was to discuss how the future European policies could best support the provision of multiple forest ecosystem services and related innovations.

The participants first discussed in smaller breakout groups the following issues:

- i. What are the biggest problems faced with the provision of FES within the current EU forest policy framework?
- ii. What is the solution to these problems – What is needed in terms of a policy framework?

After the breakout group discussions, all participants joined in the plenary session where each group reported on its breakout discussion.

During the focus group, minutes were taking. The focus group discussion was also recorded and transcribed.

3. Results

3.1 Bottom-up Approach

3.1.1 Case-studies

The visualization (Figure 1) of case studies is used as a waymark to develop a generalized storyline on the factors that impede and support the development of innovative mechanisms focused on forest ecosystem services across Europe.

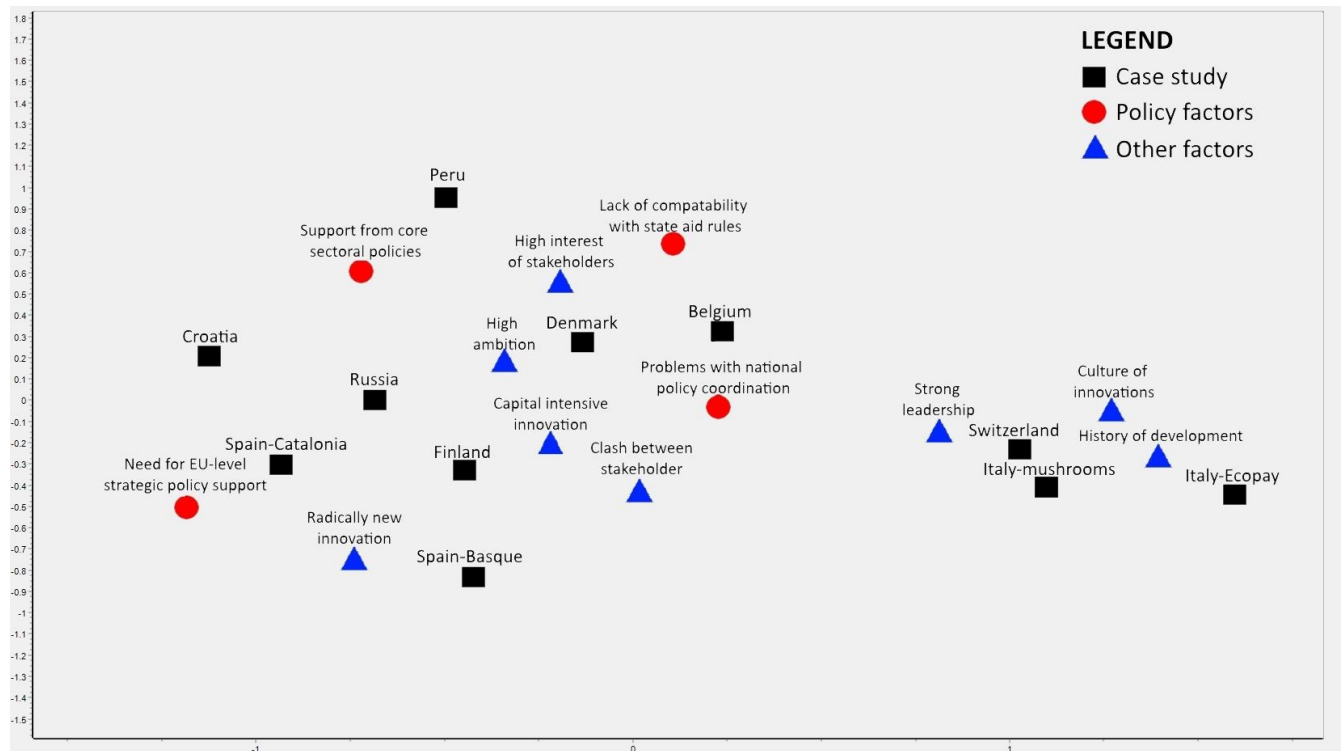


Figure 1: Multiple-correspondence analysis of main factors behind innovative mechanisms

On the right side of Figure 1 a clear grouping of three case-studies can be seen: Switzerland and two Italian cases. The Swiss case focuses on funeral forests; i.e. a forest management regime tailored for the function of a funeral forest, which represents an income to the forest owner. The ‘mushrooms’ Italian case focuses on creating a mobile application (app) for mushroom picking permits. The idea is that a part of the income from the permits goes back to forest management so that it is more tailored for provision of mushrooms, while the secondary target is that the payment mechanism has geographical control of distribution of pickers; so that the local association can take active measures to avoid their concentration in specific areas. The second (‘Ecopay’) Italian case is a public-private partnership for sustainable forest management and biodiversity restoration, where the IA team helps owners of the poplar plantations to obtain FSC certification (conditioned by taking-up forest management measures for habitat restoration, which IA team provides information on), who in turn also achieve additional income from premium prices paid by the industry for the local, responsibly sourced wood. The unifying features of these three cases are that they exhibit strong leadership by their case-study leads and that their organizations have a **strong culture of supporting innovations**. They are also small, commercially oriented organizations.

Their studied innovations are of incremental character, have been in **development for a long time** before the SINCERE project began. Relative to innovations in other cases, the area in which they are developed is more local, with clear boundaries and developed marketing characteristics. Out of these three, only in the Swiss case a policy factor is seen as having a strong influence. The Swiss case faces **problems with national policy coordination**, as legislation differs between Cantons, this enabling or preventing to innovate with funeral forests as a business model built on cultural/spiritual FES.

The second group consists out of Belgian, Danish and the Peruvian case. For the Belgian case, the Flemish forests need alternatives to existing subsidy system in order to enhance biodiversity conservation and to expand its reach to forest areas not previously covered by the payment scheme. The case uses reverse auction, where the suppliers (forest owners & managers) bid to sell the forest ecosystem services, and the government buys them. The case focuses on (I) restoration of hunting areas and on biodiversity conservation in rare habitats, while the secondary target are wild boar strips between agricultural patches to limit the negative impact of the specie and to promote biodiversity. The Danish case is also focused on a reverse auction system targeted at private forests, whose' owners and managers bid to sell the biodiversity conservation to the public agencies. The Peruvian case focuses on a payment scheme for the water and soil regulation services provided by the management of the watershed (reforestation, infiltration trenches, agroforestry), which also represents income for the local communities. These are highly ambitious, **capital intensive innovations** with strong replication and upscaling potential, are characterized by a **high level of interest among stakeholders**, many of which have **divergent standpoints** on how to proceed. In the Danish case, for example, the aim of the IA-lead (governmental organization) is to get the bids on selling complete harvesting rights, thus creating "untouched forests". This is perceived as a drastic measure by the forest owners, who are reluctant to completely sell-away these rights. Thus, after more dialogue between the involved actors, and an alternative strategy was investigated; where forest owners may bid individual biodiversity conservation measures and not the whole 'package' of forest management rights. The Peruvian case is characterized by a conflict between the local communities and the municipal water utility, where the development of the payment vehicle is marred with uncertainties in relation to how the benefits of the mechanism will truly reach its suppliers and on the control of the provision of the services stemming from the payment mechanism. Both the Danish cases have problems with **compatibility to the state aid rules** – as these nationally new types of payment mechanisms, for which there is lack of full compatibility with the national legislation. Peruvian case does not have this problem, as recent law has enabled municipal water supply utilities to reward hydrological ecosystem services from upstream watersheds – which makes it an outlier of the group.

A third and somewhat less cohesive group of cases is located at the bottom-left of the graph, which entails the Russian, Finnish, Croatian and two Spanish cases (in Basque and Catalonia). The Russian case focuses on a regulation mechanism so that people renting the forest land can use it for multiple purposes, which should increase economic efficiency and aim to maintain a balance between all ecosystem services. The case also aims to include concept of ecosystem services to the national Forest Code. The Finnish case aims to develop an operational platform comprised on local stakeholders where the landscape and touristic services of the forests will be jointly planned and optimized. The case also aims to establish a voluntary payment scheme for these services that would be paid by tourists, the proceeds of which would then provide an additional income to the forest owners. The Basque case aims to develop a local regulatory framework to place the economic values of services provided by the forests

as an integral part of the Basque region forest management strategy. The aim of this is to provide a basis upon which future payment mechanisms can be designed for the supply and enhancement of forest ecosystem services. The Catalan case aims to develop a legal document for the establishment of a Rialb Reservoir “Forest for Water” Fund (to be funded by rural tourism and other local business), which would then in the future fund FES payment schemes. The Croatian case focuses on valorisation of health and recreation function of a nature park Medvednica by (I) raising public awareness on these functions provided by the local area (II) participatively designing management activities for increasing their supply, (III) setting-up a system to fund these activities through concessions for one-off events and a voluntary payment system. Although these cases are quite diverse, they all affect how forests are management and are predominantly linked to (local) policy change. Out of this group, the Russian case is **highly ambitious** and only one that in the end will operate on a national level. The Finnish case is capital intensive as it will have a payment component, and Basque case is characterized by strong clash between stakeholders (forest owners on one side are fearful that future payment schemes that are conditional on certain management practices will too much restrict their owner rights as compared to a subsidy system, whereas the environmental groups backed by environmental legislation argue that it will not sufficiently secure the provision of all the forest ecosystem services). However, in order to succeeded, they all require **top-level administration strategic policy support**. For EU-based cases this refers to support from EU legislation and institutions and national governments, and for Russia it refers to support from the top-level state administration. To succeed, all of the cases in this group require strong participation of (local) stakeholders. Top-level administration’s support in form of recognizing FES in relevant strategies or equivalent documents, or similar policy commitment showing importance of FES as a concept would be enough to tip the balance of the negotiation processes with local stakeholders towards an implementable path. The Croatian case is somewhat of an outlier of this group as its diverging feature is that top level (national support) for valorisation of forest ecosystem services already exists.

The majority of cases in second and the third group also enjoy the **support of core sectoral policies**, which cannot be stated for the Swiss and the two Italian cases (first group). This is due to the fact that the cases in group 1 are more commercially oriented than other cases and thus have more of a local character.

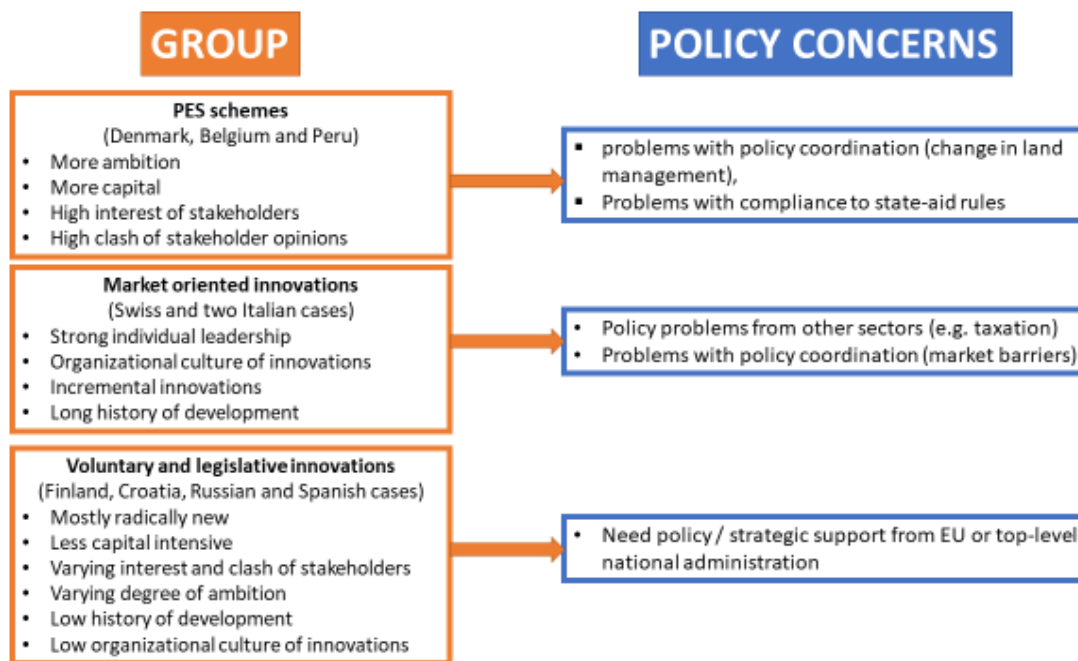


Figure 2: Typology of case-studies and their policy concerns

On an even higher level of abstraction (Figure 2), three groups of innovative (support) mechanisms emerge:

- **PES schemes** – ambitious, capital intensive innovations characterized by high interest of stakeholders with diverting opinions. As these innovations aim to introduce actual changes in how land and forests are managed, their implementation is conditioned with compatibility between the PES scheme on one side and with the legislations that governs that area on the other. Perhaps an even more fundamental problem is the compatibility between the PES scheme and the state-aid rules, without which its implementation cannot even start (i.e. state is not allowed to pay to forest owners more than they could lose with restrictions – which implies complicated valuation studies, distributing agency has to have a legal basis to form contracts for this type of innovative payments that differ from the state aid rules, and the distributing agency has to define what their implications are to EU-level subsidy / support, in comparison to state aid).
- **Market oriented innovations** – these are innovations more of a local character, with a clear market strategy and governed by individuals with a strong drive to succeed and by organizations with a strong culture of supporting innovations. These innovations are also incremental and build upon rich previous experiences, and their implementation is closer than of any other group. The more prominent policy problems that these innovations face are typical market barriers, such as taxation. However, these commercial activities also may change local management practices, which introduces problems with national policy coordination and adherence to forest-focused legislation, similar to the previous group of innovative mechanisms
- **Voluntary and legislative innovations** – these innovations are spearheaded by state-affiliated organizations, be it local area management agencies, local administration or scientific organizations.

These innovations are not capital intensive, but in order to be implemented need strong high-level political and strategic support, be it top-level state administration or EU-level support.

3.1.2 Summary for European Private Forest Owners (CEPF members)

European private forest owners see FES as a pathway to increase their income, especially if it does not substantially decrease the biomass or wood production. They are also motivated to emphasize the multiple values that stem from their forests as FES, thus as a vehicle through which their work on sustainably managing their forests can be acknowledged. However, as most FES do not have functioning markets, they do not see that many of them have realistic and market smart possibilities. The forest owners are especially weary of the position that provision of multiple FES can be enhanced or be provided increasingly free of charge. They also recognize that forests cannot provide 'more of everything', and that there are trade-offs in their provision. Thus, priority-setting should be provided. They also see FES as a possible threat – as it may restrict management possibilities, especially through environmental legislation that uses 'fixed' biodiversity protection'. Furthermore, in many countries the current state aid frameworks do not allow for FES without market value (seen as subsidies). They are of the view that the EU should provide the framework on FES-related payment systems, and then sufficient discretion should be given to individual countries to define them.

3.2 EU-level interviews

3.2.1 The current situation of EU forest policy

Based on the interviews, two coalitions can be observed when assessing forest policy at EU-level, being the pro-forest use stakeholders and the environmentalists/pro-conservation actors. Forest owners and industry forms part of the pro-forest use coalition, while environmental NGO's and conservation groups falls under the environmentalist/pro-conservation coalition. With regards to the DG's of the European Commission (EC) the division into the two coalitions becomes more complicated. While it can be said that the Directorate-General for Environment (DG ENV) could be assigned to the environmentalist/pro-conservation coalition, the other DG's can form part of either of the coalitions, depending on the specific topic at hand

The pro-forest use coalition supports the current Forest Europe definition of sustainable forest management (the economic, social and environmental pillars should be balanced equally). These stakeholders argue that active forest management is needed to protect forest biodiversity and to reach resilient forests, and they advocate that forest managers are part of the solution to climate change, and not the problem. The socioeconomics of forestry is considered to be important, creating jobs in the forest sector and forestry playing a significant role in rural development. The Green Deal and subsequently the Biodiversity Strategy might have increased the cleft between the two coalitions.

The environmentalist coalition promotes the idea of having protected forested areas, reduced management in certain cases and having close-to-nature often as a minimum standard. These actors feel that the current perception of sustainable forest management places too much focus on the economic pillar. As the following quote illustrates, this coalition also advocates for rethinking current definitions relating to forest management:

“I think compared to where we were last year, it is a really exciting time to be working on the forest topics, because we are revisiting everything! I mean there's an opportunity to talk about close-to-nature of forestry! And I know there's many foresters that want to share their experience on that. And that achieves a lot of things economically, socially, and environmentally. So, there's these really interesting discussions! And we thought we'd never be able to talk about definitions in 20 years! Suddenly we are at the time where we can actually discuss that. And I think, I like the way that the chess board looks right now with all of the actors. I like having a discussion about what the future economy looks like that's actually sustainable over the long-term. Because that means finally the forest industry is going to have to look at their model, just like the steel industry has to look at their model, or how the aviation industry looks at their model. And while the aviation industry may not have quite as optimistic of a future picture of what needs to happen, the forestry industry does! They are already on very long-term cycles and they can improve in certain areas to make that more sustainable or share lessons on how it already is sustainable. So it's a very open field for a lot of positive change.” (Interview 3)

During the second round of interviews in 2020, the pro-forest use side seemed to feel more marginalised and believing that they are on the defence under “attacks” from the environmentalist side, and with not much support in the EC. On the other hand, the environmentalist side felt in the second round of interviews that they have a voice and that they are being heard. However, both sides seem to perceive the respective other sides as relatively more powerful – that is, environmental actors expressed doubts about their own power to change forest management even though they acknowledged a better situation for them comparing 2019 and 2020, and forestry actors vice versa described their own state as much weaker than what the environmental coalition perceived to be the case.

Another aspect of division is the approach towards bioeconomy as a tool to green the economy, addressing the effects of climate change and economic recovery from the COVID19 pandemic. The pro-forest use coalition supports the concept of the bioeconomy in this regard, underlining its importance to mitigate climate change, and also proclaims the important role it plays in job-provision and supporting human demands, as expressed by the following original quote:

“That might be good for biodiversity, in this old-fashioned sense - let everything like it was. But it will change. And the environmentalists will be happy if it come that way. But we will never manage to get a green economy, because the rough material timber is most important to get the green economy. And that means we will never stop climate change! It's a pity, if we don't stop climate change, it's not a problem for nature. So what, we will have in Germany climate conditions like in Italy, in North Africa nobody can live anymore, but nature will have nice biotopes there. It's a problem for mankind, not for nature.” (Interview 5)

The environmentalist coalition is sceptical about bioeconomy as a mechanism to address climate change. It is often argued that bioeconomy threatens biodiversity in forests and can even lead to deforestation, which would make it a contra-productive mechanism to address climate change. Moreover, bioeconomy is seen as being too focussed on wood and the industry and disregarding further societal benefits of forests, as expressed in the following quote:

“... often I see that the economic and social pillars are being moulded together. So many people use the argument that getting money from selling wood products and creating jobs in the industry, also ticks the social box. Which of course in many ways it does. But we also need to remember that the social box needs to include that people enjoy the forest, that people can walk in the forest. And it goes further, as we see more impacts from the bark beetles and fires, etc, there is the social factors that a more natural forest is often more resilient. People's access to nature, and also people's feeling that their nature is helping to address climate, are also important factors to consider.” (Interview 8)

Although these two coalitions have a touchpoint in their thinking when it comes to climate change and the risks it poses as being real, their opinions on how to react to these risks and who is to blame once again expresses the clear separation. This clear division in actors, their interests, and approaches to forest use and management is also echoed in their approach to FES and the policy mechanisms and support needed for the provisioning there of, as described in the next section.

3.2.2 Do the EU policies support the provisioning of FES sufficiently?

Both coalitions agree on the importance of recognising forests for their several goods and services. Most interviewees agree that there is an increased emphasis and interest in multifunctionality of forests and the multiple ecosystem services it provides. In the perception of the interviewees, there is more reference in policies to FES and multifunctionality of forests, more research is directed at FES (including H2020 projects), and more funding is made available for this.

However, the majority interviewees stated that the EU forest policies do not provide sufficient support for FES provision. There is however a disagreement on what is needed to form the policy framework to improve the support.

When asked if the EU forest policy supports the multifunctionality of forests and its manifold ecosystems, the coalition gap becomes evident again. The pro-forest use side hold the opinion that only certain FES are really supporting, being carbon sequestration and biodiversity, all other FES are less of a priority to the Commission.

“In very simple way we are witnessing a paradigm shift. We are leaving the multi-functional approach that was shaping the EU policies and European forest policy discussion and we're getting to a clear prioritization where carbon storage and biodiversity restoration are the top priorities and the rest is second, or even not important. At the moment in the discussions we see only carbon storage and biodiversity. We don't see bioeconomy, material substitution, employment issues, industry issues, economic welfare, economic prosperity, regional economic development - everything else is forgotten, it's pushing very hard into this very narrow and small-minded view on the role of forests. To be very blunt, forests are sacrificed. The forest-based sector at the moment seems to become sacrificed at the policy table to compensate for the failures regarding carbon and biodiversity of the rest of the society”. (Interview 9)

Reversely, however, the environmental coalition criticises the forestry concepts of sustainable forest management (SFM) for being only vaguely defined and giving de facto priority to wood production and economic profits. Even though both sides agree on the fundamental principle that forests provide many ecosystem services and need to be supported for that, they do not agree on how to achieve this, as for the one side, the gap to be resolved is the lack of support for environmental services and biodiversity, while for the other side it is the lack of focus on the bioeconomy.

3.2.3 Hindering factors at EU-level: what should be addressed to improve the policy support for FES

Beyond the main perceptions described in the last paragraph, the following factors have been identified as hindering support for FES.

3.2.3.1 Lack of coordination

- i. Perceived coordination challenge between different EC Directorate-Generals (DGs)**

Different DGs with different priorities are described as having difficulties in coordinating their approaches to forests. Specifically, the Directorate-General for Environment (DG ENV) and the Directorate-General for Agriculture and Rural Development (DG AGRI) are perceived of having challenges of not coordinating enough with each other. Members of the pro-forest use coalition perceive those DGs they consider to be the ones that should represent their interests, (DG AGRI and DG GROW – DG for Internal Markets, Industry, Entrepreneurship and SMEs), to be rather weak and reluctant to engage in the dispute between the coalitions. Reversely, DG ENV is perceived by both coalitions to have more control over forest issues, following the publication of the Green Deal and the Biodiversity Strategy 2030:

“... the more EU in general talks about coordination and cooperation, the less we see. And I think it's only about which sector is stronger politically, which sector gets higher support” (Interview 6)

ii. Perceived coordination challenge at national levels

According to some interviewees, coordination challenges or lack of coordination would also occur at national levels. Different ministries (such as the public authorities responsible for forests and related issues including climate and environment) would not share the same views, and would furthermore fail to coordinate their positions on EU forest policy. Some interviewees underline that the challenges with coordinating positions “at home” would weaken some member states at the EU level, as they would not be able to come to a clear positioning, thus leaving the playing field to the EU institutions.

iii. Competence issue: disputes over competence on forests and related issues

There were notably different interpretations amongst interviewees where the competency for forests lie: a shared competence between member states and the EC or the Principle of Subsidiarity allowing member states to govern their forests “independently”. Furthermore, regarding an EC competency, there were different views on which DG should be most responsible for forest matters. The issue of competence was not so evident in the 2019 interviews. With the new Commission coming into effect in 2020, and DG ENV being more proactive in emphasizing an EC competency, the pro-forest use coalition believe that the EC would constrain member state competence. They tend to underline that forestry (that is forest management) would be a member state competence, and forest issues as part of the environment is a shared competency between the EC and member states. The Biodiversity Strategy with its ambitious targets was seen as a case demonstrating the “risk” of an environmental EC competency to the forest sector. DG ENV and other environmental stakeholders argue that this strategy is in line with the shared

competency based on a European Court of Justice case of 1999². It is further argued that climate change is a common problem requiring action. The environment and forests do not adhere to country borders, and therefore these issues need a common approach which should be formulated at EU level, applicable to all EU countries. The opposing views are depicted in the two quotes:

“We have also mixed feelings because it's not very clear who is dealing with forestry for the moment. I think we have never been in such a situation. This is mainly due to the discussions on the competencies. Because DG ENV and also Commissioner Sinkevičius made several statements on the competencies... - who is dealing with what on the competency, I think it's still not clear. Member states are a little bit confused.” (Interview 4)

“There is no exclusive competency of MS on forestry. That is very clear. It is obvious, and it is confirmed by the court. Forest is a shared competence of the Commission and MS. It is a shared competence. The EU has the power to act, and when the EU acts, it acts, and it becomes an EU policy. It is not an exclusive competence of the EU. It is not a common exclusive competence like it is with agriculture, but it is a shared competence. And this is clear, there is no contradiction to that.” (Interview 12)

iv. Trade-offs between policies

The most mentioned example of trade-offs between policies refer to policies on biodiversity and bioeconomy. This is particularly the stance the environmentalist coalition takes.

One reason given for these trade-offs is a certain “silo approach” which would exist at EU-level. A holistic approach would however be needed when it comes to environmental policies (including forest and forest related policies). The Green Deal is seen as a step in the right direction by the members of the environmental coalition specifically, as it serves as an umbrella for several policies affecting the environment and forests. Others are of the opinion that the Green Deal is creating even more silos as it would be dominated by a biodiversity perspective on forests. Specifically, the preference given to the Biodiversity Strategy versus the Forest Strategy is criticized by members of the forestry coalition as it is seen as creating a certain hierarchy where forests are second to biodiversity. Some members of this

² Parliament v Council, Judgment of the Court (Fifth Chamber) 25 February 1999 in the joint cases C-164/97 and C-165/97.

coalition have faith in the upcoming Forest Strategy in that this would ensure coherence on forestry and related issues. The following quotations are illuminating the viewpoints voiced:

“For us the silos approach will never work. We can’t split the forest in three, and this is the tendency unfortunately. If you cannot see all the pieces together, then you will for sure miss something that could have a huge impact on the other one, that you are treating as the only child. So, as the spoilt child.” (Interview 4)

“... because we are making a multifunctional sustainable forestry in European forests. And this multifunctional means that there are a lot of sectoral demands to what we are doing as foresters. And some demands are working against others. And there must be a balanced way, a description of a balanced way to do in between. If one sector is asking for all, another sector is going to zero. It must be balanced” (Interview 5)

“... if the EU would have to make a forest policy, in the sense of a directive framework, or something like this - something that says “EU Forest Policy” on top of it, a document like that- then we will have to address these trade-offs. But because it is the dedicated position of many member states that there must not be such a document, then we can continue with the situation and have many sectoral policies which conflicts with each other, without the pressure for these policies to come together.” (Interview 10)

Another opinion is that these trade-offs between policies cannot be solved at the policy-making level, as there are too many demands, interests and thus agendas involved, due to the multifunctionality of forests. The only way to overcome these trade-offs is through a holistic approach in management when it comes to on the ground implementation of policies:

“There might be some contradictions in the text. But it comes down to how it is implemented on the ground. And with implementation and all these trade-offs, you will have to find the right balance between these areas. You need biodiversity, but you also need the biomass. And then you need to see what can you harvest. And maybe adjust the harvesting to protect the bird’s nest in the tree, or not to disturb them. But you, as the owner and the manager have to find this balance. And I think this balance can’t really be decided on the top.” (Interview 9)

3.2.3.2 Lack of (scientific) data and transparent reporting from member states

Both coalitions agree that there is a need for transparent reporting by member states, sound scientific data and more research on forests, forest management and use. Also both sides perceive a lack of reporting and monitoring of policy impacts (from member states, but in some cases also on the EC side, especially referring to the outcomes of previous strategies). Member states might not report sufficiently due to a lack of capacity, a lack of political will or a fear of what will happen to the data and for which purpose will it be used.

3.2.4 Critical factors for better coordination

The following factors were expressed by the interviewees as being important for better coordination in order to support the provision of multiple FES:

- **Clarify the competency issue (Commission together with MSs, not a one-sided decision)**
The pro-forest use coalition advocates that, in order to achieve improved coordination, the forest competency issue needs to be clarified first.

- **Coordination issue needs to be solved at national level as well**

One suggestion is to include representatives of different ministries in the various EU dialogue groups. For example, representatives from environmental, forest and agricultural ministries (responsible for forest administration/management/use) should be included as well as ministries responsible for energy and industry (as tourism also often falls under the ministries responsible for industry).

- **More research needed on FES**

Some interviewees perceive that data is selected (“cherry-picked”) to support specific agendas by both stakeholders’ sides. Both coalitions wish for more research to be conducted on FES, including the valuation of FES, forest management and the effects of different manage and use practices (including set-aside areas and close-to-nature management practices) on biodiversity and the bioeconomy.

“... overall, we've been seeing the carbon sink bumbling along at more or less a fine rate which can allow many groups to come forward and say "well look everything is being maintained, that's perfect!", without necessarily talking about questions of intensification of management or loss of others ecosystem functions. So I think to the extent that we can really drill down and be more specific with the science, it will really help to give context to the policy debates that are being had at the European Union level. So I just hope there's more papers coming.” (Interview 3)

- **Improved dialogue (realisation that a common goal needs to be achieved)**

Most interviewees (from both sides) agreed that there is a need for a “real” dialogue, where all sides have an equal opportunity to state its case and where everyone is heard. Some feel the new Working Group on Forest and Nature (led by DG ENV) could provide such a platform. Others feel that this group is biased as it is only led by DG ENV. Many interviewees (again no distinction between the two coalitions) feel that the problem is not the opportunity to be listened to, but that all sides need to realise that a common goal exists, to address climate change. Compromises from all sides are needed. Unless all parties are willing to make compromises, a true dialogue will never be realised, and the common solution will not be reached. These considerations can again be exemplified by original interview quotations:

“The question we really need to ask ourselves, is the time right to come to a common solution. Which means if the sides can compromise. I think now this is a changing situation, maybe there is potential. But it also means, before we go in we should think what we can achieve together, instead of kicking and screaming. Yes, sometimes it is necessary, you might need to let some steam off. But then, it shouldn't stop there! Often people want to let steam off and then that's it, not listen to anyone else. And that's not very helpful... and people say okay point taken, point taken, thanks, nice meeting you, goodbye. End of story.” (Interview 2)

“I think we're harbouring these fears that come from a previous time where everyone's like "well if we give an inch, they'll take a mile”.” (interview 3)

“Listening, but also understanding. This is an issue. Often, we go to an event, it is just similar-minded people who support each other, then you go to another event, same thing. So I think we have this bubbles of people. But in the end we want the same things: That the forests are sustainable, that biodiversity is good, that the forest

owners are happy, that I can do recreation in the forest and that the forest will be there forever. We all want the same thing. it is just the means how to get there.” (Interview 9)

- **A holistic approach needed**
 - a. Policies: an all-encompassing (umbrella) policy is needed (this could be the Green Deal)**

An umbrella policy is demanded by some to address conflict between interests of different stakeholders and trade-offs between contradicting policies. Several interviewees have confidence in the Green Deal and think that this policy mechanism would provide such coherency. Others feel that the Green Deal is creating even deeper silos. The different views are exemplified again by original interview quotations:

“I think the Green Deal is a good one. It is very positive. Because it's the first time, .. they tried to make it coherent and overall system and in all several parts which are connected with climate change and if they are connected with climate change also connected with forests. And it's a very wide system and that's very positive for me. They tried to describe how the behaviour of people can be better to make a green economy, to get into an overall better climate, more climate stable system of society. And that is very positive.” (Interview 5)

“Maybe I start with the Green Deal. That was expected from the sector. We had certain expectations on that. Because we tend to think that we are on the good side of this battle - on the good side of this policy orientation. Because we claim that the forest sector has the potential to contribute to climate neutrality. But then, as it came out, the Green Deal stands to undervalue a little bit, or rather a lot, the role of bioeconomy and to put more emphasis on forest sinks, on afforestation. I mean this is what is written. There is more focus on protection and afforestation, and even there sometimes it is not clear exactly where it leads to, how is it going to be done. ..., the way it is formulated, at least how I read it, it is clearly first we want to ensure protection. And then as an afterthought comes forest use. But we also have an industry, and we are not against that. But as it is structured, it is clear an afterthought that comes second. We are definitely not on an equal footing, to the other interests or services of the forest. Definitely.” (Interview 14)

Some interviewees (from both coalitions) put their hope on the upcoming Forest Strategy to achieve a holistic policy approach:

“The previous Forest Strategy wasn't really very much a Strategy. It was a hodgepodge of things that are being done in other EU policies, stitched together and with a narrative written a bit around it. And this very wide thing we tried to make sustainable forest management across Europe. Which is ridiculous really. You can't operationalize it now. SFM is everything and the opposite. I am very sinical here, but I think this is how it was played. Its not a strategy really. Its a loose conglomerate of actions. And when this paper was written, you tried to round of the edges and try and make it look a bit more consistent. The New Forest Strategy... The current Commission will require this strategy to find this niche and to do things which other strategies don't do. And it will require the strategy to be consistent with other and to have a real benefit and added value... I think it will operationalise this biodiversity strategy paths on afforestation, reforestation and forest restoration - it will operationalize that. It will try to harness the CAP more in that sense. And that may be its future niche, and what it does as a main strategy. And in that sense it may really be very different from the current strategy... I expect it to be a shorter, more concise document with a clearer focus and working really in tandem with other policies rather than just repeating them. And importantly, also in terms of process,... again, the previous Forest Strategy was very much driven by the forest sector, because they saw an interest in having that. It was a strategy by and for the forest sector. And there was always a very keen interest by the forest sector and DG AGRI to have that strategy. I think

this will be different now. I think it will be driven by a wider constellation of actors, amongst other things.” (Interview 11)

b. Management: Trade-offs between policies needs to be addressed through a holistic management approach on the ground.

Interviewees from both coalitions advocate for a holistic management approach to overcome policy trade-offs. In this regard, integrated forest management is encouraged:

“Because I think that there are many stakeholders out there that would also like to see “no hands on any forest anywhere”. So that discussion is live and is a counterbalance to very hard-nosed economic objectives as well, that would like to see everything turned into profitable plantations everywhere. And this houses itself in the discussion of what is restoration... I hope that underneath the nature restoration plan, underneath this newly binding legislation, where we’re going to talk about restoration, we can actually have a discussion of the spectrum of restoration that goes from strict protection to improve plantations and everything in between... And I hope what that means for the political process, is that you can end up somewhere in the middle and not meaning the middle of restoration, but the middle meaning this mosaic that I was talking about. Where you have some protection, and you have some areas that won’t constrain people so much that they feel that they can’t act.” (Interview 3)

“Because we have neglected the forest and their biodiversity for many years, and you would argue there is a time now to give much more emphasis for that. But of course at the same time we know that we have a need of forest resources, so again, we have to do it in a way that it doesn’t harm the future generations and is very much balanced and integrated across different sectors that the value of nature is really truly taken into account. If we measure only with GDP then it’s not going to work because then we really fail to give nature and biodiversity the space it needs, and it will also not help us to achieve our 2030 biodiversity agenda and will remain having a lot of forest habitats in unfavourable conservation status. One thing we really need to do is bring that status up to the level that it becomes a natural balance and becomes a future sustainability scenario.” (Interview 7)

“In Europe I think we need to go for more integrated approaches. Still some areas need to be protected. But integrated approaches where you incorporate all 3 pillars, and then you can add climate as well, is better.” (Interview 10)

“There will be a lot of demands on the forest. And what forest can deliver, but we have to manage it. But managing only for one reason, managing only for bioeconomy or only for protection, this doesn’t work. This has to be done in a coherent way, finding the best balance. And this makes it very challenging, and also very hard to explain to society at large. [my wish would be], that the policy would understand the complexity that is actually happening in the forest, with the main objectives and the main principles [in the policies]. But then management has to be done on the ground, and there has to be trust that this can actually be done... I think that will be the ideal situation.” (Interview 10)

3.2.5 Possible policy mechanism to support FES

Comparing the interviews in 2019 and 2020, there has been a clear increase in the emphasis and appreciation for multiple FES in political agendas, research and funding for such as well as policy documents.

Both the pro-forest use side and the environmentalist/conservation side support the idea of a payment for FES scheme to support and promote the provision of FES. The details of such a scheme, and the motivation behind such a scheme once again differ between the two coalitions. The pro-forest use side

argues that there is a need for extra income from forest through FES, should areas have to be set aside for conservation. Supplying biomass for the bioeconomy is seen as an important ecosystem service (especially in the current COVID situation as it should be part of the economic recovery plan). These stakeholders are disappointed that emphasis in respective policies would however be largely placed on certain FES, namely biodiversity first, and carbon sinks second. The pro-forest use actors are strongly in favour of a market-based PES systems, which should be voluntary and country specific. They also support funding from the EU (subsidies), yet again they underline that such a scheme should be voluntary. If the EU would however impose restrictions on the use of the forest (specifically harvesting limitations/set-aside-areas), forest owners need to be compensated for this/incentivised to do so, as expressed by the following quotation:

“But now the main focus goes completely on the protection on conservation. But we know very well that if we want to make conservation, this costs money.... I don't see any serious consideration how to make the objectives feasible, by ensuring that there is enough resources to implement what has been put into the targets. It's easy to say let's protect 30% of the rest of the ecosystems, but the questions are where, by whom, and who's going to pay for it.” (Interview 6)

The forest protection/conservation side places emphasis on biodiversity and carbon storage as FES. Not all support the bioeconomy as a tool to address climate change, as it would threaten biodiversity and cause deforestation, which would make it a counter-productive climate change mechanism. Rather society needs to reduce its consumption, and not simply replace one resource with another without addressing the core of the problem. They support a PES scheme in the form of financial support (subsidies) from the EU, but this should not be unconditional payments. Should a market-based approach be followed, the market also has to have clear rules. This line is expressed in the following quotation:

“Money that would now come for forestry, will have more strings attached. This is going to be how it is. Now the question is how much money is going to come and which strings! And that is still to be defined.” (Interview 1)

Yet, importantly, both coalitions feel there is a need for PES and that the EU is not doing enough to support the provision of FES. Member states are seen as left to deal with climate change risks and the provisioning of FES. Successful FES schemes could be observed in certain member states, but this is at national level, with no real support from EU.

Money currently available for FES funding falls under the Common Agricultural Policy (CAP). However, these funds are not only earmarked for forestry, and there are several uncertainties and limitations involved, according to some interviewees. Some also feel that the financial support for FES has not been successfully spent, and wish for a clear related reporting from the Commission on this matter. While both sides agree that more money needs to be made available – both sides are also not sure that the CAP and Natura 2000 funding related to Life+ is used sufficiently at the level of the Member States.

The Commission however expressed that funding would be available, for instance under the CAP and Natura2000, but that there has not been a real demand from the member states to make use of this funding. From the Commission's perspective, PES is not necessarily the answer. Forest owners and managers should be incentivized to promote FES, and together with this practice good forest

management, to have a healthy resilient forest and to provide a service to the society. Forest owners should not only be pushed to this through monetary incentives, but they would also have the responsibility to maintain healthy resilient forests.

Both pro-forest use and protection/conservation stakeholders are of the opinion that research on FES has increased and together with this funding for such research (LIFE projects and H2020 projects such as SINCERE being an example), but the process has just started. Many feel that payment for ecosystem services is still further in the future, if it will happen at all. It is also mentioned (specifically by the Commission) that the valuation (in monetary terms) of certain FES is difficult to do (possibly even not desired), and therefore PES schemes could be problematic. A suggestion to overcome the difficulty to adjust the payments according to the valuation of the FES, is to pay a flat-rate per hectare for delivering FES:

“And I think it is not needed to get such a special value if you have a look at a very normal forest owner. From very small size to very big size. Every forest owner is providing ecosystem services: fresh air, CO2 binding, clean water, a nice landscape, recreation areas. Everyone is doing that. And there is no need to go into detail - to say “OK, there is a mountain bike trail, or there is hiking routes” and then you get some points or money for that. If you have just a special amount of money per hectare for this very basic ecosystem services, which is given by any forest owner, then it would be the first step” (Interview 5)

Some stakeholders feel that PES would act as a “place-saver”, an empty term that the Commission would argue to look into for FES, but with no realistic option to get something implemented.

3.3 Focus group

3.3.1 Breakout groups discussions

For the third step in this analysis, a focus group discussion was held with the aim of bringing together the perspectives of the first two steps (practitioners in the bottom-up approach and policy makers and EU policy stakeholders in the “top-down” approach). The focus group discussed the question of how future European policies could look like to support the provision of FES and related innovations.

In total, 21 participants joined the discussion, representing the wide range of interests in EU forest policy. Three groups were formed, consisting of seven participants each. The division of participants were based-on each participants selection of a narrative (related to forest use and protection) in order to have participants with similar perspectives grouped together. It was also ensured that each group contained participants of both “top” and “bottom” levels. The three groups first discussed what are the major challenges regarding FES provision, and secondly how these challenges can be addressed through a policy framework.

The outcomes of the discussions are as follows:

Group 1 – this group mainly consists of participants which selected the “Incentives first” narrative.

1. **European PES system challenges:** Long term commitment of payments needed, as forestry is a long term endeavor (7 year CAP not enough), “investments” that result in permanent commitments. Markets are not always viable, public funding is necessary in certain cases.
2. **No EU forest policy:** different sectoral policies that need to be coordinated – Environmental matters are often multisector, but forestry has an additional challenge that there is no coherent EU forest policy. Forest policy is a consequence of all the other policies
3. **Policy coordination and perverse incentives:** Avoid damaging subsidies that counteract good intentions. Also need to look at how the current policy framework hinders PES Examples of such subsidies: renewable energy subsidies, efficiency of existing subsidies such as under the CAP, subsidies that are too focused on economic benefits.
4. **Regional diversity and how to cope with it:** Can you address the regional difference with common criteria at the EU-level to make a PES system work? The role of “Eco-schemes” need to be clarified, especially in terms of forestry, as these Eco-schemes under the CAP might be a method to address PES in different regions. What will be the role of member states in this regard?
5. **Global interdependencies:** Leakage. Certain (positive) incentives in Europe might have a negative impact elsewhere in the world. EU policy needs to be aware of this.

No EU forest policy - solutions

- It is rather the issue of a lack of coherent policies, than the lack of a common EU forest policy that is complicating a PES scheme. All the elements are there, but it needs to be coordinated better in order for an EU PES scheme to succeed. However, if these other policies define forest management, this can cause frustration of those dealing with the issues in practice. Also available funding through policies need to be better coordinated.
- A broader EU forest policy approach is needed to trigger change in country forest law, where this law is too economic and production oriented. The question however remains if the Forest Strategy is strong enough, as it is not a directive. Reform could, as an alternative, be done at the national level without a Common Forest policy (bottom-up integration).

European PES system challenges

Points to consider:

- Developing an EU PES system would not be starting from a blank slate. There are already many incentives (subsidies), even though there is not a common forest policy. Different (even contradicting) and harmful subsidies need to be addressed first. A coherent, rather than a common, forest policy is essential then long-term environmental goals.
- As there are huge regional differences and many local issues, any PES scheme needs to have a smart local adaptation, however some general principles can be formulated. And this would be the responsibility of the EU.

- Pay attention to national laws: often national laws already pose basic requirements to forest owners. EU-level policy would then require additional requirements.
- Need to distinguish between “compliance subsidies” and “PES” for additional issues. Compliance subsidies would be to help foresters to reach the requirements posed to them (i.e. to cover their costs). A proper PES scheme would be something that comes in addition to the basic legal requirements. The question also arise whether such a scheme would be voluntary or mandatory.
- State and non-state forests – incentives are important for both. Some state forests might act biased if they are not given the necessary incentives to take the environment into account. (e.g. state forest resist to biodiversity requirements if not covered)

Group 2 – this group mainly consists of participants which selected the “Innovations first” narrative.

Which main challenges should the framework address?

1. **Accommodate FES into different current policy developments (CAP, etc.) / act on time (fund FES with other policies).** The timing is currently optimal for this, as several policies (including the CAP) is being revised, with that national forest plans
2. **Coherence among policies and holistic approach towards forests / FES.** If we want to provide multiple FES, we need to look at forests from this holistic approach.
3. **No ‘one size fits all’ solution. PES focused policies should be voluntary – and linked to other services / policies (also adapted to local circumstances).** If such a policy is aimed at a specific FES, it should always relate to other policies as well.
4. **Coherent (forest) management system / ‘on the ground’ behavior.** As it is difficult to achieve coherence amongst different policies, it is important to look at coherence at the practice “on the ground” level. In the forest, there should be a coherent and integrated management system.
5. **PES schemes should be conditional on their (e)valuation, current and potential forest management practices.** The PES should be for the *improvement* of the forest management (PES should be with measurable outcomes).
6. **Assuring that FES provision is secured by (divergent) funding sources / multiple revenue streams.** As the costs of delivering many FES is not easily measurable and therefore difficult to put a value on it. This can be addressed by funding these FES with other forest practices, such as timber production.

Group 2 came to the conclusion that the future EU forest policy should allow for the support of FES through market-based financing from different revenue streams. In this regard, foresters might have to learn to think beyond the forest sector.

In the case where the market-based approach fails, for instance where a specific FES is difficult to value, such a FES could be supported by a subsidy system. Such a system should be voluntary and should be adapted to local conditions, even though a coherent Europe-wide policy might be in place. It is important that member states should define the implementation rules. Payments should be outcome based, conditional on the improvement of management. For such a system to succeed, the following is necessary:

- A precise understanding (definition) of the specific FES needs to be determined;
- The impact of forest management on the FES has to be defined;
- Common principles and method for evaluation and valuation of the FES should be put in place at EU level;
- Local-sensitive criteria.

A bottom-up approach should be followed to bundle-up and feed local successes, experiences, challenges and best practices into the top policy level (a typology of regional situations on how to enhance the provision of FES). This knowledge should then be further shared with through knowledge transfer platforms with other regions. Here forest advisory systems would be key (The European Innovation partnership on Agriculture should in this regard be strengthened to support forestry more). For this, more research, such as H2020 research and innovations projects would be needed.

Furthermore, a coherent EU forest policy would be needed. This could be the upcoming Forest Strategy. Such a policy needs to be complemented by a coherent forest management system. For this existing mechanism, such as the Forest Europe definitions, criteria and indicators could be used. There should be a link between on the ground management (good practices) and EU-level policies. Policy-makers are often not aware of these good management practices and for this knowledge dissemination (bottom-up approach as described above) is needed. (See Annex IV for a summary table completed by the group during the discussion)

Group 3 – this group mainly consists of participants which selected the “Societal participation first” narrative. There were fewer participants who chose this narrative than the “innovations first” and “Incentive first” narratives, to have an even number of participants per group, this group was a more mixed than group 1 and 2.

Which main challenges should the framework address?

- 1. Provision of easily accessible recreation areas for citizens** that are properly managed and administered (enough funding) (reason: big land use pressures and landowner changes, mostly in Eastern Europe)
- 2. The value of many FES is not easily expressed.** Give value to the services (for now they are considered free and financed by selling timber)/ no assessment system for giving value to FES. Human or market logic?
- 3. There is low awareness on the full potential of FES.** Awareness raising on FES and communication on forest ecosystem values. And define the responsible – who should pay for that?

4. **Debate on FES is separate from the silviculture discourse/forestry cycle** (should be put together). Fragmentation of administrations. The funding should be sustainable to really make it happen, as currently funding is only available for some FES.
5. **Create a holistic view of all FES** (at national and regional levels) that we should handle and find people who will finance them

A PES scheme should exist to incentivize FES. This could be done on a yearly payment per hectare (similar to a certification scheme). It would thus be voluntary, and outcome-based on the additionality (i.e., an improvement needs to be made). For this, a large-scale valuation and monitoring system would be needed. Such incentives could come from the Green Deal.

In order to achieve a holistic view on FES, it is necessary to have a bottom-up, integrated knowledge system which would combine knowledge from landscape levels, and feeding it into the top policy levels. Co-decision making or societal participation (from regional and landscape level) in policy is thus needed to create transparency and vision for the future. (See Annex IV for a summary table completed by the group during the discussion)

3.1.2 Comparing Groups 1, 2 and 3 - Overlapping themes

The discussions in Group 2 and 3 raised rather similar topics. Group 1 had a few comparable themes, although they were less in sync with Groups 2 and 3.

Topics where all three groups agreed:

Need a coherent policy, reconciling the different policies. This is also since there is no forest policy at EU level. Forest policy is a consequence of other policies.

There are regional differences – it is difficult (maybe not even possible or desirable) to marry all these differences into common criteria at EU level to come up with an EU-wide PES scheme.

Although Group 2, and some participants in the other two groups were in favour of a market-based approach to cover the costs of providing some PES, all groups agreed that public funding (incentive payments) would be needed for certain FES. All groups mentioned that such a scheme should be on the condition of additionality. Group 1 went further into the discussion of a PES scheme of subsidy payments and emphasized that negative subsidies should be addressed and avoided (such as bioenergy). This step, according to Group 1 is also necessary in harmonising EU forest policy and achieving a coherent policy.

Group 2 and 3 reiterated that there should be a holistic approach to FES and that there is a lack of awareness, especially at top policy level, on the full potential of FES. This should be addressed through a bottom-up approach (in Group 3 it was even as strongly stated as a co-design in policy making), where the experiences and knowledge of “on-the-ground” practitioners should be bundled together and fed into the top policy level.

Group 2 and 3 also both stated that valuation of certain FES is problematic. A large-scale valuation and monitoring (evaluation) system is needed.

4. Discussion and conclusions on policy support

Social perception studies indicate a constant high demand for environmental and recreational services from forests. However, simultaneously, there is a forest biomass demand for a bioeconomy transition to satisfy society's energy demand and concurrently address the climate change targets. Yet, overemphasising a single service causes strong trade-offs with other forest ecosystem services (Torralba et al, 2020; Duncker et al, 2012). To address these trade-offs, targeted policy and/or management interventions are needed. It is however quite challenging to reach agreement at EU-level on the desired policy and management approaches needed.

Two main coalitions are evident: a pro-forest use side and an environmentalist/pro-conservation side. This division is evident for interests, approaches to forest management and expectations from policy and policy mechanism, mirroring similar findings of previous research (Winkel and Sotirov, 2016). Each side perceives the other side as being more influential and powerful. This phenomenon has been described as "Devil Shift" in the literature, a psychological process that is likely to fuel controversy and preventing cross-coalitional learning (Sabatier et al, 1987). It is also evident that with the New Commission, its strong environmental perspective and with that, the Green Deal, it is perceived by both coalitions that DG ENV has a more prominent voice. The environmental coalition seems more confident and less on the defence as was the case previously. On the other hand, the pro-forest use coalition seems to have the need to defend their position more.

This study has indicated that there are fundamentally different perspectives amongst the diverse forest stakeholders in Europe regarding societal demands from forest (i.e., use of the forest), regulation and management thereof. In-line with preceding research (see Wolfslehner et al 2020 in this regard) these different perspectives and its implications for EU policy can be simplified into three main groups:

1. The different opinions on the use of forests: as a natural resource to be sustainably managed emphasising the economic importance of the forest sector, versus the forest being a natural ecosystem which needs to be protected and its biodiversity preserved, requiring policies to prevent strong human interference in the forest. This is the primary dichotomy of the international forest governance regime, which is basically a part of a wider clash between the land-use and the conservation groups, each of which has its own actors, core beliefs and a system of policies that promote them, and whose' varying levels of influence over EU-level decision making can be traced back to the 1970s (Weber and Christophersen, 2002)
2. Contrasting views on the preferred level of forest policy making in the Europe. No common forest policy exists at EU level, nor does the EC hold a common competency for forests. However, many EU environmental polices affects forests, and thus indirectly regulates forests.
3. Divergent support for policy mechanisms: encouraging free-market instruments, regulating market instruments, or subsidies approaches.

Despite these different perspectives on forests, our work finds that there is quite far-reaching consensus at the EU policy level that more efforts are needed to support FES provision in Europe. Stakeholders from both the environmental oriented coalition as well as the pro-forest use stakeholders agree multifunctionality of forests are important, and should focus on FES; possible within a payment scheme.

Possible reasons for the meagre policy support for FES provision could be attributed to the policy coordination challenge. Schleyer et al (2015) emphasise that in order for the concept of ecosystem services to be mainstreamed into EU policy, vertical coordination is needed, that is addressing the forest competency issue. Secondly, horizontal policy integration is needed, addressing trade-offs between policies. And thirdly, policymakers should address the diverging interests of actors, taking into account their perspectives and values.

At the local level, the question of what is seen as inhibiting or facilitating factors quite strongly depends on the nature of an FES related innovation, e.g., if the idea is to marketize the provision of cultural services or biodiversity, regulation that requires forest owners to provide this service “per se” can be seen as hindering the development of a business – but at the same time this regulation can effectively also ensure the provision of the service. In that regard underlying political questions about the best way to organize forest policy interventions (more regulation, more laissez faire) are critical when it comes to how forest policy can best support FES provision and innovation – this could be exemplified by the narratives we have been using to steer the focus group discussions at the policy level.

The policy coordination challenge and climate change adaptation could be seen as an opportunity to establish an EU forest policy in relation to the Green Deal, however the competency issue remains a major challenge. In the end, a “Forest Framework Directive” or similar could establish the foundation for an EU forest policy that could assemble the many elements that are needed for supporting multiple FES provision in Europe, and importantly set the basis for financial support of FES. An alternative option that became evident from our work, is the need for a bottom-up approach where the needs, experiences, successes, and challenges of forest practitioners are bundled together and fed into the top policy level. This would also ensure that the needs of forest practitioners are addressed in policies, but also contribute to awareness raising on the potentials of FES. It should also be kept in mind that not all policy trade-offs could be addressed at top policy level and should be addressed through forest management “on the ground”. In this regard, the concept of integrated forest management could be a solution.

Furthermore, a certain window of opportunity for a European PES exists. Most actors across the wide range of interest groups, support a PES scheme, or rather a broader European incentive system for FES. Still there are different views about to what to give priority within such a scheme. We identified four narratives in this regard:

A. Nature first: effectively conserve Europe’s forests for their environmental benefits

The main problem is that European forests are under stress due to climate change and forest management that is mostly interested in economic exploitation, while society demands conservation and multiple ecosystem services. A European policy framework needs to guarantee that forest biodiversity is conserved and other environmental services are provided; this includes the need for effective regulation and better implementation of agreed policies on biodiversity, climate change, forest management practices and consumption of forest resources to ensure that the needs of many are not sacrificed by the economic interests of few.

B. Innovations first: allow the transition towards a market based “ecosystem services bioeconomy”

Forests provide many ecosystem goods and services, and forest managers and owners are since a long-time managing forests sustainably for the respective demands by society and economies. If demands of society and conditions for management are changing, the imperative for policy making should be to incentivize efficient,

market-based innovations from bottom up. Forest owners and managers must be provided with the necessary freedom to innovate on forest ecosystem services markets that should be characterized by real demand and supply – no further strong interventions by the state are needed, only fair conditions for new business models need to be provided.

C. Incentives first: Correct market failures through an effective Payment System for Forest Ecosystem Services

Forest management is under pressure due to climate change and partially contradicting demands arising from the economies and society. European forest policy must support the provision of ecosystem services, seek for synergies, and the resolution of trade-offs, through financial incentives to adapt forests to climate change. More specifically, a Payment Systems for Forest Ecosystem Services is needed; this system could be rooted at the European level, but should create flexibility for implementation in the respective national and regional contexts.

D. Societal participation first: increase transparency, participation and mutual learning to define locally rooted solutions for sustainably managed forests

Forests are a key resource that has since ever been at the focus of many societal demands. A European forest policy must ensure that forests are managed for those multiple demands, by encouraging transparency, participation, and inclusion of society in forest policy and management approaches. Mutual learning between experts and society, and bottom-up participatory processes and agreements are needed to ensure that Europe's forest provide maximum ecosystem services for societies also under conditions of constant change.

Further challenges identified related to a PES scheme includes the regional diversity across Europe – a “one-size-fits-all” system would not be a solution; not all FES can easily be expressed in a monetary value and there is a low awareness of the full potential of FES (amongst society and policymakers). A PES scheme, as defined by Wunder (2007, p. 48) could thus be a solution: “... a voluntary, conditional agreement ... over a well defined environmental service—or a land use presumed to produce that service” (own emphasis added). The idea of a PES scheme is to correct classic market failures, resulting from misaligned interest (those of the landowner versus society's) through incentivizing behavioral change. The landowner is rewarded (or compensated) for opting for a more environmental-friendly ecosystem management approach, although it might be an economically less favorable approach (Ezzine de Blaset al, 2016; Jack et al, 2008; Prokofieva, 2016). Our analysis however finds that there is already a willingness by landowners and FES providers to enhance FES, thus, when we talk about behavioral change, we do not refer to a change in mind-set. However, it is not always viable or possible for the service provider, and in this regard a European PES scheme could assist to reward the service provision, thus making the change possible. For such a system to succeed, our suggestions, based on our analysis and supported by the findings of Ezzine de Blaset al, (2016) reiterate that the PES scheme should be 1. spatially targeted (giving higher focus to areas with high FES potential); 2. Differentiated payments recognizing the regional differences as well as market profit opportunities; and 3. Payments based on the conditionality of additionality (an improvement needs to be made in the management approach, if not, payment will not be made).

As a summary of our findings, we would conclude and suggest an EU policy framework to support FES provision in Europe with the following attributes:

- 1) Although markets play an important role, this is not always the best solution as some FES would not be suitable for monetary valuation. Incentive payments are needed in certain situations.

- 2) As regional differences are vast, criteria should be adapted to local conditions, however common principles should be determined at EU level.
- 3) A PES should be conditional on additionality, i.e., payments made for the improvement of management practices. This view is also supported by literature which labels conditionality as an essential characteristic of PES schemes, additionality being the “bottom line” of PES success (Ezzine-de-Blas et al, 2016, p.13; Prokofieva, 2016). Payments, by definition, can be either uniform for all qualifying participants, or differentiated, based on different criteria (Prokofieva, 2016).
- 4) Bottom-up approach should be implemented: gathering experiences, lessons learnt successes and challenges and incorporate it at EU policy level. In this regard it is important to be aware of political and power differences amongst the various actors, although these differences cannot be managed. In order for a knowledge co-production approach to succeed, room for pluralism needs to be created (Turnhout et al, 2020).
- 5) More research is needed, in the form of H2020 research and innovation projects.
- 6) There is no consensus on whether such a system should be voluntary or mandatory. Voluntariness of the involved parties is, however, seen as a necessity for a successful PES scheme by previous research, as it allows for the termination of payments if the performance criteria are not met, and thus ensure conditionality (Ezzine-de-Blas et al, 2016; Prokofieva, 2016).

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6. Annexes

Annex I: Table 1. Summary of factors on case-study level

Innovation case	Contextual setting	Other variables	Supporting policy factors	Impeding policy factors	EU-level policy considerations
Belgium: Reverse auction pilots for forest ecosystem services in rural and peri-urban areas	Moderate clash between stakeholders (hunters vs. environmental organizations). Moderately new innovation.	Now in early implementation, IM designed beforehand. Clear ideas on how to proceed. High level of ambition Actual implementation may depend on market conditions (for boar meat)	Hunting law / fund	Policy coordination (on subsidies) Clash between IM and protected area status of the forest	Coordination with EU legislation on state-support – i.e. is IM state support or not Problematic: Cross-compliance (RDP and Natura 2000) State aid rules, RDP / finances
Croatia: PES in peri-urban forests	Land ownership issues / fragmented. Needs wide support of stakeholders to be successful.	Design started with the project. Moderate level of ambition	Local by-laws govern the IMs	No restrictions in national policy. Low replicability due to inertia of the political system.	Needs support from EU-level strategic policies to enhance the interest in the local policy sphere
Denmark: Reverse auctions for biodiversity protection	Strong interest by stakeholders. Incremental innovation. Strong	Design started with the project, a lot more to	“Naturpakken” (Natura Package) – policy that supports and funds PES	IM not completely in line with the Danish Forest Act. Risk of land restrictions	Possible clash with state aid rules.

	leadership and culture of innovations	go. High level of ambition		while re-establishing nature habitats Possible clash with state aid rules.	
Finland: Landscape and recreation value trade	Low interest of stakeholders. High interest of stakeholders is needed to make this a success story. Disruptive and new for forestry	Low leadership, long history of activities but new PES mechanism in negotiation, need to raise awareness of stakeholders	different policies (forest, sustainability, biodiversity and climate) are supportive of the IM	Sectoral policies with narrow focus – e.g. forest policies on wood production, in nature conservation focus on biodiversity – low level of integrated policies, no ‘bundling’ of FES	Rural development policies could help with amenity / landscape value
Italy: Recreational wild mushroom collection	Capital /resource intensive IM	Strong leadership, long history of implementation, this is incremental step, low level of cooperation with / among stakeholders	Good policy coordination	High and bureaucratic taxation – many barriers to business No ES in agricultural legislation	
Italy: Forest-habitat biodiversity payment scheme	Low interest of stakeholders – high is needed to make this work(i.e. farmers to join the payment scheme	Strong leadership, long history of implementation, this is incremental step	No problems donations to parks are tax deductible	Agriculture legislation does not include ES provision	Rural development policy on co-funding the restoration and management of set aside areas

<p>Peru: Payments for watershed services to cities</p>	<p>problems with stakeholder participation, conflicts and power misbalance. Insufficient learning from other cases</p>	<p>Has history of implementation. Strong conflicts among stakeholders – and low level of understanding of IMs. Low level of progress in implementation. Low level of leadership</p>	<p>New legislation is very supportive</p>	<p>clashes between the IM and Water and watershed management policies</p>	
<p>Spain (Basque country): New legal framework for FES</p>	<p>High level of involvement of IA lead. Strong disagreements of stakeholders. Low level of progress. Design started with the project</p>	<p>Tackling multiple objectives</p>	<p>Stakeholders are the main problem, not other legislation – as IM is legislation on its own</p>	<p>Coordination with other national policies (especially environmental legislation) Environmental Law has many restrictions on management regimes</p>	
<p>Spain (Catalonia): forests for water</p>	<p>Lot of resources needed to make this work. Quite radical and new innovation. Low leadership from the side of state administration</p>	<p>Design started with the project. No strong problems with stakeholders. Mechanisms not in early implementation. No political wiligness to proceed. Low social awareness. Low interest of key stakeholders.</p>	<p>No impediments.... / neutral ES recognition in policies</p>	<p>Lack of incentives for FES provision Lack of recognition of the link between forest and water quality in the forest and water regulation Bureaucracy</p>	<p>Recognition in CAP and RDP</p>

<p>Switzerland: spiritual forest ecosystem services (funeral forests)</p>	<p>Not a totally new innovation (funeral forests)</p>	<p>Implementation existed before the project started, focus is now on expansion. Strong individual leadership</p>		<p>operates in a complex policy environment, and policies differ across cantons and the IA case may stretch across a bigger territory. This makes it very difficult to make a plan on how to proceed, as some activities may be allowed in one place and not in another one. Policy coordination – clash between forestry and public health policies</p>	
<p>Russia</p>	<p>There are overall seven authorities and / or governmental bodies, that possess a legislative initiative in Russia, which makes it easier to attract someone's attention – i.e. many replication possibilities</p>	<p>Clear ideas what to do High political interest Multiple</p>		<p>Vague references to FES in forest legislation environmentalists not being a priority in the political agenda the complexity of existing legal framework</p>	

Annex II: EU-level interview questions

1. If you would have to **evaluate the current state of EU forest policy in one sentence**, what would this sentence be?
2. Who are from your point of view **influential policy actors** and **what do they want** with regards to a future EU forest policy?
3. In recent times, significant developments have happened that are relevant to EU forest policy-making: for instance, **large scale forest disturbances**, the **Green Deal** and the **Covid19 pandemic**. We would now like to learn more about **how you evaluate their impact on EU forest policy-making** for the upcoming decade by going through them individually:
 - a. **How do you think the visible impact of climate change on forests** (e.g. forest fires, forest disease) is relevant to EU Forest policy-making for the upcoming decade?
 - b. **How do you think is the Green Deal** relevant to EU Forest policy-making for the upcoming decade?
 - c. **How do you think the Covid19 pandemic** and related socio-economic impacts are relevant to EU forest policy-making for the upcoming decade?
 - d. Are there **other developments** that are important for the upcoming decade and if so how?
4. The combined **effects of climate change, Covid19 and the Green Deal** could lead to different scenarios for European forest policy. The following phrases express **different main orientations. Please comment on them and indicate which one you consider most realistic**:
 - a. *No time for tree-hugging*: EU policy need to focus on rebuilding the economy.
 - b. *The push we needed*: Now is the time to build a truly sustainable economy drawing on multiple forest ecosystem services.
 - c. *A wake-up call*: The benefits of reduced human impact on the environment are now more visible, EU forest policy needs to focus more on protecting forests and their biodiversity.
 - d. *Bigger fish to fry*: Forests (and the climate) will not be in the policy focus anymore, and no bigger changes can be expected in this field.
5. Our research in SINCERE and other projects indicates that forests are used in manifold ways in Europe, for various ecosystem services ranging from wood to non-wood forest products to recreation and “nature experience”. To some degree, this has resulted in new approaches to forest management as well as new business models for forest owners to serve broad societal demands.
 - a. Does EU forest policies **sufficiently support** (either politically or financially) innovations related to the provision of a broad spectrum of forest ecosystem services?

- b. **What should/could be done to support** FES and FES innovations (more)? What concrete **potential do you see for supporting policies in the next decade?**
 - c. Is there a space for developing something like a “**European payment system to support forest ecosystem services provision**” under the Green Deal?
- 6. How would you characterize, with respect to policy relating to forest ecosystem services, the **relationship between:**
 - a. **Different policy levels:** the EU policy level (namely the Commission) and the Member States?
 - b. **Different policy sectors?**
 - c. Do you see a **need for better coordination/integration, and how could it be achieved?**
- 7. What are the main **trade-offs between EU forest and forest related policies** (in objectives and implementation), and why?
- 8. Is there a need to **reduce trade-offs**, and if so how could this be done concretely?
- 9. Finally, we would be interested in learning about both your own vision about a future EU forest policy and your expectation of what will happen in reality.
 - a. **What is your vision (ideal situation) for a future EU forest policy in 2030?** Which thematic issues need an EU approach?
 - b. How do you **expect EU forest policy in reality to look like in 10 Years?**
- 10. Is there anything else that is relevant in the context of our interview we have not covered but would be important?
- 11. Can you please name three EU forest policy stakeholders with a different opinion on forest policy that I need to interview for this study in any case?

Annex III: Focus Group Concept Note



Exploring innovative ways to support the provisioning of forest ecosystem services in Europe – do we need new policy approaches?

Virtual Focus Group Discussion between policy and practice – 14 December 2020 14:00 – 16:45

Concept note

European citizens demand many ecosystem services forests do provide, including nature-based recreation, wood and non-wood forest products, and environmental benefits. Only some of these ecosystem services are governed by markets (e.g. wood production) or regulation (e.g. biodiversity conservation). This can result in challenges for forest management if trade-offs between societal expectations and forest management objectives occur. At the same time, changing societal demands towards forest ecosystem services have resulted in new and innovative approaches to meet such demands across the continent.

The European collaborative project SINCERE¹ has brought together forest practitioners and researchers to explore innovations relating to forest ecosystem services. One of the project's objectives is to support European forest policy making in view of a policy framework that incentivizes the provision of multiple forest ecosystem services and supports related innovations. This focus group is set to support this objective. Specifically, we aim to tackle the question:

How could future European policies/instruments to support the provision of multiple forest ecosystem services and related innovations look like?

The main idea of the focus group is to create an open platform for knowledge exchange and discussion between experts representing forest policy, forest management and research. Specifically, we aim to bring together policy experts (representing different relevant perspectives such as forestry and environment) and on the ground forest management experts from SINCERE to allow for a direct exchange of perspectives.

We will present preliminary research findings of the SINCERE project summarizing surveys and interviews done in relation to these topics at the policy and forest management practice level to kick off the discussion. We hope to subsequently create interesting discussion to explore innovative and concrete suggestions for a policy framework that incentivizes the provision of forest ecosystem services that European citizens demand, and to overcome major political obstacles related to forest ecosystem services related innovations.

To join our discussion on Monday, December 14th, from 14:00 – 16:45, please register [here](#).

We look forward to meeting you there!

The SINCERE project team

¹ Spurring Innovations for forest eCosystem sERVICES in Europe (SINCERE) <https://sincere4trees.eu/>



Annex III: Focus Group Agenda



Exploring innovative ways to support the provisioning of forest ecosystem services in Europe – do we need new policy approaches?

Virtual Focus Group Discussion between policy and practice – Monday 14 December 2020

Tentative Agenda

13:45-14:00	Opening of the online space
14:00-14:05	Welcome
14:05-14:10	Introduction
14:10-14:20	Getting to know each other
14:20-14:45	Presentation of initial results: bottom-up, top-down and lessons of the webinar Q&A
14:45-15:30	Possible policy support mechanisms
15:30-15:45	Break
15:45-16:30	Emerging policy solutions
16:30-16:35	Assessment of the meeting
16:35-16:45	Next steps and closure



Annex IV: Focus Group Summary Tables

Summary Table completed by Group 2 during the Focus Group discussion

Challenge	Specific issue/instrument	Main approach: regulation/incentives/information/participation	Policy levels	Public/private forests
Accommodate FES into different current policy developments (CAP, etc.) / act on time (fund FES with other policies) (could be the biodiversity policy, bioenergy, etc.)	Water provision, landscape, timber.... Possible other FES	(voluntary) payments / conditional on additional forest management activity Conditioned by a forest management plan (or equivalent)	Local level implementation Member states should define the implementation rules	Focused on private forests (in the future may also be state)
Coherence among policies and holistic approach towards forests / FES.	Upcoming EU forest strategy – it should tackle coherence among many different policies	Strategy	EU	
There are many clever solutions on what do forests deliver – but this is not known by many actors	Make good practices known	Information – EU as serving a dissemination portal of best experiences.	EU	NO
No 'one size fits all' solution. Focused policies should be voluntary – and linked to other services / policies (also adapted to local circumstances)	National forest dialogues - they should be combined across sectors and countries – need for a coherent system to bundle-up this bottom-up knowledge	Regulation	National – and bring it up to EU level	No different solutions (bigger differences are between big and small forest owners)
Coherent (forest) management system / 'on the ground' behavior	Reference to Forest Europe process (definitions, C&I, etc.) Get this information to the ground level practitioners	Information / soft law Projects Platforms and knowledge transfer tools. Improving agricultural advisory services to support forestry activities more	Europe / national / down to the local Problem with dissemination of knowledge aggregated in projects EIP Agri should do more	Same Same - action on both is needed

	Strengthen associations of private forest owners	Funding / training / preparation of dissemination material		Private
PES schemes should be conditional on their (e)valuation, current and potential forest management practices	Valuation method should be locally specific Precise understanding of specific FES Precise understanding of the impact of forest management practices on FES Relation between FES provision and forest management should be assessed on local level by expert	Horizon Europe research and innovation projects Multi-actor approach in the projects Platforms and knowledge transfer tools – general principles to be defined on Europe level, the criteria on a local level. No common thresholds. Project help – ‘type regions’ i.e. guidance for generalized situations for different archetypes of local situations	From EU to local EU should decide on how to make these types comparable	
Assuring that FES provision is secured by (divergent) funding sources / multiple revenue streams	This is highly dependent on which FES you focus on Carbon Biodiversity Wood market Forest owners have a mindset to think just within forest sector – they need new contacts to get new mindset(s) / contacts	Market Non-market Reforestation / wood mobilization – support to productive investments	Dependent on the national culture of forest policies and future EU policy tools	

Summary Table completed by Group 3 during the Focus Group discussion

Challenge	Specific issue/instrument	Main approach: regulation/incentives/information/participation	Policy levels	Public/private forests
Give value to the services	New financing system (Payment per hectare/year) based on certification	Incentives for landowners Green Deal	EU and national policies	Incentives for private forests mostly Give value also to public forests (a room for public f.to
Lack of awareness)	Raise awareness on the various ES that forests bring; promote the ES so that more funding comes in	CAP European Network for RD and Innovation National networks	EU national	
Create a holistic view of all FES	Support to the decision system – planning at landscape level to integrate the different knowledge systems and values from different groups	Creates transparency and vision for the future for the different groups of people Shared view/acceptance	Regional/Landscape level	



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