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„Perception versus Reality in Forest Policy“

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KEYNOTE SPEECHES

CAN A FOREST BE POST-SOCIALIST? ONGOING TRANSFORMATION OF FOREST DYNAMICS IN CENTRAL EUROPE

Dr. Agata A. Konczal

Abstract:

In this talk, the audience is invited on a journey into the forests of Central Europe. The aim is to reflect on the dynamics and characteristics of forestry and forest policy in this part of the continent during the past three decades. Using the notion of a post-socialist forest as a guiding theme, the cultural, historical, and political dynamics that have been shaping forest management, policy, and their social perception and acceptance will be discussed. By examining Poland, this presentation utilizes the notion of post-socialism to explain the ongoing transformation of forest management and forest policy, as well as the social conflicts that surround them.

SHARPENING PERCEPTION AND INNOVATING FORESTRY BY FOREST POLICY SCIENCE

Max Krott

Abstract:

The key note discusses solutions for three major issues: How to optimize the perception of forest policy within science, how to effectively transfer the scientific results into practice of forest policy making and how to mobilize people and financial resources for forest policy research. The conclusions are based on experiences of 45 years research in forest policy in five continents.

EU FOREST GOVERNANCE: WHEN POLICIES ARE THE SOLUTION, WHAT IS THE PROBLEM?

Helga Pülzl

Abstract:

The talk will look into how EU forest governance has evolved and which policy objectives are central and why implementation remains a challenge.

PANELS

1) REIMAGINING FORESTS AND FORESTRY: HOW GENDERED AND MARGINALISED SUBJECTIVITIES MATTER

Panel abstract:

Forests are not only ecological spaces but also socially produced landscapes shaped by practices, relations, and power structures that give rise to particular identities, agencies, and materialities. Knowledge production in forestry is similarly embedded within social, cultural, and epistemic regimes that operate across scales, shaping how forests are rendered intelligible within scientific, policy, and commercial domains. These epistemic formations intersect with gendered and racialised norms, thereby structuring what becomes visible, knowable, and actionable in forest contexts.

The masculinization of forestry, rooted in technocratic, productivist and colonial knowledge systems, produces dominant meanings that privilege timber extraction, biomass, and conservation logics, while marginalizing alternative uses, relations, knowledges, and lived realities. Such hegemonic and gendered meaning-making obscure affective labour, everyday practices, belonging, and forms of resistance, thereby hindering a fuller understanding of the social life of forests and their contributions to forest futures. Thus, inequalities in forests are manifested in the gendered representation, recognition, and redistribution evident in policies, ownership, rights, education, labour, risks, and more. Inequalities in tenure and decision-making lie at the core of unequal forestry relations. Resisting and challenging these inequalities is closely linked to disrupting dominant meanings and building epistemic communities that support more inclusive forests, forest sciences, livelihoods, and workplaces.

This session explores reimagined knowledge production in forest science. Presenters apply intersectional perspectives on gendered and racialised experiences and discuss alternative practices of knowledge creation and education in forestry. The session seeks to expand the understanding of gendered relations, agencies and structures of forests and to foster dialogue across disciplinary and epistemological boundaries. Ultimately, it aims to contribute to more inclusive, pluralistic, and socially responsive forest research and teaching practices. This will be done by combining critical analysis of gender and intersectionality in forestry with an focus on knowledge and strategies for inclusion and diversity.

A) HOW DOES GENDER MATTER IN FOREST OWNERSHIP? A SYSTEMIC REVIEW FOR THE FUTURE

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Abstract:

Research has shown that the conditions for men's and women's forest ownership differ. This is partly due to differing expectations regarding actions and skills in a context historically dominated by men, which in various ways creates obstacles for women to engage as forest owners on equal terms and to develop their ownership based on their own interests and motivations. How forest organizations and policy actors understand and respond to these conditions influences the opportunities available.

In a Northern context, studies and scientific knowledge on gender and forest ownership have become more scattered over the past decade. Gender-related issues in forestry have primarily been examined within the context of larger forest organizations and educational institutions, while smaller actors and forest owners themselves have received less attention, with some exceptions. Moreover, forest-owner research has a long tradition of survey-based studies which, although often including gender as a variable, provide a limited empirical basis for understanding gender, relationships, and agency in specific contexts. To better understand the current state of knowledge on gender, gender equality, and forest ownership in the Global North, a systematic review has been conducted to explore:

1. How knowledge on gender and forest ownership is produced, including methodological approaches, materials, contexts, and theoretical frameworks.
2. What current research concludes about how forest ownership is shaped by gender, and how this affects men's and women's actions, relationships, and conditions as forest owners or as individuals becoming forest owners.
3. Which knowledge gaps remain, and how future studies can be designed to bridge these gaps and contribute to a more comprehensive understanding of gender in relation to forest ownership.

Based on the review, opportunities for better integrating and theoretically advancing gender perspectives within forest-owner research will be discussed, with particular attention to national, regional, and local/organizational policies and strategies aimed at improving gender equality and other forest-related goals.

B) GENDERED EXPERIENCES OF AGENCY IN FOREST GOVERNANCE RESEARCH: AN INTERSECTIONAL ANALYSIS

Susanne Koch

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Abstract:

This study examines how gender and geographic location shape experiences of agency and constraint in the careers of forest governance researchers, and what this implies for equity and inclusion in the field. Drawing on qualitative interviews with forest governance scholars based in Europe and Africa, we analyse how researchers narrate their professional trajectories, focusing on how they describe career choices, opportunities and constraints.

European scholars tend to present such choices as driven by research interests, while African scholars more often describe their trajectories as shaped by external circumstances, funding structures and contingent opportunities. International mobility and collaboration are frequently framed by African scholars as “lucky chances” that enable participation in global forest research, but do not necessarily increase their ability to pursue self-defined research agendas.

Gender differences emerge in the narratives in how researchers frame and attribute luck in relation to their careers. Women from both Europe and Africa emphasise private life conditions—particularly partnership arrangements, care responsibilities and family support—as decisive for their ability to remain mobile, conduct fieldwork and sustain academic careers in forest governance. These patterns point to persistent gendered expectations around care that intersect with the high mobility demands of the field.

We argue that these discursive patterns reflect and reproduce broader inequalities in global forest governance research. The findings highlight the need for forest research and science policy frameworks that go beyond formal participation and address the conditions under which researchers can exercise agency in order to create more diverse and inclusive research communities.

C) MEANINGS AND PRACTICES OF GENDER EQUALITY: A QUALITATIVE STUDY OF ORGANISATIONS IN THE AUSTRIAN FORESTRY SECTOR

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Abstract:

Forestry has long been characterised as a male-dominated sector, shaped by gendered norms and practices. Research has shown the persistence of these patterns, and the Austrian forestry sector is no exception. Women account for only around 8% of employees in Austrian forestry, indicating structural underrepresentation and the presence of gendered barriers. This study is grounded in the understanding that work organisations are not gender-neutral spaces, but rather sites in which assumptions about gender are embedded in everyday practices, decision-making processes, and formal policies.

The study examines how gender and gender equality are constructed, framed, and operationalised in both meaning and practice within work organisations across the Austrian forestry sector. Using a qualitative research design, it draws on in-depth, semi-structured interviews with key representatives in management and leadership roles, complemented by a systematic analysis of existing organisational gender equality and diversity policies in these organisations.

The results show how gender equality is understood and practised within organisations, which dimensions of gender inequality are addressed, and which remain overlooked. The analysis focuses on the measures employed in organisational policies, including compensatory measures aimed at addressing unequal access to resources, informational measures that address cultural and symbolic injustices such as stereotyping or misrecognition, and structural measures intended to enhance participation and decision-making power. By analysing the relation between policies and organisational meanings and practices, this study contributes to a deeper understanding of how gender equality is constructed and filled with meaning through organisational and gendered practice and logics in the Austrian forestry sector.

D) NAVIGATING THE GENDER GAP: EVIDENCE FROM THE BAVARIAN FEM2FORESTS GRADUATE SURVEY

Leonie Wagner

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Abstract:

Background: Across Europe, forestry remains male-dominated despite incremental gains in female enrolment in higher education. The Interreg-funded project “Fem2forests” investigates how educational pathways and workplace conditions can be redesigned to attract and retain more women in the forest sector.

Methods: We combined an online survey of 234 recent graduates from Bavarian forestry degree programmes with ten semi-structured interviews involving early-career female professionals. Quantitative data were analysed using Fisher’s exact tests with Holm correction; qualitative material was thematically coded to contextualise statistical patterns.

Results: Women constitute roughly 30 % of forestry students, yet their representation falls to 25–28 % in trainee schemes and 11–18 % in professional positions across career levels. Perceived entry barriers diverge sharply: male respondents ranked physical demands highest, whereas women identified work–life balance constraints and undervaluation of competences as predominant challenges ($p \leq 0.01$). Female graduates also viewed academic grades as more decisive for recruitment success than their male peers ($p \leq 0.05$), signalling heightened performance pressure. Interviewees confirmed these trends, citing subtle stereotypes, the constant need to “prove themselves”, and limited acceptance of part-time leadership. Seventy-two per cent of part-time women listed childcare as the main reason for reduced hours, compared with 24 % of men.

Recommendations: Participants proposed four action domains: 1) expand field-based training integrated with visible female role models; 2) embed gender awareness, communication, and resilience modules in curricula; 3) institutionalise cross-gender mentoring networks; and 4) mainstream flexible, transparent career structures—including job sharing and part-time leadership—underpinned by unbiased appraisal systems.

Conclusions: Increasing women’s participation in forestry requires systemic change across the education–employment continuum. By aligning training content, workplace cultures, and HR policies with gender-equitable principles, the sector can tap a broader talent pool and bolster its adaptive capacity amid mounting ecological and socio-economic challenges. These insights are transferable to sectors confronting comparable gender gaps.

E) EASSESSMENT OF WOMEN'S CAPACITIES FOR GENDER-RESPONSIVE CLIMATE ACTION IN BOSNIA AND HERZEGOVINA

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Abstract:

Due to climate changes, in the last few decades, Bosnia and Herzegovina has become increasingly exposed to a significant risk of natural hazards such as floods, landslides, drought and forest fires. Recent floods demonstrated that the greatest impact of natural hazards on livelihoods tends to be in rural areas and the informal economy where women make up a large part of the workforce. Whilst women are strongly affected by the economic, environmental, and social effects of climate change, they remain excluded from decision-making processes related to environmental management and climate adaptation. This paper deals with assessing of gender inclusion and capacities of women in Bosnia and Herzegovina across multiple fields which are relevant to ensure effective gender-responsive climate action. Based on face-to-face interviews with 81 women respondents (researchers, politicians and businesswomen), their views and opinions on various aspects of gender-responsive climate issues were collected. The paper reflects climate-relevant scientific and political engagement (policy activism) of women, as well as their involvement in management of business systems in sectors important for the national economy but at the same time affected by climate changes (forestry, agriculture, energy, water management etc.). There is a high degree of agreement among respondents about the need to create a science-policy-business platform for dialogue that would unify issues of gender equality and adaptation/mitigation of climate change. Such a dialogue would contribute so that the capacities, skills and resources that women possess to effectively address climate change risks do not remain untapped due to prevailing social stereotypes that devalue their knowledge and result in their exclusion from decision-making. The results of this research contribute to discussions on the issues of gender and climate change adaptation and mitigation in the context of knowledge co-production, policy learning and institutional innovations at the science-policy-practice interface.

2) SOCIAL-SCIENTIFIC TOOLS TO FACILITATE THE DEVELOPMENT OF FUTURE FORESTS, THROUGH BETTER EXCHANGE WITH SOCIETY AND PRIVATE FOREST OWNERS

Panel abstract:

This is a proposed panel, the potential contributions mentioned below need still to be agreed with the respective contributors in January 2026.

The panel aims to provide a space to shortly present the social-scientific tools that hold the potential or have already been applied to facilitate the development of future forests, by contributing to a better or more targeted communication, exchange, or co-generation of knowledge, between foresters, society, and private forest owners. After short key-notes presenting the tools, we foresee a more interactive discussion of the concepts, in round-table formats (in parallel or one-by-one), which allows to exchange with the authors more directly, contribute to the further development of tools or to participate in interactive exercises or online-questionnaires. Tools may relate to social milieus, social networks, focus groups, moderation methods, transdisciplinary learning labs, reality labs, new environmental policy instruments, nudging, and other experimental methods.

A) FORESTRY STUDENTS IN GERMANY: SOCIAL MILIEU AFFILIATIONS, ATTITUDES, AND LIFESTYLES – CONSIDERATIONS FOR REACHING OUT TO FOREST OWNERS AND SOCIETY IN THE FUTURE

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Ole Rasmus Rex

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Joscha Wissing

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Abstract:

The contribution will focus on preliminary results from a social milieu related questionnaire on forestry students in several German forest-related universities or applied universities, including a large set of general worldview and lifestyle questions, and the conclusions that can be drawn from this study for the future reachability of forest owners and society in a forestry context.

B) EXPERIMENTAL EVENTS TARGETING FORESTRY-DISTANT SOCIAL MILIEUS OF PRIVATE FOREST OWNERS AND SOCIETY, IN GERMANY

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Nina Kohlenbach

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Abstract:

The contribution will focus on the results from the implementation of eight events that were experimentally tested with PFOs or society in Germany, highlighting the reachability of the different milieus.

C) WORLDVIEWS AND LIFESTYLES AS INDICATORS FOR THE AFFILIATION WITH SOCIAL MILIEUS IN A FOREST CONTEXT – RESULTS FROM A SURVEY IN GERMANY

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Abstract:

The contribution will focus on the results from a comprehensive questionnaire (n~1.000) of German society with/without a forestry background, with the aim to identify which general lifeworld attitudes and practices are most characteristic for which type of social milieu (Sinus-Milieu), in Germany. These results can provide further empirical insights to a better or different future description of milieus in a forest-related context as well as improve a (simplified) identification of the milieu affiliation of PFOs, by practice (e.g. service providers).

D) EXPLORING THE POTENTIAL OF PARTICIPATORY CITIZEN SCIENCE FOR ASSESSING FOREST ECOSYSTEM SERVICES: INSIGHTS FROM A CO-CREATION PROCESS IN SWITZERLAND

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Abstract:

Forests are vital for climate regulation because they store large amounts of carbon and provide a broad range of ecosystem services. To sustain these benefits, effective forest management is required. However, current monitoring and assessment frameworks mainly focus on forest ecosystem services that are easy to measure and economically relevant, while cultural and locally important services are often overlooked. In Switzerland, for instance, limited data availability and the low temporal resolution of existing monitoring systems restrict site-specific, local decisionmaking and hinder comprehensive assessments of forest ecosystem services. Citizen science represents a promising way to overcome these limitations by actively involving a wide range of forest users in the evaluation and monitoring of local forest ecosystem services. Building on previous research, this study aims to (i) determine which forest ecosystem services can be reliably assessed through citizen science and (ii) develop a guiding framework for systematic and efficient data collection. To achieve this, three co-creation workshops were conducted with eleven forest professionals, supported by additional expert consultations. The results show that cultural ecosystem services are particularly well suited for assessment with the involvement of citizen scientists. For some regulating and provisioning services, relevant monitoring data are already available (for example for protective forests), while others depend heavily on expert knowledge and modelling (such as oxygen production), making them less suitable for citizen science approaches. These findings underline the importance of (i) identifying ecosystem services that are locally relevant, (ii) reviewing existing data sources, (iii) selecting appropriate indicators, and (iv) designing suitable data collection and evaluation procedures before engaging citizen scientists. Overall, this study supports the integration of cultural and locally relevant forest ecosystem services into sustainable forest management through citizen science and offers guidance for policymakers seeking to foster participatory and forward-looking decision-making in the forest sector.

E) PRIVATE FOREST OWNERS, FORESTERS, FOREST STUDENTS, AND THEIR SOCIAL MILIEUS, IN GERMANY – TARGETING SOCIETAL GROUPS FOR THE DEVELOPMENT OF FUTURE FORESTS

Peter K. Aurenhammer

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Abstract:

The contribution will focus on the latest results from the research project KommZuSinus in Germany (FNR/BMLEH funded). The project contributes to analyses of private forest owners (PFO/NIPF), with small-scale forest land (mostly below 25 ha), as well as other society (not owning forest land, but interested in woodlands or forests), from the perspective of social milieus. In new analyses we were able to show social milieus (i.e. Sinus-Milieus) gaining higher explanatory value for PFO forest-related attitudes as well as activities, than socio-demographic variables do. Society as well as PFOs differ significantly across the various social milieus, with respect to many variables concerning attitudes and activities. In order to better reach out PFOs, advisory services will need to develop products and services, targeting specific social milieus. For this purpose the project developed a handbook for practice as well as concepts for events, in trans-disciplinary learning labs. Results from the

implementation of eight events that were experimentally tested with PFOs or society in Germany highlight the reachability of the different milieus. By conducting comprehensive questionnaires on PFOs, foresters, forest students, and other society, the project was able to identify which general lifeworld attitudes and practices are most characteristic for which type of social milieu (Sinus-Milieu), in Germany. These results can provide further empirical insights to a better or different future description of milieus in a forest-related context as well as improve a (simplified) identification of the milieu affiliation of PFOs, by practice (e.g. service providers).

F) STATE INSTITUTIONS, FOREST ADVISORY SERVICES, AND SUSTAINABLE FOREST MANAGEMENT: VARIABILITY IN A PRIVATE RIGHTS-DOMINATED LANDSCAPE

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Abstract:

Despite having an extensive forest land base managed by the federal government, in the U.S. ~90% of the timber supply comes from private landowners. The U.S. also has a strong culture of and institutional support for protecting private property rights, although states can and do restrict some landowner activities to preserve public goods. The types of policies and advisory tools impacting forest landowners, and the justification for these tools, differs widely across the country.

This presentation will describe the role of individual state institutions and forest advisory services in shaping sustainable forest management across the U.S., where the freedom given to landowners in pursuing management objectives is highly variable. First, I will give an overview of land tenure and federal versus state authorization for intervention. Then, summary research results from two papers will be delivered. The first uses discourse analysis to characterize a typology of interventions in private landowner decision making, from low to high state (regulatory) intervention and top-down to bottom-up (landowner) authority. This will be followed by research results from interviews with policy experts in 12 states that detail a suite of advisory and other policy tools used and information resources available to private landowners. We also highlight the perceptions of forest policy experts, who provide an assessment of how well their policies and programs both preserve forest landowner flexibility and accomplish sustainability goals. As a whole, the U.S. state-level variation may be analogous to country-level variation within the EU, and this talk will aim to initiate a dialogue about potential comparative studies for the future.

3) THE LEGITIMACY OF EXTRATERRITORIAL SUSTAINABILITY REGULATIONS: THE CASE OF THE EU REGULATION ON DEFORESTATION-FREE PRODUCTS

Panel abstract:

The European Union (EU) relies on extraterritorial sustainability regulations—from deforestation-free supply chain rules to timber trade restrictions—that extend their reach far beyond EU borders. While these regulations aim to safeguard forests globally and promote sustainable timber policies, they raise pressing questions of legitimacy. This panel thus explores the legitimacy requirements for EU extraterritorial sustainability regulations that affect third countries (i.e. non-EU countries), by assessing the perceived legitimacy of such regulations during policy formulation and implementation.

This panel aims to discuss the following key questions:

1. How is the legitimacy of EU extraterritorial sustainability regulations affecting third countries perceived during EU policy formulation and implementation processes?
2. How does the perceived legitimacy affect the design and potential effectiveness of the regulation?
3. How does the current return towards deregulation in the EU affect the perceived legitimacy of EU extraterritorial sustainability regulations by affected third-country actors?
4. How do the new geopolitics of rising Global South alliances, environmental leadership and rule-making authorities affect the perceived legitimacy of EU extraterritorial sustainability regulations?

The proposed papers particularly focus on the 2023 EU Regulation on Deforestation-free products (EUDR). Papers 1 and 2 focus on the perceived legitimacy of the EUDR, yet with different lenses and case studies. Paper 1 analyses the EUDR's policy process in particular and legitimacy perceptions of public actors from the EU, Brazil and Indonesia. Paper 2 expands the scope to private actors by analysing the EUDR's perceived legitimacy from public and private actors in Ghana and Indonesia. Paper 3 contributes a discourse analysis of the EUDR, particularly focusing on key discourses of public and private actors around the EUDR as an adopted regulation, the 2024 amendment, and the most recent proposal to postpone the EUDR's implementation dates a second time and to simplify key regulatory requirements. Paper 4 analyses different discourse coalitions in Brazil in relation to the EUDR. Finally, paper 5 broadens the panel's perspective beyond the EUDR by questioning the notions of legitimacy, sovereignty and accountability that underlie norm diffusion through the EUDR, CBAM and the CSDDD.

A) LEGITIMISED BY WHOM? NEW EU TRADE RULES REGULATING FOREST AND AGRICULTURAL COMMODITY SUPPLY CHAINS

Laila Berning

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Laura Walther

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Rafaella Ferraz Ziegert

Chair of Forest and Environmental Policy, University of Freiburg, Freiburg, Germany

Cathrin Zengerling

Chair of Transformation towards Sustainable Energy Transitions, University of Freiburg, Freiburg, Germany

Daniela Kleinschmit

Chair of Forest and Environmental Policy, University of Freiburg, Freiburg, Germany

Abstract:

What are the legitimacy requirements for European Union (EU) extraterritorial trade regulations? While legitimacy requirements for political procedures beyond the state level are well-researched in the context of the EU issuing authoritative decisions that bind its Member States, EU decisions and policies also affect states beyond its Member States. Drawing on legitimacy, accountability and normative power scholarship, we qualitatively analyse the perceived legitimacy of the new EU Regulation on Deforestation-free Products (EUDR) as a recent case of a unilateral extraterritorial EU trade regulation from the perspective of EU and tropical producer country public actors, particularly focusing on Brazil and Indonesia. Data include policy and legislative documents, media articles, key informant interviews and participant observations. We show how the EUDR's perceived legitimacy influenced its regulatory design and potential effectiveness in driving desired behavioural changes of target actors concerning halting global deforestation and forest degradation and associated human rights violations. Our results suggest that including external actors in EU extraterritorial regulations ('throughput legitimacy') is essential for effective policy outputs ('output legitimacy'), even though it is not formally required in the EU legislative processes ('input legitimacy').

B) LEGITIMACY FOR WHOM? LEGITIMATION PATTERNS OF THE EUDR IN GHANA AND INDONESIA

Katharina Weber

University of Amsterdam

Abstract:

This paper explores the legitimacy of exercising unilateral authority in a transnational context by analysing the EU regulation on deforestation-free products (EUDR). It serves as an example of a mandatory human rights and environmental due diligence (mHREDD) law, reaching beyond the EU's borders, aiming at reducing deforestation. The research explores the perceptions of the EUDR's legitimacy for both public and private actors outside the EU's jurisdiction, comparing responses in Ghana and Indonesia. Drawing on 77 interviews conducted in the EU, Ghana, and Indonesia during fieldwork in 2023 and 2024, the study identifies how (de)legitimation strategies are employed in these contexts. Findings show that process-oriented legitimacy (input and throughput legitimacy) remains a central concern. Participation and deliberation emerge not only as normative ideals but as empirical determinants shaping legitimacy perceptions. While there is broad consensus across cases that combating deforestation constitutes a legitimate regulatory objective, output-oriented legitimacy claims are undermined by concerns regarding distributive justice and the perceived effectiveness of the regulation. The paper identifies three broader conditions as central for strengthening legitimacy in such contexts: meaningful inclusion of external stakeholders in decision-making, attention to fairness, and greater sensitivity to political-economic contexts that shape how regulatory aims are interpreted. The research contributes to the wider debate on the legitimacy of unilateral global governance mechanisms in the absence of multilateral agreements. In particular, it foregrounds fairness as a key yet under-examined criterion in legitimacy perceptions.

C) THE SHORT BUT ANIMATED POLITICAL LIFE OF THE EU DEFORESTATION REGULATION

Jelle Behagel et al.

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Abstract:

The EU Deforestation Regulation (EUDR) is one of the key elements of the EU Green Deal, the latter of which was heralded by the president of the European Commission Ursula von der Leyen to be a "man on the moon" moment for the transition of Europe's economy to a sustainable climate neutral future. Today, we are witnessing strong political opposition to this moonshot adventure. The EUDR as well is being delayed, simplified, and weakened while we are writing. To understand how this happened, this paper explores the political life of the EUDR. Doing so, it offers insight into how seemingly strong support across society for an environmentally ambitious piece of legislation with the aspiration to make a global impact can become dismantled in subsequent political dynamics. It also offers a lens into understanding how the larger Green Deal is currently fighting for survival. The article

uses a Q-sort analysis to methodologically explore how public statements in different types of media (newspapers, online media, press statements by stakeholder groups) shape various storylines in the political discourse on the EUDR and how these storylines are adopted by a changing configuration of actor coalitions. Results include how storylines on smallholder empowerment were used by large non-EU producing countries to oppose the EUDR, as well as how the concept of traceability has moved across storylines from a strong instrument for accountability to simply only a bureaucratic and technical burden on the competitiveness of industry and the functioning of government. We also discuss the role of remote sensing, due diligence statements, risk profiles, bilateral discussions, and other contested ideas and instruments. We conclude our paper with a reflection on how political dynamics in the field of the environment tend to be susceptible to other political dynamics, i.e. political unrest due to COVID, loss of competitiveness in the global economy, the rise of far-right politics and so on. And we inquire into the future of the Green Deal. Will we still reach the moon?

D) GLOBAL SOUTH STAKEHOLDERS AND THE CONTESTED INSTITUTIONALIZATION OF THE EU DEFORESTATION REGULATION IN BRAZIL

Júlia Berruezo

Friedrich-Alexander-University Erlangen-Nürnberg

Maria-Therese Gustafsson

Stockholm University

Almut Schilling-Vacaflor

Friedrich-Alexander-University Erlangen-Nürnberg

Abstract:

Recent supply chain regulations have been criticized for being adopted without meaningful involvement of stakeholders in producing countries. In particular, the European Union Deforestation Regulation (EUDR) has been portrayed as a unilaterally imposed trade measure that shifts compliance costs onto upstream producers. At the same time, some stakeholders in producing countries have actively defended the EUDR and sought to shape its design and implementation. Against this background, this paper examines the discursive struggles surrounding the policy formulation and institutionalization of the EUDR in Brazil. Based on document analysis and over 40 qualitative interviews with representatives of civil society organizations, producers of different commodities covered by the EUDR, companies, consultancies, business associations and state institutions, we identify four overarching discourses that articulate fundamentally different understandings in relation to the design and implementation of the EUDR, embedded in perspectives from the Brazilian context. A first delegitimizing discourse has framed the EUDR as an external imposition and aims to delay or undermine its implementation. A second pragmatic adaptation discourse advocates for a diluted version of the EUDR by formally engaging with the regulation while minimizing its effects through loopholes, symbolic compliance and supply chain divergence. A third, synergistic discourse emphasizes selective alignment between the EUDR and existing domestic policies to strengthen deforestation control within established supply chains. Finally, a justice-oriented discourse seeks to leverage the EUDR as a tool in broader struggles for social and environmental justice in Brazil. While business actors are overrepresented in the first two discourses, some businesses also support the

synergistic frame. State institutions are distributed across all four discourses, whereas civil society actors primarily articulate the synergistic and justice-oriented discourses. We conclude by discussing the theoretical and practical implications of these findings for debates on transnational supply chain governance.

E) REGULATING FORESTS, REIGNITING DEBATE: POLITICAL NARRATIVES OF CRITICISM OF THE EU REGULATION ON DEFORESTATION-FREE PRODUCTS (EUDR)

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Kedar Uttam, Helena Leonel Ferreira

Abstract:

As one of the European Union's most significant regulatory initiatives in recent years, the EU Regulation on Deforestation-free products (EUDR) has renewed expectations regarding the capacity of public policy instruments to address forest degradation and deforestation. Despite the substantial enthusiasm and public support that accompanied the development process, the regulation has also attracted considerable criticism in both academic literature and in public debates. Such contestation is not unexpected, given that the EUDR represents one of the first major international attempts in decades to govern forests through binding regulatory mechanisms. However, the breadth and diversity of the criticisms directed at the EUDR make it challenging to systematically assess them and to identify pathways for constructive policy improvement. When considered in isolation, many of these critiques appear irresolvable, underscoring the need for a more structured analytical approach.

To address this gap, we conducted a systematic review of literature published on the EUDR between 2020 and 2026, complemented by an analysis of key policy documents, position papers, and official statements from organizations involved in or affected by the regulation. Using the qualitative data analysis software ATLAS.ti Web (version 5.8.0), we applied inductive coding to elicit the themes that were discussed in the literature we analysed. The process involved detailed reading of the publications, coding of relevant text (first-level codes), creating a codebook, categorising the codes and developing overarching themes. Based on this review, we identified and categorized dominant political narratives of criticism across five dimensions: (a) the regulation's approach and underlying assumptions; (b) the decision-making processes; (c) its scope and conceptual foundations; (d) the tools and implementation mechanisms employed; and (e) its intended and unintended impacts.

By providing a comprehensive and structured overview of these critical narratives, this study aims to facilitate more informed engagement with the EUDR, support processes of continuous policy improvement, and ultimately contribute to more effective global forest protection efforts.

4) MAPPING FOKIS IN EUROPE AND BEYOND

Panel abstract:

In most European countries, forest advisory services are a key forest policy instrument and constitute the backbone of the **FO**rest **K**nowledge and **I**nnovation **S**ystem (FOKIS). However, compared with the agricultural sector, FOKIS is generally far less developed than its counterpart, the Agricultural Knowledge and Innovation System (AKIS). In 2025, the EU-funded project FORADVISE was launched with the overarching aim of strengthening FOKIS across the EU and associated countries. Building on earlier work (Lawrence et al. 2020) FOKIS is described as *“both a system—a purposeful and interdependent group of bodies—and a method for comprehending such systems. FOKIS describes how forestry advisory services operate, focusing on four dimensions: owners, policy goals, advice providers, and tools. It emphasises the system view on advisory services and the mutual interconnections of actors and their roles in shaping forest management.”*

This panel presents results from ongoing work in FORADVISE Work Package 2, which aims to map existing FOKIS structures and identify key needs across Europe. The research is based on a mixed-methods approach. First, a team of 11 researchers conducted qualitative interviews with key informants in 28 jurisdictions, covering most EU countries and selected regions in federal states. This was followed by a quantitative survey of forest advisory service providers across the EU. Given the potentially vast scope of FOKIS, the analysis focuses on advisory services for private non-industrial forest owners. This group is typically most dependent on external advice, whereas larger or commercial forest owners often have internal advisory capacity.

For the purposes of this panel, selected thematic and geographical perspectives are presented to highlight essential features of FOKIS. After outlining the shared methodology and conceptual framework, the panel provides an overview of findings across Europe, followed by in-depth analyses of three contrasting country cases: Lithuania, France, and Sweden. The panel further examines regional patterns in Central and Eastern European countries with a socialist legacy, as well as Mediterranean countries facing distinct challenges such as climate change. Finally, the panel explores the applicability of the FOKIS analytical approach beyond Europe, drawing on case studies from two Canadian provinces.

A) TOWARDS A EUROPEAN GEOGRAPHY OF FOKIS: BETWEEN HISTORY, ECOLOGY AND THE ADAPTIVE FUTURE

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Vilis Brukas

Abstract:

The FORADVISE collaboration enabled exploration of forest advisory systems across Europe. It developed a systems-focused, multi-method approach to access expert opinion in 26 countries and describe the FOKIS in varied ecological, political and cultural conditions. This overview describes the rationale and design of the FOKIS concept and method, and identifies the main features that distinguish them and their formative contexts.

The method is based on understanding FOKIS as a system, in which actors are connected through knowledge and power relations. Forestry advice is more than simply communicating information from experts to forest managers. It includes education, support for decision-making, and local experiential knowledge. All actors matter: owners, managers, knowledge providers, researchers, and policy influencers. Their knowledge is shaped by heritage, culture, personality, lifestyle, education. Ownership reflects tradition, law and markets. Advisory services reflect political legacies and culture, shaping regulation, freedom, stability and trust. The ecological and productive potential of the forest affects its value to owners and to the economy.

These factors vary across Europe, in a non-arbitrary manner. They are shaped by history, culture and ecology. Building on earlier work exploring variation in forest governance and management across Europe, we offer groupings of FOKIS 'types'. A Nordic model embraces productive forestry within medium-scale family ownership and a role for the commercial sector in advisory services. A central European model, where scientific forestry originated demonstrates, strong professional culture, focus on sustainable forest management, and integration of forest services and owner associations (Germany and France). In parts of western Europe historically severe deforestation shapes policy focus on new planting, with grant incentives and sometimes an emphasis on private sector consultants. In the south where forest fires take priority, protectionist approaches prevail. And in countries emerging from centralised socialist control and nationalised ownership, regulation continues to dominate.

These are headline generalisations. Neighbouring countries have also taken radically different routes to evolution of their advisory systems. The intersecting ecological and geopolitical crises require flexibility, innovation and learning. The presentation concludes by considering opportunities for emergent adaptiveness in Europe's mosaic of FOKIS approaches.

B) EUROPEAN CONTRASTS IN FOREST ADVISORY SYSTEM

Vilis Brukas

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Anna Lawrence

Abstract:

At first glance, the core purpose of a forest advisory system may seem straightforward: to support decision-making by the recipient of advice—typically a private forest owner—through guidance provided by an advisor, such as a private consultant or a state forest officer. A closer examination, however, reveals substantial complexity and wide variation both within and across forest advisory systems.

Even when limiting the focus to non-industrial private forest owners, the diversity of needs and prerequisites is striking. At one end of the spectrum is a very small-scale owner (e.g. under 1 ha) who may not even know the exact location of her or his forest property. At the other end is a well-informed owner managing several hundred hectares, for whom forestry makes a significant contribution to the household economy. Similar diversity exists among service providers, ranging from small consultancy firms specialising in specific silvicultural approaches to nationwide public agencies or large forest companies offering comprehensive services, from forest management planning to facilitating timber sales. Advisory methods also vary widely from providing standardised, information through websites or printed materials to intensive, place-based knowledge co-creation during on-site consultations. Finally, forest advisory systems are deeply shaped by their institutional and political contexts, which strongly influence both the objectives, the capacity, and the design of advisory services.

To illustrate this diversity, we compare three European Union countries: Lithuania, France, and Sweden. Representing an Eastern Europe context, Lithuania is characterised by small-scale forest ownership (average 3.5 ha), strong state control, and underdeveloped advisory system. France stands out for its unified forest policy and public advisory system, despite large diversity of ecological and social conditions. France showcases an organised system with interesting example of strong public-private partnership but still faces considerable challenges in reaching out to most of the country's 3.5 million private forest owners. Sweden exemplifies a Nordic model with large decision freedom, strong forest industry and relatively large private holdings (average 34 ha). Advisory services are largely provided by forest owner associations and private forest companies, raising ongoing tensions between owner-oriented advice and timber supply objectives.

C) CHALLENGES OF ADVISORY SERVICES IN CENTRAL AND EASTERN EUROPEAN COUNTRIES: CONTRASTING TRAJECTORIES AND PERSISTENT CONSTRAINTS

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Anna Lawrence

Vilis Brukas

Vilém Jarský

Abstract:

Our contribution analyses Forest Knowledge and Innovation Systems (FOKIS) in selected Central, Eastern and South-Eastern European countries, i.e. Czechia, Slovakia, Poland, Hungary, Croatia, Bulgaria, Romania, Slovenia, Lithuania, Latvia and Estonia.

One factor that profoundly affects the experience of European countries, shaping their forest governance and advisory systems, is their political affinity before 1989. All these countries share several important features. Forest governance is typically highly regulated and centralised. Forest management is guided by detailed laws, mandatory management plans and strong public authorities. As a result, forest owners have limited freedom to make management decisions, and advisory services have little space to develop. Compared to Western and Northern European countries, FOKIS in post-socialist contexts are generally less developed and more strongly characterised by legal supervision. A key underlying issue is mutual distrust between public authorities and forest owners, with authorities doubting owners' management capacities and intentions, while owners often perceive authorities to be rigid or even corrupt.

Based on qualitative interviews and quantitative survey, the results show that countries differ in how advisory systems have evolved. Three broad groups can be identified. The first group includes countries with strongly centralised systems which have shifted little since the socio-political changes of 1989/1990, where advisory services are weak or almost absent (e.g. Bulgaria, Lithuania and Romania). The second group consists of countries with relatively well-organised regulatory systems and an important role of professional forest managers in private forests, where advisory services exist but remain limited in scope and capacity (Czechia and Slovakia, with similar patterns in Poland and Hungary). The third group includes countries that have been most successful in developing advisory systems, supported by public–private arrangements and higher levels of trust, such as Latvia and Estonia.

Overall, the comparison revealed that differences in FOKIS performance are mainly related to institutional settings, governance traditions and trust, rather than to technical knowledge or expertise.

D) FOREST ADVISORY SERVICES IN MEDITERRANEAN FLAVOURS (EXAMPLES FROM GREECE, ITALY, PORTUGAL AND SPAIN)

Luis Andres Guillén Alm

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Anna Lawrence

Petra Gulasova

Abstract:

Forests in the Mediterranean [AL1] [LG2] region area face a distinctive set of challenges in the context of climate change and high risks of wildfires, making highly pertinent an adequate forest management supported and guided by innovative forest advisory services. This contribution analyses forest advisory systems in Greece, Italy, Portugal, and Spain [VB3], drawing on expert interviews conducted within the FORADVISE project to explore how historical factors and changing needs of mediterranean countries shape the Forest Knowledge and Innovation Systems (FOKIS), and its ability to address these urgently emerging challenges.

The four cases [LG4] [LG5] [AL6] show a common historical background of protection-oriented, command-and-control forest governance, an approach that could limit active management and innovation in advisory services to tackle current challenges such as wildfire prevention, climate change adaptation, and rural land abandonment. In Greece, forest advisory services are virtually absent, with the Forest Service focused on regulation and legal compliance rather than proactive advice. Italy exhibits a highly fragmented and regionally differentiated advisory landscape, where capacity is concentrated in northern regions with strong forestry traditions, while Mediterranean regions such as Sardinia prioritise enforcement and reactive fire control over owner-oriented advice. In contrast, Castilla y León in Spain demonstrates a comparatively functional, albeit not structured or planned, FOKIS, anchored by forest owner associations that provide one-to-one advisory services; even so, the forest services are challenged to reach forest owners and help forest management fulfil to its potential. In the contrasting example of Portugal, advisory services are provided by private actors, through forest associations and forest industries, and are highly incentivised by the strong presence of certification schemes and wild-fire prevention policies that promote cooperation among the numerous small-scale owners.

The findings highlight the need to rebalance governance from strict control towards enabling advisory functions. Ways forward can include creating or strengthening intermediary organisations such as forest owner cooperatives and better integrating advisory services with fire prevention and ecosystem service objectives.

E) LA GRANDE TRAVERSÉE: USING FOKIS TO ANALYSE FOREST ADVISORY SYSTEMS IN TWO CANADIAN PROVINCES

Stephen Wyatt

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Abstract:

In Canada, as in Europe, significant areas of forests are held by small private landowners, often being passed from generation to generation. While these forests are private, they are subject to ever-expanding public expectations for a wide range of goods and services such as water and landscape values, recreational hunting, and economic benefits from timber production. Despite increasing demands upon private forest owners in Canada, public advisory services have generally failed to adapt to diverse needs, have faced budget reductions, or have been closed. In response, forest owners have sought other sources of information and support, including owner associations, non-government organisations (often with environmental priorities), private consultants, and representatives of timber buyers. Finally, as a federal country, Canadian provinces are responsible for land and forests and so governance and support for forest owners vary from one province to another.

This presentation will test the FOKIS mapping and analytical approach in two Canadian provinces – Quebec and New Brunswick. We use the same methodology developed in Europe to describe the actors engaged in advisory systems in each province, along with the types of instruments that they use. In Québec, with a long history of centralised government, several public agencies have different roles and legislated responsibilities – a situation that can lead to confusion and tension between the agencies and with other private, industrial, communal, or social actors. In New Brunswick, the closure of the public advisory service in the late 1990s led to a variety of actors (private, industrial, communal and social) offering different types of services. While some forest owners are able to choose between providers, others face a limited range of services that depends upon which organisations are operating in their region. This presentation shows the usefulness of the FOKIS framework outside Europe, and also highlights some differences in the forest policy context for small forest owners and advisory systems in Europe and Canada.

F) THE FRONT, BACK AND DIGITAL OFFICES AT THE SWEDISH FOREST AGENCY – THE GOOD, THE BAD, AND THE UGLY?

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Vilis Brukas

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Abstract:

In our increasingly digital world, new technology influences forest management, and digitalization processes also directly and indirectly affect Forestry Knowledge and Information Systems (FOKIS). Sweden is a global leader in digitalization and has prioritized the development of digital services across

several sectors including forestry. Both public and private forestry organizations in Sweden have invested significant resources into digitalization processes, including how they package and deliver knowledge and information for private forest owners. We analyzed semi-structured interviews with advisors at Swedish Forest Agency (SFA) to investigate public advisory services with FOKIS as our analytical frame. By interviewing two groups of advice providers at SFA about the tools & processes they provide, we identify themes related to organizational dynamics within the FOKIS context, with special attention to SFA's front and back office.

The latter concepts have been used in Agriculture Knowledge and Information Systems (AKIS) to differentiate between how an advisory organization handles the delivery of on-the-ground advice and necessary background work that supports advisors. Our analysis contextualizes the pressures on SFA's front and back offices in relation to pressing changes in Sweden's FOKIS. SFA has historically housed local forestry consultants in district offices and advisory services specialists at the central office, but several factors, particularly the development of digital services, blur this line. The relatively rapid expansion of the 'digital office' at SFA is presented as a necessary adaptation to Swedish policy priorities. While widespread access to online services has certainly disrupted both the supply and demand of forestry advisory services, the expansion of digital advisory services has wider implications than simply adding a new tool to an advice provider's toolkit. Our analysis reveals strengths and weaknesses of SFA's offices, with a focus on target audiences and the type of information best suited to each office. The digital office allows SFA to reach large audiences in a cost-effective manner, but the front office offers a personal touch that can be important for social capital in the Swedish FOKIS. Both front- and back-office advisors must juggle several projects and responsibilities and contribute increasingly to digital office developments.

5) ACTORS AS DRIVERS OF FOREST GOVERNANCE OUTCOMES: INSIGHTS FROM ASIA AND AFRICA

A) UNDERSTANDING GOVERNANCE GAPS THROUGH ACTOR–POWER RELATIONS AND CLIMATE VULNERABILITY: CASE STUDIES FROM THAILAND’S MANGROVE FORESTS

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Abstract:

Mangroves are essential ecosystems that play a pivotal role in climate mitigation and coastal protection. In Thailand, the expansion of mangrove coverage to 2779.23 km² by 2020 highlights their significance in national climate strategies. However, mangrove management efforts often prioritize ecological aspects, giving limited attention to governance processes, including actor relationships and socio-political aspects. These challenges are further intensified within a multi-sector governance landscape where local participation remains underrepresented in policy design. This study addresses these governance gaps by examining actor networks and relationships in two contrasting case studies 1.) Community Mangrove Forest (CMF) and 2.) Urban Mangrove Forest (UMF), we applied the Actor-Centered Power (ACP) approach, and Climate Vulnerability and Capacity Analysis (CVCA), which enable an in-depth examination of social relations, governance structures, and local climate challenges. The findings indicate that mangroves deliver essential ecosystem services in both locations, particularly supporting eco-tourism, food security, and fisheries. The actor network analysis (n = 26) reveals power dynamics across multiple levels. In the CMF, the community forest association holds dominant coercive and informational power due to its legal authority under community forest legislation, while donors exert an incentive through financial support. In contrast, the UMF operates under a top-down

model, where coercive power is concentrated within the government organizations, in line with national policy directives. Sub-district authorities function mainly as intermediaries, while donors continue to play a supportive financial role. Climate vulnerability assessments further reveal that both sites face high exposure to sea-level rise and coastal erosion, presenting significant threats to livelihoods and local economic stability. These insights into actor networks and power relations provide valuable guidance for decision-makers. Governance strategies that account for actor relationships and the sustainability nexus between mangroves, climate mitigation, and human well-being can enhance mangrove management in Thailand and support broader regional efforts across Southeast Asia.

B) ACTOR, POWER, INTEREST, AND THEIR FOREST MANAGEMENT OUTCOMES: MANGROVE FOREST CASE STUDY HIGHLIGHTS FROM MYANMAR

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Abstract:

Mangrove forest restoration has become a global priority, aiming to conserve and rehabilitate the mangrove ecosystem by 2030. Despite these commitments, significant challenges persist in Myanmar's mangrove forest ecosystem, where forest degradation continues with the involvement of actors in the mangrove forest management. Building on the actor-centered power theory (Krott et al., 2014), forest management outcomes are influenced by the interests of powerful actors, where it is defined as an action orientation, adhered to by individuals or groups, and they designate the benefits the individual or group can receive from a certain object as mangrove. This action-oriented interest leads powerful actor to achieve their desired benefits by leveraging the power sources they possess. This research hypothesis extends the framework to analyse mangrove forest management outcomes. It examines who is involved in forest management at the ground level, how actors' interest-oriented power manifestations shape actual versus desired outcomes, and how these insights can guide the

development of a sustainable mangrove management system from the ground level up to the governmental policy level. Data were collected through key informant interviews and focus group discussions in two different mangrove forest ecosystems in Myanmar from March to June 2024. Based on content and theory testing analysis, the following results are drawn. Through an empirical examination of two mangrove forest management case studies, this study observed that the interaction between actor interest and power implementation directly affects the interdependencies between mangrove conservation and resource utilization. The interest-oriented decision-making processes of actors reflect the power relations within mangrove management, which continue to drive the unsustainable utilization of mangrove resources within the existing mangrove management system. The results indicate the need for a redesign of governmental forest management structures, as evidenced by two cases of mangrove forest ecosystems where the majority of people live in poverty, and the forest management is complex, with interlinkage with other resources and the involvement of external actors.

C) WHO DETERMINES FOREST GOVERNANCE OUTCOMES: INSIGHTS FROM CONCESSION FORESTRY IN GHANA

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Abstract:

Despite the existence of a comparatively strong legal framework and international initiatives such as the European Union Forest Law Enforcement, Governance and Trade (EU FLEGT) policy, forest governance challenges persist in Ghana. Projections suggest severe forest decline if current trend continue. These contradictions indicate that forest management outcomes are shaped less by formal policy design and more by actors deploying power resources to influence other subordinate actors, and steer decisions in practice. While our study makes clear distinction between actors and stakeholders, this study focuses on actors as driving force of social, economic and ecological management outcomes in concession forestry.

Ghana the first country to sign the Voluntary Partnership Agreement with the EU and the second globally to issue FLEGT license, has approximately 74% of its forest landscape designated for timber production under a concession forestry regime. The Study employs the Actor-Centred Power (ACP) theory and a sequential design method of quantitative with a follow up qualitative analysis. It

examines relational power by identifying actors and analyzing how coercive, (dis)incentive and dominant information power is deployed in pursuit of formal and informal interests. Data were collected from the Western North region purposively selected for recording the highest timber volumes since the introduction of the Ghana Wood Tracking System under the FLEGT initiative.

Findings reveal that public state actors strategically combine formal authority with informal interests to dominate governance outcomes. While formal interests lead to capacity building and sustainable revenue generation, informal interests result in reduced access to timber which leads into illegal logging by these forest-fringe communities, and overharvesting by legal permit holders. Power is exercised through strategic control of enforcement, (dis)incentives, and dominant information. The findings highlight that understanding actor heterogeneity and power relation is essential to explain ground realities and to offer insights relevant for policy reform that enhances sustainable forest management.

D) SOCIOECONOMIC CO-BENEFITS OF REDD+: A COMPARATIVE STUDY OF CAMBODIA AND MYANMAR

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Abstract:

Reducing Emissions from Deforestation and forest Degradation (REDD+) can contribute to mitigating climate change and to achieving the Sustainable Development Goals. While previous studies have primarily focused on how REDD+ can reduce carbon emissions, systematic comparative analyses of socioeconomic co-benefits at the community level have been limited. This study examines local communities' perceptions and socioeconomic co-benefits of REDD+, comparing case studies in Cambodia and Myanmar. Based on international REDD+ safeguards assessment tools and relevant literature, five criteria for socioeconomic co-benefits were established: 1) Livelihood improvements, 2) Resource accessibility and land tenure, 3) Capacity building and enhanced participation, 4) Strengthening governance and institutional capacity, and 5) Social inclusion and equity. A Likert-scale questionnaire and interviews were used to collect data from 200 respondents in Cambodia and Myanmar.

Both countries demonstrated positive overall awareness of forests and REDD+. In Cambodia, multiple income-generating activities were actively implemented, resulting in a higher proportion of residents perceiving income increases after project participation. In contrast, Myanmar showed more immediate improvements in infrastructure, particularly through the distribution of efficient cooking

stoves to households. Regarding institutional development, Cambodia has stabilized its governance structure by integrating community forestry management units, while Myanmar remains in the initial establishment stage.

These findings highlight that socioeconomic co-benefits of REDD+ can be generated differently depending on the intervention and country context. To sustain these socioeconomic co-benefits, project design should focus on providing continuous alternative income sources for local communities who have traditionally relied on forests and enhancing their acceptance of new interventions. This study underscores the importance of integrating local perceptions and context-specific interventions in future REDD+ project design and policy.

E) THE ROLE OF SOCIAL CAPITAL AND PROJECT PARTICIPATION: A CASE STUDY FROM THE KOREA–MONGOLIA GREENBELT PROJECT

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Abstract:

Since 2007, South Korea has been implementing the Korea-Mongolia Greenbelt Project to prevent desertification in Mongolia, planting trees on more than 3,000 hectares and generating socioeconomic benefits for local communities. While previous assessments of afforestation/reforestation projects have predominantly focused on environmental outcomes such as planted area and carbon sequestration, socio-cultural perspectives—which can empower local communities to manage projects and enhance post-intervention sustainability—have been largely overlooked. To ensure long-term sustainability and community resilience, it is necessary to examine not only ecological outcomes but also social factors such as local participation, cooperation, and institutional capacity. This study focuses on social capital as a key factor in enhancing the sustainability of afforestation projects, using the Lun sum area within the Korea-Mongolia Greenbelt Project as a case study.

We analyze local perceptions and social capital levels, examining differences between participants and non-participants. A mixed-methods approach was employed, combining household surveys with in-depth interviews of project participants. The findings reveal that over 80% of respondents recognized forests as a highly important resource. Among social capital dimensions, norms scored highest while networks scored lowest. Furthermore, the participant group showed significantly higher levels of trust and certain sub-components of norms, though no significant difference was found in networks between the two groups.

The findings indicate that Mongolia's nomadic lifestyle, characterized by high mobility, makes it difficult to establish institutionalized networks through short-term, localized participation alone. To enhance the sustainability of afforestation projects, institutional and governance structures are needed that strengthen community linkages beyond mere project participation, including regular community councils, learning and exchange networks, and the formation of cooperatives.

F) ANALYZING POWER CAPABILITIES WITHIN FOREST FARMER ORGANIZATIONS AND THE FOREST VALUE CHAIN: PERCEPTIONS AND REALITIES FROM QUANG TRI, VIETNAM

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Abstract:

Forest Farmer Organizations (FFOs) are increasingly promoted in forest policy in Vietnam as collective actors expected to enhance the bargaining power, participation, and sustainability of smallholders within timber value chains. However, growing scholarship suggests that the formal positioning of such organizations often diverges from the actual power they exercise in practice. This study analyzes power capabilities among actors within FFOs and across the forest product value chain in Quang Tri province, Vietnam, with a specific focus on discrepancies between policy- and program-level narratives that frame FFOs as mechanisms of collective empowerment and the power relations empirically observed on the ground.

The study builds on the integrated value chain and power analysis framework, combining value chain analysis with the actor-centered power approach. Power is conceptualized as multidimensional and manifested through coercion, (dis)incentives, and dominant information. Empirically, the study applies a mixed-methods design, including value chain mapping, semi-structured interviews with FFO leaders, member households, traders, processors, and local authorities, as well as qualitative analysis of relevant policy and organizational documents.

The findings reveal substantial discrepancies between perceptions and realities of power in forest governance. While FFOs are widely perceived by policymakers and development programs as key intermediaries and collective bargaining agents, their effective influence over price setting, contractual terms, and strategic decision-making remains limited. In contrast, private intermediaries and processing firms exert significant power through control over market access, information asymmetries, and informal institutional practices, consistent with observations in natural resource–

based value chains elsewhere. These perception–reality gaps shape stakeholder expectations, participation incentives, and the outcomes of forest policy interventions centered on FFO.

By empirically unpacking power capabilities within FFOs and the forest value chain, this paper contributes to forest governance debates by demonstrating how policy narratives of collective empowerment may obscure persistent power asymmetries on the ground. The findings underscore the need for forest policies that explicitly move beyond formal organizational designs and address power dynamics shaping perception–reality gaps.

6) BRIDGING SCIENCE AND PRACTICE IN FOREST ADVISORY SERVICES

Panel abstract:

Across Europe, the capacity to deliver independent, trusted forest advice and to support the uptake of innovation remains limited in relation to the growing complexity of forest management challenges. Forest Knowledge and Innovation Systems (FOKIS) are unevenly developed and often weakly connected to broader policy and knowledge frameworks, constraining the translation of scientific knowledge into forest management practice. This panel addresses these challenges by providing a structured overview of the current realities of forest advisory services in the European Union, alongside expert perspectives on advisory strategies, EU policy instruments, and stakeholder engagement.

The session is organised around three themes: first, it examines forest advisory strategies and institutional innovations. Contributions include the European Network of Forest Advisors (FOREXT), which builds advisory capacity through training and education of private forest owners and brings together public and private organisations acting as intermediaries between science and practice. The FORADVISE Horizon Europe project will also be presented, highlighting its role in co-developing and testing innovative approaches to modernise FOKIS through networking, capacity building, and knowledge co-production. Second, the session critically examines how EU policy instruments shape the development and functioning of FOKIS across Europe, drawing on the perspectives of forest advisory practitioners. The session also explores the degree to which forest advisory services are integrated into national AKIS structures. The session further analyses the economic, environmental, and social implications of different forest advisory approaches, employing a sustainability-oriented cost–benefit perspective. The third theme will present stakeholder engagement process, mobilising stakeholders across scales, regions, and forestry themes, in order to build a solid basis upon which to develop knowledge sharing, capacity building, and co-innovation activities.

By linking policy frameworks, institutional arrangements, and practical advisory experiences, this panel contributes to advancing the integration of scientific knowledge into policy and practice, thereby strengthening the effectiveness and resilience of European forest advisory systems.

A) FOREXT: EUROPEAN NETWORK OF FOREST ADVISORS

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Abstract:

FOREXT establishes a pan European Forest Advisory Network to accelerate the transition towards resilient, climate smart and multifunctional forest landscapes that support the objectives of the EU Green Deal, the EU Forest Strategy for 2030, and the bioeconomy and biodiversity strategies. European forests face increasing pressures from climate change, biodiversity loss, market volatility, and fragmented governance, while forest owners, managers and rural actors often lack access to integrated, context specific, and future oriented advisory services. FOREXT responds to this challenge by strengthening advisory capacities, connectivity and innovation uptake across Member States and regions.

The network aims to develop a coherent, inclusive and demand driven forest advisory system by linking existing advisory services, research organisations, digital platforms, policy actors and practitioners into a functional EU wide network. FOREXT combines knowledge co creation, peer to peer learning and science policy practice interfaces to support forest owners and managers in implementing sustainable forest management, climate adaptation and mitigation measures, biodiversity friendly practices, and circular bioeconomy solutions. Attention is also given to small scale forest owners, under served regions, and advisory gaps at the forest landscape value chain interface.

FOREXT applies a multi level and transdisciplinary approach, integrating ecological, economic and social knowledge with digital tools. The networks outcomes aim at enhanced advisory competence and coordination across Europe, improved accessibility and quality of forest advice, stronger uptake of sustainable practices, and evidence based recommendations for strengthening forest advisory systems within EU and national policy frameworks. Furthermore, FOREXT contributes to resilient forests, empowered forest stakeholders, and a just and competitive European bioeconomy with enhanced knowledge flows and strategic capacity in forest advisory services.

B) BRIDGING SCIENCE, POLICY, AND PRACTICE: STRENGTHENING FOREST ADVISORY SERVICES THROUGH EUROPEAN KNOWLEDGE AND INNOVATION NETWORKS

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Abstract:

European forests are increasingly expected to deliver a wide range of societal objectives, including climate mitigation, biodiversity conservation, ecosystem services, and rural development. Despite this growing complexity, the capacity of forest advisory and extension systems to translate scientific knowledge into policy-relevant and practice-oriented guidance remains limited. Forest advisory services or conceptualised here as Forest Knowledge and Innovation System (FOKIS) are unevenly developed across Europe, weakly regulated, and poorly connected to national Agricultural Knowledge and Innovation Systems (AKIS). Their marginal positioning within the New Common Agricultural Policy (CAP) further constrains knowledge flows between science, policy, and practice, slowing innovation uptake and adaptive forest management.

FORADVISE addresses this science–practice gap by establishing a European forestry advisory and extension network designed to function as a platform at the science–policy–practice interface. The project promotes knowledge co-production by bringing together researchers, advisors, forest managers, policymakers, and civil society actors to jointly identify challenges, develop context-sensitive solutions, and support policy learning. Central to the approach is the modernisation of FOKIS through a shift beyond timber-oriented advice toward ecosystem services and multifunctional forest management, complemented by peer-to-peer learning and iterative knowledge exchange.

Empirically, the project identifies strengths and weaknesses of existing FOKIS, analyses the needs and preferences of advisory actors, and tests institutional innovations through network-based collaboration, digital tools, and targeted capacity-building activities. These efforts aim to strengthen advisory competences in addressing economic, social, and environmental dimensions of forest

management while improving integration with AKIS and policy processes. By fostering more effective translation of scientific knowledge into advisory practice and policy dialogue, FORADVISE contributes to more resilient, inclusive, and sustainable forest governance in Europe.

C) OPTIMISING SUPPORT FOR FOREST ADVISORY SERVICES: INSIGHTS FROM EU POLICY ANALYSIS

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Abstract:

Forest advisory plays a crucial role in promoting innovative and sustainable forest management necessary for dealing with emerging and future expected challenges facing forests in the EU. Forests contribute to the attainment of goals ranging from biodiversity preservation and provision of ecosystem services to climate change mitigation and enhancing forest resilience. Numerous policy instruments have been set in place to advance towards the EU and national forest policy targets, but they need to balance the expectations of different stakeholder groups. To ensure that these targets are attained, forest advisory services are needed now more than ever.

Our study aims to analyse the effectiveness and limitations of the EU policy instruments supporting the development and function of advisory services in Europe. We employed a four-stage data collection approach: review of EU policy instruments relevant to forest advisory, online survey with members of the European Network of Forest Extension Organizations in Europe (FOREXT), key informants' interviews with EU and international organizations involved in policy making processes and focus group discussions with local forest advisory providers in each Member States (MS). By conducting qualitative content analysis of policy instruments, we identified four categories of policy instruments that impact forest advisory services in the EU: Financial and Market-Based Instruments, EU Strategies and Action Plans, EU Regulations and Directives and Certification and Voluntary Initiatives. The Forest advisory measures supported ranged from technical advice on different aspects of sustainable forest management, to capacity building activities, support for business models and networking opportunities. Through further analysis of interview transcripts and workshop minutes we expect to find perceived limitation and effectiveness of current EU policies such as: lack of information, lack of skilled professionals to offer advisory services, diversity of the EU forest sector which create different challenges and priorities for the MS, low update of decision support tools and lack of advisory network on forests. Tailored approaches are therefore required to address the diverse needs of forest advisory stakeholders, and development of EU-wide Forest Knowledge and Information systems can provide a venue for knowledge sharing, innovation dissemination and science to practice translation.

D) FROM COST–BENEFIT ANALYSIS TO FOREST ADVISORY PRACTICE

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Abstract:

Forest advisors play a crucial role in shaping forest management decisions; however, the economic, environmental, and social outcomes of advisory recommendations are rarely assessed in an integrated and systematic manner. While Cost–Benefit Analysis (CBA) is widely applied in other sectors, its use in forestry, particularly in forest advisory and extension, remains fragmented, inconsistent, and poorly explored. To date, no comprehensive synthesis exists on how CBA methods and tools can be adapted to support forest advisory practice.

This study addresses this gap by reviewing existing CBA approaches, tools, and case studies relevant to forestry and transferable sectors, and by proposing a conceptual framework for a practical CBA-based toolkit tailored to forest advisors and forest owners. The overarching aim is to support advisors in evaluating and communicating the economic, environmental, and social impacts of management advice in a feasible and decision-oriented manner.

A systematic and multilingual literature review was conducted, covering both academic and grey literature to capture locally relevant methods, tools, and applications. Searches were conducted using major scientific databases, including Scopus, Web of Science, ScienceDirect, and institutional repositories, which encompassed documents in 11 languages. The initial search yielded 125 documents, of which 118 unique records were screened using a shared review protocol. Documents were independently assessed based on predefined inclusion and exclusion criteria, focusing on the application of CBA, relevance to advisory or technical support activities, and consideration of environmental and social dimensions.

Following the screening process, 59 documents were selected for full review. A standardized review template was used to extract information on CBA application, methodological approaches, environmental, social, and economic criteria, data sources, transferability, and elements relevant for toolkit development.

The review reveals substantial diversity in CBA methodologies and frequent challenges in integrating non-market environmental and social values, as well as limitations related to data availability and usability in advisory contexts. At the same time, the analysis identifies transferable practices, indicators, and design principles that can inform the development of a CBA toolkit. The paper thus provides both a structured synthesis of existing CBA approaches and a conceptual foundation for operationalizing CBA in everyday forest advisory practice.

E) BETWEEN SEPARATE UNIVERSES AND SHARED SYSTEMS: PATTERNS OF FOKIS–AKIS INTEGRATION ACROSS EUROPEAN COUNTRIES

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Abstract:

Recent CAP reforms emphasise AKIS as a cornerstone for innovation, knowledge exchange, and policy delivery, yet forestry is only marginally addressed within this framework. This imbalance risks constraining the capacity of the forest sector to provide independent, knowledge-based, and trusted advice at a time when policy demands on forests are rapidly increasing. This paper examines how national Forestry Knowledge and Innovation Systems (FOKIS) are currently positioned in relation to Agricultural Knowledge and Innovation Systems (AKIS) across 19 European countries and regions, based on a structured set of scoping interviews with national and regional experts. The analysis focuses on the degree and modalities of FOKIS–AKIS integration, perceived advantages and risks of closer linkages, and priority domains for collaboration.

Findings reveal a pronounced asymmetry in advisory resources: in many cases forestry accounts for only 2–10% of advisory budgets or staff compared to agriculture, with a smaller group of countries reaching 20–30% yet still operating in the shadow of well-resourced AKIS. We identify three broad

governance configurations: (i) largely separate or parallel systems (e.g. England, Greece, Netherlands, Norway, Portugal, Sweden, parts of Germany and Italy); (ii) formally unified frameworks where agriculture and forestry remain effectively siloed (e.g. Austria, Latvia, Lithuania, Slovenia, Slovakia, Hungary); and (iii) more functionally integrated models in which agricultural advisory organisations increasingly promote forestry and afforestation (notably Scotland, with some elements in Ireland and Croatia).

Across contexts, experts see high potential for targeted integration in agroforestry and woodland-on-farms, afforestation and restoration, landscape-scale environmental management, funding and programme interfaces, and shared educational and advisory pedagogy. At the same time, there is widespread concern that deeper institutional integration could dilute forestry-specific needs within agriculture-dominated structures. The results suggest that strengthening FOKIS–AKIS linkages is most promising where it is purpose-driven (topic- or landscape-based), backed by safeguards such as dedicated forestry budgets and staffing, and supported by mechanisms for joint planning rather than full organisational merger. These empirical insights provide a comparative baseline for designing integration pathways that enhance cross-sector collaboration while preserving the distinctiveness and capacity of FOKIS.

F) STAKEHOLDER ENGAGEMENT- SCIENCE AND PRACTICE

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Abstract:

In the context of climate change, forest advisory services and the provision of neutral, reliable knowledge are essential for sustainable forest management. The diversity of socioeconomic contexts across Europe makes the equitable distribution of knowledge and resources particularly important. Closely linked to this challenge is the engagement of stakeholders and the development of knowledge platforms and networks connecting forest advisory actors across the EU.

Within the framework of the FORADVISE project, our work focuses on building and strengthening forest advisory networks at both national and European levels. This process began with the identification of key actors and representative contact points in each of the 18 partner countries, with the broader objective of covering all 27 EU Member States. These contact points were then engaged to mobilize national-level stakeholders involved in forest advisory services. Engagement was fostered through bilateral exchanges and open calls, as well as through the use of existing AKIS networks and the provision of clear guidelines for each national contact point.

A key milestone of this process was the organization and coordination of 18 national kick-off workshops, which brought together identified stakeholders in each country. These events served to inform participants about the network's objectives and available knowledge platforms and repositories, while also collecting valuable input on stakeholders' needs and the challenges faced by forest advisory services.

A central component of network building has been the establishment of thematic working groups. These groups aim to assess the current state of available, ready-to-use knowledge—such as platforms, technical factsheets, and existing networks—and, with the support of existing knowledge repositories such as EUFarmBook and its ambassadors, to extend the network, while also developing a shared understanding of gaps, needs, and challenges related to knowledge accessibility and dissemination.

Based on this work, a global strategy for building and sustaining a European forest advisory network will be presented.

7) VALORIZING CLIMATE CHANGE ADAPTATION IN FOREST MANAGEMENT – TOWARD A COORDINATED EFFORT BASED ON EXAMPLES ACROSS EUROPE

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Abstract:

In recent years, the importance of mitigating and adapting socio-ecological systems, such as forests, to climate change has become increasingly evident. International commitments, such as the Paris Agreement and the European Green Deal, require governments to develop strategies to limit global warming to 1.5 °C and achieve carbon neutrality. In line with these commitments, some progress has been made in developing financial support mechanisms for mitigation measures in forest management. However, today we know that there is a great possibility that the 1.5 °C target will not be achieved and that adaptation measures are more pressing than ever before. Still, there are limited policies and market-based mechanisms in place to incentivize forest owners, forest managers, and other relevant stakeholders to implement silvicultural measures that primarily aim to adapt forests to the current and future climate. Therefore, developing coordinated mechanisms to promote and recognize the value of adaptation measures is decisive for a resilient future. Limited research has been conducted until now to collect and review examples of respective valorization mechanisms and instruments, especially those aside government instruments. Solutions could include private-sector certification systems or regulations, payments for forest ecosystem services schemes, and combined mitigation/adaptation funding mechanisms. This interactive panel will explore specific examples from across Europe's forest sector, focusing on innovative and inclusive practice cases. Drawing on a study funded by the Swiss government, we will present initial findings and examples derived from the literature and expert interviews. With the aim of creating a space for gathering diverse exemplary practices and approaches across Europe, panel participants will then be asked to share additional innovative examples from their countries and the contexts they work in. Using breakout groups, we will discuss the relevance and upscaling potential of the different approaches, mechanisms, and instruments identified. The outcome of the workshop will be an exchange of ideas and specific approaches and a shared vision for more coordinated efforts to valorize climate change adaptation measures for a resilient forest sector in Europe.

8) FOREST PROFESSIONALS IN AN ERA OF POLYCRISIS: RETHINKING EDUCATION, VALUES AND PROFESSIONAL ROLES

Panel abstract:

Forests cover approximately 39% of the European Union's land area, with Finland and Sweden being the most forested countries—each with around 60% forest coverage. Forest governance and management practices thus play a central role in shaping both forest landscapes and the ways people relate to and interact with them.

Historically, forest professionals have held a dominant position in defining forests and determining their use. This group includes actors with educational backgrounds in forestry and related disciplines, working in operational and managerial roles such as forest planning, timber harvesting, biodiversity conservation, and stakeholder engagement. Through their work, professionals enact policies and uphold norms that influence how forests are utilised in society. Their decisions affect forest ecosystems and shape relationships between forests and current and future generations, impacting both social and ecological sustainability.

However, external pressures—including climate change, biodiversity loss, shifting societal values, and developments in global environmental governance—are increasingly challenging the norms, practices, and expertise of forest professionals. These calls for change generate uncertainty, tensions, and sometimes resistance. At the same time, forest professionals are uniquely positioned to challenge the profession from within and foster change in values, norms, and practices.

This roundtable panel invites researchers and forest professionals to jointly explore perspectives on and responses to an increasingly contested profession. Questions to be addressed include:

- How do forest professionals perceive their role in sustainable forest futures?
- How do growing calls for change influence their identity and agency?
- What kinds of value conflicts arise between traditional forestry norms and emerging societal expectations?
- What emotional responses emerge, and how are they addressed?
- What competencies are needed to navigate complex forest governance landscapes?
- How can forest professionals strengthen engagement with diverse stakeholders and knowledge systems?
- How can forest education and employers support transformative change and sustainability leadership?
- What kinds of institutional or cultural support are needed to foster innovation and reflexivity in forest professions?

A) NAVIGATING UNCERTAINTY AS PROSPECTIVE FOREST PROFESSIONALS: STUDENTS' DILEMMAS AND FUTURE VISIONS

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Abstract:

Young people in forestry education are seldom represented in public discussions about forests. This study draws on focus group interviews with high school and university students to explore their perspectives on the ongoing transition in forestry and their future careers. They see forests as crucial for their well-being and an important arena for their social lives and recreational activities. The way students relate to forests is seen as central to understanding the emotions that shape their visions of the future.

Students' reflections reveal complex dilemmas, such as balancing economic and environmental goals, addressing unethical practices, and confronting gender-based disparities. To analyse these dilemmas, the study applies a transformative learning framework, emphasizing the role of communicative learning in understanding diverse intentions, beliefs, and emotions.

The findings show that forestry students' perceptions differ from reality in several ways. Students learn to think long term and to preserve biodiversity during their forestry education. However, when they enter working life, they must adapt to forest companies' short-term perspectives, which may conflict with students' values. For example, future machine operators are taught to drive carefully to avoid damaging the soil, but in practice the focus on fast-paced production means they do not have time to apply what they have learned. The study suggests that forestry education should foster reflective spaces where students can critically examine assumptions and explore alternative ways of acting, thereby preparing them to navigate the ethical and practical complexities of forestry.

B) FOREST PROFESSIONALS' LEWORLDDS: PERSONAL AND PROFESSIONAL MEANINGS SHAPING FOREST RELATIONSHIPS AND SUSTAINABILITY PRACTICES

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Abstract:

Forest professionals' experiences and the meanings they attach to forests shape how they engage with forest landscapes, respond to sustainability challenges, and interact with stakeholders. This qualitative study, based on 37 interviews with Finnish forest professionals and analysed using Interpretative Phenomenological Analysis (IPA), explores how personal life histories and professional socialisation orient their relationship with forests.

Forests are central to their lifeworlds—embodied and sensory spaces where interpersonal and interspecies relations unfold. They are often experienced as socially shared yet professionally governed environments that offer security and belonging. These relationships are situational and role-dependent, shaped by positions in work, family, leisure, and community life. As experts, forest professionals frequently express psychological ownership over the forests under their responsibility.

While forests are often articulated as resources for human well-being, professionals also express diverse and sometimes contradictory meanings that challenge dominant cultural narratives. These relationships reflect communal and intergenerational tensions, as well as personal potentials for sustainability-oriented change. Reform is hindered by entrenched binary thinking, hierarchical norms, and knowledge hegemonies, yet broader understandings aligned with socio-ecological values suggest possibilities for transformation.

C) BECOMING A FORESTER. GERMAN STUDENTS' PERSPECTIVES ON THEIR FUTURE PROFESSIONAL ROLE

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Abstract:

Our talk focuses on the question how a new generation of forest professionals perceive their role in sustainable forest futures, how they respond to challenges relating to climate and social change, and the potential role of educational institutions as "actors of change".

Foresters in Germany are facing extreme challenges due to climate change and social change, struggling to adapt their management strategies. In this context, our study explores the professional socialization of forest management students at Universities of Applied Sciences in Germany: How is a professional habitus formed during forestry education, and how well does this equip students to

address ecological and social transformations? Through qualitative in-depth interviews, we investigate how students experience their education and interpret their future roles and tasks. Using a praxeological framework informed by Bourdieu's concept of habitus, we explore how higher education shapes students' ways of perceiving, feeling, and belonging. Findings from our analysis include students' hierarchical positioning in relation to a lay public, their objectivist perspective on knowledge, their identification as part of the "forest family", and mechanisms of inclusion and exclusion that produce a strong sense of group cohesion. Despite inner heterogeneity in the student body, adaptation pressure is high, especially for those who envision a career as a forester. The students themselves see two main challenges for their professional future: social pressures from a lay public and an unpredictable future due to climate change. Based on our findings, we identify potentials and barriers for transformation in the forestry profession as they manifest during education. We discuss a potential role of educational institutions to foster diversity in the student body, provide spaces for critical reflection, and promote transformation competencies.

D) DIFFERENT CONCEPTIONS AND PERCEPTIONS OF CHANGE IN FOREST ADAPTATION. WHAT DO WE ACTUALLY WANT TO ADAPT TO WHAT AND WHAT FOR?

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Abstract:

The conceptualization of climate change as a scientifically objectified and technocratic concept oftentimes mismatches with the experiences on the local level. On the one hand, policies do inadequately reflect local needs and circumstances. On the other hand, this mismatch can result in reluctance to change and adaptation. Scholars at the intersection of Political Ecology and Science and Technology Studies (STS) thus highlight the need for new approaches to understand the meaning-making of climate change in its locally embedded, environmental, cultural and political entanglements (Goldman et al., 2018; Hulme, 2010; Jasanoff, 2010; Nightingale et al., 2022). They argue for shifting the focus from how change is perceived to what change actually entails for the affected actors. Despite the extensive literature on climate change adaptation of forests, few studies address how actors make sense of change through intricate human-nature relationships and how they consequently decide to react upon. Using a comparative study design, I aim to shed light on the dynamics between how climate change with regard to forests is conceptualized in policies at different levels and how local, forest-related actors understand change in their management. For this purpose I analyzed policies and conducted narrative interviews in three case studies across Europe: Les Landes (France), Solsonès (Spain) and Freiburg (Germany). The results reveal a mismatch between topics and their relevance addressed in policy documents and the interview partners' narratives. Additionally, the analyses show different ways of attributing meaning to change. Whereas adaptation policies align with the universalized objectivation of climate change, local narratives are based on the actors' experiences, observations and local forms of knowledge. Adaptation policies are often too abstract and provide

inadequate resolution to give clear management guidance on a local level. Instead of answering the question on “how to close the perception gap”, I claim that we need to better understand the complex human-nature entanglements and power dynamics that shape what change actually is on different levels. In this context, we need to acknowledge the plurality of epistemological and ontological approaches to change in order to adapt forests in a climate and socially resilient way.

E) FOREST GENETIC RESOURCES: THE "INVISIBLE MAN" OF FOREST AND BIODIVERSITY GOVERNANCE IN EUROPE

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Abstract:

Forest Genetic Resources (FGR) and Forest Reproductive Material (FRM) are widely framed in European policies as strategic assets for climate adaptation, biodiversity conservation, and long-term forest resilience. Yet, much like Queen's “invisible man” within forest governance systems, their role remains largely implicit, weakly understood, and insufficiently integrated into decision-making processes. While forest and biodiversity governance is strongly state-centred, implementation depends on a broader network of actors whose perceptions, knowledge, and responsibilities are unevenly aligned with policy objectives. This misalignment creates a persistent policy implementation gaps and slow progress of some EU goals (e.g. planting 3 billion trees by 2030). Drawing on insights from the Horizon Europe project OptFORESTS (GA nr. 101081774), this contribution applies a systems-thinking perspective to examine how FGR and FRM are perceived and enacted across stakeholder groups. Using a Quadruple Helix framework, we mapped the European forest stakeholders through literature analysis, expert consultations, and participatory mapping, finding three main sub-communities of stakeholders. Public authorities play a central coordinating role across all sub-communities. Key operational actors show limited awareness and understanding of EU forest and environmental policies, particularly within scientific and nursery sectors. These gaps weaken feedback loops between on-the-ground practice and policy design, contributing to fragmented and ineffective governance responses. Divergent societal narratives coexist, ranging from expectations of technological optimisation to calls for minimal intervention, strict protection, and rewilding, bringing

to trade-offs and conflicting positions. From a biodiversity perspective, these governance mismatches have far-reaching implications. Weak alignment between policy goals and implementation practices risks narrowing the genetic base of forest stands, reinforcing path-dependent management routines, and constraining adaptive responses to pests, diseases, and climate extremes. Insufficient integration of biodiversity-oriented principles in regeneration and planting decisions can erode genetic diversity across landscapes, undermining ecosystem resilience and long-term multifunctionality. By making the “invisible” dimensions of FGR and FRM governance explicit, by setting an easy-to-understand definition of these key resources, this contribution highlights the need to rethink forest governance as a dynamic socio-ecological system rather than a linear policy process. Addressing these hidden mismatches is essential for strengthening policy legitimacy and safeguarding forest biodiversity under contemporary environmental and societal pressures.

F) A COMPARATIVE STUDY OF KEY ACTORS IN GERMAN AND SWISS PRIVATE FOREST MANAGEMENT

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Abstract:

Europe’s forests face increasing climate-related risks such as droughts, heat, and intensified disturbances, which threaten biodiversity and the provision of ecosystem services. Active forest management is widely promoted as a key strategy to sustain forest resilience and climate adaptation. Because roughly half of European forests are privately owned, climate adaptive management depends on whether private owners translate policy and advice into action. Yet microowners (<2 ha) remain empirically underrepresented, even though their large number. Consequently, the role of trusted and influential forestry actors in shaping the decisions of microforest owners and therefore the realized practices remains also underexplored in the literature. Building on social network theory, we conceptualize trust and perceived influence as dimensions of social capital that structure information flows, and management decisions in small forest ownership. We examine how perceptions toward forestry actors (e.g. managers, rangers, owner associations, peers) relate to realized management among private forest owners, using survey data from Germany and Switzerland. Following, we compare patterns across countries and by holding size (≤ 2 ha vs > 2 ha) using planned Welch tests and assess perception–practice alignment within micro-owners. In 2024/25, 414 owners (Germany: 297;

Switzerland: 117) rated trust and perceived influence in key actors and reported whether they had implemented harvesting, active, or passive biodiversity measures in the past ten years. The results showed that local forest rangers are consistently rated as the most trusted and influential actors, while NGOs and digital- or print-media, rank lowest. Among micro-owners, perception–practice patterns differed nationally: in Germany, realized management links more strongly to perceived influence, whereas in Switzerland it aligns more with trust, especially concerning community ties (peers, owner associations). Of the highly overall trusted actors, only Swiss owner associations were trusted significantly more by active than by nonactive micro-owners. These findings point to a perception–reality gap: trust in actors is generally not the key tipping point for micro-owners’ actions, even though the actors may have the social capital to convince forest owners. Ecosystem-provision goals may therefore be promoted by stronger leverage of currently underused social capital, which could improve uptake of adaptive management and biodiversity measures.

9) MAKING ALTERNATIVE FOREST MANAGEMENT A REALITY: PERSPECTIVES OF CHANGE AND TRANSITION

Panel abstract:

Across many EU countries and in the Nordic region, conventional rotation forestry with clear-felling remains dominant, yet its ecological and social legitimacy is increasingly questioned. Calls for change arise from diverse directions—climate adaptation, biodiversity conservation, ecosystem services, cultural values, and local livelihoods. However, the processes that enable or hinder transition toward alternative forest management practices differ widely across contexts, ownership structures, and policy frameworks.

This panel brings together European and Nordic perspectives on forest management transitions to explore how change occurs—or fails to occur—within the specific social, institutional, and ecological settings of the region. The presentations address change at multiple scales: from systemic analyses of governance and policy frameworks to local-level studies of ownership practices, user perspectives, and ecological domains such as riparian buffer zones. Following IFMP6's ethos, our panel seeks to unpack the “perception versus reality” gap in forest policy: while many stakeholders perceive change as both desirable and feasible, the reality of implementing alternative forest management often confronts entrenched routines, economic incentives, market lock-ins, institutional inertia, tradition and cultural anchors. By drawing on empirical studies and conceptual analyses, the session highlights how innovation, agency, and networks of practice are shaping emerging forest management models beyond the clear-fell paradigm; but also, how change faces opposition and constrains.

Together, the papers provide a comparative and cross-disciplinary view of transitions in forest management in across Euro Nordic countries and beyond. The panel aims to stimulate dialogue among researchers about change and transition in forestry; and how to bring the gap between the perceived notions about change and the processes happening by practitioners.

Further information: The session will open with a short presentation to conceptually frame change and transitions in forestry. Then standard scientific presentation will follow. Although, we fill the five presentations quota, we welcome more contributions to the panel session from other countries in Europe if they fall within the topic of transitions.

A) NEGOTIATING FOREST MANAGEMENT: INSTITUTIONS, VALUES AND PRACTICES IN THE MULTI-USE OF FORESTS IN SWEDEN

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Abstract:

This presentation examines whether and how multi-use of forests in Sweden is associated with alternative forest management beyond the clear-cut model, and how such management pathways are negotiated within a governance system that continues to privilege industrial forestry norms. The study analyzes how alternative, hybrid, and continuity-oriented practices emerge or are contained through everyday negotiations with governance structures, advisory systems, and dominant interpretations of “good forestry.” The analysis draws on in-depth interviews and field observations with private forest owners and entrepreneurs engaged in multi-use activities (tourism and guiding, equine work, small-scale sawmilling and crafts, wild foods and pedagogy), as well as representatives of organizations that support multi-use and alternative forest management practices. Using critical institutionalism and drawing on the plurality of values framework, we conceptualize the multi-use of forests as a site of negotiated governance where institutional rules, advisory cultures, market logics, and certification regimes intersect with forest owners’ diverse meanings of responsibility, care, livelihood, and stewardship. The findings show that forest management among multi-use actors spans a continuum from minimal intervention and continuous-cover forestry to hybrid regimes that combine selective management with conventional clear-cutting. Multi-use activities sometimes reinforce continuity-oriented practices and selective management, but in other cases, coexist with conventional harvesting or depend on inherited forest structures rather than actively reshaping them. These forest practices emerge through ongoing adjustments to institutional frameworks, enterprise needs, ecological conditions, ownership arrangements, and values of nature. Respondents describe how advisory systems, certification requirements, market relations, intergenerational decision-making, and access to specific competences or machinery influence what management options they perceive as possible, appropriate, or risky. Overall, the presentation argues that alternative forest management among multi-use actors can be understood as an outcome of negotiated governance rather than deliberate opposition or straightforward transition. Multi-use of forests thereby illuminates where Swedish forest governance currently “contains” alternatives and where small institutional openings make incremental shifts in the meaning of responsible forestry possible.

B) UNLOCKING TRANSITION PATHWAYS FOR ALTERNATIVE FOREST MANAGEMENT IN SWEDEN: MULTI-LEVEL CONSTRAINTS AND OPPORTUNITIES

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Abstract:

Growing demands for climate adaptation, biodiversity and multifunctionality are pressuring Nordic forest sectors to move beyond conventional management based on even-aged monocultures and clear-cutting. Yet in Sweden, adoption of alternative forest management (AFM) remains marginal and incremental change appears the most likely near-term pathway. This presentation synthesises results from recent and ongoing studies using a complex systems approach to investigate forest management transitions in Sweden, including a literature review, analysis of formal and informal institutions influencing AFM, interviews and workshops with key stakeholders and industrial, institutional and private forest owners, qualitative case studies of collaborative AFM initiatives, and a new innovation project (ReViva) on business models and value chains for AFM. Across these studies, stakeholders consistently highlight socio-cultural norms, conservative professional routines, knowledge gaps and weak or ambiguous institutional support as more constraining for AFM uptake than biophysical or purely economic factors, reinforcing a regime in which intensive rotation forestry remains the default. A longitudinal case study shows how decades of collaborative planning towards multifunctional forest landscapes repeatedly stalled due to feedbacks between trust asymmetries, power imbalances and fragmented knowledge, despite clear evidence of tourism potential and local demand for less intensive management. At the same time, interviews with early adopters practising AFM indicate that many private forest owners perceive it to be a multifunctional, resilience-oriented approach that aligns with environmental, cultural and livelihood goals and supports diverse ecosystem services. However, systemic challenges include unclear terminology and standards, limited advisory support, and underdeveloped markets for clearcut-free timber. The institutional analysis clarifies this tension: international and EU strategies increasingly legitimise AFM, but national laws, certification systems, forest owner associations and industrial actors send soft and often ambiguous signals, framing AFM as complementary and experimental. ReViva illustrates one attempt to intervene in these lock-ins by coupling AFM with franchise-based processing and digital traceability to generate price premiums, new advisory practices and narrative change along value chains. Together, these findings advance understanding of multi-level transition barriers and explain why transitions toward AFM in Sweden remain slow, while identifying leverage points for making AFM a more viable reality in production-oriented Nordic contexts.

C) TRANSFORMATIVE PATHWAYS TO CONTINUOUS COVER FORESTRY IN GERMANY OVER THE LAST CENTURY

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Abstract:

Forest management is a highly contested issue with clear trade-offs between climate adaptation and mitigation, biodiversity conservation and industrial forestry production objectives. Amid an increasingly polarised forest debate, Continuous Cover Forestry (CCF) has gained traction for its potential to harmonise these divergent goals. This article examines the social-ecological transformation of German forestry policies and the management towards CCF practices over the last century using a combination of the multi-level perspective and multiple streams framework where we analyse the role of practitioners, business, institutions, and policy related actors. We identified a close-to-nature forestry organisation, a state policy and an EU LIFE project which together provide a more comprehensive understanding of the forestry transformation in individual German states. While forestry crises were important, we found that policy entrepreneurs with empirically-based solutions were decisive for creating the opportunity contexts for policy change. Our empirical results exemplify how CCF is achieved via multiple pathways integrating timber production, biodiversity and climate adaptation goals simultaneously. In conclusion, we reflect on the degree of the German forestry transformation necessary for achieving long-term, synergistic forestry goals and discuss how diverse pathways enable climate and economic resilience of CCF.

D) GRASSROOTS CHANGE: INFORMATION AND ADVICE NETWORKS OF SWEDISH FAMILY FOREST OWNERS INTERESTED IN ALTERNATIVE FOREST MANAGEMENT

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Abstract:

Family forest owners control slightly more than half of Sweden's productive forests, making them pivotal actors in shaping the future of Swedish forests. While previous research highlights the diversity of ownership objectives among forest owners, the Swedish Forest Agency estimates that over 95% of family-owned forests are managed using clear-cut systems, despite the availability of legal alternative management methods. This persistence of homogenous forest management occurs within a context often described as "governance without government," where economic incentives are minimal, voluntary certification schemes dominate, and informational instruments serve as the primary policy tool. This study investigates how information and advice networks influence forest owners' decisions to adopt alternative management practices, focusing on continuous cover forestry. Using bipartite network analysis and social capital theory, we examine a national survey sample to compare the informational networks of three groups: owners who have implemented continuous cover, owners interested but not yet implementing continuous cover, and owners uninterested in continuous cover forestry. We hypothesize that differences in network structure and access to advisory resources help explain variation in adoption behavior. Preliminary findings suggest that a slight majority of Swedish family forest owners express interest in managing at least part of their forest using continuous cover forestry methods. Anticipated results will provide insights into how advisory and peer networks function as drivers of change, offering practical implications for accelerating the diversification of forest management practices in Sweden.

10) FORESTS, TREES AND FOREST POLICY AS PART OF THE NATION

Panel abstract:

In Europe, forests have long been and still are today closely linked to regional identities, national imaginaries, and state-building processes. Covering more than one-third of Europe's land area—with significantly higher shares in many Northern and Eastern European countries—they are perceived as everyday ecological, social, and economic environments. Consequently, forests anchor values and practices among institutions, communities, and individuals. Politically, the EU and its member states are defining and regulating forests and their use through (national) forest strategies and a mix of soft and hard law instruments.

Contemporary human relationships with forests are strongly shaped by a worldview rooted in resource-oriented attitudes and Western philosophical and religious traditions that emphasize binaries between humans and nature. These ontological and epistemological assumptions permeate both individual and collective engagements with trees and forests. In state narratives, forests are simultaneously economic, cultural, and green resources to which humans, state institutions and companies are granted legitimate access and use. The forestry profession operationalizes these narratives by guiding owners toward sanctioned attitudes and practices, while countering competing ontologies, epistemologies and understandings. Hierarchies embedded in institutional narratives classify nonhuman beings such as animals and plants through the lens of utility and risk: species framed as pests or invasive are cast as threats, their meanings shaped by prevailing political contexts.

This session examines three geographically distinct cases from Finland, Hungary, and Germany to trace how national linkages, hierarchies, and narratives are attached to forests and trees, and how they shape forest ecologies, uses, and policies. The three papers are part of an edited volume scheduled for publication in 2026. By juxtaposing these cases, we illuminate the co-production of forest governance and cultural imaginaries, and the ways government, discourses and public opinion influence the future of forests and human–nonhuman relations. The panel contributes to ongoing debates on forest policy, environmental justice, and the politics of knowledge in European forestry.

A) "A GOOD FINN TAKES GOOD CARE OF HIS FOREST" - NATIONAL NARRATIVES IN HUMAN-FOREST RELATIONSHIPS OF FINNISH FOREST OWNERS AND PROFESSIONALS

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Abstract:

As a heavily forested country in Northern Europe, Finland has historically built much of its national identity around forests and their use. Forests and forestry are deeply embedded in national narratives, which have profoundly shaped—and continue to shape—people's relationships with forests. Particularly with the advent of modernization, the conceptualization of forests as a resource became both explicit and hegemonic, shaping ideal relationships with the forest and aligning forest management practices with this dominant paradigm. Alongside resource nationalism, forests retained their cultural importance and remained embedded in various non-forestry-related practices and traditions such as hiking or berry-picking. In recent decades, resource-oriented thinking has faced increasing challenges, as civil society and a change in environmental and social values have questioned the status quo of the Finnish forest sector. In this societal context, the practices of owning and managing forests involve complex social, cultural, and political meanings, values, and emotions. Both individual forest owners and professionals experience and reproduce national feelings and identities through their ownership and work-related activities.

This presentation explores forest-related national narratives among Finnish forest owners and professionals, based on qualitative interviews conducted between 2019 and 2023. We are particularly interested in the types of narratives these groups have adopted and been socialized into, how these narratives relate to forest governance and state-building, and how they reflect forest-related attitudes and practices of these actors—that is, their human–forest relationship (Halla et al. 2023). The concept of human-forest-relationships reflects how cultural norms, collective memory, and socio-economic structures shape individual and communal meanings and practices related to forests. In our analysis, we reconstruct key narratives among forest owners and professionals. These diverse and partly conflicting narratives reflect various forms of nationalism and illustrate how forest-related identities as well as values are embedded both in everyday life and professional practice. We show that an attitude of maintaining forest productivity for the well-being of the nation and one's own family continues to prevail among both forest professionals and owners. However, currently still marginalized or alternative narratives emphasizing biodiversity or old-growth forests over productivity exist—and may be gaining ground.

B) BARK BEETLE DEVASTATION AND FAR-RIGHT SUPPORT IN THE GERMAN HARZ REGION

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Abstract:

This paper examines the effects of landscape changes on public support for far-right groups in the German federal states of Niedersachsen (Nether-Saxony), Sachsen-Anhalt (Saxony-Anhalt) and Thüringen (Thuringia). In particular, it will focus on the devastation of spruce-based forests caused by bark beetle infestation in the Harz National Park (Beetz et al. 2024), the role these landscape changes play in the publications of the far-right Alternative für Deutschland (AfD) party and the far-right extremist group Identitäre Bewegung (IB), and social media interactions with these discourses.

Within the last three years, Niedersachsen, Sachsen-Anhalt and Thüringen have grown to be among the German states with the highest support for the AfD and right-wing activist groups (Reuband 2022). They are also the federal states encompassing the Harz National Park, which has seen far-reaching arboreal devastation due to bark beetle infestations in recent years (Huo et al. 2024). I will draw on research examining the interconnectedness of landscape identity and political sentiment (e.g. Forchtner 2019 and 2024, Lekan 2004), on recent studies conducted by FARN (Fachstelle Radikalisierungsprävention und Engagement im Naturschutz, transl. Specialist Unit for the Prevention of Radicalisation and for Environmental Volunteering) and the RIOET project (Rechtsextremismus in Ökologischen Transformationsräumen, transl. Right-wing Extremism in Areas of Ecological Transformation) and on social media engagement with AfD and IB publications to expose the influence of bark beetle devastation on the extent of, and arguments surrounding, far-right support in Germany. In so doing, I will illuminate two main lines of argument present in far-right publications and online discourse: bark beetle devastation as a symbol of governmental neglect, and arboreal devastation as a “promethean” (Kølvraa and Forchtner 2024) opportunity for a German national renewal.

C) WHO GETS TO TELL THE STORY? THE IMPORTANCE OF GOVERNANCE AND NARRATIVE IN BC FORESTRY POLICY

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Abstract:

Conflicts over forest management run deep in British Columbia (BC), where the provincial forest sector remains an important economic driver in many rural communities while the province also hosts the greatest biodiversity within Canada. This long-standing tension is evident in the two largest civil protests in Canadian history over logging temperate rainforest, the first in the early 1990's [1, 2],

subsequently eclipsed in size by a similar one over three decades later [3]. In this paper we consider the persistence of this conflict; what has changed, what has not; and whether or not this conflict will be resolved. We draw upon the evolving but still small literature in the area of forest conflict [4] where much of the literature involves descriptions and analyses of individual case studies [5, 6,7,8], and attempts to generalize insights have been limited by either specific disciplinary lens or a focus on particular types of conflicts [9,10,11,12,13,14]., More recent literature frames forest conflict primarily as a governance issue, and the need to examine the local level context to untangle the roots of these complex conflicts [15, 16]. In contrast, conservation science literature argue that policy change (and conflict) is best understood through a narrative lens in which the story matters more than the local or institutional details [17, 18, 19, 20].

BC has seen significant changes in governance between these two protests with the expansion of Indigenous rights; while long-standing ENGO and industry association campaigns have spanned this lengthy period framing how forests should be managed [21], at the same time there have been changes in how expertise and information is presented and used in these campaigns [22, 23] and where indigenous and local communities are often disadvantaged in regards to powerful actors when it comes to conservation [24]. We take advantage of a recent forest policy initiative to examine the changes in narrative and information [25]. Through expert interviews, we assess stake and rights-holder perceptions and changes in societal attitudes; ask what effect changes in governance have upon how these issues are framed; the consequences for forest conflict in BC and prospects for its resolution.

D) ENDURING DEVELOPMENT FRAMING IN FOREST POLICY CHANGE IN RESPONSE TO CLIMATE CHANGE

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Abstract:

Indonesia has introduced a series of new forest policy instruments in response to climate change, yet these changes have largely taken the form of policy layering rather than fundamental reform. This study examines why and how such layering has occurred, focusing on the growing influence of climate change discourse shaped by United Nations climate mechanisms. By combining historical institutional analysis with frame analysis, the research traces the evolution of climate-related forest policy and discursive patterns that structure Indonesia's response. The historical institutional analysis shows that

the state continues to treat forests as national wealth and a basis for economic prosperity, while increasingly emphasising their contribution to climate change mitigation and the need to align with global climate commitments. Recent policy innovations such as Nationally Determined Contribution targets, the Forest and Other Land Use Net Sink agenda, and carbon economic value schemes have been introduced, together with new agencies. However, these innovations are often temporary and fragmented. The dominant problem framing presents national development as a central priority that can be pursued alongside sustainable forest management. Within this framing, policy responses are primarily financial, moving from earlier climate finance and incentive mechanisms toward carbon economic value instruments, which channel attention to measurable carbon-oriented benefits rather than actual underlying drivers of forest degradation. This reflects ecological modernization discourse, in which economic growth and environmental protection are presented as simultaneously achievable within a liberal market order and a sustainable development paradigm. Yet this takes the form of a weak ecological modernization model, as Indonesia's forest policy response relies more on market mechanisms to promote green development paying relatively less attention to social and ecological concern. As a result, climate concerns are incorporated as additional layers within an enduring development centred forest regime rather than driving transformative change. A more just and equitable forest policy response to climate change therefore require stronger attention to distributional issues and deeper ecological reform.

E) STORYLINES OF REWILDING AT THE EU POLICY LEVEL: A DISCOURSE AND POLITICAL ECOLOGY PERSPECTIVE

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Carmen Rodríguez Fernández-Blanco

Abstract:

Rewilding has emerged as an increasingly popular concept in conservation policy, practice and academia in response to the previous approaches to conservation. Rewilding approaches often emphasise the aim of reducing human impacts, and prioritizing ecosystem health and processes over individual habitats and species. Meanwhile, rewilding remains a politically contested and conceptually ambiguous concept with different meanings attached to it. Conflicts surrounding rewilding focus on the purpose and effectiveness of rewilding, competing ideas of what constitutes 'wild', or issues of justice and community inclusion. Although social science research on rewilding has increased in the last decade, its use and understanding of rewilding at the EU policy level has received less scrutiny. This gap is increasingly significant given the potential role of rewilding in the implementation of the Nature Restoration Regulation. Therefore, this paper addresses this gap. The study's empirical findings are based on a qualitative analysis of twenty in-depth interviews conducted in 2025 with EU policy

stakeholders, including policymakers from EU authorities, NGOs, land managers' interest groups, and research. Using a discourse and political ecology approach, the paper assesses the discursive construction of rewilding in EU policymaking by policy stakeholders. It analyses which storylines actors share in relation to rewilding and how these storylines link to existing sectoral storylines and broader discourses. Furthermore, it analyses how different actors narrate rewilding as either an opportunity or a threat concerning its implementation, using rewilding in forest landscapes as an example. By doing so, it draws conclusion about the use and implementation in future policymaking.

11) FOREST POLICY AND FOREST CARE – ACTORS, PRACTICES, AND MEANINGS

Panel abstract:

People often form deep, meaningful connections with trees and forest ecosystems, expressed through diverse practices of care. These relationships, however, vary widely and may even conflict depending on cultural, social and professional understandings of what it means to care for and about forests. Yet, dominant forest policy and management paradigms, grounded in economic and productivist approaches, tend to undervalue care as a relational, ethical, and political dimension of human-forest relations.

While the notion of care has been central to various epistemic and ontological traditions (e.g., indigenous peoples' relations with land and forests), this concept has recently gained broader attention in environmental research as a key dimension of human–nature interactions (Jax et al., 2018; Barca, 2020). Rooted in feminist scholarship—particularly Tronto's work (1993, 2013)—care has been associated with domestic labour, capitalism, and gendered power structures. Only recently, scholars have expanded care into an analytical framework for understanding human-forest relations, including attachments, responsibilities, and ethical commitments, demonstrating that care provides a powerful lens for examining everyday forest practices and the governance structures that shape them.

This panel explores caring and uncaring practices in relation to trees, forest ecosystems, and forestry. It examines how care is enacted, negotiated, institutionalised, or marginalised in forest policy, management, and cultural contexts. We are particularly interested in tensions between formal policy frameworks and lived, situated forms of care; the political and institutional conditions that enable or constrain caring practices; and examples of care that point toward alternative pathways for forest governance and stewardship.

The panel consists of five case studies from Germany, South Korea, Poland and Finland:

- Who cares, and how? Deep stories and modes of caring in a forest controversy in times of climate crisis
- Forest Protection as a Core of Forestry Identity: The social meaning of practical interventions
- Trees in Seoul: Practices and discourses of mutual care between urban forests and city dwellers
- The Language of Care in forest conflicts in Poland
- Whose Forest Wellbeing? Care, commodification, and inclusion in Finnish forest tourism

Together, these contributions enrich current forest policy debates and demonstrate the relevance of care as a critical lens for understanding contemporary and future forest governance challenges.

A) WHO CARES, AND HOW? DEEP STORIES AND MODES OF CARING IN A FOREST CONTROVERSY IN TIMES OF CLIMATE CRISIS

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Abstract:

Forest-related controversies in Europe have historically been characterised in terms of a conflict between ‘conservation’ and ‘forestry’ stakeholders with their respective competing claims regarding the appropriate management of forests (Winkel et al., 2011, Winkel/Sotirov 2015). Even though these claims and the narratives in which they are embedded have been thoroughly analysed, and despite various silvicultural, economic and policy efforts at reconciling them (e.g. Aggestam et al., 2020), similar conflicts continuously re-emerge, indicating unexplored dynamics beyond the rational debate of management options. At the same time, the observable consequences of climate change in forests across Europe pose a serious challenge to the well-established claims of both coalitions.

We explore a public controversy surrounding forest management in Germany. Between 2018 and 2020, a wave of consecutive droughts caused severe damage to large areas of forest, sparking a heated political and public debate (Mack 2023). While traditionally, the German forestry sector and its associated scientists have held a strong position as the central authorities on all forest-related matters, a network of ‘rogue’ foresters, forest researchers and nature conservationists have publicly challenged this privileged status in the wake of the crisis (John et al., under review).

We claim that, beneath the surface of this seemingly technocentric debate, a complex web of competing, affectively charged narratives drives the entrenched conflict. Drawing on the framework of “deep stories” (Hochschild, 2016), we demonstrate that these narratives are not being ‘contaminated’ by emotions; rather, they are inextricably linked to and motivated by affective relationships to both forests and people (Buijs & Lawrence, 2013), centrally involving modes of caring (Halla & Laine, 2022).

By drawing on a variety of data sources, we reconstruct those deep stories and the modes of caring enfolded in them, revealing multiple, interwoven and emotionally charged deep stories reinforcing this conflict. We suggest that unacknowledged, those different modes of caring may prevent an urgently needed open discourse. Yet in the face of multiple global environmental crises, a shared sense of care may present an opening towards a more shared vision of how to protect forest ecosystems, livelihoods, and the provision of ecosystem services.

B) FOREST PROTECTION AS A CORE OF FORESTRY IDENTITY: THE SOCIAL MEANING OF PRACTICAL INTERVENTIONS

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Angela Siemonsmeier

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Abstract:

In the context of climate change, invasive species, and intensifying land-use pressures, forest protection has become central to the technical practice and cultural meaning of forestry. This article investigates how forestry professionals experience protective interventions—such as pest control, storm damage mitigation, and reforestation—not only as ecological tasks but also as meaningful social actions embedded in contested human–nature relations. Drawing on ethnographic case studies in German forests, the study examines how such interventions shape, affirm, and challenge foresters’ identities as “protectors” or “caretakers.”

Practical tasks like bark beetle control or gypsy moth monitoring are framed as both emergency responses and forms of care situated within a broader ethical landscape. Forest protection emerges as a networked performance involving pheromone traps, drones, aerial maps, legal regulations, pathogens, and human expertise. These heterogeneous elements co-produce decisions, responsibilities, and moral outcomes, making forest management a distributed and relational process.

Integrating perspectives from labour theory and multispecies ethnography, the study conceptualizes forest protection as situated care work—materially demanding, affectively charged, and morally complex. Building on the notion of “collaborative survival,” it shows how forestry labor unfolds within unstable assemblages of trees, insects, fungi, bureaucracies, and economic imperatives. Rather than mastering nature, foresters navigate fragile alliances across species boundaries, improvising in response to uncertainty and decay.

Forest protection, we argue, is a central but often unconscious arena for negotiating professional identity, requiring foresters to balance technoscientific rationalities with embodied knowledge, moral commitments, and shifting societal expectations. These findings illuminate how forest protection practices are shaped not only by ecological conditions but also by political mandates and regulatory frameworks. Legislation such as the EU Deforestation Regulation (EUDR), which restricts trade in products linked to deforestation, and the EU Nature Restoration Law, mandating recovery targets for degraded forests, directly influence how foresters prioritize and justify interventions. Aligning professional experience with political goals such as safeguarding and expanding forested areas is becoming increasingly important.

C) THE LANGUAGE OF CARE IN CONFLICT ABOUT FORESTS IN POLAND

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Abstract:

“Forest is a value in itself but Polish society is not ready for such thinking”, I heard during an interview with one of the participants in my research—an activist fighting against the logging of his forest. When I asked him to elaborate on this idea, he told me that an activist narrative that emphasizes the value of forests for human needs is more effective than a narrative that appeals to feelings for forests or care for other species. As it later turned out, this view was popular among other forest activists, too.

This talk is based on my anthropological research on the conflict over forests in Poland, primarily between State Forests and forest activists, during which I examine, among other things, the language used by two sides of the conflict to talk about forests. Although the motivations of many activists are rooted in relational ties and care for the forest, the language they use in official narrative is based on economic rationality, calling values that forests have for people, e.g. nonproductive services provided by forests. This language is reproducing the dominant paradigm used in forest policy.

Is this language really effective in the fight against logging? Does this narrative not reproduce patterns that separate humans from nature (Ehrenfeld 1988)? Can adding language of care to the narrative be effective? And what if we go a step further and add language of care not only to the narratives about the forest, but also to Forest Policies? I ponder these questions together with the participants in my research, examining whether the language of care for the forest can create a space for dialogue between the two sides of the conflict and contribute in building a more relational future in which humans become through relationships with other species (Tsing 2015: 152).

D) WHOSE FOREST WELLBEING? CARE, COMMODIFICATION, AND INCLUSION IN FINNISH FOREST TOURISM

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Abstract:

As forest policy increasingly prioritizes wellbeing and recreation, new forms of governance emerge, in which forests are valued through sensory and emotional connections. This presentation investigates how Finnish forests are being recast as objects of care and commodification in the expanding wellness tourism sector. Drawing on multi-sited ethnographic research (2020–2022) with three Finnish forest tourism venues, I analyse practices such as forest bathing, tree hugging, guided meditations, and tree adoption schemes offered on-site and digitally.

These venues mobilise forests as therapeutic landscapes that promote sustainability narratives and non-extractive relations. Yet they also operate within a political economy that turns ethical and affective engagement into marketable experience. Inspired by feminist care theory and environmental humanities perspectives, the paper examines how care becomes both an environmental ethic and an

economic strategy, which points towards obscuring uneven power relations, multispecies entanglements, and the governance structures shaping forest access and use.

The study highlights how wellbeing tourism reshapes forest policy debates from resource extraction toward affective value, while still embedded in neoliberal market logics. Questions of who can access forests and on what terms serve here as an entry point for broader conversations on how policy discourses of wellbeing and inclusivity may obscure the underlying market realities shaping who benefits from forest spaces.

12) KNOWLEDGE TRANSFER IN ENVIRONMENTAL SCIENCE: 10 YEARS OF RESEARCH-INTEGRATION-UTILIZATION (RIU) MODEL PRACTICES

Panel abstract:

Decisions and measures in environmental science should be based on relevant and latest scientific findings, developed within a high-quality scientific research process, to encounter challenges of climate change, improve sustainable land-use management and to foster biodiversity. Even though scientists generate innovative scientific solutions to encounter current and future environmental challenges, the solutions rarely reach practitioners on the ground nor political actors on the decision-making level. To overcome this shortcoming manifold theoretical models of knowledge transfer were developed and applied ranging from linear/technocratic over functional-/co-production models to embedded models of knowledge transfer. One of the most recent developments being the Research-Integration-Utilization (RIU) model of knowledge transfer. It is the first to acknowledge two distinct phases - research and utilization - each following its own, different rationale, in addition to a separate phase of integration connecting these different worlds. Furthermore, the RIU model takes interests and power as constituting analytical elements of the integration and utilization phase, in which interest-based and power-based processes become visible through social interactions of actors. These processes prove to be highly influential for pushing scientific information into practice. This model was applied in different environmental and political contexts as well as in developed and developing countries. After ten years of continuous application and further developments it is time to bring together scientists who have integrated the RIU model in their studies. The panel provides opportunities for intensive scientific exchange and discussions on past, present and future use of the RIU model on different science-policy interfaces applying a global perspective.

A) 10 YEARS OF THE RIU MODEL – REFLECTIONS ON THE FUNDAMENTALS, OBJECTIVES, IMPACTS, AND CRITICISM OF THE MODEL

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Abstract:

This contribution serves as an introductory speech for the panel, examining the theoretical foundations of the RIU model and its position in scientific debates on science–policy interfaces. Additionally, it draws some critical interim conclusions. First, it outlines the model's development, which dates back to two significant research projects in Germany in the 2000s. It then explains how the model gained international recognition through subsequent projects, finally being published in a book in 2016 which has since been cited over 100 times. From the outset, the aim of developing the RIU model was to challenge two prevailing approaches: the view that the transfer of knowledge from science to practice is primarily a communication problem, and the belief that greater cooperation or

even co-production between science and political practice in research would inevitably lead to greater transfer success in the context of an intensified debate on transdisciplinarity in environmental sciences. In contrast, RIU adopted a political science perspective. Insufficient communication or a lack of mutual understanding between science and practice does not alone hinder knowledge transfer; rather, political actors evaluate science-based information differently to science itself, based on their interests and power relations. Consequently, statements considered highly relevant in science, such as those on climate change, may be evaluated quite differently in politics. This can lead to limited knowledge transfer in practice due to power dynamics. RIU-based studies have also shown that increased cooperation between science and practice in the research process itself does not guarantee the utilization of scientific knowledge. Here, too, political interests and power often take precedence over science, marginalizing certain information even in such settings. Nevertheless, knowledge transfer that conveys scientifically sound information can still be successful if the right integration forums are used and powerful political allies are gained. These basic principles have been empirically tested in numerous case studies since 2016, first in Europe, then in Asia, and increasingly in Africa as well. This contribution attempts to assess the current status of the RIU model, its successes and critical points, and the need for further research. In light of current developments since the corona crisis, I will demonstrate that the knowledge transfer perspective adopted by RIU, which is based on political science, is highly relevant and explanatory.

B) RIU MODEL IN PRACTICE: INSIGHTS FROM A META-ANALYSIS OF KNOWLEDGE TRANSFER STUDIES

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Matúš Urbančík

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Abstract:

The Research–Integration–Utilization (RIU) model was developed to explain why scientifically sound knowledge often fails to influence policy decisions and practical implementation in environmental governance. Over the past decade, the model has been increasingly applied across different policy fields, governance levels, and world regions. This contribution presents a systematic meta-analysis of empirical studies using the RIU model to analyse knowledge transfer processes.

Based on a structured review of peer-reviewed journal articles published between 2013 and 2022, the contribution analyses 24 RIU-based studies from Europe, Asia, and Africa. The analysis combines quantitative and qualitative approaches to identify thematic foci, methodological patterns, and theoretical developments in the application of the RIU framework. Particular attention is paid to the

growing role of actor-centred power perspectives, the identification of allies in knowledge transfer, and the use of integration forums and facilitation mechanisms.

The findings indicate that while the RIU model remains analytically robust across diverse contexts, its explanatory power has been significantly strengthened through adaptations addressing power relations and contextual conditions. The contribution concludes by reflecting on the current state and future potential of the RIU model for analysing science–policy interfaces in environmental governance.

C) FROM NARRATIVE TO ACTIONS: THEORETICAL FRAMEWORK OF INTEGRATION AND A METHODOLOGICAL PRE-TEST

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Abstract:

New Zealand's food and fibre sector causes manifold environmental problems, ranging from greater levels of nitrogen and phosphorus in freshwater streams, and an increase in greenhouse gas emissions, to immense biodiversity losses. New Zealand's politics intend to improve its own environmental performance in land use practices. The "Moving the Middle" (MtM) research project aims to contribute to this goal at the scientific level by influencing land managers' surrounding system and system dynamics using leverage points. This paper takes the interrelation between idea-based narratives and human actions and seeks to integrate it into an interest-(power) based theoretical approach for the achievement of change in systems that affect land managers' decisions. We would like to find how reframed narratives can be transferred more efficiently, by using interest and power mechanisms that leverage system changes, to actors who influence land use. To answer the question and to test our three hypotheses we adapted the Research-Integration-Utilization model for knowledge transfer in order to transfer reframed narratives to actors. Within a pre-test, our results revealed that the existing narratives in New Zealand's land use sector consisted of dominant and shared information, according to our developed narrative definition which is based on the Actor-centred Power approach. Furthermore, we identified and characterised four different integration forums where a reframed narrative could be introduced. Within these integration forums we described relevant actors who influenced the agricultural land use sector according to interests and elements of power and influence.

D) THE INFLUENCE OF SCIENCE WITHIN FOREST POLICY MAKING - THE CASE OF PAYMENTS FOR FOREST ECOSYSTEM SERVICES FOR CLIMATE-ADAPTED FOREST MANAGEMENT IN GERMANY

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Abstract:

Forest science provides extensive scientific information. Its influence on forest-related political decision-making, however, has often proved to be negligible. For this reason, a case study on the payment of forest ecosystem services (PFES) in Germany examines the extent to which other factors influence the political knowledge transfer process and demonstrates, through a power-based definition of actors, the opportunities for political influence of researchers in the political process. An innovative approach for a quantitative analysis of political influence is employed, consisting of the four elements “coercion”, “(dis-) incentives”, “dominant information”, and “scientific information”. Using the newly introduced terms “focused interest” and “focused influence”, a differentiated analysis of the political influence of actors in relation to political issues is enabled. It becomes evident that the use of political influence resources by actors varies between political issues. For greater political impact of scientific information, a stronger consideration of the individual roles of actors and issues is recommended. The study further positions the augmented actor-centered power (ACP) framework vis-à-vis broader power theories and other ACP scholarship, highlighting its distinct suitability for tracing influence in forest policy making.

E) INTEGRATION OF SCIENCE-BASED ECOLOGY INTO SILVICULTURE THROUGH STATE-WIDE PLANNING – THE CASE OF SLOVENIA

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Abstract:

Forest management plans are the main tool that forestry is applying to integrate science-based ecology into silviculture. Silvicultural approaches, ranging from commodity-production, over multifunctional to ecological forestry, all claim to integrate results of ecological science. By using cases of ecologically-based silviculture we use the example of Slovenia to analyse whether and how forest management planning transferred innovative results of ecological science into practice. Slovenia, with its system of state-wide planning (=independent of forest ownership), nature-based silviculture and recent forestry reform represents an ideal case to study the knowledge transfer. Before the reform in 2016, state forests were managed by concessionaires and after by state-owned enterprise, all in accordance with state-wide planning. In the context of knowledge transfer, this raises the question if and how state-wide planning was able to integrate science-based ecology into silvicultural practice? For answering that, we first evaluated main scientific concepts of ecologically-based silviculture (while applying a set of indicators to our literature review) and revealed differences in their ecological standards. Subsequently, we analyzed integration of different ecological standards by Slovenian strategic, tactical, and operational forest management plans over a 30-year period (1996-now) by using the RIU model. These results were then used to evaluate if and how forest management planning was able to transfer science-based information about ecology into practice. Our results show that, during the last three decades existing contradictions between specific scientific concepts of ecologically-based silviculture did not hinder the integration of science-based information into the silvicultural practice. However, the extent to which ecological standards were applied in practice varied between the planning levels and reform periods - during the first period of concessions (1996-2016), and the second, when forest management was conducted by a state forest enterprise (after 2016). The empirical evidence from Slovenia suggests that actors and their allies shape the transfer of new scientific information into practice to large extent. This finding supports the claim of the RIU model, that not the science or practice itself but the integration forums - in our case the state-wide planning - and the actors allied within them determine the knowledge transfer.

F) KNOWLEDGE INTEGRATION PRACTICES FOR FOREST MANAGEMENT: BARRIERS AND OPPORTUNITIES FOR COMBATING DEFORESTATION AND CLIMATE CHANGE IN THE CONGO BASIN

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Abstract:

One of the greatest challenges of forest management in the Congo Basin is integrating knowledge from different sources and at different levels in order to combat deforestation/forest degradation. The limited available knowledge is not optimally integrated to efficiently achieve existing sustainability goals set by the states. On the one hand, there is scientific knowledge, which is reflected to a greater or lesser extent in international agreements, but also in national forest regulations and the institutional structures responsible for their implementation. On the other hand, there is local knowledge, which is difficult to be integrated into formalized knowledge systems. However, the major challenge is to ensure the meaningful integration of different knowledge sources to guarantee the sustainability of forest management and the fight against climate change. This contribution examines the practices of integrating supranational and local knowledge in both public policy and the daily practice of forest management. After summarizing the knowledge gathered in various institutional and non-institutional systems, we examine the integration practices that do or do not contribute to addressing the challenges of sustainability in the Congo Basin: What are the obstacles and opportunities of practices for integrating knowledge about forest management? This question is addressed from the perspective of the RIU model that is well suited to examining the links between knowledge generation, its integration, and its use for sustainable forest management. The focus is on integration, its forms and means, the actors involved in the integration process, and its results in terms of use or consideration in the actions of the various actors. The contribution is based on case studies from the KnowGlobal project, which focuses specifically on Cameroon, Gabon, and the Democratic Republic of Congo, where numerous qualitative interviews were conducted with various stakeholders.

They enable a comparison of the situations in different countries to obtain an overview of the limited level of integration in the Congo Basin. In fact, it appears that integration is more often proclaimed than practiced by stakeholders. Even though isolated integration processes can be observed, political and administrative decisions dominate over scientific decisions and local knowledge in practice. Even if scattered developments are noted, in practice, political and administrative decisions dominate over science-based choices and local knowledge. Ultimately, everything depends on the issues at stake at the time of the integration decision. This shows the fragility of the Congo Basin's mechanisms, which rely more on the interests of political actors than on institutionalized procedures of knowledge integration.

13) THE WICKED PROBLEM OF (UN)EQUAL FOREST GOVERNANCE

Panel abstract:

Forests and forest lands within and across countries are governed for competing domestic, regional and international interests and actors. The production of commodities such as timber, pulp and oil palm compete with areas designated for conservation, mining, social forestry and other activities. Flows of material, finance and ideas are enabled through networks of actors, institutions, and legitimised through discourses and selected data and information. These flows produce benefits and burdens in the different localities of production and consumption. The session uses a critical global political economy perspective to analyse the often unequal outcomes of global forest governance, in particular in frontier regions in the Congo Basin, South East Asia as well as in Europe. During the session the individual papers introduce and define concepts such as political-mapping assemblages, frontiers and the plantationocene, and how they relate to the production and reproduction of inequality. The aim of the session is to identify pathways that allow us to break with current patterns of inequality in the governance of forests and forest lands. Our target audience are scholars of different backgrounds and career stages, and the findings of this session aim at decision makers and practitioners involved in the governance of forests and markets at all levels.

A) COLONIAL LEGACIES AND PERSISTING GLOBAL TRADE INEQUALITIES: THE CASE OF GERMAN - CAMEROONIAN FORESTRY SINCE 1892

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Maria Brockhaus

Arttu Malkamäki

Alizée Ville

Grace Y. Wong

Abstract:

Forest resources have been central to colonial trade, and colonial legacies remain key in determining who benefits from ongoing deforestation in the Global South today. Combining historical trade data with qualitative archival sources, this paper explores the enduring legacy of colonialism on global economic inequality, by tracing the historical evolution of forestry-related trade between Germany and Cameroon from 1892 to 2022. Drawing on dependency theory and historical institutionalism, we conceptualize colonial legacies as sector-specific path dependencies or “stickiness”, particularly in industries shaped during colonial rule. The research underscores the role of sectoral stickiness in trade and established financial actor structures in maintaining these disparities, challenging the conventional view that attributes global inequality solely to developing countries' dependence on commodity exports to the Global North. Instead, it highlights how historically entrenched financial

systems continue to favor former colonial elites, creating an uneven playing field for local interests. The findings suggest that addressing global inequality requires a shift in focus from merely addressing trade dependencies to dismantling the financial structures that continue to support former colonial powers. Meaningful decolonization must involve not only political and cultural reckoning, but also the restructuring of global economic institutions and networks that perpetuate colonial-era privileges.

B) CHANGING FOREST FRONTIERS: LOCAL WELLBEING AND EQUITY

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Abstract:

Resource frontiers are spaces imagined as having unlimited possibilities for extraction and framed as being integral to economic activity. Frontiers are both a liminal space of anticipated development and growth and an edge where expansive extraction comes into shape and consumes local systems of access, livelihoods and memories. As forest frontiers are rapidly converted to large-scale plantations and other extractive uses throughout the tropical Global South, the loss of mixed agriculture, fallow and forest landscapes not only impact local livelihoods but also on cultures and social systems. The traditionally diverse landscapes are maintained by smallholder farming and customary practices, and where indigenous people and local communities have resource and land rights. The conversion of these complex relational systems to homogenous and commodified landscapes have a long and violent history. The narrative of frontiers as “empty” or “idle” and in need of productivity have been employed since colonial times to rationalize forms of market-based extraction that often excludes rural societies (Goldsmith 2024, Wong et al. 2022). The same narratives are used today with development led by states and transnational companies, and accompanied by flows of investments anchored in global commodity supply chains (Koh et al. 2025, Ali & Varkkey 2023). Local people in frontiers exercise their agency to engage with, negotiate and adapt to, and/or contest these externally driven forms of development. Our research in Southeast Asia and Central Africa examines how local communities’ wellbeing are tied to their different perspectives of equity, and to their variable capability to re-claim their lands or to enable and engage in the development process.

C) GLOBAL FOREST GOVERNANCE THROUGH THE PLANTATIONOCENE LENS

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Abstract:

Global forest governance today faces intensifying demands at multiple scales. This presentation provides a synthesis of four individual studies across the EU, Central Africa and Southeast Asia, that collectively examine how certain modes of forest uses are constructed, justified, and stabilised in the forest domain, while excluding alternative pathways. By engaging with critical institutionalism and the Plantationocene lens, and applying a mixedmethods approach, the studies demonstrate how

sustainability is framed across forest arenas, yet often in ways that legitimise continuity rather than transformation. This synthesis aims to answer the question: Why do forest governance interventions, despite ambitious commitments, extensive knowledge, and new policy instruments, fail to produce transformational change in forest use? The four studies present a story from how historic path dependencies and tensions in global forest governance produce persistent policy–practice gaps, how discursive framings shape political resistance to environmental ambitions and how sustainability narratives travel globally, legitimising solutions that reproduce inequality and environmental degradation. Across geographies and governance settings, sustainability emerges not as a neutral concept but as a contested political tool shaped by influential institutions that dictate which forest futures are possible.

D) THE ROLE OF EQUITABLE FOREST TENURE IN JUST POLICY CHANGE IN HALTING DEFORESTATION AND FOREST DEGRADATION

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Maria Brockhaus

Jenniver Sehring

Kaisa Korhonen-Kurki

Monica DiGregorio et al.

Abstract:

Avoided deforestation and forest degradation in the Global South is one of the most effective and cost-efficient climate solutions for reducing carbon emissions and mitigating climate change globally. A significant driver of the loss of the world's remaining tropical forests results from large-scale agriculture and commodity production linked to international trade networks, often dominated by multi-national corporations and driven by economic demands. In the complex policy ecosystem where climate and forest governance intersect, market-based public-private commitments and deforestation-free commodity policies have emerged as today's promising mechanisms to halt deforestation. Yet, despite the national and international efforts to tackle deforestation, forest loss in the tropics continues, with accelerating rates in many countries. To identify which national policy conditions, and more specifically, which combinations of these conditions, hinder or enable environmentally and socially just policy change away from business-as-usual deforestation, this study undertakes a systematic comparison of domestic public policy environments across nine Global South countries (Brazil, Peru, Guyana, DRC, Cameroon, PNG Indonesia, Vietnam, Laos). By employing Qualitative Comparative Analysis (QCA), we explore a set of conditions, drawn from both the institutional setting and the policy arena, that are expected, in different combinations, to influence deforestation-tackling policy outcomes. Particular focus is placed on exploring the roles of equitable forest tenure arrangements and supply chain governance, their interconnectedness, and equity implications.

The findings from the analysis reaffirm the assumption that deforestation-tackling policies, including supply chain governance, can have only limited impact on avoided deforestation in the absence of national ownership and political will. The success in avoiding deforestation is path-dependent on existing institutions: an effectively implemented and enforced legal forest framework, law, and policies remains crucial, while the lack of equitable land tenure arrangements in the deforestation-tackling policy environment undermines not only policy effectiveness, but also human rights.

E) ANALYSING THE INEQUALITY MACHINE: A CRITICAL EXAMINATION OF THE GLOBAL FOREST SECTOR IN THE CONGO BASIN

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Patrice Bigombe, Blaise-Pascal Ntirumenyerwa Mihigo, Symphorien Ongolo, Jianmin Xiao, Sandrine Andong, Roger Mbuyu Kimpesa Kasulo, Chenmei Li, Alexandra Rasoamanana, Alizée Ville, Hannah Ehrlichmann, Niina Pietarinen, Felicien Kengoum, Yves Mandjem, Mawa Karambiri, Samuel Assembe-Mvondo, et al.

Abstract:

In many tropical forest-rich countries, among them Cameroon and the DRC, the exploitation of forests and forestland is often justified by the promise of development and increased societal welfare. Yet, inequality in benefits and burden sharing is persistent, across and within societies, human and non-humans. Over the longer term, the forest sector appears to have benefitted those that have historically organised forest exploitation and forestland conversion in the Congo Basin as colonial powers, namely Belgium, France and Germany. More recently, China emerged as a new power in the region. Not least, state bureaucracies and national elites are also entangled in rent seeking throughout historic and current politics of land, trade and finance. How can we explain differences in benefits and burden sharing, and what are the underlying mechanisms driving these inequalities? With an explicitly historic and critical political economy lens, we conduct a comparative analysis of factors (re)producing (in)equalities when forests and forest lands are exploited in the Congo Basin. To shed light on benefits and burden sharing, we apply a 4I lens, and investigate institutional stickiness over time, as well as actor's interests, ideas and beliefs and the role of information in forest and land governance, it's policies and practices. Our data corpus entails policies, agreements as well as presentations and meeting notes, statistics from national and international sources, and interview transcripts and observations from exchanges with national and international actors in Belgium, Cameroon, China, DRC, France, and Germany. Our results indicate that both institutional and agency related 'sticky' factors are at play. Extraction, exclusion, and silencing operate as the main mechanisms maintaining the machine of inequality. They will need to be targeted in discourse, policy and practice for any ambition to engage the forest sector for more just future pathways, across geographies in the North and South.

14) MISMATCHES, OBSTACLES OR BARRIERS? SCRUTINIZING REASONS WHY FOREST COMMUNICATION FAILS

Panel abstract:

In recent decades societal values concerning nature and forests have evolved in most parts of Europe, resulting in changed and diversified human–nature relationships and an increasing importance of relational values associated with forests (Buijs und Lawrence 2013; Halla et al. 2023; Riechers et al. 2025). This development is mirrored and reinforced by policy decisions at the European Union level, indicating a paradigm shift towards a stronger preferences for ecological sustainability, nature conservation, and biodiversity protection in forest management (Fleckenstein 2024; Gordeeva et al. 2025). Consequently, today the forest sector encompasses highly heterogeneous actors with different values, forest-related preferences, silvicultural objectives, and self-perception (Wagner und Miederhoff 2025; Hengst-Ehrhart und Schraml 2020; Köhler et al. 2024).

The ongoing transition has spurred major developments in forest-related communication and discussions about professional identity within forestry and its stakeholders. There has been an intensification and diversification of communication, with new channels, framings, and narratives being used to communicate the changing role of forestry, as well as to actively interact with the public. However, these communication efforts have achieved limited success. The increasing diversity of the forest sector is still insufficiently reflected in both the scientific literature (Mack et al. 2024) and in public perceptions of forestry (Riedl 2025).

This panel explores why forest-related communication often fails to effectively convey the current transition within forestry to the broader public. Drawing on multiple case studies from Europe and based on insights from communication psychology and effective communication, the panel identifies key challenges and pitfalls in forest-related communication. Ultimately, a deeper understanding of how communication works – and how it can fail – offers a pathway toward more inclusive, trust-based forest governance. From a theoretical perspective, the panel aims to explore the mismatches and gaps arising from communication challenges: Are they merely obstacles, or do they represent fundamental barriers? Do they point toward eventual alignment – or an increasing divergence?

A) HOW WORDS SHAPE THE PERCEPTION OF FORESTRY IN GERMANY: ALIGNING CONTENT AND LANGUAGE FOR EFFECTIVE STRATEGIC COMMUNICATION

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Abstract:

Effective communication has become essential for shaping the public perception of forests and forestry, especially in the face of societal change and ecological challenges. This study explores how language use contributes to strategic communication by focusing on the concept of language intensity (LI), defined as the rhetorical richness or degree to which language deviates from neutrality and evokes emotional responses. Grounded on a framework of strategic communication and the language expectancy theory (LET), this research investigates the extent of emotionalization in the language used by various forest-related and forest-focused actors in Germany. A language intensity analysis was applied to texts on websites and social media platforms (Facebook and Instagram) from 33 organizations in total, including ministries, state forest enterprises, NGOs, and research institutions.

Using a linguistic analysis based on established LI metrics (Bowers, 1964; Donohue, 1991), the study traces five linguistic means and calculates their weighted emotionality. Results reveal substantial variation in LI across actors and media channels. NGOs focused on nature conservation generally use higher LI, whereas public administration and research institutions deploy more neutral language. In our study, communication on websites was more emotionally expressive than on social media. The findings suggest that many forestry actors use a factual communication style that may contradict their strategic goals to reframe the forestry sector as multifunctional, modern and innovative. The study concludes that aligning language style with communication purposes and audience expectations is essential for persuading the public of a positive transition of the forest sector.

B) UNDERSTANDING FOREST COMMUNICATION: HOW EMOTIONS AND EVIDENCE SHAPE PUBLIC ATTITUDES AND PERCEPTIONS

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Abstract:

Forests are increasingly central to climate and biodiversity debates, yet communication about them often oscillates between emotional storytelling and scientific rationality. This study investigates how different communication styles shape public engagement and the depth of information processing. Drawing on the Elaboration Likelihood Model (ELM), six focus groups representing all German Sinus-Milieus discussed two contrasting forest-related videos—one fact-focused, one emotionally framed. Thematic analysis identified indicators of central and peripheral processing routes. Findings show that elaboration depended more on individual motivation and prior knowledge than on social milieu affiliation. Overly emotional messages triggered skepticism, while emotionally grounded, authentic communication fostered engagement without necessarily deepening understanding. Conversely, factual content enhanced credibility but risked cognitive overload and emotional detachment. The results highlight the need to reconcile emotion and evidence in environmental communication to cultivate informed, reflective publics capable of forming stable attitudes and supporting meaningful participation in sustainability transitions.

C) ANALYZING THE SOCIAL MEDIA PRESENCE OF INSTITUTIONAL FOREST STAKEHOLDERS TOWARD TARGET GROUP-ORIENTED COMMUNICATION THROUGH SINUS-MILIEUS IN GERMANY

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Abstract:

Inaccurate and varying levels of knowledge about forests and forestry among different population groups lead to confusion, mistrust, and public discontent. Therefore, precise target-group-oriented mass media communication is essential for the forestry sector to strengthen understanding of and acceptance for the measures urgently needed to combat climate change. This article compares the social media accounts of forestry institutions with a high number of followers with accounts with less success and the accounts of private influencers who communicate about forestry issues. It asks if these accounts correspond with the target group-oriented communication approach, provided by the Sinus Institute. The article aims to understand why key forestry information is not understood, accepted, or internalized in the long term by parts of the German population. Additionally, the article analyzes which social groups are hardly reached by existing communication practices and the factors contributing to effective milieu-sensitive communication. The study is based on data collected in

cooperation with the Sinus Institute (n=2081), which provides detailed insights into the channel preferences, trust structures, and thematic interests of milieus in Germany. The results reveal clear disparities between institutional communication strategies and those employed by private influencers. The results offer guidance on how forestry institutions can improve the effectiveness and impact of their public relations efforts.

D) FOREGROUNDING SURFACING FOREST VALUES ON INSTAGRAM AND YOUTUBE: A CASE STUDY OF COASTAL PLANTATION FORESTS IN DENMARK

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Abstract:

In the age of social media, forest visitors capture and share their experiences on platforms such as Instagram and YouTube, rendering particular landscape features, vegetation, and wildlife publicly visible. At the same time, information boards, paths, bridges, and even picnic tables shape how people move through and engage with forest landscapes. Through these visual and textual forms of communication, users express interests, appreciations, and concerns, and articulate what forest sites mean to them. While platform vernaculars and visibility logics influence how content is presented and indexed, the values expressed in these representations provide insight into how forest sites are used, perceived, and associated with, and point to which existing public values may gain prominence in policy debates. This is particularly relevant in western coastal Denmark, where plantation forests require active management to restore dune habitats and protect biodiversity. As tourists and local residents hold specific relationships and expectations toward these forests, policymakers need to understand the existing, publicly articulated values and site associations to anticipate how landscape changes and policy interventions may be received.

This paper employs a networked content analysis (Niederer, 2019), combined with digital methods (Rogers, 2013) and visual methods (Niederer & Colombo, 2019), to examine how human and ‘more-than-human’ actors are publicly represented in digital portrayals of Danish coastal plantation forests on Instagram and YouTube. Situated within digital STS, media studies, and visual culture studies, the analysis attends to the networked and multimodal nature of social media posts as digital objects. By identifying which actors become visible, how they are portrayed visually and textually, and which forest-related values are articulated through these representations, the study offers policy-relevant insights into existing forms of forest practices and engagement in the Danish context.

E) LOSING EMOTIONAL CAPITAL: FORESTRY EXPERTISE AND POWER IN FOREST POLICY DEBATES

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Abstract:

Forestry professionals have traditionally understood themselves as epistemic authorities whose societal legitimacy is grounded in formal training, institutional embeddedness, and access to allegedly objective bodies of knowledge. Within this professional self-conception, the relationship to the forest is predominantly constructed as rational, technical, and explicitly non-emotional. Emotions are framed as a disturbance to professional expertise and are primarily attributed to “lay” actors or critics of forest management.

In socio-political negotiations over forest use, conservation, and climate adaptation, this perspective reproduces a hierarchical dichotomy between rational forestry experts and emotionalized, supposedly knowledge-deficient publics. This paper argues that such a self-understanding overlooks central dynamics of power and knowledge production in forest policy discourses. Drawing on Pierre Bourdieu’s theory of capital, emotions are conceptualized as a form of social and symbolic capital that is crucial for generating recognition, legitimacy, and discursive resonance in the public sphere.

The paper demonstrates that the systematic devaluation or externalization of emotions within the forestry expert habitus leads to a loss of this emotional capital. As a consequence, forestry actors increasingly face legitimacy deficits in forest policy arenas—such as debates on forest transformation, biodiversity conservation, or competing land-use claims—and lose discursive authority to civil society, conservation, or media actors who successfully mobilize emotional relationships with forests.

Rather than positioning emotions in opposition to knowledge, the paper conceptualizes them as a constitutive element of forest policy negotiations. It argues for a reflexive expansion of forestry identity and expertise that acknowledges emotions as a resource without abandoning scientific rationality. In doing so, the contribution offers a theoretical impulse for critical forest policy research and for the further development of forestry communication and participation strategies in the context of increasingly pluralized forest societies.

15) TRADITIONAL KNOWLEDGE AND BIOCULTURAL LANDSCAPES: COMPARATIVE PERSPECTIVES FROM AFRICA, SOUTH AMERICA, ASIA, AND EUROPE

Panel abstract:

This panel session focuses on the integration of traditional knowledge, non-timber forest products (NTFPs), and landscape-based management to enhance the ecological, social, and economic resilience of forest communities. It presents comparative regional and country cases from Africa, South America, Asia, and Europe, including Indigenous and community-based NTFP systems in Africa and the Amazon, *adat*-based customary governance and social forestry transitions in Indonesia, forest–water–microbial knowledge systems linked to fermented beverages in Japan, and multifunctional landscape practices embedded in biosphere reserves and protected area networks in Europe.

By adopting a biocultural and landscape perspective, the panel aims to deepen understanding of the status, challenges, and opportunities associated with traditional knowledge and NTFPs, and to explore how these knowledge systems can be better integrated into contemporary governance frameworks, value chains, and sustainability transitions to strengthen community resilience.

NTFPs provide multiple benefits to communities in food security, nutrition, and livelihoods, and remain crucial income sources for forest-dependent and Indigenous communities across diverse regions. Traditional knowledge has been cumulatively developed through long histories of cultivating, harvesting, processing, and using NTFPs, as well as managing the surrounding forest and agricultural landscapes in which these resources are embedded. The values of traditional knowledge and NTFPs—ecological, cultural, and economic—have increasingly been recognized in global policy debates and heritage frameworks.

However, significant institutional and governance challenges persist in maintaining traditional knowledge systems, ensuring intergenerational transmission, and adding value to NTFPs in ways that are socially equitable and ecologically sustainable. These challenges are particularly evident in contexts of demographic change, market integration, climate variability, and the expansion of formal conservation and certification regimes.

A) CONTRIBUTION OF TRADITIONAL KNOWLEDGE OF EDIBLE NON-TIMBER FOREST PRODUCTS TO HUMAN HEALTH AND LIVELIHOOD

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Abstract:

Traditional knowledge related to edible non-timber forest products (NTFPs) plays a crucial role in supporting food security, nutrition, and livelihoods in forest-dependent communities across Africa. While global syntheses have examined research on edible NTFPs, the internal patterns and orientations of African scholarship remain insufficiently explored. To address this gap, this study analyzes research trends on traditional knowledge related to edible NTFPs in Africa using the African subset ($n = 162$) of a global dataset compiled by Min et al. (2024), which was constructed through a Scopus-based search targeting studies at the intersection of traditional knowledge, edible resources, and NTFPs. This research assessed geographic and temporal distributions, NTFP types, reported impacts, research methods, and keyword occurrence patterns in Africa. The results reveal a pronounced geographic concentration of research, with studies clustered in a small number of countries - particularly Ethiopia, South Africa, and Uganda - while Middle Africa remains markedly underrepresented. Methodologically, African NTFP studies rely predominantly on interview-based ethnobotanical approaches, with limited use of laboratory-based nutritional or biochemical analyses. Overall, the findings indicate that research on edible NTFPs in Africa remains a health-oriented perspective centered on medicinal herbs. While descriptive studies focusing on the functional utilization of medicinal herbs are prevalent, research addressing market development and industrial applications is scarce. These results suggest that studies on traditional knowledge related to edible NTFPs would benefit from a more strategic approach that incorporates stages of industrialization aimed at enhancing local livelihoods. Future research should pursue broader thematic coverage, expanded geographic representation, and more diverse methodological approaches to strengthen the contribution of traditional knowledge to food security, nutrition, and livelihood-oriented policies.

B) FROM HARVESTING NORMS TO MARKET GOVERNANCE: AN ANALYSIS OF PRACTICES AND PERCEPTIONS IN YUNNAN, CHINA

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Ryo Kohsaka

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Abstract:

This study examines how institutions and market governance shape villagers' harvesting practices, perceptions of fairness, and the role of traditional knowledge in the matsutake mushroom sector of Yunnan, China in contemporary contexts. The analysis draws on more than 120 valid household surveys collected in Shangri-La and Chuxiong, complemented by semi-structured interviews with farmers and local stakeholders, as well as participatory observation during harvesting and trading activities. The study adopts a knowledge-governance interface perspective, combining both quantitative breadth and qualitative depth, enabling an examination of how rural households perceive and engage with local rules and markets. The survey investigates villagers' awareness of village regulations, harvesting norms such as the avoidance of immature mushrooms, sales channels, grading practices, and attitudes toward fairness in transactions. Preliminary observations suggest that while matsutake income constitutes only a supplementary share of household earnings, harvesting nevertheless remains an important seasonal activity for many households. The data also suggest differences in how households perceive rules and fairness in market transactions, likely linked to variations in local institutional settings. Awareness of branding or geographical indications remains limited across sites. These findings provide new empirical evidence on how rural households negotiate between customary norms and market institutions, offering insights into non-timber forest product governance and rural livelihood strategies.

C) THE ROLE OF TRADITIONAL ECOLOGICAL KNOWLEDGE IN SHAPING FOREST STEWARDSHIP: EVIDENCE FROM JAVA, INDONESIA

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Abstract:

Indonesia's forested landscapes are undergoing rapid socio-demographic change, characterized partially by weakening of customary governance institutions transitioning to formal yet incomplete regulations. As a response, social forestry has emerged as a key policy instrument to re-anchor local livelihoods and stewardship within multifunctional landscapes since 2014. This paper examines how

customary norms and traditional ecological knowledge continue to shape landscape management practices under conditions of depopulation, with particular attention to state-manage landscapes of Java, Indonesia. Using a combined case-based and legal system review approach, the study analyzes how customary based tenure norms, collective rules, and customary institutions are articulated, recognized, and transformed within formal social forestry and spatial planning frameworks including PIAPS map. The analysis situates resource use within broader landscape mosaics, linking subsistence activities, food provisioning, and ecosystem services—to community resilience. The findings suggest that customary institutions serve as vital 'social mechanisms of access,' enabling communities to navigate the bureaucratic bottlenecks of formal permit acquisition. These local norms provide the institutional elasticity necessary to maintain forest stewardship even as traditional agrarian structures are pressured by modern market integration. However, misalignments remain between decentralized spatial planning, national social forestry programs, and locally embedded knowledge systems. The paper argues that recent shift toward centralized, digitalized licensing under the recent Omnibus law risks reducing social forestry to a tool of administrative compliance; true reform requires moving beyond the mere issuance of permits to ensure that communities possess the substantive 'bundle of powers'—including capital, technology, and market links—required to benefit from the forest in a changing global economy.

D) FERMENTED LANDSCAPES AND BIOCULTURAL HERITAGE: TRADITIONAL KNOWLEDGE IN WIENER GEMISCHTER SATZ AND JAPANESE SAKE

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Abstract:

Traditional knowledge embedded in fermented beverage production are gaining salience as cultural heritage in the UNESCO Intangible Culutural Heritage registration in 2024. The knowledge is instrumental also in shaping resilient agro-ecological landscapes and regional identities. This paper presents a comparative analysis of *Wiener Gemischter Satz* (WGS) wine production in Vienna, Austria, and traditional Japanese sake brewing, focusing on how historically accumulated knowledge systems interact with landscape management, institutional frameworks, and contemporary environmental change. While wine and sake differ in raw materials and production processes, both rely on place-based knowledge linking biological diversity, climate, water, forests, and human practices.

Drawing on a comparative case-based approach, the study examines how mixed-vineyard practices in WGS and forest- and water-dependent sake brewing in Japan function as adaptive strategies within their respective landscapes.

In Vienna, varietal diversity and co-fermentation reflect a traditional risk-minimization strategy that has been revalorized through DAC and PDO schemes and embedded within biosphere reserve and Natura 2000 landscapes. In Japan, sake brewing traditions integrate forest management, water governance, microbial knowledge (e.g. *koji* cultivation), and technological evolution, contributing to the construction of terroir-like concepts and premium value despite the absence of formal appellation systems comparable to European PDOs.

E) A MOUNTAIN WOMAN’S LIFE AND THE CHANGING RURAL LANDSCAPE IN JAPAN

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Abstract:

This study examines the experiences of a 74-year old woman living in a mountain village, using the tanka poems she composed to explore the lives of rural women and the social transformations that have shaped them. Her life spans a period of profound change: the shift from extended to nuclear families, the transition from agrarian livelihoods to a money-based economy, and the reconfiguration of mountain use from charcoal production to plantation forestry. Amid these transformations, she and her family fulfilled their long standing responsibility to protect the land passed down “for generations” and to cultivate the mountains for the sake of future descendants. Yet the younger generation has not inherited the skills or knowledge of agriculture and forestry, and their sense of responsibility toward the land and the village has gradually weakened.

She lived through an era in which the notion of “freedom” was scarcely available to women, and she carried out her roles through endurance and effort. Only in recent years has she gained time for herself, though she continues to work in the fields and mountains, drawing on the extensive skills she has accumulated. Growing up when marriage was virtually the only path for women, she trained for domestic roles and worked tirelessly as a wife, mother, and daughter in law. She does not envy younger generations who enjoy modern conveniences; rather, she takes pride in a life rooted in farming and mountain work. While freedom expands one’s choices, the act of fulfilling responsibility has grounded her in the land and cultivated her creativity.

Her life story reveals that the values and practices sustaining mountain livelihoods now stand at a critical turning point. The question of how we relate to the land, and what kind of future we choose to build, becomes increasingly urgent. At the same time, it remains essential to observe how the meaning and ownership of the mountains will evolve, and for whom they will exist in the years to come.

16) REIMAGINING ENGAGEMENT: DELIBERATIVE, INNOVATIVE, AND INTERPRETIVE APPROACHES TO STAKEHOLDER ENGAGEMENT IN FOREST GOVERNANCE

Panel abstract:

Contemporary forest governance relies on a broad mix of engagement practices ranging from formal consultations and multi-stakeholder deliberation to community-based initiatives and creative or narrative-driven approaches. While participation is widely promoted as essential for legitimate and effective governance, gaps often emerge between what engagement is expected to achieve and how it unfolds in practice. This panel brings together contributions that examine these dynamics through deliberative, socially innovative, and interpretive approaches to engagement, with a focus on how they interact with and support forest governance processes.

The main objective of this session is to explore how different forms of engagement in forest governance operate in practice and how they address questions of inclusiveness, knowledge recognition, collaboration across scales, and learning over time. The panel brings together analyses of formal participatory and multi-level deliberative processes, socially innovative governance arrangements that reconfigure relationships foster cooperation, and strengthen socio-ecological resilience, alongside narrative and creative methods that surface lived experience and perspectives often overlooked by institutional processes.

Taken together, the panel creates a space for dialogue across different modes of engagement and governance contexts. While grounded in a set of confirmed case studies and conceptual contributions, the session remains open to related perspectives that resonate with its themes. In line with the aim of reimagining engagement, the panel concludes with a dedicated interactive discussion that invites participants to reflect on their own experiences with stakeholder engagement in forest-related decision-making. This collective exchange will focus on how engagement practices can better support inclusive, adaptive, and climate-smart forest governance in diverse policy and practice settings.

A) BETWEEN AMBITION AND REALITY: LESSONS FROM CO-CREATING THE FIRST PAN-EUROPEAN FOREST RESEARCH STRATEGY

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Abstract:

Co-creation has become central to contemporary research and innovation (R&I) policy development, promising inclusive, legitimate, and implementable strategies. Yet translating theoretical principles of deliberative democracy into practice remains challenging, particularly in complex, multi-level, multi-stakeholder contexts. This paper examines the EUFORE project's ambitious effort to develop the first pan-European Strategic Research and Innovation Agenda (SRIA) for the forest-based sector through a large-scale, multi-national, multi-level stakeholder co-creation process.

The EUFORE stakeholder engagement process was grounded in Habermasian communicative action theory, stakeholder salience frameworks, and power-sensitive participation principles. The design featured comprehensive quadruple helix stakeholder mapping, iterative regional-to-European deliberations across six geographical regions, thematic working groups, and explicit mechanisms to address power imbalances, including travel support, procedural rules, and stratified selection. Drawing on multiple data sources such as attendance records, stakeholder surveys, meeting documentation, post-process interviews, and our own reflective observations as project coordinators, we systematically compare theoretical intentions with practical realities across six analytical dimensions: stakeholder inclusiveness, deliberative quality, power dynamics, multi-level integration, procedural adaptiveness, and co-ownership perceptions.

The resulting SRIA reflects genuine multi-stakeholder input, though questions of implementation commitment remain. This reflective case study contributes empirical evidence to the deliberative democracy and co-creation literatures while offering pragmatic lessons for practitioners designing similar large-scale participatory processes. We discuss the opportunities and pitfalls of "good enough" deliberation that acknowledges practical constraints while maintaining democratic legitimacy, and propose refined expectations for what co-creation can realistically achieve in complex governance contexts, particularly in designing inclusive strategies for the forest-based sector and beyond.

B) WHY SOCIAL INNOVATION MATTERS IN RURAL, MEDITERRANEAN FIRE-PRONE TERRITORIES

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Abstract:

This study explores how social innovation (SI) can promote resilience in rural Mediterranean Europe. These territories are highly fire-prone, but also face multiple interconnected challenges such as depopulation, economic marginalization, which are exacerbated by land use and climate change. This research focuses on two case studies exemplifying examples of SI in governance, both in rural Valencia (Spain): the municipality of Aras de los Olmos, and the extensive grazing project "A Paso Lento" in Alcublas. These two cases illustrate how socially innovative governance (SIG) approaches can reconfigure rural governance systems in a way that supports the socio-ecological resilience of the system as a whole, beyond wildfire risk mitigation.

The findings show how SIG has a very important role in fostering inclusive, democratic decision-making processes. These empower local communities and create enabling conditions for the collaboration of the public with public administrations, and also of government levels across scales. Furthermore, these two examples show how facilitating urban-rural connections and strengthening the social bonds in a community can help integrate multiple actors. These have an and mobilizing resources across scales support economic revitalization, and builds socio-ecological resilience by. The two initiatives presented here demonstrate how SIG can enhance the quality of life in rural areas, in a way that wildfires are not anymore, the sole focus, but merely an integrated part of the rural governance system. This further reinforces the argument that a more systemic and territorial perspective to wildfire governance is needed, emphasizing the importance of addressing interconnected socio-economic and ecological factors. This shows how social innovation is a territorially embedded process that can enhance wildfire resilience of rural territories at risk.

C) CREATIVE AND VISUAL APPROACHES TO ENGAGEMENT IN CLIMATE-SMART FORESTRY

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Abstract:

Understanding community narratives about forests and climate change requires attention to how meanings are co-created through engagement, including creative and visual forms of expression. This study draws on case studies from European sites within the FORWARDS project to explore creative and visual approaches to engagement in Climate-Smart Forestry (CSF). Focusing on practices that combine visual elements, storytelling, and facilitated interaction, the study reflects on how engagement approaches are designed, enacted, and adapted across different forest contexts. Rather than treating visuals and stories as outputs, they are approached as part of co-creative engagement processes that shape how forest change and responsibility are discussed and understood.

Situated alongside scientific narratives of CSF identified in earlier research, the study considers how these engagement practices give rise to community narratives that can be traced, compared, and reflected upon. Adopting a narrative-led orientation, it explores how creative and visual approaches support dialogue, learning, and reflection, and what they offer for strengthening participatory engagement in forest governance.

D) FOREST STORYTELLING AND ENGAGEMENT FOR CHANGE

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Abstract:

The development of the practical toolkit “Forest Storytelling and Engagement for Change” was led by European Forest Institute in collaboration with King’s College London and Prospex Institute. With this Guide, we contribute to debates on inclusive forest governance by examining storytelling as a practical and creative engagement approach. Drawing on the EU-funded SUPERB project, “Forest Storytelling and Engagement for Change” is designed to support forest restoration and biodiversity actions through a variety of stories: from online debates to locally grounded narratives. The toolkit recognises diverse forms of knowledge, surfaces lived experiences often overlooked in formal restoration

processes, and supports collaboration between diverse stakeholders. It provides activities and advice to those with an interest in the role of stories in shaping forests – from a policy-maker interested in understanding who and what might be missing from their plans, a forest practitioner interested in how people are

engaging with their site, or a community group interested in what kinds of stories there are about forests in the area. By using storytelling to strengthen relationships between people and forests, our approach fosters social learning, broadens participation, addresses conflict, and helps embed restoration efforts within local socio-ecological contexts.

17) JUST TRANSITIONS IN FORESTS AND RELATED LANDSCAPES: PERCEPTIONS AND REALITIES ACROSS EUROPE

Panel abstract:

Within the Paris Agreement the significance of climate justice in actions to address climate change is explicitly recognized (Paris Agreement, 2015). This international acknowledgement implies that signatory countries endorsed the principle that climate action must be conducted in a just manner. On EU level, then, the European Green Deal emphasises the need for a just transition, stating that “this transition must be just and inclusive. It must put people first, and pay attention to the regions, industries, and workers who will face the greatest challenges” (European Commission, 2019). In response to the calls for justice, this panel aims to investigate the realities of these just transitions, especially considering local, regional, and national contexts of forest and related landscapes.

Understanding justice perceptions matters for two reasons. First, justice has intrinsic value: analysing it helps prevent deepening inequalities, ecological vulnerabilities, and socio-economic marginalization. Second, justice has instrumental value: perceived justice can enhance policy acceptance, while perceived injustice and marginalization may trigger backlash and slow transitions (Bergquist, 2022; Mehleb, 2021).

Literature on just transitions and environmental justice often refers to three core dimensions: procedural, recognitional, and distributive justice (Schlosberg, 2007; Wang et al., 2021). Each of these dimensions can be further broken down into sub-dimensions. For example, in relation to distributive justice questions arise about what people perceive as a just distribution of benefits and burdens, including what costs and benefits are deemed important, which mechanisms should be used to create this distribution, what moral argumentations are perceived as valid to base the distribution on, and what vantage point is used to judge whether a specific distribution is or is not just. It becomes evident that realities and justice perceptions highly influence the decisions taken on a just transition pathway. However, more critical approaches on land use change in forest and related landscapes have mostly examined justice concerns in the Global South and in North–South relations while perspectives within a European context remain underexplored. The realities of these transitions, how they unfold and how they are perceived, experienced, and contested by practitioners, are still poorly understood.

This panel explores (in)justice perspectives, preferences, and lived realities among practitioners implementing transitions in forests and related landscapes. Practitioners include, for example, forest and water practitioners and decision-makers, forest owners, and those responsible for natural hazard management.

We particularly welcome case studies or comparative analyses from Europe, as just transitions in Global North contexts. Contributions applying an environmental justice, just transition, or political ecology lens are strongly encouraged.

A) WHO SHOULD GET WHAT AND WHY? EXPLORING THE DRIVERS OF STAKEHOLDER PREFERENCES FOR POLICY OPTIONS IN NATURAL HAZARD MANAGEMENT

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Susanne Hanger-Kopp

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Abstract:

Switzerland's infrastructure for protecting against natural hazards, like floods, debris flows, and landslides, is aging and needs renovation. At the same time, climate change is making these hazards more frequent and severe. These growing challenges call for new policy and management options.

However, respective policies and management options often come with trade-offs, benefiting or disadvantaging some groups more than others. While a lot has been written about stakeholders' preferences of different policy options, we know much less about "why" they have different distributive justice preferences. For example, it is unclear whether their distributive preferences are shaped more by self-interest, professional roles, or personal values. Understanding what drives these distributive preferences and addressing these drivers is key to designing policies that are widely accepted and capable of fostering compromise among different stakeholder groups. This study thus explores both stakeholder's distributive preferences and their drivers.

We conduct semi-structured and open-ended interviews with stakeholders, such as farmers and foresters as well as local policy makers (n= 30 - 45) in Spring 2026 in Switzerland in three case studies, which differ in the degree of natural hazard exposure and the prevailing engineering approaches, from low to high risk. We ask stakeholders about their preferences about components of different policy and management approaches. These preferences will form the dependent variable. In a next step, we explore stakeholders' motivations behind these preferences. This will form the independent variable. For instance, a farmer's opposition to river revitalization may not stem from the loss of productive land, but from a perceived threat to their identity: subsidies tied to revitalized areas may make them feel more like landscape gardeners than farmers, prompting resistance to policy measures. We will then assess through content analysis the aggregated preferences for policy and management options and explain why stakeholders hold these preferences. The results will serve to inform policy makers on stakeholder preferences and will improve policy making by taking the underlying reasons for stakeholder's preferences into account.

B) SOCIALLY ACCEPTABLE TRANSITION PATHWAYS IN THE FOREST SECTOR: INSIGHTS FROM SWEDISH FOREST OWNERS AND SCENARIO MODELLING

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Abstract:

Forests are central to reaching the Paris Agreement goals. In the EU, most forests are privately owned, making forest owners key actors in climate transitions. For these transitions to succeed, they must therefore be perceived as socially acceptable by forest owners. Previous research has highlighted that forest owners do not represent a homogenous group, but that they differ in motivations and values, and it is therefore likely that they also have different perceptions on what a socially acceptable transition in the forest sector ought to look like. As the EU and MS countries are working on developing their forest-climate related policies amid growing opposition, understanding these diverse perceptions is crucial. This paper aims to identify which kind of forest transition pathways are perceived as socially acceptable by forest owners and assess their potential to meet Paris Agreement commitments. We address the following research questions: (A) How do different forest owners perceive the roles of forests in climate transitions? (B) Which forest management strategies are preferred, and by whom, to mitigate climate change? (C) How do different forest owners view different policy instruments related to forest-sector transitions? and (D) How should these instruments be designed to foster social acceptance? To answer these questions, we combine social acceptability theory with literature on transition pathways and policy design and examine empirical material collected during 5 focus groups with 20 Swedish forest owners. Finally, we model the preferred pathways to evaluate their contribution to increasing forest carbon uptake. Based on the preferred pathways model, we also provide recommendations for management measures that can enhance social acceptance and climate mitigation potential.

C) A RACE TO NET ZERO: FRAMINGS OF (IN)JUSTICE IN THE POLITICAL DISCOURSE RELATED TO THE EU'S LAND USE, LAND USE CHANGE AND FORESTRY REGULATION

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Abstract:

The integration of climate targets into EU forest governance is politically contentious, with policy actors pursuing conflicting objectives through justice-based claims of victimisation and marginalisation, often resulting in intractable conflicts. This paper examines how justice is framed by policy actors in political debates concerning the EU's Land Use, Land Use Change, and Forestry (LULUCF) Regulation. We answer three research questions: a) what just transition frames are employed by policy actors within the LULUCF discourse, b) who uses these frames, and c) how these frames relate to the official EU LULUCF policy framing. To address these questions, we analyse 101 stakeholder submissions from the EU's Have Your Say initiative and key EU LULUCF policy documents. Integrating frame analysis with environmental justice and political ecology theories, we identify five distinct just transition frames: Forestry first, Forests for climate, EU transition policy pragmatism, Biodiversity and climate first, and Addressing the periphery. Findings reveal significant structural power asymmetries, with economically dominant, industry-aligned frames being privileged in official policy texts. Conversely, ecological concerns, regional interests concerning Europe's periphery, and specific forms of practitioner knowledge remain marginalised or excluded. Such underrepresentation intensifies regional inequalities, ecological vulnerabilities, and socio-economic marginalisation. Across all identified frames, policy actors consistently highlight procedural injustices, including limited transparency and inadequate participation opportunities. The paper concludes that addressing these justice deficits requires recalibrating EU forest governance towards genuine procedural inclusivity, fairer distribution of policy burdens, and explicit recognition of both material and epistemic marginalisation.

D) GROUNDWATER RIGHTS DISTRIBUTIONS UNDER UNCERTAINTY ACROSS GERMANY

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Abstract:

Amid growing concerns about water scarcity and uncertainty about groundwater availability, German Lower Water Authorities (LWAs) are facing increased pressure to allocate groundwater rights in a just way. While the National Water Strategy emphasizes the promise of improved data and monitoring to support conflict-free decisions, this contribution argues that uncertainty in groundwater governance cannot be overcome solely through better quantification. Drawing on political ecology and uncertainty studies, we conceptualize uncertainty as an experienced and relational condition emerging from the interplay between groundwater's material properties, technological knowledge practices, and institutional-legal decision arenas. Based on 23 in-depth interviews with LWAs across Germany, the paper identifies diverse sources of uncertainty that shape decision-making: epistemic uncertainties linked to limited or missing hydrological data; ontological uncertainties rooted in groundwater's spatially heterogeneous, invisible, and temporally delayed behavior; and normative uncertainties arising from the legal leeway and value-laden choices embedded in rights allocation. Decision-making under uncertainty leads to a wide range of practical responses in the granting of rights: some authorities adopt precautionary interpretations of the law, while others privilege applicants' presumed rights to extraction. These diverging practices reveal that uncertainty is not merely a technical obstacle but a site of normative judgment and interpretation. The paper demonstrates that the weighing of different uncertainties is decisive for groundwater rights allocation. It ultimately contributes to understanding groundwater governance as an entanglement of material, epistemic, and normative uncertainties, with implications for emerging prioritization strategies in Germany and for reflecting on questions of justice in future groundwater allocation processes.

E) NORM CONTESTATION THROUGH DISCOURSE NETWORKS – THE CASE OF THE NATURE RESTORATION REGULATION

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Abstract:

The European Union's Nature Restoration Regulation (NRR), adopted in 2024 as part of the European Green Deal, aims to address decades of ecological degradation by setting binding ecosystem restoration targets, including explicit measures for forests. Its legislative process was marked by

intense political contestation: environmental NGOs and scientists promoted ambitious restoration goals and ecological responsibility for future generations, while forest associations and conservative parties warned of property rights violations, unequal distribution of burdens, and overregulation. These controversies show deeper normative contestation over environmental issues within European institutions and across member states. We investigate how such contestation unfolds in public discourse, asking: (1) which norms were addressed and contested in European media debates on the NRR; (2) how actor constellations around these norms developed; and (3) how contestation dynamics contribute to the legitimization of EU environmental governance in forest restoration, including competing claims about fairness, inclusion, and just transition pathways. Our analysis is grounded in norm contestation theory, which conceptualises norms as dynamic, context-dependent practices whose meaning evolves through use and reinterpretation. We apply Discourse Network Analysis (DNA) to newspaper coverage of the NRR between 2022 and 2025, including the Commission proposal in 2022, the regulation's final adoption in 2024, and the first drafting phase of National Restoration Plans. Two complementary network types are constructed: concept networks mapping how environmental and forest-related norms are linked or opposed and congruence networks showing which actors align or polarise around competing normative claims. By combining norm research from International Relations with social network analysis methods, we contribute to the understanding of policy legitimacy in contested EU environmental governance and demonstrate how complex norm dynamics can be operationalised and visualised in large, heterogeneous debates.

F) POLICY TRANSLATION AS A DISCURSIVE PRACTICE: THE IDEATIONAL INTEGRATION OF FORESTRY INTO THE GERMAN NATIONAL WATER STRATEGY

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Abstract:

Participatory processes are increasingly recognized as essential components of modern environmental governance. While much scholarly attention has been devoted to the design and implementation of such processes, less is known about the critical phase between participatory processes and final policy outputs. The article addresses this research gap by proposing policy translation as an analytical lens to investigate how narratives are transformed as they are transmitted from participation to policy. In order to apply the concept of policy translation empirically, the ideational policy integration of forestry into the German National Water Strategy (NWS) is investigated. Accordingly, this research examines how forestry was, after previous fragmentation of the water and forest sectors, ideationally integrated into the NWS. Based on a qualitative analysis of 100 process-accompanying documents, two drafts and a final version of the NWS, as well as eight semi-structured interviews with key stakeholders, the study uncovers a narrative shift throughout the NWS' development. The results insinuate that this shift occurs primarily throughout the translation process, which is here characterized as ongoing discursive struggles, including practices of gatekeeping and imposition. This research contributes to a more nuanced understanding of the policy process by illuminating the discursive dynamics that occur throughout the translation process. It calls for future research to critically explore the policy translation between participatory process and final policy output, as it highly influences policy outcomes and may, as shown here, overshadow the inputs from the participatory process.

18) ADAPTING FORESTRY EDUCATION TO GLOBAL CHANGE

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University of Freiburg

Juliet Achieng Owour

European Forest Institute

Sandra Liebal

Technische Universität Dresden

Ida Wallin

Swedish University of Agricultural Sciences

representatives of International Forestry Students' Association.

Panel abstract:

Forests, their governance and management are increasingly shaped by climate change, shifting species composition and evolving socio-economic dynamics. Forestry education needs to rapidly adapt to these changing realities and engage actively with students, forest professionals, the forestry sector, society and scientists to stay up-to-date. Traditional forestry programs need to be reimagined, not only to better address complexity and uncertainty, but also to align with changing societal values and to support students in building meaningful and resilient careers. Enrollment numbers are declining for many traditional country specific forestry programs, while international degrees continue to attract students. We take stock of the ongoing developments and jointly reflect on the efforts needed to provide relevant forest science education for current and future generations of students.

In this session, we explore how to educate the next generation of forest professionals and scientists that will create and manage resilient forests. We will look at examples of betterments in forest science education, as well as present interdisciplinary research identifying competencies and skills needed by forest professionals in times of global changes. We will discuss tools and strategies for knowledge exchange and successful collaborations to overcome challenges in attracting students as well as provide recommendations for bridging the gap between forest education and employment research, policy and practice.

A) SHAPING FUTURE FORESTERS: ASSESSING EMPLOYERS AND RECENT GRADUATES' PERCEPTIONS ON CHANGING DEMANDS IN FOREST SECTOR EMPLOYMENT

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Abstract:

The question of whether graduates from forest science programmes possess the relevant skills needed for them to succeed in careers in the forest sector is critical for both graduates and the sector in general. Gaps between perceived demands and education have been identified in some past studies. Through interviews with 30 employers from five countries (Brazil, Finland, Germany, South Africa and the United States of America), we investigate the changes in the forest sector labour market, including emerging employment fields. We further explore the perceptions of skills required by future forest professionals, drawing on the Work-readiness integrated competence model (WRICM). We compare the perspectives of the employers and those of 39 recent graduates from the same countries obtained from a global survey. Results show that employers anticipate a decrease in the share of employment by 2030 in the fields of forest management, forest industries, wood processing and energy production. Both employers and recent graduates agree on the importance of job specific dimensions. Meta-skill resources (timely application of new knowledge) and intellectual resources (foundation and cognitive) are regarded as important future skills by employers, while recent graduates' emphasis was on intellectual and personality (managing oneself and others) resources dimensions. The results of this study shed light on the perceived gaps in the present and future training needs. Systematically capturing the perceptions of employers and graduates is crucial for informing universities to better prepare graduates for the labour market and match their own interests.

B) APPROACHES AND CONCEPTS OF TEACHING INTEGRATIVE FOREST MANAGEMENT AT HIGHER EDUCATION INSTITUTIONS ACROSS EUROPE (IN PREP. FOR CURRENT FORESTRY REPORTS)

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Abstract:

The management of forests and their associated biodiversity is challenged by unprecedented environmental and climatic changes, as well as shifts in societal settings and demands. Successful application of forest practices under global change requires well-trained forest managers and, thus a transformation of their education. While forestry education has advanced significantly and innovative programmes are celebrated worldwide, it remains unclear how well curricula align with alternative forest management approaches.

In Europe, Integrative Forest Management (IFM) serves as an umbrella term for paradigms that integrate biodiversity conservation and global change adaptation into forest management for the sustainable provision of multiple ecosystem services. Therefore, it is important to understand the academic community's shared perspectives on the expectations and obstacles associated with teaching IFM.

Through online surveys of forest sciences professors from across Europe, this study documented IFM-related teaching in higher education and the structures, methods and competencies associated with IFM curricula.

Our results indicate a prioritization of IFM practices that promote natural, site-adapted tree regeneration, partial harvesting, structural heterogeneity and the retention of habitat trees and deadwood. Experts highlighted that competencies in ecology, resilience, synthesis and public communication are essential for IFM.

This study consolidates expert perspectives in the context of IFM by identifying gaps in forestry curricula and opportunities for international exchange. Our review contributes to the advancement of forest sciences education, by highlighting how students can be better equipped with relevant knowledge and competencies for IFM and how future professionals can be prepared to take informed management decisions in times of uncertainty.

C) ROOTED INEQUALITIES IN FOREST EDUCATION. INSIGHTS FROM A STUDENTS' PERSPECTIVE. IN ROUTLEDGE HANDBOOK OF SUSTAINABLE FORESTRY: SHAPING THE FUTURE WITH FORESTS

C. T. Loch

Barbara Öllerer

IFSA

Abstract:

Gender dimensions are important in the context of sustainable forestry and forest education. This chapter explores the persistent gender disparities in the forestry sector, highlighting the exclusion of Women, Intersex, Non-binary, Trans, and A-gender (WINTA*) individuals. By examining the structural barriers that limit the participation of WINTA*, we argue that achieving gender equality is essential not only for social justice but also for the long-term sustainability of the forestry sector. Drawing on the case of the IFSA Open Letter on Gender and Forest Education, a proactive student-led initiative, we emphasize the need for a multifaceted approach to addressing current inequalities. This includes gender awareness in curricula, gender-aware learning environments, role models, and global collaboration. We conclude that forest education is a crucial starting point for fostering a more inclusive, sustainable, and equitable forestry sector, and we underscore the pivotal role of decision-makers in academic institutions and forestry organizations in driving systemic change.

D) HIGHER FORESTRY EDUCATION IN GERMANY: STUDENTS' PERSPECTIVES ON STUDY CONTENT, SKILL ACQUISITION AND CAREER PREPAREDNESS

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M.T. Hausl

E. Viehweger

F. Born

N. Weber

Abstract:

This study investigates student' perspectives on bachelor-level forestry programs in Germany. Based on 440 completed survey responses from nine universities and universities of applied sciences, the results show that forest management, plant knowledge, and ecology are the most valued subjects among students. However, many participants perceive a mismatch between their interests and the actual curricular coverage – particularly in areas like leadership, digital data analysis, and forest management. Students generally report moderate acquisition of soft skills, with the highest gains in self-management and analytical thinking.

Our survey indicated some gender-based differences: female students more often favor topics related to ecology, plant knowledge, and social skills, while male students prefer traditional forestry subjects like forest management, hunting, and engineering. Male respondents also report a significantly higher sense of career preparedness. Contrasts were also found between universities and universities of applied sciences. While the former emphasize scientific and interdisciplinary content, their students feel less prepared for entering the job market. The findings underscore the need to better align forestry curricula with student expectations and labor market demands, e.g. by enhancing the integration of soft skills and ensuring a balanced coverage of both traditional and emerging content areas.

E) PASSION FOR NATURE: GLOBAL STUDENT MOTIVATIONS FOR FOREST-RELATED EDUCATION AND CAREER ASPIRATIONS

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Abstract:

Despite the relevance of forests to biodiversity and climate change, education and careers related to them are still unattractive to young people. This paper presents findings from a study whose goal is to investigate the motivation and career aspirations of students in forest-related programmes at the university/tertiary level around the globe. The analysis is based on data gathered through a survey of 787 bachelor's, master's, and PhD students from 82 countries. The findings reveal that the choice of forest-related programmes by students is guided by (i) the desire to do beneficial work, specifically to make a positive difference for the environment/communities, (ii) job satisfaction, e.g., enjoyable work, and (iii) working outdoors. With regard to career pathways, students were most interested in working in forest-related nature and biodiversity conservation and least interested in forest-related industry and non-forest-related fields. The study found significant differences across continents regarding student preferences but only a few across study levels and gender. This paper provides useful insights that can help in tailoring forest-related programmes to meet the expectations of the students and universities.

F) BECOMING A FORESTER. EXPLORING FOREST MANAGEMENT STUDENTS' HABITUS IN THE MAKING

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Abstract:

Foresters in Germany are facing extreme challenges due to climate change and social change, struggling to adapt their management strategies. In this context, our study explores the professional socialization of forest management students at Universities of Applied Sciences in Germany: How is a professional habitus formed during forestry education, and how well does this equip students to address ecological and social transformations? Through qualitative in-depth interviews, we investigate how students experience their education and interpret their future roles and tasks. Using a praxeological framework informed by Bourdieu's concept of habitus, we explore how higher education shapes students' ways of perceiving, feeling, and belonging.

Findings from our analysis include students' hierarchical positioning in relation to a lay public, their objectivist perspective on knowledge, their identification as part of the "forest family", and mechanisms of inclusion and exclusion that produce a strong sense of group cohesion. Despite inner heterogeneity in the student body, adaptation pressure is high, especially for those who envision a career as a forester. The students themselves see two main challenges for their professional future: social pressures from a lay public and an unpredictable future due to climate change. We argue that their problem definitions actually point to underlying transformation challenges.

Our findings are in resonance with recent debates on forestry's professional culture, its implicit foundations, and its challenges with respect to change. They also point to a potential role of educational institutions to foster diversity in the student body and promote transformation competencies.

19) BRIDGING THE DIVIDE: POWER, POLARISATION AND PATHWAYS FOR A SUSTAINABLE TRANSITION IN FORESTRY

Panel abstract:

The calls for forests and forestry to transition towards more sustainable and resilient states are getting more frequent and louder as the climate and biodiversity crises progress. While forests are gaining importance as a key resource for climate mitigation and adaptation and their role in biodiversity conservation is increasingly recognized, the conflicts around forest utilization are getting heated. Observers claim that the debates in several forest-rich countries are polarised and overcoming polarisation is frequently mentioned as a major step towards sustainable transition.

The contributions to this panel put these claims under scrutiny. We begin with the question whether polarisation exists in the first place, how it is defined, which narratives underlie such a definition, and who stands to gain or lose from maintaining a narrative of polarization.

Moreover, we are discussing how powerful actors in a polarised setting may wield their influence to maintain control over decision-making processes and define the parameters of what is considered legitimate knowledge and acceptable practice within forestry. They may further unintentionally or intentionally deploy various techniques of “silencing” to marginalize alternative perspectives and constrain public deliberation. As a result, people may self-silence, critical discussions becoming sidelined and thereby limiting a balanced discussion about what are ecologically and socially just ways of managing forests.

The presentations highlight different perspectives on and theories of polarization, including for example affective polarization, and apply these to cases of forest debates in Sweden, Finland, Canada and Germany.

In addition to the abstracts below, we invite further presentations covering various perspectives on the interface of power and polarization in sustainability transitions. We are also open to other theoretical and methodological approaches that speak to the overall theme about bridging divides in sustainability transitions. Discussants will be appointed to initiate and facilitate reflections together with the audience.

A) POLARISATION IN SWEDISH FORESTRY: NATIONAL, LOCAL OR ELITE?

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Stephen Wyatt

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Abstract:

The Swedish Forest sector stands at a crossroad. Historically anchored in a strong export-oriented model of intensive forestry, it is now confronted with mounting concerns about biodiversity loss, climate mitigation, and social legitimacy. This dynamic has triggered a sharpened polarization in public discourse, policy debates, and stakeholder practices. Theme interdisciplinary research group at the Pufendorf Institute, Lund University. In our presentation, we discuss how an increasingly polarized narrative undermines processes and prospects for a fair and effective transition to sustainable forest governance in Sweden.

We present a conceptual framework for analyzing polarization incorporating three distinctions: (1) how we can understand polarization (2) whose views are polarized and (3) which topics this polarization concerns. Conceptualizing polarization lays an important foundation for empirically exploring the dynamics within the Swedish forestry sector and offers valuable insights into how conflicts, tensions, and oppositional narratives are articulated between different actors.

However, employing a polarization lens can also be problematic, as it may suggest the need for balancing two sides; between one group that aims to defend the production-oriented model of forest use and a second group that advocates stronger conservation. A strong focus on polarization may obscure the deeply entrenched asymmetries of power that characterize the Swedish forestry sector.

Our framework building on the case study of Sweden contributes to the understanding of how polarization, power relations and knowledge practices shape forest governance and how a plurality of voices could be heard and fairer debates on forestry can be reached. The insights may inform comparative research and provide practical implications for policy actors navigating forest transitions in contexts characterized by contested knowledge, multiple values, and structural inertia.

B) ALLIANCES, PROPAGANDA COALITIONS AND (MIS)REPRESENTATION: THE EVOLUTION OF BIODIVERSITY DELAYISM IN SWEDISH FORESTRY POLITICS

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Abstract:

In the last few years, forestry has seemingly become more prominent in Swedish public political discourse. The debate appears heated and polarized. One dominant side defends the status quo, against a growing opposition arguing for a need to transition away from current intensive forest management practices. This has been seen in a context of an increasing amount of legislative and non-legislative proposals at EU level aimed at protecting more forests as well as fostering more sustainable forest management, such as the regulations on Nature Restoration, Deforestation and Forest Monitoring. Those representing the status quo in Sweden have been active and partly successful in attempting to delay, weaken or completely remove such proposals.

The debate is full of contradictions. Claims regarding public environmental concern, economic harms and benefits, and protecting the interests of private forest owners are utilized by a variety of actors on both sides. Recent policy outcomes highlight a need to critically examine employed narratives, including in relation to issues of proportionality and representation, particularly as actors active in the debate often claim to speak on behalf of others. As such, this paper uses discourse network analysis (DNA) in combination with interpretive discourse analysis. The former combines social network analysis and qualitative content analysis to examine how actors are related and form coalitions at the level of discourse, as well as how this has evolved in Swedish public discourse over time. The latter will allow for the identification and examination of possible discrepancies between discourses and their social contexts, including consideration of power relations, to analyze potential conflicts not just between, but also within, mapped coalitions.

The paper's focus on Sweden as a case study offers a two-fold contribution to research on perception and reality in forest policy elsewhere in Europe. Primarily, it contributes to comparative research on

how coalition dynamics have evolved and a critical understanding of representation in forest politics. Secondly, as Swedish actors' influence on EU proposals also impacts which measures are or are not implemented in other European, it provides insights to barriers to changes in EU forest governance more broadly.

C) IS ONE CARIBOU WORTH ONE HUNDRED FORESTRY JOBS? PUBLIC DEBATE, CONFLICT AND POLARISATION AROUND THE RELATIVE IMPORTANCE OF FOREST-BASED ECONOMIC DEVELOPMENT AND SURVIVAL OF THE WOODLAND CARIBOU IN QUÉBEC IN 2023-25

Stephen Wyatt

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Abstract:

Public debate over protecting habitat of the woodland caribou in areas intended for commercial forest harvesting in Quebec, Canada, is not new. In 2015, a “think-tank” estimated that the economic cost of protecting the woodland caribou equated to 117 jobs to save a single caribou – a calculation subsequently condemned by wildlife researchers. Key actors – notably the forest industry, indigenous peoples, environmental groups, and the provincial government – recognise the importance of taking measures to protect critical habitat but have failed to agree on acceptable measures. In 2024, the issue reached a new crisis point as the federal government threatened to intervene in Quebec’s forest management policy to force the adoption of a caribou management plan, as required by endangered species legislation passed by both the federal and provincial governments. All the “usual suspects” responded to align with either the federal government’s actions in favour of the caribou or the provincial government’s support of the forest industry. Commentators decried the polarisation of the forestry debate in Québec, as seen elsewhere across the country, and around the globe.

This presentation examines this debate through the lens of polarisation theory. Polarisation theory does prove useful in helping to understand how some actors move further apart and the ways in which claims provoke counterclaims. However, the caribou debate appears quite different to polarisation as studied in political systems. Instead, we find that key actors hold a wide variety of perspectives and value positions, and that while these may sometimes align with other actors through alliances, these alliances can also change as context and priorities change. Furthermore, differences between actors at national or provincial level are not always reflected in position of local or regional groups, creating opportunities for cooperation that might be otherwise be ignored. Statements about “polarisation” from actors who hold significant policy-making power may reflect an attempt to protect the status quo by discrediting alternative views. This suggests that while conflict and heated debate certainly does exist in forestry, viewing this as “polarisation” may be more harmful than helpful, emphasising opposition instead of encouraging movement towards negotiation and collaboration.

D) (UN)POLARIZED FORESTS? DISENTANGLING CONTROVERSIES AROUND GERMAN FORESTS AFFECTED BY CLIMATE CHANGE

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Abstract:

Polarization is ubiquitous in literature concerning environmental conflicts, as their complexity is mostly simplified along two opposing lines of argumentation. Yet, the factors that trigger and drive polarization are highly context-specific. With this regard, discourse analyses facilitate revealing power-knowledge relations, which allow for a differentiated perspective on polarized debates. The present study scrutinises and reveals factors of the deep-rooted conflict between forestry and nature conservation in Germany, by analysing the public debate on forests being affected by climate change between 2018 and 2020. For this purpose, I analysed newspaper articles, policy documents and twitter data to account for the hybrid dynamics of contemporary media debates. The debate was sparked by large scale forest damages, bringing the controversies between actively adapting forests versus relying on self-regulating ecosystem dynamics publicly to light. Both sides, being supported by scientists, emphasize the urgency of their proposed measures to “save” the forests and make them climate resilient. However, the results demonstrate an intricate variety of frames and subject positions beneath the surface of the two polarized lines of argumentation. Instead of being solely issue-related, I claim that the polarization is mainly driven by affective sentiments of belonging to pre-structured actor groups that are discursively reproduced within the debate. This affective polarization is reinforced through processes of perceived polarization that are expressed through simplifications, generalizations and dismissive re-framing of opposing arguments. Polarization is thus driven by an entrenched struggle of an *“us versus them”*, *reflecting the asymmetries of those holding the authority over forests and those challenging dominant forest management practices*. Discussing the results in relation to the respective literature, the study highlights the importance of a more nuanced perspective on environmental polarization. In this regard, discourse analysis helps to reveal underlying mechanisms driving polarization. This understanding is crucial to resolve entrenched debates and allow for alternative solutions to emerge.

E) POLARISATION IN NORDIC FORESTS - BY WHOM, FOR WHAT?

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Abstract:

Environmental destruction with highly unequal benefits and burdens, persists and accelerates despite today's accessibility of knowledge on environmental consequences of diverse forest and land management practices. Meanwhile, social movements calling for action, businesses promoting green agendas, and there is an increasing availability of green finance instruments as well as increasing attempts of civil society to hold states and businesses accountable to their green promises. Yet, there is a notable dissonance between what seems possible and desirable by society, and what is practiced with regards to ongoing biodiversity loss and climate change. In Europe and specifically in the Nordics, there is a rise of populism and shifts especially of young, male voters to the extreme right, what Meyfroidt (2025) calls 'democratic backsliding'. This goes hand in hand with increasing environmental ignorance, strategies of delay (Pietarinen et al. 2025), and advocacy coalitions (Begeman and Winkel 2025) as well as media engagement (Kukkonen and Malkamaeki 2024) to defend and maintain the status quo. In this paper, we ask what are the mechanisms that maintain or advance the current, unsustainable business-as-usual. In our analysis of case study material from Finland, Sweden and Norway, we examine: i) polarization, with its potential to undermine coordination and collective action for change, and ii) silencing, which often effectively marginalizes those (humans) calling for change or those (non-humans) in need for change. We explore these through case studies and comparative work, focusing on material and immaterial flows building on critical global political economy with discourse and policy network analysis.

20) SCALING FOREST-BASED BIOECONOMY AND INNOVATION: WHEN POLICY NARRATIVES MEET PRACTICE

Panel abstract:

The panel explores how perceptions of the forest-based bioeconomy and forest-sector innovation differ from – or align with – the realities of forest policy and governance on the ground. While the forest-based sector is increasingly framed as a cornerstone of a sustainable bioeconomy, policy narratives often emphasise high-tech innovation, substitution of fossil-based materials, and green growth, sometimes overlooking the multifunctionality of forests and the diversity of local needs, values and capacities.

Building on the work of the IUFRO Task Force “Building an Integrated Vision of the Forest-Based Sector within a Bioeconomy” (T50) and “Scaling-Up Science-based Forest Sector Innovation” (T51), the panel invites contributions that critically examine how bioeconomy and innovation policies are interpreted, implemented, and measured across different contexts, and where gaps persist between narratives and practice.

Contributions in this panel address, among others, the following themes:

- how forest-related indicators and monitoring systems reflect national bioeconomy strategies and governance arrangements across Europe;
- how forest-based bioeconomy visions are perceived by different stakeholder groups (e.g., forest-related actors, communities, public bodies, and industry);
- expectations about “innovation” and the actual conditions of forest-sector innovation ecosystems, including institutional, financial and regulatory barriers;
- how multi-actor innovation models (e.g., multi-helix and other collaborative frameworks) develop and function across different governance and territorial contexts;
- science-based evidence and its translation into forest and bioeconomy policies, especially in post-socialist and Eastern EU contexts.

In addition, the panel seeks to take stock of research and development (R&D) on the forest-based bioeconomy and forest-sector innovation to date, identifying lessons learned, persistent asymmetries, and opportunities for more inclusive and integrated innovation ecosystems.

Taken together, the panel aims to provide comparative insights into how forest-based bioeconomy and innovation policies can move from aspirational narratives toward more balanced, evidence-based, and participatory practice.

A) NAVIGATING THE BIOECONOMY: THE ROLE OF FOREST-RELATED INDICATORS IN EUROPEAN BIOECONOMY STRATEGIES

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Abstract:

The bioeconomy is a central pillar of the European Union's transition to climate neutrality and sustainable growth, yet the representation of forests, Europe's largest renewable resource, in national bioeconomy strategies and monitoring remains underexplored. We examine how forest-related indicators are selected and framed within officially adopted national bioeconomy strategies and action plans across Europe. We identify and classify indicators as economic, ecological, or social; compare their prevalence across countries; and analyse how governance arrangements shape indicator choices. Using a comparative qualitative design, we combined document analysis (strategies, action plans, monitoring reports, statistical publications) with semi-structured interviews with ministry officials, researchers, and national experts involved in indicator development.

Across the strategies reviewed, 78 bioeconomy indicators were identified, 75% of which are forest-related, signalling a strong focus on forests within national monitoring frameworks. These indicators are predominantly economic, with fewer ecological and social metrics. While common patterns include reliance on existing sectoral statistics (especially established forestry reporting), concise and predominantly economic indicators, avoidance of duplication and new data burdens, and inter-ministerial or expert-led processes constrained by limited capacity, countries differ in the prominence of forestry within the bioeconomy, the integration of forest-related indicators, the dominant sectoral focus shaping indicators (land/forest, agriculture, marine, biotech/technology), and the degree of coordination with forest-related institutions - leading to uneven coverage of environmental and social dimensions. Preliminary findings underscore substantial cross-national variation driven by sectoral priorities and governance.

B) FOREST SECTOR INNOVATION SYSTEM – AUSTRIAN CASE STUDY

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Abstract:

Research and innovation are important drivers to adapt the European forest sector to societal, economic and ecological changes. For understanding innovation processes, systemic approaches analyse the various public and private actors involved in developing and implementing innovations, together with the relevant institutional frameworks and their interaction. Innovation system or innovation ecosystem analyses have been applied to the forestry sector and wood value chains, mostly on national or regional levels. Ongoing European research project EUFORE conducts a detailed analysis of the EU forest sector innovation system, as part of which country level case studies are conducted. For Austria, the earlier forestry innovation system analysis has been revisited, updated and enlarged to the whole forest sector, including further forest-based value chains. In addition, research and innovation support programmes have been analysed. Furthermore, interviews with central actors have been conducted, asking about their role in sector innovation processes and their perception of key influencing factors.

The mapping reveals a broad range of organizations within the forest-based sector, with pronounced differences between the field of forestry and further value-chains. In forestry, there are fewer research organisations being dominantly public. Along the value chains of forest-based goods and services, the wood sector is clearly dominating, with a higher number of organisations and more private ones than in forestry. With regards to research and innovation programmes, there is a strong disconnection of the sector to national RTI strategies and instruments. In the recent years, facing severe forest damages from climate change induced droughts and bark beetle calamities, a specific initiative “Forest Fund” was initiated, aimed to support the adaptation of the sector to this challenge. This fund included research and innovation measures for climate-oriented forestry as well as the increased use of wood, e.g. in construction (“Wood Initiative”). Interviews reveal pronounced differences between the perceived challenges and priorities between different types of actors regarding innovation support measures.

C) BIOECONOMY IN CZECHIA UNDER THE PERSPECTIVE OF CEE2ACT PROJECT

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Abstract:

The main aim of the contribution is to assess the development of bioeconomy-related strategies in the Czech Republic and provide deeper insights in how the national bioeconomy is being developed. Additionally, the role of different stakeholders is being evaluated, including a comparative viewpoint with other Central and Eastern European (CEE) countries. Part of the contribution deals with the current findings from Horizon Europe project CEE2ACT (2022-2025). The project provided a unique bottom-up approach to involve various stakeholders in bioeconomy in 10 countries and built up on good practice examples from 7 other countries that have already developed its own national bioeconomy strategy. The results include the current state of bioeconomy in the Czech Republic, and its expected future development and additionally discusses the role of relevant stakeholders and understanding of bioeconomy principles among Czech public.

D) TOWARDS CROSS-BORDER QUINTUPLE HELIX ECOSYSTEMS? STAKEHOLDER PERCEPTIONS FROM JAPAN AND SOUTH KOREA

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Abstract:

Forest-bioeconomy policy agendas increasingly emphasise innovation models that involve multiple societal actors. These are often framed through the Triple and Quadruple Helix models, which highlight collaboration among universities, industry, government, and civil society. Recent scholarship extends this perspective through the Quintuple Helix, which introduces the natural environment as a fifth helix and links innovation more explicitly to socio-ecological transitions. Despite the growing relevance of this framework, empirical studies remain limited due to the complexity of identifying agency beyond core institutional spheres and the evolving nature of helical interactions. Existing work also suggests that wider helix dynamics typically emerge gradually from robust Triple Helix foundations and develop through multi-level and cross-territorial processes within place-based sustainability transitions.

This study contributes to this discussion by examining early-stage dynamics of forest-based innovation ecosystems in Japan and South Korea. The analysis draws on interviewers' notes from semi-structured

interviews conducted in 2025 with 34 participants (South Korea n=19; Japan n=15), representing governmental organisations at national and regional levels, as well as educational, research, and interest-group actors. Preliminary observations indicate fragmented collaboration patterns, typically organised through actor-specific or short-term project arrangements, coupled with a commonly expressed need for more stable funding and human resources for research, development, innovation, and education. Stakeholders demonstrate interest in sustainability-oriented themes—such as digitalised wood supply chains, forest-damage prevention, non-timber forest products, forest-based wellbeing, and bio-based materials—yet the strategic involvement of civil-society and environmental actors (the fourth and fifth helices) currently appears limited. Further analysis will refine these themes and assess implications for developing more integrated, sustainability-oriented partnerships. The study also informs future considerations on how regional forest-based innovation ecosystems may connect across borders as they evolve toward broader multi-actor configurations.

E) SMALL-WORLD CONNECTIVITY, BIG HIERARCHIES: EUROPEAN FORESTRY R&I IN PRACTICE

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Abstract:

European forest policy and research programmes increasingly frame forestry research and innovation (R&I) as an open, inclusive ecosystem promoting territorial cohesion and balanced participation across Europe. Drawing on Social Network Analysis (SNA) of Horizon 2020 and Horizon Europe forestry R&I projects focused on innovation, this paper examines how far these policy narratives align with the actual structure of collaboration, coordination, and resource distribution within European forestry R&I.

The analysis covers 162 forestry innovation projects (2019–2023), selected where forestry- or forest-based innovation—technological, organisational, governance, social, policy, or business-model—was an explicit focus. These involved 1,214 institutions and 17,811 collaboration ties. Network-level results

show a highly connected system with small-world characteristics: short path lengths and high clustering indicate strong coordination and dense intra-cluster collaboration. However, hierarchical structures persist, with collaboration intensity, brokerage roles, coordination, and funding concentrated in a small institutional core.

Institution-level centrality and structural hole measures identify a narrow group of long-established public research organisations, EFI, INRAE, LUKE, WUR, and BOKU, as dominant hubs and brokers. These actors repeatedly co-participate across projects, maintain diverse collaboration portfolios, and act as key connectors among otherwise weakly linked clusters. In contrast, most institutions show sporadic involvement, typically through single projects, with limited access to influential positions. Private companies and public bodies remain weakly integrated, reinforcing the dominance of research organisations.

At the country level, results reveal a persistent EU-15 versus EU-13 divide. Institutions from Western and Northern Europe occupy central network positions, coordinate a disproportionate number of projects, and receive greater EU funding, while actors from Central, Eastern, and Southeastern Europe remain structurally peripheral, despite targeted Widening Participation efforts.

The findings show that structural asymmetries in European forestry R&I, especially in innovation-oriented projects, are systemic rather than temporary, reproduced through cumulative advantage, path-dependent collaboration, and excellence-based funding models. While dense connectivity supports coordination efficiency, the concentration of power and resources among a few institutions limits inclusiveness, diversity, and long-term adaptability, revealing a clear gap between policy ambitions and empirical reality.

F) SHIFTING CONSUMER PERCEPTIONS AS ENABLERS OF A PROSPEROUS BIOECONOMY TO CONSERVE FORESTS IN THE TROPICS: THE CASES OF COLOMBIAN SPECIALTY COFFEES AND AMAZONIAN BIOCOSMETICS IN BRAZIL

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Abstract:

Forest conservation depends on how society perceives it but also on how people regard the economic activities that affect forests, such as agriculture. Each year, 4-5 million hectares of native vegetation are lost in the tropics, 90-99% of it due to unsustainable agricultural expansion, and mostly to produce a few commodities such as soy and palm oil. Development and goods based on industrial monocultures is partly to blame. Yet escaping from such dynamics is hard — and it requires innovation around economic alternatives. Mere attempts to turn smallholder production systems into

commodity suppliers routinely stumble upon the inherent demands of commodity markets, e.g., for standardization and scale. Moreover, small-scale producers often realize that such bulk markets typically fail to ascribe much (or any) value to product particularities, functional differences, or to the environmentally and culturally sound ways in which production has taken place.

One pathway to promote and valorize smallholder value chains may be framing certain goods as specialties rather than commodities. A specialty is a unique product, sometimes linked to a region or to a culture that produces it, and — unlike commodities — valued precisely for its specific properties rather than its fungibility for bulk markets. While common in Europe (e.g., regional food specialties), this study is among the first to assess them in the context of tropical landscapes. We analyze two salient cases, Amazonian biocosmetics in Brazil and Colombian specialty coffees, drawing from the literature and a total of 30 key-informant interviews to identify the conditions for integrating specialties promotion in policies for sustainable landscapes.

Our results show that, while structuring the production side of alternative value chains remains key, a fundamental and often overlooked element is consumer perception. Amazonian biocosmetics and Colombian specialty coffees have only thrived because of a notable shift from undiscerning, mass consumers to knowers, connoisseurs, and more selective buyers — even among low-income populations, as specialties need not be luxury products, but they do need consumers to understand product differences and to value certain features. We then discuss lessons for tropical forest conservation in Latin America and beyond.

SCIENTIFIC PAPERS

THE POLICY ARRANGEMENT APPROACH REVISITED: A SYSTEMATIC LITERATURE REVIEW THROUGH QCA

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Abstract:

The *Policy Arrangement Approach* (PAA) was developed as a response to other policy sciences frameworks by a group of Dutch environmental policy scholars in the late 1990s. Particularly theories on policy instruments, policy networks and policy discourses were critically examined, while “useful” elements of those were integrated in one framework. By doing so, the PAA sought balance between agent and structure as well as organization and substance, while analyzing environmental policy practices, including on forests. Moreover, the dynamics thereof was considered in a meta-theory of political and societal change, coined as “political modernization”. In this paper, we assess the scholarly literature applying the PAA so far through a systematic literature review. A recent *Scopus* search produced over 100 relevant scientific papers, a quarter of which relates to forest policy and forest governance. In the first step of the systematic review, we scan all abstracts of all relevant papers, while reporting what policy issues the papers address and how the PAA is applied to understand or explain these issues. In a second step, a subset of these papers will be identified for applying a QCA (Qualitative Comparative Analysis). A QCA helps to generalize findings from a group of relevant and comparable case studies, and offers a semi-quantification of certain outcomes (to be deduced from the “policy issues” of the papers) to be explained by certain conditions or combinations of conditions (to be deduced from the PAA itself). It is expected that such a QCA will produce a further empirical underpinning as well as a theoretical refinement of the PAA. Such will enhance the quality of environmental policy analysis, including on forests.

THE EU AS A GREEN NORMATIVE POWER? UNPACKING DYNAMICS OF NORM DIFFUSION IN FOREST BIODIVERSITY

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Abstract:

In the European Union (EU), substantial policy efforts aim to safeguard and enhance forest biodiversity. Under the European Green Deal (EGD), flagship policies such as the new EU forest and biodiversity strategies for 2030, aim to drive the ecological transformation of nature, society, and economy. Central to these efforts are norms - soft institutions and shared standards that guide actors' behaviour. Drawing on diffusion approaches, we examine the EU's normative impact on its member states in forest biodiversity politics and identify key norms promoted by the EU. Using qualitative content analysis and expert interviews, we analyse the new EU strategies and confront them with past and current national forest and biodiversity strategies in Germany and Spain to investigate whether, and to what extent, European norms are reflected in national documents. Our results indicate that the EU exerts green normative power through the European Green Deal by articulating norms that shape national discourses and policies on forest biodiversity. However, contested interpretations by the analysed member states reveal a dynamic and context-dependent norm diffusion process. By shedding light on such complex interactions, this study advances our understanding of the EU's influence on member states' identities and norm contestations. Furthermore, the findings contribute to the broader literature on European integration and norms research by offering empirical insights into the diffusion processes between the EU and its member states in the context of forest biodiversity politics.

FOREST FINANCE: HOW FINANCIAL SCHEMES KEEP PROMISING POSITIVE CLIMATE FUTURES

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Abstract:

Forest have been the subject of innovative finance schemes at least since the idea of REDD (reducing emissions from deforestation and forest degradation) was coined in 2005 and have figured heavily in debates around climate mitigation and adaptation ever since. The latest incarnation of this two-decades spanning history is the “Tropical Forest Forever Facility”, or TFFF, launched ahead of the latest climate summit in Belém (COP30). The TFFF is an example of what is commonly referred to in the finance sector as “blended finance”, where financial guarantees by governments are used to “derisk” private investments. It also follows the model of REDD+, promising direct payments per hectare of forest land conserved or restored, a model that so far has not delivered on its promise of stopping deforestation. While there was much hype around the TFFF leading up the COP30, it failed to reach its targets of 25 billion USD starting finance and its future is currently uncertain. So how can we explain the persistence over time of innovative forest finance instruments such as REDD+ and the TFFF even when they fail to produce actionable results at scale?

In this paper I explore the question above by analyzing the development and launch of the TFFF via a Critical Fantasy Studies (CFS) perspective. In the analysis, I highlight how ideas behind blended finance and direct payments for forest conservation capture the imagination of policymakers and civil society. Moreover, I show how the desire to achieve financial, social, and environmental objectives functions to silence critical voices and to mobilize support. Finally, I reflect on how political dynamics between the Global North and the Global South shaped the TFFF as a negotiated outcome between different political positions. The discussion part of this paper looks ahead to the role of global finance for forests more broadly. As climate and biodiversity summits are increasingly dominated by financial discussions, I ask whether global forest conservation is indeed in need of more money or whether the global community needs to consider alternative models of conservation.

BRIDGING THE TRAGEDY OF THE HORIZON: ALIGNING POLICY TIMELINES WITH LONG-TERM DECISION-MAKING LOGICS OF PRIVATE FOREST OWNERS

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Abstract:

Transitioning toward resilient forestry and a circular, sustainable bioeconomy requires immediate investments and decisions whose benefits materialise only in the long term, often beyond conventional human decision-making and policy-making horizons. Frame and Cradock-Henry (2023) describe this mismatch as the “tragedy of the horizon.” Similarly, Klauer et al. (2013) argue that time is a critical factor explaining why scientific insights on climate change frequently fail to inform practical decision- and policy-making. To address this challenge, they distinguish three concepts of time: short-term operational time (“Chronos”), medium-term infrastructural time (“Kairos”), and long-term time associated with stocks and generations (“inherent time”). They propose a heuristic—the “power of judgment,” or the “art of long-term thinking”—as a guiding approach to bridge the gap between scientific knowledge and policy or practice.

Building on this perspective, we argue that it is essential to further develop decision-making models that operate simultaneously as scientific theories and practical tools. To advance such models, the work presented focuses on private forest owners as a case study, as forestry inherently requires long temporal horizons. Forests take decades to mature, and decisions made today shape both ecological and economic outcomes far into the future. Using qualitative ladder techniques (Miles & Rowe 2008; Walker & Crittenden 2012), we structure the attributes, perceived consequences, and underlying values shaping long-term decision-making among forest owners. The interviews are analysed in relation to an existing body of constructs identified through a previous systematic review (Brudermann et al., unpublished), allowing us to connect empirical insights with established theoretical perspectives on long-term behaviour.

The study addresses two guiding research questions: (1) What high-impact, long-term mitigation, adaptation, and sustainability decisions are most relevant for forest owners within evolving climate and bioeconomy contexts; (2) Which attributes, perceived consequences, and core values shape the relevance and prioritization of these decisions?

By conceptualising time-sensitive decision logics and linking them to the three temporal concepts proposed by Klauer et al. (2013), this study uncovers value structures that either support or constrain long-term thinking. In doing so, it contributes to forest policy debates on how policy instruments, institutional frameworks, and advisory systems can be better aligned with the temporal realities of forestry.

A NEW BLUEPRINT FOR ASSESSING THE MULTI-DIMENSIONAL PERSPECTIVES OF FOREST SUSTAINABILITY IN INDIA

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Abstract:

Forests are a vital natural capital and covers 31% of the Earth's terrestrial area. They are recognized for providing essential ecosystem services and livelihoods of millions of people globally. Thus, every nation must establish a comprehensive monitoring and reporting framework on forest sustainability. This is particularly significant for a developing nation like India, which has 2% of the world's forests and ranks 9th among nations with the largest forest areas, alongside millions of forest-dependent communities. Therefore, with escalating anthropogenic pressures on forests for livelihoods and climate risks, designing a comprehensive forest monitoring and reporting framework encompassing ecological, social, and economic dimensions is of paramount importance. Such a holistic framework would enable the augmentation of management practices and the formulation of contextual strategies. In this context, the current study identified critical gaps in existing monitoring and reporting frameworks and developed a comprehensive blueprint to assess forest sustainability in India.

In India, the majority of forests are under government ownership, with all data collection and record-keeping by government organisations. There are two monitoring/reporting frameworks by the Forest

Survey of India (FSI) and the National Working Plan Code (NWPC). The review of the existing global (ITTO, Forest Europe and Montreal Process) and Indian monitoring frameworks at the forest management unit level by the FSI and the NWPC revealed that these frameworks have a strong focus on the ecological dimension and fall short in capturing the social and economic dimensions, in particular. Subsequently, the study proposed a comprehensive list of 28 indicators (10 ecological, 10 social, and 8 economic) and 64 sub-indicators to measure the sustainability of India's vast forest resources, along with their respective metrics and the frequency of assessment. Additionally, it identified and suggested measures to minimise overlap, inconsistencies, and redundancy in existing data collection and record-keeping mechanisms, and recommended capacity building for the concerned officials to enable effective reporting on forest sustainability in India. Such a robust indicator-based framework would underpin informed decision-making to leverage diverse forest-based benefits and advance efforts to achieve sustainable forest management, while reporting on multiple SDGs, REDD+ and NDC targets.

PROFESSIONAL IDENTITY, DIGITAL PLAYBOUR, AND WORKER VOICES IN FORESTRY DISCOURSE

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Abstract:

Forest policy communication has traditionally flowed through institutional channels: state organisations, industry bodies, and scientific networks. Gamified social media platforms, particularly TikTok, now enable operational-level forest workers to communicate directly with the public through video content and live streaming. This represents a form of 'playbour', where recreational content creation becomes embedded within professional contexts, raising questions about how professional identity shapes engagement and whether professional accountability constrains authentic expression. This study examines forest workers' social media practices by observing 410 creators globally (predominantly on TikTok, with presence on Instagram, YouTube, and Facebook) and by conducting an in-depth survey of 42 active creators. We focused on two critical dynamics: how workers'

professional orientation influences their communication motivations and behaviours, and how they navigate freedom of expression.

Professional identity fundamentally shaped engagement patterns. Workers who view content creation as professional work were universally motivated by public education (100% vs. 44% of recreational creators) and were significantly more willing to address politically sensitive forestry topics (71.4% vs. 8.0%). Additionally, workers with professional orientations reported greater perceived freedom of expression than recreational creators. These patterns suggest that professional framing is associated with both increased engagement with contentious issues and greater perceived autonomy in communication.

Qualitative analysis revealed sophisticated communication strategies: workers employed educational framing to address controversial topics whilst managing risks around personal safety and professional relationships. Rather than avoiding difficult subjects, professionally-oriented creators strategically engaged with them, balancing authenticity with professional expectations.

These findings challenge assumptions that professional accountability necessarily constrains worker communication about forestry. Professional identity appears to empower rather than constrain authentic engagement, particularly when workers frame their activities as public education and sector advocacy. This digital playbour phenomenon suggests that forest-sector employers and policymakers could benefit from developing supportive frameworks that harness workers' expertise for public education whilst respecting autonomy and addressing legitimate concerns about professional boundaries, representing a shift from controlling worker narratives to collaborating with grassroots communication efforts that are already shaping public understanding and policy debates about forestry practices globally.

A FUZZY DELPHI APPROACH TO ENHANCING PUBLIC ACCEPTANCE OF TIMBER HARVESTING IN SOUTH KOREA

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Abstract:

Public acceptance of timber harvesting policy in South Korea remains limited despite growing demands for domestic timber use and carbon neutrality. Opposition has evolved beyond rational policy disagreement into a value-laden conflict shaped by divergent beliefs and perceptions. This study identifies perception-based strategies for enhancing public acceptance by explicitly addressing the normative and contested nature of forest policy debates. The study employs a two-stage mixed-methods design integrating media analysis and expert-based perception measurement. First, text mining and media discourse analysis examined how timber harvesting has been framed in public debates. Analysis of 3,226 news articles (2019–2023), complemented by in-depth frame analysis of 154 articles from the 2021 logging controversy, revealed that timber harvesting has been persistently framed through value-laden narratives linking forest management to disasters, climate change, and political conflict—particularly during periods of heightened public attention. These frames

constructed timber harvesting as a normative policy conflict rather than a technical management issue. Building on these findings, a Fuzzy Delphi Method systematically measured expert perceptions under conditions of uncertainty and value divergence. Twenty experts stratified by stakeholder affiliation (academia, government, civil society) participated in a two-round Delphi survey evaluating perception-improvement measures derived from media analysis. Expert judgments were modeled using triangular fuzzy numbers to capture ambiguity and heterogeneity in value-based assessments, enabling consensus assessment through central tendency and response range. Thirteen of nineteen measures met consensus criteria. High agreement emerged around carbon-neutral reframing, procedural transparency, and science-based communication. Conversely, measures addressing experiential education, local employment linkage, and operational management failed to reach consensus, revealing structurally contested perception domains among stakeholders. The findings indicate that enhancing public acceptance requires policy designs that transcend one-way information provision toward strategies addressing value-based perception gaps and procedural trust. This research contributes methodologically by demonstrating how fuzzy set theory can operationalize value-based policy perceptions under uncertainty, and substantively by identifying consensus-based pathways for forest policy reform in contexts where technical solutions alone are insufficient to resolve normative conflicts.

CHAIN REACTIONS: HOW BUSINESSES RESPOND TO THE EU DEFORESTATION REGULATION IN BRAZIL, CAMEROON, GABON, AND EUROPE

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Abstract:

The 2023 European Union Regulation on Deforestation-free Products (EUDR) is a transnational regulation aimed at addressing deforestation along the supply chains of forest-risk commodities. Grounding our analysis in new institutional theory with distinct behavioral drivers explaining actor behavior, and using mixed methods, we draw on cases of Brazil, Gabon, Cameroon, and the EU to understand the behavior of forestry and agricultural sector businesses in response to the EUDR. We find their stated behavior in all cases to be driven by market (dis)incentives and, especially for EU businesses, by the regulatory threat of penalties. Overall, the influence of behavioral drivers varies contextually. Businesses' frequently expected behavioral responses, like segregation of EUDR-conforming from non-conforming supply sources, could hamper the EUDR's regulatory effectiveness in mitigating deforestation globally. We show how the design and implementation of regulation should consider and leverage different institutional elements in creating robust frameworks that effectively influence actors' behavior.

DECISION-MAKING, ADVICE, AND AGENCY IN FAMILY FORESTRY: FOREST OWNERS' INTENTIONS AND PROFESSIONAL STEWARDSHIP IN A MARKETIZED ADVISORY CONTEXT

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Abstract:

Across Europe, forest policy increasingly promotes alternative harvesting methods to enhance biodiversity, climate resilience, and multifunctionality. Yet in Sweden, clear-felling remains dominant, revealing a persistent gap between policy ambitions and management practice. Understanding this gap requires attention both to forest owners' decision-making and to the advisory systems through which policy, knowledge, and practice are translated on the ground.

This presentation combines findings from two complementary studies, integrating quantitative and qualitative approaches to examine forest management decision-making in family forestry within a liberal forest governance system characterized by market-based advisory services.

The quantitative component draws on a nationwide survey of over 3,000 private forest owners and applies the Theory of Planned Behaviour to examine intentions to apply clear-felling and alternative harvesting methods. Using structural equation modelling, we analyse how attitudes, perceived behavioural control, and social norms shape owners' stated intentions, and how these are influenced by experience, economic considerations, and professional advice.

The qualitative component draws on twenty-four semi-structured interviews with forest advisors employed by forest companies and forest owners' associations. Guided by a care–knowledge–agency framework, it explores how advisors understand their stewardship role, how they navigate relationships with forest owners, and how the marketization of advisory services shapes their capacity to support alternative harvesting methods in practice.

Taken together, the two studies show that forest owners' intentions are primarily driven by their attitudes toward harvesting methods and their perceived ability to act, while social norms play a limited role. At the same time, professional advice and prior experience emerge as central mechanisms linking owners' decision-making to advisory practices. The qualitative findings further reveal how advisory work under market-based conditions involves ongoing negotiation between care for forests and landowners, professional knowledge, and organizational and economic constraints.

By explicitly integrating behavioural insights from forest owners with qualitative evidence on advisory stewardship, this presentation demonstrates how forest management decisions are co-produced through interactions between owners and professionals. The findings suggest that enabling transitions toward more diversified and sustainable forest management will require not only economic incentives, but also advisory systems that strengthen agency, trust, and learning within marketized advisory contexts.

CONFLICTING AND CONVERGING PEOPLE'S PERSPECTIVES: COMPARATIVE Q METHOD EVIDENCE FROM SIX EUROPEAN ARCTIC LOCALITIES

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Abstract:

Elected policymakers need to understand people's perceptions for designing effective strategies and policies. Traditional survey methods used for assessing those perceptions are however often questioned for their ability to reliably capture all the diversity and nuance of opinions and beliefs and reliability is highly dependent on large-scale sampling. In contrast, Q-method offers a structured, mixed-methods approach to systematically identify people's perspectives with a much smaller sample. It addresses issues of diverse and opposing viewpoints, the plurality of discourses, and allows inclusive participation across disciplines and practice. The use of Q-method helps identifying clusters of shared viewpoints, representing distinct value positions, belief systems, or mental models. Importantly, it gives equal weight to all participants' perspectives, regardless of status, expertise, or institutional position, ensuring that marginalized or less dominant viewpoints are captured alongside mainstream opinions.

To demonstrate the utility of Q-method, we used it to examine local perspectives on industry development, including forestry, tourism, mining, fishing, and indigenous activities, across six Arctic municipalities, situating these findings within broader patterns identified through a regional European Arctic Q-method study. Following a structured process of concourse development and statement sampling, complemented by local and expert interviews, participants completed Q-sorts that were analyzed using multivariate data reduction techniques. This approach allowed us to systematically identify distinct clusters of opinion, revealing how European Arctic communities balance priorities such as economic growth, cultural integrity, and environmental sustainability. Beyond highlighting divergent viewpoints, the study identified areas of agreement, providing critical entry points for improving dialogue, negotiation, and collaborative decision-making in complex socio-environmental contexts.

The findings demonstrate that the Q-method not only captures the diversity of people's perspectives but also has the potential to inform the design of more inclusive and socially robust policies. By identifying shared priorities and potential conflicts, this method can guide policymakers, and resource managers, in fostering collaborative European approaches that are better aligned with local values, knowledge, and sustainability objectives.

SHIFTING SYSTEM BOUNDARIES, THE CHALLENGES OF FOREST MODELLING AND IMPLICATIONS FOR POLICY DEVELOPMENT

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Abstract:

For the study of complex systems, Decision Support Systems (DSS) have increasingly become one of the principal tools of choice for assessing variation in outcomes based on the manipulation of individual, causal variables. The forest resource faces an increasingly complex set of challenges: for

one, forests are increasingly expected to assist in resolving the potentially competing goals of climate change mitigation, biodiversity preservation and ecosystem resilience. For another, climate change simultaneously represents an important driver of change and disturbance in the forest, an important disruptor in the quest for ecosystem resilience and stability. DSS are designed to assist scientists and ultimately policymakers in sifting through a broad range of complex interactions for clues on how best to shape optimal responses to these challenges. Ideally, policy priorities should then reflect optimal constellations of forest-based strategies targeted at achieving complex sets of potentially competing goals.

By empirically examine the set of system boundaries used in previous research on forest carbon modelling combined with a text analysis their aim, discussions and conclusions we identify narratives and development over time.

We find that DSS methodologies and approaches for forest carbon modelling have shifted over time. In their early days, they were primarily designed to address carbon sequestration in standing forests. But as the goals envisioned for the forest resource have shifted, the system boundaries assessed in the framework of DSS systems have likewise shifted. More recent research includes also harvested wood products and substitution within their system boundaries. We also point out that most modelling are done on sub-national landscape scale and without acknowledging the problem with emission leakage.

Overall, these changes impose new constraints on policymakers and the system boundaries of the current policy environment.

FOREST CONFLICTS IN POLAND FROM 1989 TO 2025 – INSIGHTS FROM QUALITATIVE ANALYSIS OF SPECIALIST PRESS

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Abstract:

Recent studies on forest-related conflicts in Europe suggest that their number and complexity has been growing. However, research on forest-related conflicts, especially across Central and Eastern Europe, remains fragmented, largely because conflicts are difficult to identify and document systematically. As a result, broader assessments still tend to rely on a narrow set of well-documented, highly visible cases and on researcher-led case studies. Media analysis can extend this perspective; however, most studies draw on mainstream media sources, which raises questions about the relationship between occurrence of conflicts and patterns of media coverage.

To address these challenges, this paper provides a historical overview of forest conflicts in Poland based on qualitative analysis of articles published in three specialist magazines: the ecological-social magazines *Zielone Brygady* (1989–1994) and *Dzikie Życie* (1994–2025), and the forestry magazine *Las Polski* (1989–2025).

The paper combines two approaches to content analysis: quantitative, to provide an overview of the dynamics of issues and actors involved in conflicts over time, and qualitative, to explore in more detail the claims and developments of the major conflicts observed during this period.

The study addresses three exploratory questions: (1) How did forest conflicts evolve over time, which actors were involved, and what claims or issues were articulated; (2) which conflicts are considered major from the perspective of environmental organisations versus the forestry sector; (3) what positions on forest policy, including EU regulations, and forest management practices are expressed in these sources.

Informed by the Advocacy Coalition Framework, the analysis investigates whether reported conflicts were part of broader struggles to shape forest policy and whether advocacy coalitions can be observed in this field.

Preliminary results suggest that across analysed period, foresters in Poland largely ignored numerous conflicts important for the environmental movement. After the 2017 Białowieża Forest conflict, they increasingly began to treat conflicts as a threat to the image of the forester. The emergence of a new actor – the “Forests and Citizens” movement – helped to increase the visibility of the claim for social control over forests and its inclusion into electoral programs.

A MIXED METHODS FRAMEWORK OF POLICY COHERENCE ASSESSMENTS IN THE AGRICULTURE, FORESTRY AND CLIMATE POLICY SECTORS

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Abstract:

Balancing conservation, sustainable land use, and economic development is a key challenge for environmental governance. Establishing coherence in land use policies is thus crucial. The policy coherence literature largely affirms that coherent policies can enable policy effectiveness.

Policy coherence has been defined as an attribute in policy-making that systematically reduces

conflicts and promotes synergies between and within different policy areas to achieve the outcomes associated with jointly agreed policy objectives.

It thus requires that policy objectives are integrated across sectors, that coherence with and between policy instruments is established and that policy implementation does not distort the goals of formal policies. Policy mixes – the combination of multiple policy strategies and instruments to achieve goals – play a central role for the understanding of policy coherence. There is a vast literature on different methods for policy coherence assessments. Yet, these methods are largely qualitative, a standardization of the appraisals is only partly available and the evaluation of different national policy systems is largely depending on the interpretation of the experts. We present a novel approach for a framework for policy coherence assessments in the land use sectors which is based on the concept of aligned and balanced objectives, but also covers the OECD aspects of relevance, effectiveness and efficiency. It furthermore builds on network theory to analyse synergies and antagonisms in policy mixes. Quantitative components enable a comparison between countries or specific clusters of policies within a country. Qualitative components describe the policy mixes in more detail in order to enable a deeper contextual understanding. Our assessment approach mainly relies on a compilation of national governance frameworks including policies, laws, regulations, decrees and non-state or hybrid initiatives. These are described and summarized as a basis for content analyses including a scoring of different objectives. Policy instruments which are contained in these documents are then identified. A matrix for synergies and antagonisms forms the basis for network analyses resulting in visualized networks as well as quantitative network metrics. Stakeholder feed-back and perceptions related to policy objectives and effectiveness of implementation are collected through workshops and/or interviews. Recent results from EU, Brazil as well as ongoing work from Paraguay, Indonesia, Ghana and Uganda are used to illustrate the approach.

WHERE BRUSSELS' FOREST RESTORATION AMBITIONS CONFRONT NATIONAL REALITIES: A COUNTRY COMPARATIVE HISTORICAL ANALYSIS

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Abstract:

The EU Nature Restoration Regulation (EU-NRR) sets ambitious targets to restore terrestrial and aquatic ecosystems, halting biodiversity loss and supporting climate objectives. Its adoption marks a significant development in EU forest policy because it introduces legally binding forest restoration targets and indicators, despite the longstanding fragmentation of EU competences in this area and deeply rooted national forest governance traditions. Consequently, the EU-NRR's forest provisions unfold within highly contested political spaces and confront long-established institutional settings as they move from supranational formulation towards national implementation. Although the EU-NRR is

directly applicable and does not require formal transposition, the successful implementation of its forest provisions is likely to depend not only on national actors and agencies but also on the degree of compatibility between the EU-NRR and long-established domestic forest institutional arrangements. Drawing on key concepts from historical institutionalism, we interpret forest governance developments as path-dependent processes that are occasionally disrupted by critical junctures, such as geopolitical conflicts or natural disasters, which redirect developments along country-specific trajectories. We employ comparative-historical analysis (CHA) to explain how these historical developments structure the compatibility between EU-NRR forest ecosystem provisions and domestic forest governance arrangements in two contrasting cases, Germany and Spain. While both countries exhibit decentralized governance structures and strong regional competencies in forest policy, they differ substantially in their regulatory styles and the distribution of administrative responsibilities at the national level. Empirically, we combine i) an analysis of contemporary national forest-related policies, including legislative acts, strategy documents, and associated funding instruments, ii) 24 semi-structured interviews with officials from national ministries, environmental NGOs, and forest owner associations, and iii) an examination of historical restoration narratives developed by national experts and assessing the influence of social, (geo)political, economic, and ecological drivers on forest restoration practices and governance across three time periods (1st: <1940, 2nd: 1940-1989, 3rd: >1990). Our study demonstrates how country-specific historical developments shape the degree of institutional compatibility with European Green Deal policies in the forest policy domain by linking historical institutional trajectories to the ongoing implementation of the EU-NRR.

IDENTIFYING KEY DYNAMICS AND LEVERAGE POINTS WITHIN THE ENERGY FORESTS CONFIGURATION USING CAUSAL LOOP DIAGRAMMING

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Abstract:

Sweden aims to develop a climate-positive bioeconomy with its industrial forestry sector as a backbone for substituting carbon-intensive resources across the economy. Forest-derived woody biomass already plays a major role, accounting for roughly 25% of primary energy supply and 12% of the value of Sweden's value-added products. Agriculture contributes a smaller share of bioenergy, mainly through liquid biofuels, biogas, and biodiesel. A notable crossover between the two sectors is

the use of agricultural land for “energy forests”: plantations of fast-growing broadleaf tree species—willows, aspens, and poplars—grown in short rotations on marginal or unmanaged farmland.

Numerous assessments have attempted to quantify the potential land base for such energy forests, with estimates ranging from 88,000 to 500,000 hectares. Many reports conclude that substantial areas could be productively used for fast-growing broadleaf biomass production to meet future energy needs. However, despite this theoretical potential, planted area has declined sharply since its brief expansion during the 1980s and 1990s. Total energy forest area fell from around 14,000 hectares in the 1990s to roughly 7,000 hectares in 2024. This contraction suggests missed opportunities for efficient land use in service of national decarbonization goals, including bioenergy supply and carbon sequestration.

Existing research has largely focused on the landowner perspective, identifying motivations and barriers influencing decisions to plant fast-growing broadleaf species on agricultural land. Yet comparatively little work has developed a systemic understanding of how these factors interact, or how broader structural dynamics inhibit or support the diffusion of energy forest systems. To address this gap, we apply a soft systems modelling approach, using causal loop diagramming to synthesize existing literature, identify key variables, and map causal relations. This enables us to characterize the (dys)functioning of the energy forest configuration and to surface the reinforcing and balancing feedbacks underlying its decline.

A workshop with actors active in energy forest value chains will be used to validate and extend the model. This participatory step will help identify leverage points for interventions that could improve system performance and support the more effective use of agricultural land for fast-growing broadleaf biomass within Sweden’s broader climate-positive bioeconomy strategy.

FOREST GOVERNANCE IN PRACTICE: NEGOTIATION, EXPERTISE, AND ADAPTATION WITHIN THE FOREST EUROPE PROCESS

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Abstract:

This paper examines how forest governance functions in practice by observing stakeholder interactions within the Forest Europe process during the 2024–2025 cycle. While academic discussions on forest governance often focus on institutional design and normative frameworks, less attention has been paid to the everyday dynamics that influence decision-making when diverse actors engage

directly. Forest Europe offers a unique vantage point as a voluntary, high-level political platform bringing together 46 countries and the European Union, it convenes governments, scientists, civil society, and industry stakeholders in consensus-driven deliberations on sustainable forest management. Drawing on participation in the Liaison Group this study provides an insider account of how governance processes are enacted, negotiated, and adapted in real time. By examining governance within this context, the study provides insights into how abstract principles are transformed into actionable strategies amidst uncertainty and crisis. This paper combines participant observation and reflexive documentation of negotiation settings, ranging from plenary meetings to informal exchanges. Particular attention is focused on how authority, knowledge, and legitimacy are negotiated among actors with differing levels of power through multi-level governance analysis, and on the role of scientific and technical expertise in influencing (or failing to influence) outcomes. This perspective allows for an understanding of governance as dynamic practice rather than a static policy framework. Possible findings might suggest that forest governance in this context is characterised by fluid negotiation, coalition-building, and continuous compromise, rather than linear policy cycles and show that crises serve as catalysts that rearrange priorities, integrating security and preparedness issues with sustainability narratives. This paper contributes to a more grounded understanding of how forest governance operates under complex conditions and demonstrates how international forest governance frameworks may adapt to remain relevant in times of significant uncertainty.

TOWARDS A EUROPEAN FUTURE? HOW INTERNATIONAL DONORS ARE SHAPING MOLDOVA'S FOREST GOVERNANCE REFORM

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Abstract:

As the Republic of Moldova advances on its path toward European Union accession, it faces significant challenges in reforming its forest governance system to meet international environmental and climate goals. This study investigates how international donors, particularly the EU, the World Bank, and member states' development agencies, are influencing Moldova's forest governance reform through

financial support, technical assistance, and policy conditionality. While donor-driven programs such as the National Forest Expansion and Rehabilitation Programme (NFERP) and the Moldova Forest Development Programme (MFDP) promise large-scale afforestation and institutional development, questions remain about the depth, direction, and sustainability of these externally supported reforms. Drawing on the literature on international environmental governance pathways and Europeanisation, this timely study explores changes in domestic rules, norms, actor constellations, and discourses as they unfold. Empirically, the study is based on document analysis, expert interviews, and participatory observations. By critically examining the interplay between donor agendas and local governance dynamics, this study contributes to a growing body of research on forest governance transformations in post-socialist Eastern Europe.

OPENING THE BLACK BOX: LESSONS FROM EU FOREST-RELATED POLICY IMPLEMENTATION IN SLOVAKIA

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Abstract:

Although a common forest policy is not formally embedded in the founding treaties of the European Union, forest governance has increasingly been informed by a range of strategic and legally binding EU documents adopted in recent years. These developments are closely linked to the implementation of the European Green Deal and its environmental objectives, including climate neutrality and biodiversity protection. Consequently, forest management has become implicitly or explicitly affected by evolving EU policy frameworks.

The implementation of these requirements in Slovakia reveals a some of persistent challenges rooted in the country's post-socialist institutional legacy. While Slovakia is formally considered to have completed its transition to a market-based and democratic system, forest governance continues to display structural continuities. Forestry remains a traditional sector characterized by hierarchical governance arrangements, bureaucratic decision-making, and pronounced sectoral approach. From the perspective of historical institutionalism, these features represent forms of path dependence that constrain policy adaptability and slow down responses to externally driven policy change.

At the same time, the European Union increasingly demands rapid and transformative environmental action, which creates tensions between historically embedded national governance models and EU-level policy expectations. This paper analyses these tensions by examining how institutional legacies shape the implementation of contemporary EU forest-related policies in the Slovak context.

Methodologically, the paper is based on qualitative policy analysis combining a systematic review of EU and national forest policy documents with an interpretative analysis informed by historical institutionalism. The study identifies key implementation challenges and proposes policy instruments

aimed at mitigating institutional rigidity, enhancing cross-sectoral coordination, and improving adaptive governance capacity.

The findings contribute to a better understanding of post-socialist forest policy transformations and are applicable to other EU member states with similar political, institutional, and socio-economic conditions. Funded by the EU NextGenerationEU through the Recovery and Resilience Plan for Slovakia under the project No. 09I03-03-V04-00355.

UNDERSTANDING POWER IN NATURAL RESOURCE GOVERNANCE: A META-ANALYSIS OF EMPIRICAL STUDIES

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Abstract:

Power is a fundamental yet frequently under-theorized concept in natural resource governance, particularly in forest management research. Despite its central role in shaping decision-making processes, institutional dynamics, and resource outcomes, power is often treated implicitly rather than as a distinct analytical category. This study examines how power is conceptualized, theorized, and empirically applied in forest governance literature. A qualitative meta-analysis of peer-reviewed articles was conducted based on search in the Web of Science Core Collection. Following a structured selection, a final sample of 104 articles published between 2000 and 2025 was analyzed using a content-structuring approach. The results reveal that power is predominantly addressed implicitly, with only a minority of studies explicitly defining it as a primary object of analysis. Most studies embed power within broader discussions of governance, participation, institutional change, or policy processes. Across literature, power is most conceptualized in actor-centred and relational terms, emphasizing the ability of actors to influence decision-making, control resources, and shape policy outcomes. Governments and public authorities are consistently identified as dominant power holders, whereas local communities, forest owners, and civil society actors are more often portrayed as power-seeking or constrained by institutional arrangements. Structure-based and discourse-oriented approaches remain less frequently applied, indicating a methodological preference for analyzing observable actor interactions over less tangible structural and discursive forms of power. Consequently, power is often operationalized through proxies such as participation, access to resources, or decision-making influence, rather than through explicitly defined theoretical constructs. The analysis also identifies a temporal shift in literature. Earlier studies focused on decentralization and power devolution in developing countries, particularly in Southeast Asia and Africa, whereas more recent research shows increasing thematic and geographical diversification, including Europe and East Asia, alongside a stronger emphasis on actor-oriented analyses. Despite governance reforms promoting decentralization and participation, persistent power asymmetries remain, with elites often retaining control over forest resources and decision-making processes. Theoretical approaches to power are fragmented, and no dominant framework emerges. Methodologically, literature is strongly dominated by qualitative approaches, particularly interviews and document analysis, reinforcing

actor-oriented perspectives. This study was funded by the Slovak Research and Development Agency (APVV-23-0116) and the EU NextGenerationEU (Project No. 09103-03-V04-00355).

SHIFTING MANDATES, SHIFTING EXPECTATIONS: INSTITUTIONAL REORGANIZATIONS AND PERCEPTION DYNAMICS OF ARGENTINA'S NATIONAL WILDFIRE MANAGEMENT SERVICE

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Abstract:

Wildfire governance occupies a hybrid space between forest policy, emergency management, and environmental policy, making it particularly sensitive to institutional design and public interpretation. Drawing on institutional theory, wildfire governance is conceptualized as a contested domain in which agencies pursue legitimacy, authority, and resources. Wildfire management actions (prevention, suppression, and preparedness) are therefore not only technical operations but also expressions of institutional identity and political priorities. In Argentina, the National Wildfire Management Service (SNMF) has undergone repeated institutional reorganizations over the past decades, shifting between Environment, Security, and most recently the Ministry of Defense under President's Milei administration. These shifts provide a unique lens for examining how organizational positioning influences both internal identity (mission) and external perceptions of wildfire governance. Against this background, this research aims to analyze how institutional location shapes expectations, legitimacy, and perceived mission of fire management administration by using the case of the SNMF in Argentina. Through semi-structured interviews with personnel who served under different ministerial arrangements, as well as with key stakeholders involved in forest governance, the study investigates whether organizational transitions influence the service's operational identity, strategic priorities, and perceived purpose within the broader governance system. Special attention is given to recent reforms that prioritize cost-cutting and aerial contracting, assessing how these policy shifts are interpreted by practitioners and perceived by society. By situating wildfire governance within the broader debate on perception versus reality in forest policy, the contribution offers a comparative perspective on how institutional design, political signaling, and public interpretation jointly shape wildfire governance outcomes. The findings aim to clarify how perception gaps emerge and how they influence the effectiveness and legitimacy of wildfire policy in Argentina and beyond.

STATUS QUO OR TRANSFORMATIVE CHANGE IN THE FOREST? JOURNALISTS' PERSPECTIVE ON COVERING FORESTS

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Abstract:

In recent years, journalism about environmental and social concerns in the Swedish forest sector, has increased and received attention from a wide audience of media-users. The media coverage has brought attention to the role forestry has in reaching Swedish climate goals as well as sustaining biodiversity, and poses questions about whether these issues can be addressed within the current forest management regime. In addition, this increased coverage has made the forestry topic accessible to more people, while at the same time seems to have contributed to even more locked-in positions for established stakeholders in the forest debate. This article focuses on the role of journalists as democratic mediators and co-producers of knowledge about forestry. The media coverage of Swedish forestry highlights the need to better understand how journalists navigate diverging knowledge claims in relation to actors within academia, as well as in industry, policy and activism. Furthermore, this article explores Swedish journalists' epistemology, and concepts such as objectivity, polarization and transformation. Using material from 17 semi-structured interviews with journalists covering Swedish forestry, this article looks into how different type of journalists deal with the topic of forestry in a context where forestry has become re-politicized and where little consensus is to be found. These themes are explored further in three planned focus groups with journalists, to be conducted in spring 2026. With the focus groups, we aspire to better understand what role(s) journalism has for the public debate about forestry, focusing on how journalists working in the area of forestry coverage perceive their roles and their profession. Furthermore, the article aims to contribute to a discussion on the potential democratic implications of a broader societal debate on the forest issue.

STAKEHOLDER INVOLVEMENT IN THE SELECTION OF HIGH PUBLIC INTEREST FORESTS AND DESIGN OF MANAGEMENT METHODS

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Abstract:

High public interest forests (HPIFs; referred to as community forest areas since 2025) constitute an important governance instrument for addressing conflicts between timber production and broader societal expectations in Estonia's state forests. This study examines stakeholder perceptions of HPIFs and evaluates the effectiveness of participatory processes in integrating ecosystem services into forest management decisions. The aim is to assess how local communities, the State Forest Management Centre (RMK) specialists, and municipal representatives conceptualize the role of HPIFs and to what extent current participation practices influence management outcomes.

The study applies a qualitative, multi-source research design. Empirical data consist of (1) semi-structured interviews with RMK forest management specialists, (2) a survey of local government representatives, and (3) a qualitative content analysis of stakeholder proposals submitted during HPIF participation processes between 2021 and 2024. Data were analysed using deductive qualitative content analysis, drawing on the Common International Classification of Ecosystem Services (CICES v5.1) to classify ecosystem services into provisioning, regulating, and cultural categories. In addition, preferred forest management practices and perceptions of participatory influence were systematically coded and compared across stakeholder groups.

The results indicate that HPIFs are predominantly valued for regulating and cultural ecosystem services, particularly habitat conservation, buffering functions near settlements, and recreational and health-related benefits. Provisioning services, including timber production, are generally accepted only when associated with low-intensity and close-to-nature management approaches, such as continuous cover forestry, selective cutting, and thinning. While participation processes are perceived to improve transparency and information exchange, both RMK specialists and municipal representatives highlight their limited impact on management decisions due to existing legal and planning constraints.

The study concludes that current participation practices in HPIF governance remain weakly connected to formal decision-making and ecosystem service assessment frameworks. Strengthening the institutional linkage between participatory input, ecosystem service-based evaluation, and forest planning instruments is essential for improving policy coherence and advancing socially legitimate forest governance.

CO-CREATING FOREST MANAGEMENT PLANS FOR BETTER IMPLEMENTATION OF LANDSCAPE PERSPECTIVE ON PRIVATE ESTATES.

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Abstract:

The adoption of a landscape-oriented approach in forest management constitutes a formidable challenge, especially in countries where forest governance rests on a *laissez-faire* approach and forests are dominated by non-industrial private owners and timber-oriented private companies. Planning at a landscape scale represents a *wicked problem*, as there is no straightforward solution for conceptualising and operationalising management activities at this level. The forest management plan (FMP) plays a vital role in Sweden's forestry, serving as an instrument for generating and implementing forest management alternatives. To effectively balance diverse objectives and consider different management options, including the alignment of estate management with features of surrounding landscape, the current FMPs require improvement. Additionally, there is a need to advance the planner's core capacity from production-oriented technical expertise to a broader skill-set that better matches forest owners' multi-dimensional needs.

Our study is based on knowledge co-creation between scientists, forest planners and owners, enhancing the likelihood of practical implementation on a broader scale. In this presentation, we will report the approaches used and lessons learned from testing novel approaches to forest management planning on three pilot estates of small-scale private owners who are members of forest owner association Södra. In particular, we will highlight the challenges and opportunities for bridging the gaps between owners' needs, the planners' professional knowledge, and the academic knowledge. Through co-designing novel planning procedures and piloting them on selected forest estates, the study aims to produce procedural guidelines, a prototype plan incorporating landscape features, and a training module for forest planners. These outputs are hoped to enhance client-orientation and versatility of forest management plans.

NEGOTIATING NATURE: THE POLITICS OF ECOSYSTEM RESTORATION IN THE DEVELOPMENT OF THE EU NATURE RESTORATION REGULATION

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Abstract:

The recently adopted Nature Restoration Regulation (NRR) constitutes the most significant advancement of European integration in the environmental policy sector since the Habitats Directive of 1992. Perhaps unsurprisingly, its proposal generated what has widely described as an unprecedented level of political controversy in the history of EU environmental policy-making. While there is an established body of scholarship that examines the politicization of the European Union (EU) in the context of European integration, relatively little attention has been paid to the complex process of politicization at the EU level itself, particularly overlooking the increasingly politicized dynamics of interaction within and between EU actors. This article examines how the NRR became politicized by analyzing its contested evolution through a multi-dimensional analytical framework of politicization. We identify three dimensions of politicization: (1) growing issue salience, (2) polarization of opinion, and (3) the expansion of actors and audiences engaged in EU issues. Using process tracing, these dimensions are traced from the initial announcement of the intention to develop an NRR in the European Green Deal in late 2019 through to the Regulation's adoption in August 2024. Drawing on 21 expert interviews and an extensive document analysis, our findings illustrate four critical moments in which the issue of nature restoration became politicized and demonstrate how these moments shaped the subsequent trajectory of the NRR policy-making process. These moments include (1) salience escalation triggered by the postponement of the Proposal's publication, (2) increasing position polarization within the European Parliament, culminating in the Committee on Environment, Public Health and Food Safety's (ENVI) vote, (3) the EP Plenary Vote amid public protests, and (4) the breakdown of majority support in the final adoption phase. Our study highlights that divergent economic and political interests and their strategic crosssectoral political mobilizations – further amplified by a context of geopolitical crises and overlapping election periods – have driven heightened politicization of EU environmental policy, creating sharp divisions even within the European Parliament's progressive ENVI Committee. The paper concludes with a reflection on the broader dynamics of politicization in contemporary EU environmental governance, particularly within the evolving landscape of the EU Green Deal.

SCIENTIFIC INNOVATIONS AND POTENTIAL ALLIES FOR INTEGRATING FORESTS AND HARVESTED WOOD PRODUCTS INTO THE VOLUNTARY CARBON MARKET

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Abstract:

One instrument for financing climate protection is the integration of European forests and harvested wood products (HWPs) into the voluntary carbon market (VCM). The scientific community consistently develops innovative ideas that could be used for increasing carbon storage in forests and HWPs, securing transparency and traceability of market activity within the VCM, improving monitoring, reporting, and verification measures, or reducing over-crediting. Despite the support of several key political actors, such as the EU Commission or the private emissions trading sector, on integrating forests and HWPs into the VCM and the existence of innovative scientific solutions for such integration, the activation of additional political support by actors is still needed to achieve the climate policy objectives of the VCM and to organize a more successful knowledge transfer from science into practice. Grounded on the Research-Integration-Utilization (RIU) Model of knowledge transfer in which allies play a central role, this study aims to identify potential political support for the integration of forests and HWPs into the VCM from various actors at the EU level. Our findings reveal that numerous governmental and non-governmental actors active at the EU level and relevant for such an integration support this aim. There are also a significant number of actors who have not yet formulated an explicit interest on the issue, despite pursuing ambitious climate protection targets themselves. Opposing positions were identified particularly among environmental and nature conservation organizations, which are generally skeptical of market-based solutions for climate protection. Based on key results and following the RIU model assumptions, this study recommends that potential allies be sought primarily among the actors without specified interests on the integration of forests and HWPs into the VCM. Such actors could be activated by clearly demonstrating the advantages of participating in the VCM. In contrast, actors with opposing positions could be presented with selected scientific innovations that address their specific concerns. The creation of a robust database in which knowledge transfer processes can be documented and developed is crucial for the implementation of these recommendations.

PREFERENCES AND TRADE-OFFS IN FOREST MANAGEMENT: FAMILY FOREST OWNERS' WILLINGNESS TO PAY FOR ENVIRONMENTAL BENEFITS

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Abstract:

Understanding forest owners' preferences for forest management outcomes is essential for designing policies that balance timber production and environmental concerns. Using a choice experiment approach, we studied how individual characteristics and concern for forest disturbances influence family forest owners' willingness to pay (WTP) for climate change mitigation, biodiversity conservation, and ecosystem resilience in forest management. We collected data from Finnish family forest owners through an online survey and analysed it with a mixed logit model in WTP space, including interactions to explore preference heterogeneity. The results indicate that forest owners are generally unwilling to lose profit for climate change mitigation, possibly because climate change is perceived as a global issue beyond individual control. In contrast, biodiversity conservation may be viewed as a more local and concrete, which may explain its higher priority among respondents. Higher education level was associated with higher WTP for both climate change mitigation and biodiversity conservation while ecosystem resilience remained less valued, suggesting that its benefits are not necessarily well understood. However, owners who expressed greater concern about forest disturbances showed higher WTP for both climate change mitigation and ecosystem resilience, indicating that awareness of risks can increase support for these attributes. The findings suggest that voluntary adoption of climate-friendly forest management practices is unlikely without financial compensation, highlighting the importance of economic incentives in policy design. At the same time, the limited valuation of ecosystem resilience points to a need for targeted communication and education to clarify its role in reducing risks of forest damage. Overall, the generally positive attitude toward biodiversity conservation suggests that biodiversity-oriented forest policies may provide a practical and socially accepted entry point for promoting sustainable forest management among family forest owners.

HEALTH SHOCKS AWARENESS AND FOREST MANAGEMENT INSTITUTIONAL COMPLIANCE: POLICY INSIGHTS FROM GHANA

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Abstract:

Institutional compliance is fundamental to forest governance, yet the literature implicitly assumes social stasis when analysing its determinants. This obscures how awareness of social change events, such as health shocks, reconfigures compliance behaviour. Using 332 household surveys, the study employs multiple linear regression to analyze determinants of institutional compliance and an Oaxaca–Blinder decomposition to explain compliance gaps across household levels of health-shock awareness. Directed content analysis of 24 key informant interviews, 16 focus group discussions, and 4 expert interviews was used to contextualize quantitative findings. Results indicate that only migration determines formal institutional compliance among households with low health-shock awareness, whereas prison sanctions, forest monitoring, and material incentives drive compliance among households with partial or full awareness. This suggests that without effective health risk awareness, households' compliance with formal forest management institutions is shaped by short-term economic gains. The Oaxaca–Blinder decomposition shows that formal institutional compliance gaps are shaped by group characteristics and structural factors, underscoring the need to mitigate livelihood and structural vulnerabilities in shaping compliance decisions. On the other hand, compliance with informal institutions is shaped by education and forest monitoring among households with low awareness of health shocks, whereas fines, financial incentives, and capacity-building are associated with non-compliance behaviours among households with partial awareness. Among households with full awareness, fines significantly drive compliance. This suggests that, in the absence of culturally aligned health risk perception, informal institutional compliance behaviors are shaped by transaction costs. The decomposition analysis shows that informal institutional compliance gaps are shaped solely by structural factors, underscoring compliance uniformity when health risk communications are integrated into local forest management frameworks. Policy recommendations include healthshock awareness campaigns, complemented by shock-resilient livelihoods for effective formal institutional compliance. Furthermore, aligning health shock communication with local knowledge, beliefs, and taboos can reinforce institutional compliance among households. This study contributes to the adaptive forest governance discourse by highlighting that awareness of health shocks can strengthen tropical forest governance when robustly integrated in forest governance frameworks. Contextual evidence from other tropical countries is needed for generalization.

NEW ACTOR, OLD EXTRACTIVISM? CHINESE ENGAGEMENT IN THE FOREST SECTOR OF THE DEMOCRATIC REPUBLIC OF CONGO

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Abstract:

At the core of social equality and just governance lies the question of why and how global extractive structures largely remains and unchallenged, despite decades of struggle over access to forest resource. Against the backdrop of expanding Chinese investments as the “new kid in the forest” (Terheggen 2010) in the historically European-dominated forest sector of the Democratic Republic of Congo (DRC), this study investigates material and discursive elements that drive and shape changes in “access” (Ribot 2003), defined here as the powers to benefit from the export-oriented commodification of forest resources. A mixed method approach was employed, relying primarily on critical qualitative analysis (Denzin & Lincoln, 2011) supported by descriptive statistics to engage with a combination of primary (interviews, field notes and archives) and secondary data (grey literature, online databases) gathered through desk research and fieldwork in DRC and China during 2023 and 2024. We identify three types of access: institutional, informal de facto, and discursive, map out various shaping elements including knowledge, capital, social relationships, identity, markets and power, and trace a chain of “access” involved in benefit creation and distribution through resource-making, extracting, processing, trading, value-adding and consuming. Our analysis demonstrates the experience of Chinese actors gaining access to timber resources through established extractive pathways historically paved by Europeans, focusing on how they leverage material advantages especially private cash flow, and how they discursively inherit and reinterpret extractive mentalities legitimize their roles. Furthermore, we situate Chinese access within broader struggles of access driven by the commodification of forest certification and conservation in DRC, suggesting a reconfiguration of access in which powerful foreign actors, old or new, retain access. Despite recent progresses in safeguarding institutional access (forest concession titles) for Congolese population, communities and Indigenous groups, they do not translate into powers to benefit from resources. Aligning with political economy calls to see ‘trees in forests’ by situating local dynamics within global structures, we conclude by highlighting the need to look beyond institutional title-granting—such as the 2022 Indigenous Peoples Law and the expansion of community forest concessions in DRC—to the underlying elements of access and powers.

MAP OF FOREST POLICY RESEARCH

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Abstract:

What research is done within the field of forest policy? This question is answered in this study by a bibliometric analysis. Data is based on Scopus co-citation network. Sampling is based on snowball and thematic deductive sampling via combination of manual and custom-trained categorization-focused language model. Sampled data covers all scientific publications within the field of forest policy and builds inductive classification of what this field is. Analysis shows extent of research activity per topic, organizational-level specializations, key publications per topic and trends through time. Analysis is presented via a combination of network, statistical and natural-language processing

INTERNATIONAL COOPERATION APPROACHES TO ADDRESS PRODUCTION SHIFTS IN FORESTRY AND AGRICULTURE AND GHG EMISSIONS LEAKAGE: ASSESSING STAKEHOLDER PERCEPTIONS IN EU, BRAZIL AND INDONESIA

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Abstract:

In the context of climate policy, the land use sectors are likely impacted by international production shifts and associated environmental and socio-economic spillover effects. For instance, it is estimated that the implementation of European Union (EU) Green Deal policies in forestry and agriculture in Europe may lead to an additional production of 10 Mio m³ timber, 5-10 % increase in palm oil production and associated loss of biomass carbon at – 435 Mt CO₂ in 2035 in Indonesia. In Brazil, estimates are at similar orders of magnitude, and concerning mostly timber, soy and vegetable oils. Related socio-economic and environmental spillover effects can be rated by stakeholders as risk or opportunity, and related international policy responses to address them as fair or unfair, respectively. This study aims at obtaining stakeholder perceptions in Brazil, Indonesia and EU of risks and opportunities of expected production shifts and GHG emission leakage, and of selected scenarios to address leakage and production shifts through international cooperation. Four scenarios of

international cooperation were assessed in terms of risks and opportunities to address leakage: 1. Non-intervention scenario (production shifts and related GHG emissions leakage just takes place unabatedly), 2. Trade intervening instruments (e.g., tariffs on high-carbon commodities or requiring carbon due diligence of value chains), 3. Technical-financial cooperation as a means to address unintended spillover effects of production shifts, 4. Results-based finance by EU to ensure land use sustainability. Quantitative and qualitative results of assessing these scenarios are used to formulate policy recommendations on how international leakage could be addressed in agriculture and forestry. Preliminary results of Brazil and Indonesia indicate that stakeholders diverge much in the risk and opportunity perception of the non-intervention and the trade instrument scenarios. On the other side, stakeholders generally perceive the technical-financial cooperation and results-based finance scenarios as higher opportunity-laden and less risky. Such preliminary results may indicate that no single policy solution is feasible, but rather a combination of cooperation scenarios may address complex challenges of production shifts and leakage.

TRANSLATING SCIENCE INTO POLICY AND POLICY INTO PRACTICE: A CASE STUDY OF A FOREST ENTERPRISE

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Abstract:

This paper will contribute to the debate about the effective translation of scientific findings into forest management policies and the implementation of these policies into everyday practice. This debate will first be placed into the larger debate on the sources and legitimacy of different knowledge systems, including science, embodied experience, and traditional ecological knowledge (Fortmann – Ballard 2011). A case study of the translation of science into practice in a model forest enterprise in the Czech Republic will then be described and analyzed in detail. The research included participant observation, interviews, and a survey, involving employees of the enterprise spanning from the top management to the manual workers who tend to the forest. Different types of knowledge systems identified during the research will be outlined and communication channels, overlaps, and disagreements between them will be analyzed. The research results will be related to similar research in neighboring countries (e.g. Pregernig 2000, Juerges – Jahn 2020, Stevanov – Krott 2021). The paper will conclude with a proposal for a more effective dialogue of knowledge systems grounded in a genuine multi-actor approach.

CAN SLOVENIA ACHIEVE THE EU BIODIVERSITY AND FOREST STRATEGY TARGETS BY 2030? INSIGHTS FROM FOREST OWNERS AND MANAGERS

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Abstract:

The EU's Biodiversity Strategy for 2030 and the New EU Forest Strategy for 2030 (hereinafter referred to as the Strategies) propose concrete forest-related policy objectives to contribute to the protection and restoration of biodiversity and the achievement of a sustainable, climate-neutral economy. The implementation of the Strategies depends on the engagement, motivation, and dedication of forest owners and managers. This study assessed, through a survey (n=398), the willingness of forest owners and managers in Slovenia to adapt their forest management practices to align with six EU forest-related policy objectives. The objectives were structured into three distinct types of policy intervention: a) conservation management of forests; b) close-to-nature forest management and climate-resilient forests; c) sustainable management of forests. Based on forest management objectives and decision-making principles, four types of forest owners and managers were identified. The "Multifunctionalists" (43.1%), represented by state forest managers and large-scale private forest owners, demonstrated the strongest support for all objectives. The "Environmentalists" (25.8%), primarily small-scale private forest owners or managers of municipal forests, remained largely divided/neutral, showing some slight support, especially for strict protection and restoration related to climate change and climate-related disturbances. The "Optimizers" (20.9%) are large-scale private owners for whom the forest represents a source of income. They tended to oppose most objectives, viewing them as a constraint for forest management. The "Traditionalists" (10.2%) are small- and medium-scale private owners, who, among all types, most strongly oppose all objectives. The results indicate that Slovenia faces challenges in achieving the EU Strategies objectives, as the identified types - with the exception of the "Multifunctionalists" - do not support the objectives and, consequently, are unwilling to change their forest management practices. Policy makers must recognise the intrinsic motives and norms that affect forest owners' willingness to engage, as responsiveness to EU and national policy objectives depends on how well policy intervention logics and instruments align with the dominant decision-making logic of forest owners and managers, thereby increasing acceptance of Strategies objectives.

CONFLICTS IN FORESTS AND JUSTICE: POWER, ACCESS, AND INEQUALITIES WITHIN THE CONSTITUTIONAL FRAMEWORK OF THE CZECH REPUBLIC

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Abstract:

This paper examines legal conflicts over forest use and management in the Czech Republic, analyzing how constitutional law addresses issues of power and inequalities in judicial decisions. The analysis draws on key rulings of the Constitutional Court of the Czech Republic, including Pl. ÚS 22/17, which invalidated parts of the Nature and Landscape Protection Act for failing to adequately protect public environmental interests. Describe the balance between ownership rights and environmental protection; and focus on II. ÚS 164/20, concerning public access restrictions to forest land. These decisions reveal a gradual shift in judicial reasoning toward a more balanced understanding of private property rights and public environmental interests, as articulated in Articles 7, 11, and 35 of the Charter of Fundamental Rights and Freedoms. However, the research identifies persistent structural inequalities in access to legal remedies and participation rights, particularly for local communities and civil society actors. The paper argues for a reinterpretation of the constitutional concept of public interest in forest governance and recommends strengthening procedural rights to enhance environmental justice.

BRIDGING THE SCIENCE-POLICY GAP IN COFFEE AGROFORESTRY: WHAT DO WE REALLY KNOW ABOUT SOCIAL RESILIENCE?

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Abstract:

Coffee agroforestry is widely promoted in forest and development policies as a climate-resilient strategy that enhances both ecological and social outcomes for smallholder farmers and forest communities. Yet does the scientific evidence support these policy narratives? This scoping review systematically examines the disconnect between policy emphasis on social resilience in coffee agroforestry systems and the actual state of empirical research. Following PRISMA-ScR guidelines, we searched Scopus and Web of Science using coffee agroforestry terms (11 keywords) and social-ecological resilience concepts (19 keywords), applying a framework of coping, adaptive, and transformative capacities. Initial screening of 114 articles yielded 75 studies for inclusion, with preliminary analysis revealing patterns in how social resilience in coffee agroforestry has been conceptualized and measured. Preliminary findings reveal a striking science-policy gap in coffee agroforestry social resilience research. Initial screening suggests that existing research predominantly focuses on ecological dimensions such as biodiversity and carbon sequestration, with limited empirical attention to farmer and forest community level social resilience. While policy frameworks consistently promote coffee agroforestry for "community resilience" and "livelihood security," empirical studies examining how farmers actually build resilience capacities through agroforestry and what governance mechanisms enable this process remain limited. Without sufficient empirical grounding, current governance interventions risk failing to address actual farmer vulnerabilities in coffee agroforestry systems. Our systematic evidence mapping identifies where targeted research is urgently needed. By making visible what we do not know, this review provides a roadmap for bridging the science-policy divide and enabling evidence-informed governance for climate-vulnerable coffee-producing forest communities.

UNPACKING FOREST DIPLOMACY: USING QUALITATIVE COMPARATIVE ANALYSIS (QCA) TO EXPLAIN DELEGATION STRUCTURES IN PERU

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Abstract:

Multilateral forums offer critical spaces for nation-states to present their stances on forests; specifically, states can maximize their influence through larger delegation sizes which potentially increase their capacity to participate actively in complex, concurrent negotiations to advance their

preferred outcomes. However, developing countries face both systemic and domestic challenges that may jeopardize their attendance.

This study investigates how delegation size and composition reveal a country's resource allocation and strategic priorities, elucidating the tension between international forest discourse and its empirical commitment in global decision-making. Using Peruvian delegations as case study, the research aims to answer the following question: Why do delegations attending forest-focused and forest-related multilateral forums undergo fluctuations in size and composition over a ten-year period (2014-2024)?

Framed by Rational Choice Theory, the study posits that delegation structures are the result of strategic choices made by state actors to maximize utility while navigating the costs and benefits imposed by domestic and international constraints.

We employ a comparative case study design to contrast Peruvian delegations at the United Nations Forum on Forests (UNFF) with representatives at the UN Framework Convention on Climate Change (UNFCCC). A preliminary database of the number of official delegates and their affiliation was built from the forums' lists of participants during the study period, to determine the size and composition of the delegation, and the forum location. Content analysis of ministerial documents and semi-structured interviews with current and former delegates served to gather data on financial sources, and ministerial rotation as a proxy of political instability. These factors are analyzed using Qualitative Comparative Analysis (QCA) to identify the specific causal configurations that determine the resulting delegation size and composition.

This research leverages QCA to offer a rigorous interdisciplinary analysis of how domestic volatility dictates international engagement. It contributes a necessary Global South perspective to forest policy, proving that the reality of a country's international stance is often written in the logistical composition of its delegations.

BEING VS ACTING AS A “FOREST OWNER” – UNDERSTANDING FOREST OWNERS SITUATED AGENCY THROUGH A PRACTICE LENS

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Abstract:

For many small-scale private forest owners in Europe, forest management is a side activity, making their engagement a central concern of forest policy research. However, forest owners have often been studied from a rational-choice perspective, with limited success in understanding forest owner behaviour and explaining the lack of forest policy uptake. Drawing on Bourdieu's theory of practice, this research reconceptualises forest ownership as a practice shaped by *habitus*, available *capital* and *field* to understand situated agency of forest owners. Guided by the research question *How do small-*

scale private forest owners in Germany perform forest ownership, the study pursues two objectives: (1) to map the interconnected practices that constitute forest ownership; and (2) to reveal the situated agency that emerges from those practices. For this purpose, four workshops with small-scale forest owners are conducted in Baden-Württemberg (Germany) to discuss the performance of forest ownership. The records are analysed to identify practices of forest ownership including the elements that constitute them (materials, meanings and competences). By foregrounding practices and situated agency we put into question the often claimed “passivity” of small-scale forest owners and suggest to not view it as a deliberative strategy but the emergent outcome of practice bundles that prioritise e.g. low effort maintenance, recreational use, or risk aversion. The paper contributes to a nuanced account on forest owner agency and offers an understanding for designing policies that align with, rather than disrupt, the existing practices of small-scale forest owners.*

**The empirical part of this research will be conducted in the beginning to mid-march 2026 (The dates for the workshops are already set and the invitations are already sent out). I am confident to be able to present results by May.*

FROM PERCEIVED BENEFITS TO POLICY PRIORITIES: A FUZZY-BASED APPROACH TO SUPPORTING NON-WOOD FOREST PRODUCT COLLECTORS’ ASSOCIATIONS IN SERBIA

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Abstract:

This paper aims to examine how non-wood forest product (NWFP) collectors’ perceptions of expected benefits from collective action influence their readiness to join associations, and how these perceptions can be translated into policy-relevant priority groups for targeted support in Serbia. Using a fuzzy-logic decision-support approach, we analyse perceived benefits of association across three domains: (i) administrative (e.g. information on regulations, assistance with permits, support in accessing subsidies/grants), (ii) informational–educational (e.g. knowledge of NWFP species, training for proper and sustainable collection, understanding of forest and ecological processes), and (iii)

economic–infrastructural (e.g. market information, joint sales and processing, improvements to forest-related infrastructure).

Data were collected in 2022 through a survey of 639 NWFP-collecting households in Serbia. Responses were aggregated into three benefit indexes, which were then combined into a fuzzy priority index to classify households into low-, medium-, and high-priority groups for inclusion in association-support programmes.

The results identify three distinct profiles. In the low-priority group (25%), all three benefit indexes are low, indicating that these collectors expect few or no gains from associating. In the medium-priority group (48%), administrative and informational–educational benefits remain moderately low, while economic–infrastructural benefits are dominant, suggesting that association is mainly viewed as a mechanism for improving market access and commercialisation. In the high-priority group (27%), all three indexes are very high, indicating collectors who expect simultaneous administrative, capacity-building, and market-related support from associations.

Construct validity is supported by a significant association between the fuzzy priority groups and stated willingness to engage in establishing an association: willingness is approximately 60% in the low-priority group, approximately 80% in the medium-priority group, and over 90% in the high-priority group ($\chi^2(2) \approx 33.9$; $p < 0.001$; Cramer's $V \approx 0.27$). Overall, the findings suggest that systematically differentiating collectors' perceived benefit profiles can improve the alignment of policy instruments with heterogeneous household needs, enabling more effective and targeted support for NWFP collectors' associations.

FROM TECHNICAL TOOL TO POLICY INSTRUMENT: THE ROLE OF ROMANIA'S WOOD RESOURCE BALANCE IN SUPPORTING EVIDENCEBASED FOREST GOVERNANCE

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Abstract:

The shift toward evidence-based forest governance in Europe increasingly relies on digital infrastructures capable of transforming operational data into clear and policy-relevant information. Romania's Wood Resource Balance (BLR), publicly available through a national platform, represents one of the most recent and comprehensive attempts to consolidate national wood flow data into a transparent, accessible, and policy-relevant tool. The BLR provides consolidated information from SUMAL 2.0 for the years 2023 and 2024 (Romania's digital system for monitoring timber harvesting, transport, and transactions), covering the movement of wood from harvesting and import to processing, consumption, and export, and offering a structured representation of operational data that can be used at the science-policy interface. This paper examines the BLR as a governance instrument with significant potential to reshape forest policy processes. By providing coherent, verifiable, and publicly accessible information on wood resources, the BLR addresses long-standing challenges in Romania's forest administration, including fragmented reporting, low interoperability between datasets, and limited capacity for monitoring transformation chains. These improvements enable clearer identification of supply-chain patterns, domestic consumption structures, and regional dynamics that are key elements for designing more efficient and equitable forest policies. The analysis highlights several policy-relevant contributions of the BLR. First, it supports compliance with international reporting obligations by offering standardized, comparable data. Second, it enhances transparency in a sector marked by controversy and public mistrust, improving the informational basis for communication between authorities, industry, and civil society. Third, the BLR provides an empirical foundation for evaluating market functioning, assessing accessibility constraints, planning energy-wood policies, and improving the allocation of forest resources. Finally, the Romanian experience illustrates how digital transparency tools can contribute to more responsive and accountable forest governance in post-socialist contexts. This study demonstrates how a technical innovation can evolve into a strategic policy instrument that strengthens institutional capacity, supports evidence-based decision-making, and fosters a more transparent and participatory model of forest governance.

SCIENCE-POLICY INTERFACE IN THE ELABORATION OF THE ROMANIAN FOREST CODE: FOREST LAWS ANALYSIS IN SELECTED EUROPEAN COUNTRIES

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Abstract:

The objective of the study is to identify and describe best practices in the regulation of the forestry sector as reflected in forestry legislation in other countries, in support of the elaboration of the new Romanian Forest Code. The analysis of forestry legislation focused on the main regulatory act of the forestry sector (Forest Code or Forestry Act) in 17 European countries with a recognized tradition in forestry. The database for the analysis was mainly constituted from FAOLEX, as well as from relevant scientific articles used for the comparative analysis of forest regulatory frameworks. A deductive qualitative categorization was employed for the content analysis of the legal acts.

The results of the analysis point to different approaches used to regulate the forestry sector across five domains: governance and forest administration, ownership and property rights, sustainable forest management, biodiversity conservation, and bioeconomy/financial support. The paper identifies that current EU forest strategy concepts (e.g., bioeconomy, old-growth forests, ecosystem services, and the use of wood in long-term products) are not yet directly reflected in the main forest legal acts, but rather are used in strategic planning documents. Recommendations on good regulatory practices from European countries are presented from the perspective of their integration into the newly approved Romanian Forest Code.

A POLICY FIELD IN CRISIS OR IN BLOOM? PUBLIC PERCEPTIONS OF FORESTRY IN POLAND

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Abstract:

Recent years have brought several crises to Polish forestry, including a high-profile conflict over the management of the Białowieża Forest, a bottom-up social movement challenging the harvesting policies of the State Forests Holding, which manages nearly one-third of the country's territory, and the politicization of the forest service by an increasingly autocratic government. These developments have undermined the traditionally high social legitimacy of Polish foresters. As a result, forestry in Poland now operates in a challenging socio-political environment, shaped by numerous policy initiatives aimed at diversifying decision-making structures previously dominated by foresters and at shifting forest management priorities toward regulating and cultural ecosystem services.

This paper draws on data from two national surveys conducted in 2024 and 2025 on representative samples of Polish citizens to examine public perceptions of forestry, forest management objectives,

and preferred functions of Polish forests. We also identify socio-demographic characteristics associated with support for new policy initiatives or, alternatively, for the continuation of the status quo. The results reveal a complex picture. While the operation of the State Forests Holding is assessed relatively positively, including its performance in the field of nature conservation, respondents express more critical views regarding the organisation's capacity to communicate with local communities and to involve other actors in forest management decision-making. Our findings support earlier large-N studies indicating a growing shift in public preferences away from provisioning ecosystem services toward regulating and cultural ones. We further demonstrate that political orientation, gender, affluence, and place of residence significantly shape attitudes toward forest policy.

THE POLITICAL, SOCIAL, AND IDEOLOGICAL LOGICS OF FOREST FUTURES IN THE NETHERLANDS

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Abstract:

Futures are inherently formative of forest policies. Futuring practices, e.g. models and scenarios, inform explicit targets for forests' futures, and future imaginaries influence the desired role of forests in future society. 'Forest futures' is used here for the various explicit and implicit futures that constitute forest policies and in turn shape the future of forests. The political, social, and emotional dimensions of futures are increasingly recognised by scholars, but too often neglected in forest futures, making them inadequately responsive to climate uncertainties, complexity of societal demands, and political instability. Using the case of the Dutch forest sector, this paper shows the social, political and ideological logics that shape forest futures and explores the conditions of possibility and impossibility of changes in forest futures. Through document analysis and semi-structured interviews, the paper builds a historical overview of Dutch forest futures, starting at the turn of the 20th century, when fear for a Netherlands without forest and nature instituted two organisations for their preservation. The 20th and 21st century show many changes in forest futures through institutionalisation and de-institutionalisation of forest and nature laws, strategies, and organisation, and shifts in governance modes to decentralisation and Europeanisation. More recently, forests futures become predominantly articulated as part of climate change futures and utopic visions of a healthy and prosperous 2050. Forest futures change with political logics of optimism and pessimism related to e.g. wars, economic development, and environmental concerns. In utopic and dystopic imaginaries, forests serve a greater ideal, for example wellbeing and recreation in welfare-utopias of the 1960s and 2020s, or a physical safeguard in wartime or climate-dystopia. Desired visions of forests-for-themselves have emerged in times of green ideology and optimism, however rapidly lost traction when faced with crises. The analysis shows that logics of reduction consistently determine future practices in the forest sector, identifying forests in terms of resources, area, species, and carbon storage. The paper shows under which conditions forest futures changed or which forest futures resisted change, ending with future research pathways focussed on how possibly to transform forest future practices to make them better equipped for challenges faced today.

FUELLING THE FUTURE? FRAMING FORESTS IN THE EU'S RENEWABLE ENERGY DIRECTIVE

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Abstract:

The European Union has set ambitious targets to reduce its carbon emissions and achieve climate neutrality. One sector undergoing transformation is the energy sector, which aims to increase the share of renewable energy. Forest bioenergy is an important contributor to the potential success in fulfilling the goals. However, increasing pressure on forests raises concerns about the sustainability of using forest biomass for energy. Different perceptions of this matter often appear in the media, creating an overall picture of a polarised debate. The EU's Renewable Energy Directive (RED I-III) is mentioned in these discussions as a policy driving the exploitation of valuable forests and causing damage to soil or biodiversity. These debates inspire our research, and in this particular study, we examine the evolving role of forests and forest bioenergy in the RED I-III. Combining content and thematic analysis of the legal documents, we analyse how references to forests have changed over the Directive's three versions. The study's results show that forests were primarily framed as key biomass providers, whereas their ecological and socio-economic functions received limited attention. Continuous revisions of the RED have increasingly strengthened sustainability criteria and introduced principles such as cascading use and biodiversity protection, reflecting growing environmental awareness. However, tensions persist between the expansion of renewable energy and the long-term sustainability of forest ecosystems. The findings emphasise the need for more integrated and consistent EU governance linking energy, climate, and forest policy to ensure that the renewable energy transition aligns with forest sustainability.

FACTORS INFLUENCING HOW STATES LEGALLY RESPOND TO REGIONAL INTERNATIONAL ORGANISATIONS FOREST POLICIES: A COMPARATIVE ANALYSIS OF ECCAS AND THE *PROYECTO MESOAMÉRICA*

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Abstract:

Research on the outcomes of the policies, i.e., the legal transpositions necessary for member states to implement regional forest policies, has often been overlooked. The Central African Forest Commission (COMIFAC) was initially established as an independent organisation focused on forests and the environment. It was later integrated into ECCAS as a specialised institution. Similarly, the Mesoamerican Biological Corridor, which focuses on biodiversity and the environment, led to the creation of the Proyecto Mesoamérica (PM). The PM helps implement regional development and integration projects. As regional organisations, the PM and COMIFAC have 10 and 11 member states, respectively. Studying the two organisations' forest and forest-related policies reveals that the PM has passed the Master Plan for Sustainable Territorial Management in the Mesoamerican Biological Corridor (2013-2020), the Mesoamerican Strategy for Environmental Sustainability Action Plan (2013-2016), and the Mesoamerican Strategy for Environmental Sustainability Action Plan (2017-2019). On the other hand, COMIFAC passed the COMIFAC Second Convergence Plan 2015-2025. Both organisations have climate change adaptation and mitigation objectives in their policies, and they adopt similar measures to achieve these goals, such as the number of protected areas and the adoption of national climate change action plans. The research questions are: Is there variation in the legal transpositions between member states within each organisation? And what factors contribute to these variations between member states? There were policy implementation overlaps between the two organisations from 2015 to 2019. Therefore, we only used data from this period. Four factors were used to explain variations between member states. Namely, first, the signing and ratification of the Paris Climate Change Agreement and the submission of Nationally Determined Contributions (NDCs). Second, the Worldwide Governance Indicators. Third, international donations to Forestry and Environmental Matters using OECD CRS data. And lastly, the forest cover area of the member states. Our preliminary results show that some states align closely with regional goals, while others lag. By comparing similar policy frameworks with divergent implementation patterns, the study sheds light on the outcome performance of regional environmental governance across two regions.

“HOW DO YOU LIKE YOUR CONTRACTS?” AN INVESTIGATION ON FOREST OWNERS CHOICES FOR DELIVERING ECOSYSTEM SERVICES ACROSS EUROPE

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Abstract:

Forests are well-known ecosystem services (ES) providers. Policymakers aim to find appropriate instruments to ensure continuous provision of such services to society, primarily involving forest owners. In the EU, the Common Agricultural Policy (CAP), specifically through Rural Development Programmes (RDPs) provides incentives for various actions linked to ES delivery, with higher focus on biodiversity conservation and carbon sequestration. The measures applied by CAP 2014-2022 and CAP 2023-2027 range from flat compensations to management agreement aligned with the logic of Payments for Ecosystem Services (PES), which requires specific contractual rules to be agreed upon between ES providers (i.e., landowners) and ES users.

Despite the variety of available instruments in CAP 2014-2022, only half funding for forestry has been used, and similar low uptake has been observed in literature for other funding schemes. Thus, it is likely that CAP 2023-2027 will also have to address challenges of participation. This supports the need to better understand landowner's preferences for different contract features.

This study aims to:

1. Assess how the inclusion of more optimal PES features in RDP measures (i.e., result-based criteria, area-based mechanisms, etc.) could improve participation among different forest owners;
2. Investigate how contract feature preferences change according to three different ES having a public-good dimension, i.e., habitat conservation, carbon sequestration, and watershed services (the latter less targeted by CAP so far), and according to landowner characteristics.

The investigation will target EU forest owners, with the support by the European Landowners Organization. The survey is structured in five sections: i) description of the respondent position, ii) description of the forest, iii) experiences with RDP funding, iv) preferences for PES and other contract features for future instruments to support the provision of three public dimension ES, v) socio-demographics of the respondent. Section iv) will be structured to conduct a discrete choice experiment, where respondents will choose between different contract feature combinations for the three ES under analysis.

Our results aim to support the design of more effective and attractive mechanisms for the three ES under investigation, tailoring specific features for the target owners.

TRANSFORMATIVE CHANGE IN FOREST CONSERVATION POLICY? COMPARING PROTECTED AREAS AND OECMS THROUGH THE IPBES FRAMEWORK

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Abstract:

As the global biodiversity crisis intensifies, the Kunming-Montreal Global Biodiversity Framework emphasizes the need for transformative change – not only by expanding the conservation areas, but also by rethinking how, by whom, and for what purposes biodiversity, including that of forest, is conserved. In this context, this study examines whether ‘Other Effective Area-based Conservation Measures (OECMs)’, formally defined by the Convention on Biological Diversity (CBD) in 2018, represent a policy instrument aligned with the principles of transformative change, as outlined in the IPBES Transformative Change Assessment.

Using a theory-driven qualitative content analysis, this study compares the protected areas and OECMs across three dimensions of transformative change: structures (governance and policy instruments), views (values and worldviews), and practices (implementation and on-the-ground behaviours). Drawing on official policy texts and guidance from CBD, the IUCN and related national implementation documents such as Japan’s ‘Nationally Certified Sustainably Managed Natural Sites’, many of which apply to forest landscapes, the analysis identifies key differences between the protected areas and OECMs.

The findings indicate that OECMs – unlike the protected areas, which are legally designated with conservation as their primary objective – are policy tools that validate conservation outcomes across

diverse socio-economic and forest governance contexts, even where conservation is not the original management objective. In many forest areas, OECMs promote inclusive governance models that acknowledge plural knowledge systems and conservation values, especially those held by Indigenous Peoples and local forest-dependent communities. They emphasize recognition over designation, outcomes over intent, and context-sensitive management over standardized enforcement.

These attributes not only broaden the spatial scope of conservation but also embody institutional and normative shifts aligned with transformative change. While protected areas remain essential for safeguarding core forest ecosystems, OECMs demonstrate how conservation can be embedded into forest landscapes and multifunctional land use systems. We argue that OECMs represent not merely a technical supplement to protected areas, but a form of governance innovation that reshapes who can act as a conservation actor, what constitutes legitimate knowledge, and how conservation is practiced.

ITALY'S NATIONAL COMMITMENT TO FORESTS AND THE FORESTRY SECTOR: ANALYSIS OF POLICIES AND FINANCIAL RESOURCES

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Abstract:

The central role of forest ecosystems and related production sectors is increasingly recognised as strategic within European policies on sustainable development, environmental protection and ecological transition. This fundamental role has been recognised by the European Union through the European Forest Strategy. In Italy, the guidelines of the new European Forest Strategy have been transposed and adapted to the national context through the adoption of the Consolidated Law on Forests and Forest Supply Chains (TUFF, 2018) and subsequently with the development of the National Forest Strategy (SFN, 2022). The support measures planned for the implementation of the TUFF and the SFN are aimed at addressing the main structural and functional critical issues in the national forestry sector. These include: the fragmentation of private land ownership, the still insufficient dissemination of forestry planning tools, the reduced competitiveness and productivity of forestry companies, the failure to exploit national timber resources, the poor training of forestry workers and, last but not least, the impact of climate change and extreme events. Public support plays a crucial role in promoting investment, innovation and organisational capacity, contributing to strengthening the resilience of the forestry system and its integration into territorial development processes. However, in order to understand the actual effectiveness of these support instruments in pursuing national and European strategic objectives, it is essential to systematically evaluate the use of public grants and subsidies, analysing their consistency with the expected results and the impacts generated on the territory and on the beneficiary enterprises. This study aims to provide an exploratory overview of Italian public expenditure in the forestry sector, analysing how funding has been allocated, spent and managed over time, as well as the main results achieved in terms of support for forestry businesses, improved resource management and environmental and socio-economic benefits. To this end, data collected by the National Forestry Information System (SINFor) are used, relating to the various financial resources, both national and European Union, disbursed at national level and allocated to the implementation of the SFN and the pursuit of the priorities identified therein.

CONFLICTS SHAPING THE UPTAKE OF THE EU FOREST STRATEGY AT NATIONAL LEVELS

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Abstract:

Conflicts have arisen between Member States and the European Commission around the EU Forest Strategy either because of differing opinions on whether forests should be considered as a commodity, as nature to be conserved, or because of disagreements about the EU's competencies vis-a-vis national sovereignty of forests. These conflicts highlight high and diverging stakes in the Union's governance of forest ecosystems. At the national level, impending changes related to EU regulations impact the forest-based sector and its governance, including monitoring and access to finance. Despite not being legally binding, the EU Forest Strategy is significantly influencing national policies within the broader EU political framework. To what extent this new strategy exacerbates existing conflicts or shapes new ones is not well understood. The main objective of this study is to understand whether and how conflicts and policy prioritization may influence the implementation of EU policy at the national level. Theoretically, we draw on Europeanization studies to understand how different forest-related conflicts are connected to attempts to integrate European forest policy at the EU level. Empirically, we build on extended policy document analysis and interviews with national policy experts in 15 European countries. Our analysis provides a rich overview of the extent to which diverse national policy developments align with the EU Forest Strategy goals and how these developments connect to existing or newly emerging conflicts around the Strategy's implementation. Based on these insights, we suggest potential ways to overcome the challenges and advance forest policy in Europe.

DEVELOPMENT OF THE ZAMBIAN SUSTAINABLE CHARCOAL PRODUCTION STRATEGY: EFFORTS TO HALT FOREST DEFORESTATION

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Abstract:

Zambia is facing increasing climate variability, marked by more frequent droughts and floods, rising greenhouse gas emissions driven largely by deforestation and forest degradation. Besides agriculture expansion, charcoal production is one of the drivers of forest loss, while simultaneously serving as a critical source of household energy and rural livelihoods. Biomass fuels account for approximately 83% of national energy use, with charcoal dominating urban cooking energy demand and firewood remaining prevalent in rural areas, due to inadequate access and reliability of electricity from hydropower. Charcoal production is a pivotal livelihood activity for forest-dependent communities. The challenge, therefore, is to formulate the new national forest policy, which not only in agreement with the international commitments, but also incorporating the promotion to transition from unsustainable production systems toward sustainable, regulated, and socially inclusive alternatives. This paper aims to present the current stage of the Zambian sustainable charcoal production strategy development. The strategy is grounded in an evidence-based and consultative process, drawing on policy reviews, empirical studies, stakeholder consultations, and expert analyses. A workshop for stakeholder consultation was conducted in October 2025 to provide a structural framework for a national sustainable charcoal production strategy. It recognizes the dual structure of Zambia's charcoal sector, comprising both formalized and livelihoods-based value chains, and addresses the environmental, social, and economic dimensions of charcoal production, trade, and consumption. Four strategic measures are identified. The first deals with sustainable charcoal production – downscaling unsustainable practices and upscaling sustainable methods, accompanied by the strengthening regulatory instruments and enforcement of the charcoal value chain”. The third and fourth measures focus on expansion of clean and modern energy” and livelihood diversification for producers and traders, which look at the complementary measures to support the key challenges to halt forest degradation. The identified enabling condition to implement the strategic measures include strengthening national and local governance and regulations, supported by interministerial, and formal non-formal institution collaboration. Integration of this topic into school education and awareness campaigns are also necessary for getting public support.

INFORMATION EXCHANGE NETWORKS FOR TIMBER LEGALITY IN SELECTED SOUTHEAST EUROPE COUNTRIES

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Abstract:

Recent policy developments in the European Union (EU), particularly the EU Deforestation Regulation (EUDR), have placed new expectations on timber-producing countries in selected Southeast Europe countries. While it is recognized that formal alignment with EU legality requirements has progressed unevenly across the region, much less is known about how information on timber legality is exchanged among the actors responsible for implementation. This mismatch between policy perception and everyday governance practices may significantly affect the effectiveness of EUDR implementation within and beyond the EU.

This contribution builds on previously published research on the Republic of Serbia, which used social network analysis to map information exchange on timber legality among key decision-makers. Adopting the same methodological framework, the study investigates four additional cases in the region: Croatia, Slovenia, Republic of Srpska (Bosnia and Herzegovina), and Montenegro. Data were collected through interviews and surveys with institutional actors involved in timber legality, including forestry administrations, inspectorates, state forest enterprises, customs, private sector representatives, scientific bodies and non-governmental organizations.

Results reveal distinct network patterns shaped by political context, institutional legacy, and EU integration status. In all cases, public authorities hold central positions in the network, while private and civil-society actors remain marginally involved in information flows. These structural characteristics indicate a strong reliance on hierarchical governance and limited trust-building mechanisms. These factors are likely to influence the perception of regulatory credibility and the practical capacity to meet EUDR requirements.

By bringing together empirical insights from selected countries, the paper highlights how persistent gaps between formal obligations and actual information exchange practices may challenge the

transition toward transparent, risk-based timber legality assurance. The findings underline the need for more balanced and inclusive communication structures, both nationally and regionally, to support effective EUDR implementation and strengthen the legitimacy of forest governance in economies in transition.

UNDERSTANDING FOREST VALUE ORIENTATIONS AND ATTITUDES TOWARD FORESTRY AND FOREST-BASED TOURISM AMONG THAI EDUCATED RESPONDENTS: A COGNITIVE HIERARCHY PERSPECTIVE

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Abstract:

This study explores how underlying value orientations influence perceptions of forest ecosystem services and forest-based tourism in Thailand, guided by Cognitive Hierarchy Theory (CHT), which proposes that fundamental values shape orientations, influencing attitudes and behaviors towards environmental issues. This study addressed three research questions: (RQ1) What are the nature-based values among Thai educated respondents associated with ecocentric or anthropocentric orientations? (RQ2) Which value orientation is related to positive or negative attitudes towards Thai forest-based tourism? And (RQ3) How is forest-based tourism reflected in the key forest-related document - Thai National Forest Policy? Quantitative data of an online survey via social media platform were gathered from Thai university respondents in 2024-2025 and analyzed to examine associations between nature value typologies, value orientations, and attitudes. A qualitative thematic analysis of Thailand's forest policy documents was conducted to assess how forest-based

tourism is represented at the strategic level. Significant associations were found between most nature value typologies and both anthropocentric and ecocentric orientations, suggesting that nature values among Thai respondents are multidimensional. Respondents valued forests for both human-centered and nature-centered reasons. No significant link was observed between the provision of non-wood products and stress reduction, suggesting a stronger focus on the economic and physical wellbeing benefits. The findings suggest that blended conservation and communication strategies, integrating human wellbeing with ecological values, may be the most effective approach. University communities, as informed and engaged groups, can play a key role in promoting sustainable forest management and forest-based tourism in Thailand.

BOUNDARY SPANNING: THE ROLE OF SERVICE PROVIDERS IN EXPANDING ACCESS TO REVEGETATION PROGRAMS

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Abstract:

Approximately 60% of land and 58% of forest area in the United States are privately owned, and in recent years broad bipartisan support has emerged for large-scale tree planting on non-forest lands, including abandoned farmland, marginal agricultural sites, and mined areas. Despite widespread investment, little is known about the accessibility of financial and technical assistance programs for private landowners in the United States to support tree planting activities. Service providers (SPs) – foresters, agronomists, ecologists, wildlife biologists, and other natural resource professionals in the public and private sector – play a central role in facilitating access. Positioned at the intersection of public programs and private landowner needs, SPs function as boundary spanners, leveraging their expertise and networks to connect resources, build relationships, and foster participation in revegetation programs. Yet, few studies have empirically examined how their collaborative practices shape opportunities for engagement and natural capital investment. SPs play a particularly important role in outreach and engagement of underserved landowners, many of whom face historic and ongoing barriers to program participation. For these groups, collaboration with service providers may be the most critical pathway to learning and accessing financial and technical assistance. Understanding how SPs, as boundary spanners, engage with these landowners is therefore key to addressing program accessibility and limitations. This paper addresses that gap through analysis of thirty semi-structured interviews with service providers in North Carolina and Indiana, USA. Interviews explored SPs' practices, competencies, and resources for engaging underserved landowners and administering revegetation assistance programs. Research on boundary-spanning suggests that competencies, such as building trust, negotiating diverse interests, and navigating complexity are

essential (Williams 2002). Additional practices involve translating and aligning perspectives across diverse and historically excluded populations (Quick & Feldman 2014). Our preliminary findings indicate that relationships between SP and landowners rest on trust, and that program participation is shaped by available funding, capacity, and institutional collaborations. By highlighting the boundary-spanning practices of SPs, this study advances understanding of how engagement can expand access to revegetation programs, particularly for historically underserved landowners. The paper aligns with the conference themes “Perceptions and Realities in Forest Governance” and “Participatory and Inclusive Forest Governance”.

PULP CAPITAL AND HEGEMONY: HOW POWER RELATIONS OBSTRUCT SUSTAINABILITY TRANSITION IN THE FINNISH FOREST SECTOR

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Abstract:

The forest sector in Finland is facing an ecological and an economic crisis. The ecological crisis consists of the collapse of the forest carbon sinks driven by excessive harvest levels, endangerment of forest species and biotopes driven by intensive forest management, and eutrophication driven by ditching and intensive soil preparation. The economic crisis consists of the decreasing profitability and value added of the forest sector. This dual crisis is connected to the fact that the “majority of forests in Finland are managed for the purposes of providing the paper and pulp industry with raw material” (Berglund 2001). After the World War II, most Finnish forests have been transformed into young, even-aged tree plantations, and the share of pulpwood and energywood of wood harvests has been constantly increasing in relation to the share of more valuable timber. Pulpwoodization – the reduction of boreal forests into pulp industry resources – is a case of strikingly inefficient form of land use from both economic and ecological perspectives. Thus, sustainability transition in the Finnish forest sector would require a break away from pulpwoodization, which would involve increasing the value added from forests while addressing ecological issues. Among other things, such reversal would involve a transition from rotational forestry to continuous cover forestry in forest management and a transition from pulp products to timber-based products in the forest industry. But what are the political and economic obstacles to the shift away from pulpwoodization? This paper approaches this question as a matter of forest power, which refers to the power relations shaping the use of forests. The paper argues that the sustainability transition in the Finnish forest sector is obstructed by the uneven distribution of forest power, which favours the interests of the pulp industry over the interests of other actors. In particular, this paper approaches this uneven distribution of forest power through the lenses of the concept of hegemony, arguing that the domination of forest sector by pulp industry can be understood by examining how the hegemony of pulp industry has been formed through the interplay between political, economic and ecological factors.

WIND ENERGY DEVELOPMENT IN FORESTS: A COMPARATIVE ANALYSIS OF SUBNATIONAL POLICY CHANGE IN GERMANY

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Abstract:

Wind energy development in forests represents a highly controversial issue in Germany's energy transition, where ambitious climate policy objectives intersect with forest and nature conservation goals. In Germany's federal system, this conflict is largely negotiated at the subnational level, resulting in substantial variation across the German federal states regarding the regulatory and planning frameworks governing wind energy development in forests. This study aims to provide a comparative overview of how these policy frameworks have evolved since the early 2000s and to identify factors contributing to policy change. The analysis focuses on key policy outputs, including state forest laws, wind energy decrees, administrative guidelines and spatial planning instruments. Methodologically, the study applies a systematic document analysis and classifies the federal states along a scale capturing the degree of restriction or openness toward wind energy development in forest areas. The results reveal distinct development patterns across the federal states. While some adopted early and relatively permissive approaches allowing wind energy development in managed forests, others maintained more restrictive forest protection regimes over extended periods. More recently, federal-level legislation has increasingly influenced state-level policy adjustments. The conference contribution presents work-in-progress findings and discusses their implications for forest policy as well as for the governance of climate–biodiversity trade-offs in federal systems.

PROMISES AND PERILS OF MARKET-BASED INSTRUMENTS FOR FORESTS: EXPLORING DIVERGENT ACADEMIC PERSPECTIVES THROUGH A META-NARRATIVE REVIEW

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Abstract:

Market-based Instruments (MBIs), such as Payment for Ecosystem Services, eco-certification or carbon- and biodiversity credits, have been a prominent topic in environmental research for almost three decades. Despite the rapid emergence of MBIs within the fields of forestry and conservation, the academic debate remains fragmented across disciplines, leading to diverging evaluations on the effectiveness of these policy instruments. Through a systematic meta-narrative literature review of 148 academic papers, complemented by expert appraisal, we examined epistemological assumptions, prominent variables, and key findings of the research on MBIs. Five academic perspectives can be distinguished: (i) environmental economics (ii) governance studies (iii) behavioural studies (iv) policy studies and (v) political ecology. By exploring these perspectives across separate thematic areas, we show how separate conceptualizations of MBIs have led to distinct, sometimes complementary and sometimes conflicting, research findings and policy insights. Specifically, we identified a fundamental divergence between perspectives focused on optimizing the MBI efficacy and those that problematize the foundational design and purpose of the instruments themselves. While full integration between the perspectives may neither be desirable nor possible, we conclude by stressing the necessity for scholars to engage across paradigmatic boundaries to further advance the empirical analysis of the “promises and perils” of market-based instruments, and increase our understanding of their possible contribution to mitigating environmental and social problems of natural resource use.

BEYOND CASH INCENTIVES: INSTITUTIONAL DYNAMICS OF COLLECTIVE ACTION ACROSS STATE AND PRIVATE FORESTS OF COMMUNITY-BASED MANAGEMENT IN JAVA, INDONESIA

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Abstract:

Evaluations of forestry incentive programs frequently overlook the essential role of local institutions and differences in payment mechanisms but focus more on biophysical or economic outcomes. This study addresses this gap by providing a comprehensive analysis of program multidimensional outcomes and how cash and non-cash incentive systems influence collective action and affect local institutional incentives in community-based forest management (CBFM) at both state and private forests on Java, Indonesia's most populous island. Using Ostrom's Institutional Analysis and Development framework and a mixed-methods approach, we interviewed a total of 228 participants across three private company-supported voluntary incentive programs. The findings reveal that the effectiveness of incentives primarily depends on the institutional capacity, rather than on the incentive's size. Although participants are predominantly smallholder farmers with low education and economic welfare, strong social capital, established local institutions, and the presence of local champions significantly enhance the outcomes of collective action. Cash incentives are most efficacious when program objectives emphasize forest conservation and protection. Meanwhile, non-cash incentives serve as institutional strengthening rather than substitutes for cash, and they are more influential for forest rehabilitation and restoration as main goals. The governance frameworks of social forestry in state forests are more structured and primarily support restoration initiatives, especially when material incentives are limited. On the other hand, private forests are under greater pressure to undergo conversion and require ongoing, customized incentive measures. The research highlights the unique roles of government, academia, NGOs, and private companies as key players in the development of incentive systems. However, private companies may also act as context setters, possessing significant power but low interest in the sustainability of CBFM. The government, as a policymaker, can encourage private companies to become key players by enhancing their interest in CBFM as a component of their business strategies. It cautions against generic subsidy initiatives and underscores the risks of abolishing incentives without institutional integration. This study advances the theoretical and practical framework for formulating adaptive forest incentive programs in densely populated tropical areas by advocating a diagnostic approach that aligns incentive design with tenure conditions and institutional capacities.

VISIONS FOR THE FUTURE OF EU FOREST POLICY AND ITS NATIONAL IMPLEMENTATION IN FINLAND UP TO 2035

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Abstract:

Over the past three decades, EU forest policy has evolved through distinct eras, reflecting shifts in political priorities: sustainable forest management (from the 1990s to the early 2010s), bioeconomy (from the early 2010s to 2018), and ecological crisis (from 2019 onwards). The publication of the European Green Deal in 2019 marked a significant transition from production-oriented goals toward biodiversity- and climate-centric objectives. More recently, the second von der Leyen Commission (from 2024 onward) has introduced new priorities, such as deregulation, competitiveness, and security, which diverge from those of the first von der Leyen Commission (2019-2024). This shift, along with changes in the broader operating environment, may challenge the current course of policy development and indicate the emergence of a new policy era. These evolving priorities, combined with tensions between EU-level and national forest policies, for example, in Finland, where conflicts between EU environmental and climate objectives and national forest policy priorities have been particularly pronounced, highlight the complexity of future EU policy development.

Considering these changes, this study examines plausible future visions for EU forest policy and its national implementation in Finland up to 2035. The study explores alternative visions and the challenges of anticipating policy development. The research data comprise twenty expert interviews with specialists in EU forest policy, sustainability transitions, and futures research. The interviews were structured around a futures table based on expert assessments of how megatrends, drivers, policy trends, power relations, contradictions, inertias, path dependencies, and potential surprises may shape policy development. In addition to envisioning desirable and undesirable but plausible visions for the futures of EU forest policy, experts identified critical elements for enabling a sustainability transition in forest use and for ensuring justice within that transition. By combining visions for the future up to 2035 with conditions for a just sustainability transition, the study provides insights into EU-level forest policy developments and possible visions for its national implementation in Finland.

SWEDISH SOCIETY PREFERENCES FOR REWETTING PEATLANDS: TESTING THE EFFECT OF PAYMENT VEHICLES THROUGH A DCE

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Abstract:

In Sweden, approximately 30% of peatlands have been drained to increase forest productivity, negatively impacting peatlands' hydrological, biological, and climatic conditions. Since 2021, Sweden has been working to restore these areas through Rewetting Agreements, but progress is currently 80%

behind expectations. To improve restoration efforts, there is a need for increased human capacity and a compensation system for forest owners. In response, we assess Swedish society's willingness to support increased rewetting actions for climate and environmental benefits. We designed a DCE with five attributes related to post-rewetting effects on forest peatlands: reduced carbon emissions, increased water-loving vegetation and wildlife, decreased risk of adverse weather events, and increased swampy areas and mosquitoes (disservice). Two payment options were compared: i) an increase in monthly taxes per person and ii) a premium for forest-related products (e.g., paper, berries, mushrooms, wooden furniture, biofuels) per person and month. The reason; it is of high importance to select an appropriate payment vehicle for evaluating social preferences. In an online test with Swedish residents (n taxes = 77; n premium = 68), we compared the two payment options. The DCE scenarios and cards were identical except for the payment vehicle. Results across samples are comparable; respondents do not show significant differences in socioeconomic characteristics. There were no significant differences in preferences for the attributes between samples, indicating that taxes are as credible a payment vehicle as premiums. Society has a higher marginal willingness to pay for reducing carbon emissions to zero and for reducing the risk of events by 30%- 40%. Much more presence of water-loving wildlife and vegetation is preferred, while their WTP for mosquitoes and swampy areas has the opposite effect. However, we found a significantly higher protest response to taxes than to the premium (respondents selected all opt-out alternatives across all choice cards, thereby refusing to pay more for peatland restoration), suggesting that the premium might be a more feasible payment vehicle in practice. Evidence suggests that assessing the potential of payment vehicles is of great importance to achieve higher social support and greater willingness to pay for nature restoration and conservation.

PROPOSAL FOR A PAYMENT SCHEME FOR FOREST WATER-RELATED ECOSYSTEM SERVICES IN THE SLOVAK REPUBLIC

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Abstract:

Water is a basic commodity and an essential prerequisite for life, with its strategic importance increasing due to rising economic demands and living standards. Forest ecosystems play a critical role in providing water-protection services; however, the costs of management measures aimed at enhancing water retention and quality are currently borne by forest owners without additional compensation. Water protection thus represents a highly relevant subject for the development of innovative Payments for Ecosystem Services (PES) schemes.

The objective of this paper is to design a model example of a private PES scheme within the catchments of the Starina, Bukovec, Málinec, Klenovec, Hriňová, Turček and Nová Bystrica water reservoirs. The analysis identified the key actors: the supply side consists of forest owners in the protection zones, while the demand side comprises water utility companies, municipalities, and their

inhabitants. The research quantified the value of the provided water-protection service in the studied areas, ranging from 9,66 to 43,42 €.ha⁻¹.year⁻¹.

The proposed private PES scheme provides a mechanism for financing specific management changes aimed at active water protection. The results confirm that voluntary payments are a suitable tool for internalizing forest owners' costs, while successful implementation depends on thorough preparation and effective communication with stakeholders. This innovative approach has the potential to increase the quality of services provided and offers a practical framework for forestry and environmental policy in the Slovak Republic.

“FREEDOM WITH RESPONSIBILITY”: A PLAY OF LEGAL REGULATION, FORESTRY, AND EXTRACTIVISM IN INLAND (NORWAY)

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Abstract:

This paper examines the relations between forestry as a political economy and law in the Inland region, which has the highest roundwood removals for commercial purposes in Norway, through the theoretical lens of forestry extractivism. In doing so, the paper critically assesses the extent to which law has enabled and given form to intensive land exploitation, the depletion of nature, and unequal relationships among forestry stakeholders, including farmers, forestry workers, farmers' associations, and forestry entrepreneurs. From this perspective, the paper discusses the assumptions underlying an emerging debate between the continuation of the regulatory framework of “freedom with responsibility” —which is based on making forestry farmers responsible for balancing production, environmental, and social values, and private certification mechanisms— and the need to change it in accordance with the European Union Deforestation Regulation and the proposed Forest Monitoring Law. The paper critically analyses the extent to which these regulatory frameworks can redress the extractivist features of forestry in Norway. The final goal of the paper is to understand the features of Norway's forestry as part of the global mode of extractivism, and to investigate how state legality has given shape to its extractive dimensions, who benefits and who loses out from the current legal framework and how the law mediates the economic and social relations that emerge in this context. The paper provides concrete knowledge that intertwines and enters into dialogue with general and abstract theories about the relationship between law and political economy.