



BOOK OF ABSTRACTS

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I. SESSION DESCRIPTION

ID: S3

Forests Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda

Hosts:

	Title	Name	Organisation	E-mail
Hosts:	Prof. Dr.	Carsten Mann	Eberswalde University for Sustainable Development, Eberswalde, Germany	carsten.mann@hnee.de
Co-hosts:	Dr.	Mónica Hernández-Morcillo	Eberswalde University for Sustainable Development, Eberswalde, Germany	monica.hernandez-morcillo@hnee.de
	Prof.	Bernd Hansjürgens	Environmental Research Center, Leipzig, Germany	bernd.hansjuergens@ufz.de
	Dr.	Lasse Loft	Leibniz Centre for Agricultural Landscape Research (ZALF), Müncheberg, Germany	lasse.loft@zalf.de

Abstract:

European forests provide a wide range of ecosystem goods and services vital to society; however, their sustainable provision remains challenging. This session explores the current status of forest ecosystem services (FES) supply and demand in Europe and investigates how to foster the development of innovative governance arrangements, management, and business solutions for the sustainable provision of forest ecosystem services. To that aim, papers focus on pioneer governance innovations such as new payment schemes, network approaches, and policy mixes for e.g. carbon sequestration, biodiversity protection, enhancing recreational values and improving forest-timber value chains in a range of biogeographical regions and institutional regimes of European forests. Throughout the session, an overview of governance innovations for FES that have emerged in the past years shall be gained. Besides empirical findings, this includes innovative theoretical and methodological considerations like FES valuation and assessment approaches, economic experiments and games, innovation journeys and systematic identification of enabling factors. The mosaic of papers seeks to broaden the perspective and understanding on how FES provision in Europe can be more creatively, efficiently, and sustainably fostered. These insights serve as the basis for targeted forest policy, management, and business recommendations, to efficiently address the main concerns of the stakeholders directly involved in FES provision.

Goals and objectives of the session:



We consider this session as integral part of the activities conducted under ESP’s TWG 18 on Governance and Institutional Aspects as well as TWG 7 on Economic & Monetary valuation which is co/lead by the session hosts. The goal of the session is to gain insights into governance approaches, policy design, innovation system dynamics and fostering and hindering conditions for the sustainable provision of forest ecosystem services. Therefore, the session seeks to provide an insightful view of recent research and innovation approaches from ES sciences, policy and practices, and the necessary context conditions. It further aims to facilitate a debate on possible ways forward in terms of forest science, management, policy, and business. As this session links nicely to the biome working group on forests & woodlands, we seek to elaborate options for further collaboration.

Planned output / Deliverables:

The outcome will be empirical insights of selected papers, an in-depth discussion and a synthesis of opportunities and challenges for forest ES governance innovations. This might be compiled to a joint policy brief for better integrated and coordinated forest policy as a timely contribution to an emerging science-policy discourse in Europe after 2020 (e.g. New Green Deal and the New Forestry Strategy).

Related to ESP Working Group/National Network:

Sectoral Working Groups: SWG 3 – ES in Forestry production systems

II. SESSION PROGRAM

Date of session: Monday, 7 June 2021

Time of session: 13:30 – 17:00

Timetable speakers

Time	First name	Surname	Organization	Title of presentation
13:30 13:45	Carsten	Mann	Eberswalde University for Sustainable Development	Governance Innovations for forest ecosystem service provision – Insights from an EU-wide survey & Introduction to the session and insights from an EU-wide survey
13:45 14:00	Liselotte	Hagedoorn	Vrije Universiteit Amsterdam	Reducing the finance gap for nature-based solutions with time contributions
14:00 14:15	Clemens	Blattert	University of Jyväskylä	Sectoral policies cause incoherence in forest management and ecosystem service provisioning: a Finnish case study
14:15 14:30	Clémence	Dirac	Federal Office for the Environment	Governance mixes for the management of recreation in urban and peri-urban forests: the Swiss case study
14:30 14:45	Enrique	Doblas-Miranda	CREAF	The Interreg Europe project PROGRESS: Promoting the Governance of Regional Ecosystem Services
14:45 15:00	Jeanne-Lazya	Roux	European Forest Institute	Governance of Forest Ecosystem Services in the EU: Exploring



Time	First name	Surname	Organization	Title of presentation
				innovative policy support mechanisms for the provisioning of FES
15:30 15:45	Marc	Deconchat	INRAE Dynafor	Forest for biomass or for biodiversity: scenarii for solving conflicts in the French context
15:45 16:00	María	Triviño	University of Jyväskylä	High rates of short-term dynamics of forest ecosystem services
16:00 16:15	Stefan	Sorge		Identifying (and understanding) influencing factors of innovative governance for a sustainable supply for forest ecosystem services: a socio-ecological-technical analysis framework
16:15 16:30	Claudia	Sattler	Leibniz Centre for Agricultural Landscape Research	Participatory Process Net-Mapping to analyze governance innovations for the provision of forest ecosystem services
16:30 16:45	Lasse	Loft	Leibniz Centre for Agricultural Landscape Research	The emergence of governance innovations for the sustainable provision of forest ecosystem services in Europe: An empirical comparison of six innovation journeys
16:45 17:00	Monica Bernd	Hernandez Hansjürgens	HNEE UFZ	Final debate and concluding remarks; closing of the session

Moderation 13:30-15:00: Carsten Mann & Lasse Loft

Moderation 15:30-17:00: Monica Hernandez & Bernd Hansjürgens

III. ABSTRACTS

Abstracts are ordered based on the session program. The first author is the presenting author unless indicated otherwise.

1. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

Governance Innovations for forest ecosystem service provision – Insights from an EU-wide survey

Presenting author: Carsten Mann



Other author(s): Lasse Loft, Mónica Hernández–Morcillo

Affiliation: Eberswalde University for Sustainable Development, Germany

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In this presentation we show results of an analysis of the occurrence of governance innovations in the forestry sector in Europe in relation to the forest ecosystem services (FES) they provide and the factors that influence innovation development. Based on a European-wide survey that has been distributed online, public and private forest owners and managers affiliated to different property size indicate what type of governance innovations activities they engage in and why. Guided by a system-based understanding of forestry innovation systems, biophysical, social and technical factors are identified that influenced innovation development. Our results show that most innovation activities are largely oriented towards biomass production. Accordingly, most forest owners implement efficiency-driven optimisation strategies for forest management and technological improvement for provisioning service supply to generate income. In contrast, the provision of regulating and cultural services is no yet a prominent part of the forestry activities. Reasons are rooted in a reliance on market-oriented economic rationale for timber production that results in a lack of financial resources to compensate for other FES provision as well as a lack of institutions that provides backup and security to forest owners and managers to engage in innovation development. If other FES beyond timber provision shall be provided, new forms of communication, cooperation and financing are needed. Prospectively, the provision of the wide range of FES should be an explicit part of the forestry portfolio and a management alternative. Therefore a strategy is needed that helps to align actors and sectors for sustainable forests. Current revisions of the Forest Strategy on EU level pose a window of opportunity for better fostering novel governance approaches for more sustainable FES provision.

Keywords: forest ecosystem services, forest governance, governance innovation, enabling factors, European forests, forest ownership, forest size

2. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

Reducing the finance gap for nature-based solutions with time contributions

Presenting author: Liselotte Hagedoorn

Other author(s): Mark Koetse, Pieter van Beukering, Luke Brander



Affiliation: Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam, Netherlands

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Nature-based solutions (NBS) to climate change and other environmental challenges face a well-documented shortfall in financing and resource allocation. Economic evaluations of NBS that apply stated preference methods increasingly use time payments instead of the traditionally used money payments, especially in developing countries. These studies, however, have focused on measuring the benefits of NBS and have not investigated the potential of time contributions to reduce the finance gap. In this paper we investigate this potential through a systematic overview of the literature and an analysis of four datasets across Ghana and Vietnam that derive from similar questionnaires and choice experiments with time payments. We find that time payments are more suitable than money payments for the funding and management of NBS because citizens have higher levels of experience with time payments, higher levels of trust in the appropriate use of the time payments, lower levels of expected free riding, and higher levels of overall acceptability. Furthermore, the results indicate that time contributions from households for implementing NBS could be increased or maintained over time through the preservation and fostering of social capital and coping appraisal. The analysis also reveals that implementing time contributions would in general not disadvantage specific socio-demographic groups in society, a result that does however warrant the need for localized studies in future projects. Finally, using two specific projects as examples, we calculate that time contributions can cover 29–44% of project costs by covering the labour demand, and has the potential to further reduce project costs by up to 67–95% if freely provided labour can be converted to project funds. These results are of high importance to those working on funding NBS, awareness and behavior change campaigns, and practitioners that apply stated preference methods.

Keywords: finance gap, nature-based solutions, stated preferences, willingness to contribute time, systematic literature review

3. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

Sectoral policies cause incoherence in forest management and ecosystem service provisioning: a Finnish case study

Presenting author: Clemens Blattert



Other author(s): Kyle Eyvindson, Markus Hartikainen, Daniel Burgas, Maria Potterf, Jani Lukkarinen, Mikko Mönkkönen

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Forests are subject to various social, economic and ecological demands. In most EU countries several national policies aim to guide forest use, but often with competing objectives leading to incompatible management paradigms. The incoherence among policy goals and fragmented coordination in their implementation may negatively impact the sustainable provision of forest ecosystem services (FES). We used a multi-objective forest planning approach at the national scale to assess the optimal management that corresponds with the objectives of different Finnish sectoral policies and analysed their long-term effects on FES provisioning. We 1) translated the written sectoral policy documents (national forest strategy (NFS), biodiversity conservation strategy (BCS), and bioeconomy strategy (BES)) into optimisation scenarios including quantitative demands for FES; 2) simulated a systematic sample of forest stands representing the whole country with alternative management regimes and under climate change; and 3) determined the combinations of management regimes matching best with each policy optimisation scenario. The NFS proved to be the most comprehensive policy with the highest number of targeted FES, while BES had the fewest stated FES targets. However, NFS is oriented towards the value chains of wood and bioenergy with a dominating economic growth paradigm, which caused intense within-policy conflicts and hindered reaching the biodiversity targets. The BCS and BES targets were on opposite more coherent, but policies showed either sustainability gaps in terms of timber and bioenergy potentials (BCS) or no improvements in forest biodiversity conservation (BES). All scenarios resulted in segregated forest management practices dominated by continuous cover forestry, protected areas, and intensive management zones, with actual proportions depending on the policy focus. Our results highlight for the first time the conflicts among Finnish sectoral forest policies in terms of management requirements and policy effects on forest multifunctionality, and provide valuable input for policymakers to increase coherence among future policies.

Keywords: forest policy, ecosystem services, multi-objective optimization, forest management, climate change

4. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)



Governance mixes for the management of recreation in urban and peri-urban forests: the Swiss case study

Presenting author: Clémence Dirac

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In Switzerland, visitors enjoy free access to forest, whether the forest ownership is private or public (Article 699 of the Swiss Civil Code). Thirty percent of the Swiss forests belongs to the Confederation, cantons or communes and seventy percent to forest corporations or to small private owners. At federal level, there exist no legal instrument (regulations, planning or zoning) and no economic instruments (taxes or subsidies) for the management of recreation in forest in Switzerland. At a cantonal level, legal restrictions for the protection of biodiversity are possible and authorizations for special public events in forest are legally required. Subsidies for measures, which support the management of recreation in forests, are in place in only one of the 26 cantons of Switzerland. While the pressures raised by recreation activities on forest biodiversity, forest economy and between recreation activities themselves are growing, the legal and economic frameworks that govern the service of recreation in forest remain not sufficient in Switzerland. The Federal Office of Environment reacted and decided to create in 2018 the strategy Recreation in forest, a non-binding political strategy. This strategy aims at implementing social, environmental and economic measures to improve the sustainable management of recreation in urban and peri-urban forests. It focuses on three priorities: promoting the health of the population, respecting the forest ecosystem and enhancing the economical valorization of the forest ecosystem service of recreation (payment for ecosystem services). The strategy and its measures contribute to the objectives of the Swiss Forest Policy 2020. They link up with various federal strategies and policies on health, sport, tourism, biodiversity and spatial planning. In the presentation, the author will explain the legal, political and social contexts of recreation activities in the Swiss forests and will focus on the content, implementation, perspectives and challenges of the strategy.

Keywords: recreation in forest, governance, Switzerland, sustainable management, legal, economic and political instruments

5. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)



The Interreg Europe project PROGRESS: Promoting the Governance of Regional Ecosystem Services

Presenting author: Enrique Doblas–Miranda

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InterregEU PROGRESS aim is to initiate a process of policy change towards the conservation of biodiversity and the maintenance of nature's capacity to deliver the goods and services that we all need. The policy instruments tackled by the project are the European Regional Development Fund Operational Programs at regional or national level and other strategies dealing with the protection and valuing biodiversity and ecosystem services. The approach proposed by the project is firmly based on policy learning and capacity building of the partner organizations and relevant stakeholders of the concerned policy subsystems, as it stimulates a collective multidimensional and dynamic exchange of experience. Based on four different guidelines to boost the change, we have already detected several exemplary good practices:

- 1) Promote the measurement of the costs and benefits of ecosystem services derived from land use. During the second semester of the project, we detected numerous practices, as for example SITxell, a free territorial analysis system within everyone's reach, making it possible to study and evaluate non-urban in the Barcelona Province, and the All-Ireland Pollinator Plan Framework, which provides targeted and actionable information resources for wide-ranging stakeholders to reverse declines in pollinating insects.
- 2) Support the horizontal integration of the ecosystem concerns into the sectoral policies and plans. In the third semester, we found practices such as the Catalan Forest Laboratory, a joint initiative to make available for general public, expert or beginner information and data related to forests, and the RED FAITH project, which illustrates how airborne imaging technologies can lead to cost savings and a better monitoring system for forest management.
- 3) Explore innovative financial and marketing mechanisms for payment for ecosystem services.
- 4) Improve landscape governance for economic and environmental sustainability.

Keywords: European project, good practices, ERDF, stakeholder approach

6. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)



Governance of Forest Ecosystem Services in the EU: Exploring innovative policy support mechanisms for the provisioning of FES

Presenting author: Jeanne-Lazya Roux

Other author(s): Marko Lovrić, Georg Winkel

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With a rising demand in the kaleidoscope of services, the question arises if the provisioning of these services is supported sufficiently by policy mechanisms and if there are sufficient incentives for forest owners to explore the uptake of forest ecosystem services (FES) innovations. Different stakeholder groups have different perspectives on what are the major challenges faced by EU forest policy and which solutions would tackle them best. This paper aims to identify and elaborate on the shared and contrasting approaches of the major policy actors at EU-level related to FES, their expectations related to the forest, as well as policy mechanisms supporting FES. We explored the opportunities and challenges for FES at EU policy level, and how the challenges could be addressed. Finally, we intend to provide a series of policy-level recommendations. A three-step approach was followed. First a 'Bottom-up' analysis focused on 11 case studies across Europe looking at policy factors affecting the provision of different FES. Secondly, 27 semi-structured interviews were conducted during the summers of 2019 and 2020 with EU forest stakeholders (nature conservation groups, NGOs, forest owner and industry organizations) and policymakers. These interviews concentrated on the supporting and hindering factors for the provisioning of FES. Finally, a focus group (21 participants representing the interviewees, scientists and local practitioners) were held, in order to identify policy mechanisms that would secure provision and enhancement of the multiple forest ecosystem services in Europe. By categorizing the stakeholders in accordance with the Cultural Theory, we reduced the infinite number of worldviews to four simplified groups. Taking these different perspectives in consideration, we formulated four narratives. And finally identified common solutions to the challenges and a series of policy-level recommendations related to policy support mechanisms for FES innovations. This paper forms part of the H2020 project, SINCERE.

Keywords: forest ecosystem services, supporting and hindering factors, EU governance solutions, focus group

7. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)



Forest for biomass or for biodiversity: scenarii for solving conflicts in the French context

Presenting author: Marc Deconchat

Other author(s): Florin Malfosse, Floriane Clément-Kumar

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Forests are at the center of many of the issues involved in coping with global changes. On the one hand it seems necessary to exploit them more intensively to produce biomass to replace products with a strong impact on the climate, on the other hand it seems necessary to preserve them much more in order to protect the large part of biodiversity they host as well as their role as carbon sinks. The tension between these two seemingly contradictory expectations is the subject of intense debates, which is particularly lively at present in France. Based on the same data, but with different hypotheses, several scenarios have attempted to assess the consequences of the two orientations. Their results are not clearly enough contrasted to favour one scenario in particular. To overcome this difficulty, we believe that 3 new dimensions should be introduced into the analyses. 1) the territorial dimension to better consider local specificities (resources, demands and constraints); 2) the risk dimension to consider the impacts of global changes and the weight of risks in investment options, especially in the very long term; 3) the social dimension to promote better shared collective decision-making conducive to better environmental justice inclusive of a diversity of actors. The presentation defines these 3 dimensions and what they imply in prospective approaches.

Keywords: forest, France, biomass, biodiversity, scenario

8. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

High rates of short-term dynamics of forest ecosystem services

Presenting author: María Triviño

Other author(s): Tord Snäll, Louise Mair, Jon Moen, Jan Bengtsson

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Currently, the main tool for assessing and managing ecosystem services (ES) at large scales are static maps of their potential supply. However, many ecosystems change over short timescales, thus static maps soon become inaccurate. Here we show high rates of short-term dynamics of three key forest ES, wood production, bilberry production, and topsoil carbon storage. Almost 85% of the coldspots for the three ES considered and 65% of the hotspots had changed into a different state over a ten-year period. Wood production showed higher rates of short-term dynamics than bilberry production and carbon storage. These high rates of short-term dynamics imply that static ES maps give limited information for assessing and managing multifunctional, dynamic landscapes, such as forests. We advocate that dynamic, spatially explicit tools to assess and manage ecosystem service dynamics need to be further developed and applied in post-2020 biodiversity and ES policy supporting frameworks.

Keywords: carbon, coldspot, hotspot, wild berries, wood production

9. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

Identifying (and understanding) influencing factors of innovative governance for a sustainable supply for forest ecosystem services: a socio-ecological-technical analysis framework

Presenting author: Stefan Sorge

Other author(s): Carsten Mann

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A research agenda is currently developing around the linkages between forest ecosystem services (FES) and innovative approaches to govern forests. Due to the public goods character of many of these services, the appearance of externalities, imperfect property rights, insufficient knowledge and information, markets often fail to efficiently allocate natural resources. Ensuring the sustainable provision of the wide range of FES requires innovative and unconventional approaches in forest management, business, and governance structures. We present the conceptual foundation and empirical application of an analysis framework for explaining the emergence and development of governance innovations for the provision of FES. Six concepts were selected on the basis of relevance. They were reviewed and analysed to assess their structure and identify key influential factors to shed



light on the sustainable provision of FES, their ecological, political, societal and economic conditions that promote governance innovations and ecosystem services. The conceptual framework builds on the idea of complex and interlinked social–ecological–technical–forestry–innovation systems analysing two governance innovations, one payment scheme in Germany and one network approach in Italy. The objective is to gain a solid understanding of what has influenced the governance innovations emergence and development, and what needs to be changed for innovation upgrading and/or upscaling by systematically unpacking the system dimensions and its fostering and hindering factors. A diverse set of stakeholders were included in the analysis following a multi–actor approach for knowledge co–creation. Through the analysis, interdependencies of the system are revealed such as strong relations between the sustainable ecosystem service provision and positive developments in business related on FES, and adjustment possibilities of crucial influencing factors are conjointly elaborated for new opportunities and road mapping. We highlight the need for a sound system–based and co–created information basis that allow for purposeful innovation conditioning by policy decision makers, practitioners and related stakeholders.

Keywords: innovation factors, socio–ecological–technical forestry systems, forest management, forest policy

10. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

Participatory Process Net–Mapping to analyze governance innovations for the provision of forest ecosystem services

Presenting author: Claudia Sattler

Affiliation: Governance of Ecosystem Services Working Group, Leibniz Centre for Agricultural Landscape Research (ZALF), Germany

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The focus of this study is on the analysis of social innovation processes aiming for an improved governance of forest ecosystems, particularly in regard to promoting the provision of regulating, cultural, and supporting ecosystem services as environmental public goods. Social innovations can refer to any solution that addresses a social or environmental issue and that creates social relationships in the process leading to new types of collaborations among concerned actors. However,



up until now, it is not well known how exactly such processes are initiated and maintained over time. Against this backdrop, an analysis is conducted for three European examples of such social innovation processes, in Germany, Finland, and Sweden, in which different incentive mechanisms to spur ecosystem service provision and raise environmental awareness among social actors are explored, including two PES (payment for ecosystem services) schemes. Process Net-Maps is employed for institutional analysis, focusing on governance actors and their interactions. Process Net-Map is a participatory and interview-based method where interviewee/s and interviewer/s together map all relevant actors and steps of the innovation process on a large piece of paper against a timeline. The analysis includes a backward looking perspective on the historic development process of each innovation, but also a forward looking perspective on how actors anticipate the further development of the innovation process. Results highlight on the types of actors involved in each example, in what types of action situation they interact with each other, typical challenges struggled with, what impulses pushed the innovation process forward and allowed to hold momentum, different actors' motivations for staying engaged, actors' obtained benefits and how they exert influence in decision-making, and actors' understanding of successes and set-backs during the process. In the discussion, the results of the single examples are used to explore common patterns and derive generalizable aspects.

Keywords: governance of ecosystem services, institutional analysis, social innovations, participatory methods, social network analysis

11. Type of submission: Abstract

[S. Sectoral Working Group sessions: S3 – Forest Ecosystem Service Governance and Valuation – Pathways towards a new forestry agenda](#)

The emergence of governance innovations for the sustainable provision of forest ecosystem services in Europe: An empirical comparison of six innovation journeys

Presenting author: Lasse Loft

Other author(s): Peter Stegmaier, Ewert Aukes, Stefan Sorge, Christian Schleyer, Michael Klingler, Felix Zoll, Jutta Kister

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European forests provide a range of forest ecosystem services to society. To date, professional forest management systems have mainly focused on timber and biomass production resulting, amongst others, in uniform forest structures. However, some novel governance approaches emerged throughout Europe that support the provision of non-marketable forest ecosystem services, in particular for regulating and cultural forest ecosystem services. Yet, little is known as to how such novel modes of governance successfully emerge and which parameters constrain or enable their development. In this study, we draw on innovation studies to adapt the concept of Innovation Journeys from industry innovation to the context of forest ecosystem services governance. We then assess the innovation development processes in six EU Innovation Regions. The assessed governance approaches encompass a scheme of voluntary payments for ecosystem services, a habitat bank and new actor constellations and networks for the development of business approaches, management systems and education. Data collection included a review of public project reports and other documentation of the EU H2020 InnoForEST project. Based on this, twelve open narrative group interviews were conducted with representatives of each of the six Innovation Regions. We find that forest governance innovation development processes can be analysed along a set of phases and event types – the adapted Innovation Journey concept. In its application to our six study cases we reveal that innovation processes have a rhythm, which varies depending on the local and historical situation. Innovation processes are not simply characterized by continuous progress but are essentially non-linear. We conclude that innovation does not take place under ideal “laboratory” conditions. Rather, it is shaping and being shaped by active innovation work facing crises, stagnation and setbacks, and requiring a facilitating process that takes into account the socio-ecological context.

Keywords: forest ecosystem services, governance innovations, innovation journeys, EU