

5th International Forest Policy Meeting  
April 10-12, 2024, Helsinki



UNIVERSITY OF HELSINKI



## **5th International Forest Policy Meeting – A Political Forest**

Forests, trees, and forested lands are claimed for many purposes. They provide for materials such as timber, pulp and non-timber products; and also for carbon, for biodiversity, for soil and water protection; as well as for energy and rural development. They provide space for recreation, eco-tourism and socio-cultural and spiritual values in the global North and South alike. Many of these interests are interconnected, and they entail critical cross-sectoral and transboundary interdependencies. In these highly contested and connected spaces with a myriad of powerful (and less powerful) interests at play, policies related to forests and forest lands shape and are shaped by the outcomes of actors' negotiations and impositions of their interests. These interests reflect underlying institutional histories, discourses, and information at various levels, domestically, regionally (e.g., the EU), and internationally. Science and research, and especially social sciences, is required to unpack and critically examine forest policy, decision making and implementation processes and practice, and assess its implications for people (including historically underrepresented groups, women, and youth) and planet.

The 5th IFPM is an in-person event and aims to provide an open environment to present, interact and critically discuss new insights to wicked problems. One major purpose of the meeting is to facilitate networking and dialogue amongst forest policy interested researchers with a particular emphasis on creating a safe and nurturing atmosphere for early-career researchers to present and discuss their work.

The IFPM5 conference team

## Keynote 1 - Decolonizing research practices in forest and forest policy

### Speaker

**Sabelo J. Ndlovu-Gatsheni** is currently Professor and Chair of Epistemologies of the Global South with Emphasis on Africa and Vice-Dean of Research in the Africa Multiple Cluster of Excellence at the University of Bayreuth in Germany; Professor Extraordinarius at the Centre for Gender and African Studies at the University of Free State (UFS) in South Africa; Honorary Professor in the School of Education (Education & Development Studies) at the University of KwaZulu-Natal (UKZN) in South Africa; Research Associate at the Ali Mazrui Centre for Higher Education at the University of Johannesburg (UJ) in South Africa; and Research Associate at The Ferguson Centre for African and Asian Studies at The Open University in the United Kingdom. He is a Fellow of the Academy of Science of South Africa (ASSAf) and the Zimbabwe Academy of Sciences (ZAS). Professor Ndlovu-Gatsheni is a prolific scholar with a hundred publications including more than 20 books to his name. His latest publications include *Epistemic Freedom in Africa: Deprovincialization and Decolonization* (Routledge, 2018); *Decolonization, Development and Knowledge in Africa: Turning Over A New Leaf* (Routledge, 2020); *Marxism and Decolonization in the 21<sup>st</sup> Century: Living Theories and True Ideas* (Routledge, 2022) co-edited with Morgan Ndlovu; and *Beyond the Coloniality of Internationalism: Reworlding the World from the Global South* (CODESRIA Book Series, 2024-in press). The leading African historian Professor Toyin Falola has written a book-length study on his work entitled *Sabelo Ndlovu-Gatsheni and Decolonial African Studies* (Routledge, 2024).

### Panelists

**Dr Ayonghe Akonwi Nebasifu** is a Postdoctoral Researcher at the Department of Forest Sciences, Faculty of Agriculture and Forestry, International Forest Policy Research Group, University of Helsinki. His current research (GreenPole project) pursues interdisciplinary assessments of forest policy outcomes in Finland, Sweden, Norway, and Denmark. His work shares interest in multiple areas, including: co-management systems for natural resources; people-nature relations; anthropological inquiry; and interdisciplinary theories on power, knowledge-integration, agency, and cultural resilience. He has also worked on the anthropology of protected areas in Sub-Saharan West Africa. Currently a member of the *Just Ecological Political Economy* Editorial Board, of the Helsinki Institute of Sustainability Science (HELSUS).

**Karen Nobre Krull** is a Brazilian agroecologist with experience in federal environmental and research institutions in Brazil, as well as civil society organizations. Over the past two months, she served as a Visiting Researcher at the Stockholm Environment Institute (SEI). In recent years, her work has centered on developing strategies for the Amazon region and implementing initiatives with rural communities to facilitate the agroecological transition of productive systems, promote regenerative agriculture, and foster rural development.

**Daniela Kleinschmit** is Professor for Forest and Environmental Policy at the University of Freiburg. Before she has spent six years at the Swedish University of Agricultural Sciences. Her research interest comprises land use policies and governance with focus on legitimacy, discourses, communication and integration. Daniela has initiated and coordinated various research projects and published a number of scientific papers, chapters and edited volumes. She is actively supporting science-policy interactions and internationally well connected as Vice-president of the International Union of Forest Research (IUFRO) in the international scientific community.

**Irmeli Mustalahti** is a professor of natural resource governance based at University of Eastern Finland. She is a chair of Responsive Natural Resources Governance (RNRG) research group. Her main research and teaching interests are long-term empirical research on natural resources governance, environmental conflict resolution and collaborative governance of natural resources. Since 2003, she has engaged with the Academy of Finland funded research projects and being in close collaboration with various international research networks. Since 2015, she has been developing, jointly with an international researchers, PhD supervisors and practitioners, Environmental Collaboration and Conflict Resolution (ECCR) network and course series

**Muhammad Alif K. Sahide (Alif)** is Professor and Head of Forest and Society Research Group of Forestry Faculty (FSRG) of Universitas Hasanuddin. He actively engages on forest education and networking in Southeast Asia, and is part of national policy committees and works across Southeast Asia as part of the ASEAN Social Forestry Network. His research focuses on critical perspectives of international regimes, commons and commoning, community forestry, institutions, and bureaucratic politics in Indonesia. He continues to hold a broad portfolio of research on forest and land use governance. He serve as reviewer of approximately 15 forest policy and governance journals every year. Alif is also a research team member for 15 collaborative research projects supported by various international and national research, policy and planning institutions including: PAIR, EXPLORE, Universitas Hasanuddin, South Sulawesi regional planning agencies (BAPPEDA), and the Ministry of Higher Education and Research in Indonesia. As founding and chief editor of Forest and Society, Alif has also been active in leading writing workshops across Southeast Asia. He is engaged in facilitating capacity building and writing workshops for young researchers, supports various local NGOs on writing and publishing their ideas, all of which has been facilitated through the platform of the Forest and Society editorial mission and program.

Moderator:

**Dr. Maria Brockhaus** is Professor and Chair of International Forest Policy at the University of Helsinki, and a member of HELSUS, the University's Sustainability Centre. Her main research themes are forest policy and governance in climate change mitigation and adaptation, the political economy of tropical deforestation, policy and institutional change and related policy networks and discourses,

## **Keynote 2 - EU Forest Strategy: ambitions, anxieties and policy implications**

### Speaker

**Georg Winkel** is Professor and Chair of the Forest and Nature Conservation Policy Group at Wageningen University, the Netherlands. His main research interests encompass forest and conservation policy, the role of knowledge and discourses in policy making, and (environmental) sociology relating to forests and nature. He holds an MSc (Forest Sciences) and a PhD (Forest and Environmental Policy) from University of Freiburg, Germany. Previously he has been working at the European Forest Institute, Joensuu (2015-2017) and Bonn (2017-2021) and at the University of Freiburg (2001-2015). He also spent one year at the University of California, Berkeley, in 2011.

### Panelists

**Dr Karoliina Niemi** works as the Director of Forest Affairs at the Finnish Forest Industries federation, which is an interest organization of the Finnish forest industries. She holds a doctoral degree in forest ecology from the University of Kuopio.

**Dr Mai Suominen** works as the leading forest expert at WWF Finland. She holds a doctoral degree in forest ecology from the University of Eastern Finland.

**Adrián Tistan** works as a policy officer at the forest team of the Land Use and Management Unit of the EU Directorate-General for Environment, where he is responsible for the implementation of various actions of the new EU Forest Strategy for 2030. He holds a Master's degree in Forest Management from the University of Copenhagen.

### Moderator

**Dr. Constance L. McDermott** is an Associate Professor and Jackson Senior Research Fellow in land use and environmental change at Oriel College and the Environmental Change Institute, School of Geography and the Environment, Oxford University. A social scientist by training, she has over 30 years' experience conducting research and applied work on state, civil society and market-based approaches to the governance of forests and related supply chains, and the nexus of forests with climate, agriculture and land use change. Her work, which spans the Americas, Europe, Asia and Africa, includes a strong focus on issues of social equity in environmental conservation initiatives.

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## Abstracts

Fernande Abanda Ngono

### **The invention of natural world heritage in the forest territories of the Congo Basin**

Fernande Abanda Ngono<sup>1</sup>

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*Key words : natural world heritage, protected areas, patrimonialization of nature, decolonization of nature conservation policies.*

For several decades, we have been witnessing a patrimomania that particularly affects the South. Several inhabited natural areas defined as protected areas during the colonial era are now considered as "common heritage of humanity", under the prism of UNESCO's heritage policies, forest territories have become world natural heritage; The global patrimonialization of nature has thus allowed the appropriation in the name of humanity of vast spaces around the world. In its total extent, there are just over 10 million hectares of forest located in the Congo Basin. These forest territories, which now refer to a global ecological capital, are above all ancestral territories inhabited by communities that have made them a living environment and a living space. This communication intends to re-question the challenges of the making of natural world heritage in the Congo Basin, by tracing the paradigms and movements that have carried this process since its advent in several Central African countries. This is one of the results of applied social science research conducted from 2016 to 2022 in the region.

The interest here is to shed light on the often understated historiographical foundations on the local implications of the classification of the Congo Basin forests in the UNESCO World Natural Heritage List and the transformations that this process induces on the representations, uses and action of the ancestral communities living in these territories. This analysis is a continuation of studies on the territorial dynamics of global patrimonialization and those on the socio-anthropological aspects of nature conservation. However, it offers new perspectives and additional insights into the strategies at work in the construction of this World Heritage category. It also sheds new light on the dynamics of social innovation in territories struggling with top-down nature management policies that impose themselves on it. Starting from the case of the Dja Wildlife Reserve, a site in Cameroon that was heritage in 1987 but appropriated for millennia by Baka and Bantu communities, this research describes the upheavals that patrimonialization induces on the lifestyles of these communities. Through an interdisciplinary approach, it sheds light on the controversies surrounding this policy, which claims to be humanist and universalist. The case of the Dja Fauna Reserve highlights the logic of territorial confiscation and green grabbing that this process feeds and inspires in the territories where it is implemented.

Its main contribution lies in the recognition, in territories facing the injustices of conservation policies such as patrimonialization, of a dynamic of collective action driven by local communities. Through this dynamic of resistance, they adjust their social relations and impose themselves in the governance of these sites. These heritage controversies appear to be a point to be taken into account in current claims related to heritage restitution. This research then suggests a revision of the meaning and logics of natural world heritage and a decolonization of the mechanisms that feed it.

Elias Andersson

### **Alternatives and openings for forest pluralism: a participatory approach to services and decision-making in Swedish forestry**

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The demand for diversified forestry in Sweden has been widely acknowledged for a long period, but its realization is lagging, highlighting the need for substantive changes in implementation. Previous studies have underlined the dominant and hegemonic position of present regime of the “Swedish forestry model”; focused on e.g. even-aged and clear-cut forestry, timber production, a high degree of Norwegian spruce or Scots pine monocultures and an advisory system that is dominated by timber purchasing organizations, that hampers innovations of forest management. By scrutinizing and challenging present procedures and knowledge production for forest advisory services and planning, this study aims at exploring behavioral, organizational, technological, socio-ecological challenges and openings for transformative, as well as incremental, changes towards a more diversified forest management, as well as the condition of agonism and pluralism in forest-related knowledge production, participatory processes, management, service provision and planning. To accommodate the demand for more diversified management that better matches forest family owners’ needs and societal goals, we undertake a number of participatory processes including organization of advisory services in private and public domains and a poststructuralist approach to knowledge production within women forest owner’s networks. On the basis of an interview study on the present market of forest-related advisory and planning services and the organizational and strategic approaches of dominant actors, this presentation focuses on how these shape the understanding of advisory services, relations, agency, knowledge and decision-making processes in private forest ownership in Sweden.

## **Gender and Leadership in a forest science network – Who is part of IUFRO?**

Elias Andersson<sup>1</sup> & Maria Johansson<sup>2</sup>

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IUFRO constitute the largest global network for forest science cooperation with multiple levels and actors. Its leading position entails an influential role addressing a multiplicity of forest-related issues and challenges. This raises questions about both whom and what kind of knowledge that fits in, is encouraged and can flourish, thanks to the structures and relationships that the network offers. In research, gender, as well as regional, differences in networking have been highlighted as one of the main reasons for unequal career development and promotion gaps, and academic networks are no exception. Networks, both formal and informal, provide access to e.g. relationships, recognition, information and resource.

Against this background, the overall study explores the gender relations, practices and structures of IUFRO through an organisation analysis focused on representation, recognition and redistribution. The analysis shows an unequal representation at different levels, recognition, e.g. in the forms of awards, and distribution of resources. By exploring how IUFRO, its organisation and practices is perceived and experienced by persons in leading and influential positions, this specific study adds insights to the practices and implementation of leadership and organisational policies within IUFRO. The analysis show that informal networking is often described as the strength, and a benefit of IUFRO, and therefore something that is encouraged. However, the organizations often lack information about this - one of its main activities/practices. Only looking at the formal structure of IUFRO, provides limited understanding of its networking practice, its conditions and the organization as a whole, as the informal processes also impact on representation, recognition and the distribution of resources. The use of different organizational identities both show its strength and complexity. However, it might also limit the basis for identification and participation. In balancing between bottom-up and top-down, flexibility and structure, it highlights the need to adapt and relate the implementation of change to the mixed organisational practices and basis of the network(s), the organisation and its leadership.

Sandrine Andong

## **French colonial forestry regulation in Cameroon and the production of inequalities in forest management in Cameroon.**

Sandrine Andong<sup>1</sup>

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Logging in Cameroon was largely regulated during the French colonial period. France organized activities related to the production and export of timber, as well as the repression of offences related to timber exploitation. These forestry regulations led to the dispossession of local people from their land and forests, and strict regulation of their use of forest resources. Post-colonial forestry legislation has maintained French colonial logging logics. These logics continue to underpin Cameroon's current forestry policies, legislation and practices. Their alignment with international policies and requirements has not removed the French colonial logics of forest management. The inequalities produced by French colonial regulations are reproduced by current regulations in Cameroon. The aim of this paper is to carry out a historical analysis of the regulation of Cameroon's forestry sector during the French colonial period and the 1994 forestry reform, in order to highlight the types of inequality that are specific to or common to the two sets of regulations discussed here. This research shows that (i) French colonial regulation of the forests of Cameroon created economic, social and professional inequalities between foreign and indigenous actors; (ii) it also laid the foundations for the current difference in access to forest resources between foreign and national actors in Cameroon; (iii) these inequalities and differences in access are still present in the Cameroonian forestry sector, and favor the extension of the hegemonic relations and domination established by French colonization of Cameroon to Cameroon's relations with its other European partners in forest management.

## **Foreign policy as an instrument of (re)production of inequalities : the case of FLEGT in the Congo Basin forest sector**

Yves Paul Mandjem<sup>1</sup>, Maria Brockhaus<sup>2</sup>, Sandrine Andong Essola<sup>1</sup>, Patrice Bigombe Logo<sup>1</sup>

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*Key words* : Congo Basin, Foreign policy, VPA-FLEGT, (re) production of inequalities.

Initially a domain exclusively reserved for States to preserve their vital interests relating to their power and security outside of their territories, the field of foreign policy has gradually broadened over the last decades to include subjects, such as the environment, and new actors such as the European Union (EU), an international organisation. As a result of these evolutions, the European Initiative against illegal logging in tropical forests, or FLEGT for short, can be seen as an instrument of the EU's external action on tropical forests. This instrument is implemented outside

of Europe, through bilateral agreements known as Voluntary Partnership Agreements (VPAs), signed between the EU and some tropical countries that produce and export timber to the EU's territory. As regulatory tools for implementing European external action on tropical forests, the FLEGT-VPAs signed with certain Congo Basin countries are restructuring the landscape of forest governance in these countries, and are also suggesting behaviours to the actors involved in these implementation processes.

Using a constructivist approach, this paper aims to make a contribution to Foreign Policy Analysis (FPA). Using Bourdieu's sociology of the 'field', we analyze the process of implementing an EU foreign policy instrument on forests, specifically in Cameroon. We analyze the changes orchestrated by this process both in the structure of Cameroon's forestry sector and in the "*habitus*" of the actors involved. In particular, this research shows that (1) the VPA-FLEGT process is taking place in Cameroon in a context of inequality characterized by the 'unjustified' difference in access to material and symbolic resources, which it accentuates to the benefit of European actors. (2) That, this difference in access gives rise to a struggle for control of power and forest resources between the European and Cameroonian parties. (3) It also inspires actors on the Cameroonian side to mobilize strategies of resistance in various forms, ranging from inertia to the instrumentalization of time, the hidden aim of which is to (re)take total or partial control of their system of governance.

Jodie Asselin

### **The Discursive Context of Forest in Land Use Documents: An Irish Case Study**

Jodie Asselin<sup>1</sup>

<sup>1</sup> University of Lethbridge, Canada

This paper explores the discursive construction of the term 'forest' within land use documents and how its usage can deliberately cultivate ambiguity. The talk will focus on a case study of Irish afforestation in upland County Cork that is part of a reimagined 'green' future through tree planting. I argue that policy language often embraces the multiple potential affordances within the term forest to discursively bridge contradictions between economic and conservation goals while leaving their material implications to be negotiated by those working on the land itself. This is so much so that I have come to think of trees in this region as 'paper forests' — in that their existence, to some degree, is more concrete when legislatively declared than when materially present. In the bureaucratically thick terrains of rural Ireland, documents are important components of human-environment relations. Focusing dually on their discursive justification and their implications on the everyday lives of rural dwellers opens up the notion of landscape to include its legislation.

Aino Assmuth

# **Forest carbon payments: a multidisciplinary assessment of policy options for promoting carbon storage**

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**Keywords:** *Carbon payment scheme; Forest carbon; Additionality; Carbon leakage; Social acceptance*

Forest carbon sinks can play an important role in mitigating climate change, but currently only few policies exist globally where economic incentives are created for forest owners to strengthen them. This article aims to facilitate the design and implementation of governmental payment schemes for forest carbon uptake services by presenting a multidisciplinary analysis of the many challenges involved in such schemes and by proposing potential solutions. We assess the consequences, opportunities, and risks of carbon payment schemes from economic, ecological, social, and legal points of view based on existing literature.

The main economic challenges of implementing carbon payment schemes relate to potential leakage, the question of additionality, as well as uncertainties of empirical forest-owner behavior. The most important ecological considerations include effects on soil carbon dynamics and biodiversity as well as issues of non-permanence and forest resilience. Our exploration of the social acceptance of carbon payments among the general public, key market actors such as forest owners and forest industry, and other stakeholders suggest that both the process of developing the scheme and its details are significant. Further, our legal analysis indicates that central challenges for carbon payment schemes especially within the European Union rise from the requirement to comply with competition and state aid regulations.

Finally, we synthesize our findings and suggest a two-step approach for introducing public carbon payments in an EU Member State. Initially, the scheme could be launched via De minimis aid, with low pricing to moderate market effects, with payments limited exclusively to additional carbon storage, and excluding peatlands where tradeoffs exist between tree biomass and soil carbon. In the future, improved knowledge base and institutional changes may enable schemes that encompass whole ecosystem carbon for all relevant soil types, create optimal incentives also for land use choices, and utilize, e.g., the new aid scheme (CEEAG) regulation of EU.

Peter Auernhammer

**On the relevancy of social milieus for forest policy research.**

Aurenhammer, P.<sup>1</sup>, Glormann, M.<sup>1</sup>, Strüber, P.<sup>1</sup> and Krott, M.<sup>1</sup>

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The paper/contribution provides an overview on social milieus (e.g. Sinus-milieus) and their application in sectors other than forestry. It further shows how recent forest related research has taken into account social milieus or has otherwise, at least partly, considered actor or owner beliefs and preferences (e.g. in social networks). It concludes on the challenges and opportunities for the incorporation of social milieus in novel research concepts.

Mersudin Avdibegović

### **Regulatory framework of private forest management: A comparative analysis of selected South-East European countries**

Mersudin Avdibegović<sup>1</sup>, Špela Pezdevšek Malovrh<sup>2</sup>

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***Keywords:*** *private forests; Forest law; property rights; forest management; private forest owners' cooperation; forest policy*

Forest policy and forest ownership patterns in South-Eastern European countries, including Croatia, Bosnia and Herzegovina (BiH), Serbia and Slovenia, have changed significantly in recent decades due to different social, political and economic changes. The distribution of ownership types varies between the countries – in Slovenia private forest ownership predominates (77%), in Serbia almost half of the forests are privately owned (47%), while in BiH and Croatia only around 20% of the forest is private-owned. In all the analysed countries, private forest properties are small-scale and fragmented, which affects management opportunities and the scale at which policy interventions need to be made. This paper analyses the existing Forest laws in analysed countries to assess how the regulatory framework affects private forest owners' (PFOs) rights, forest management and accelerates PFOs cooperation. For this purpose, Schlager and Ostrom (1992) framework was used, following the Property rights index in forestry developed by Nichiforel et al. (2018). In all analysed countries laws impose exclusive rights and responsibilities of PFOs, as well as restrictions on the use of their forests. In these countries, the legislation contains detailed regulations for forest management activities and stipulate that mandatory forest management plans are an important tool for implementing sustainable forest management. In order to improve the efficiency of private forest management, the laws in all countries support voluntary cooperation among PFOs. From the analysis, it can be concluded that there is a need

to better align public and private interests in relation to forest resources, that the property rights need to be deregulated, and that the level of participation of PFOs in the forest policy-making process is unsatisfactory and, in most cases, only formal.

Antonio Basilicata

## **The (Normative) Impact of EU Forest and Biodiversity Strategies on Member States**

Antonio Basilicata<sup>1</sup>, Sarka Hajtmarova<sup>2</sup>, Mireia Pecurul-Botines<sup>2</sup>

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In the European Union (EU), many policy-making efforts have been undertaken to address issues of biodiversity decline in forests. Among them, recent initiatives such as the European Green Deal and new EU strategies on forests and biodiversity pave the way for the ecological transformation of nature, society and economy. Drawing upon theoretical frameworks of norm diffusion from political science, this study investigates the normative impact of the EU on member states in forest biodiversity politics. We analyse the new EU forest and biodiversity strategies and compare them to current and previous strategy documents in Germany and Spain, using qualitative content analysis methods. The aim is to discern the extent to which EU-level norms, as presented in respective strategy documents, influence national policy-making and implementation processes.

Our preliminary findings indicate a complex and multifaceted process of norm diffusion at play. The EU acts as a driver for norm emergence, not only through hard law but also political strategies. Consequently, these documents exert a significant influence on national policy agendas, prompting alignment with some EU-level norms and objectives, particularly in areas such as nature conservation, sustainable forest management practices, and climate change adaptation. However, this normative influence is not without its challenges, as we also observe instances of divergence. Member states often exercise agency in interpreting and implementing EU norms according to their heterogeneous national contexts, suggesting a more nuanced and dynamic relationship between EU and national level norms.

Overall, our ongoing study contributes to a deeper understanding of the normative impact of EU forest and biodiversity strategies on member states, highlighting the complex interplay between supranational norms and national policy dynamics. These findings have implications for EU governance processes, underscoring the relevance of soft law instruments for shaping member states' identities. Moreover, the study provides an empirical contribution to the norm diffusion literature by enhancing our understanding of diffusion processes between supranational and national governance levels.



Mairon Bastos Lima

## **The Amazon frontier quandary: American gospels, Asian consumption, Brazilian people and European policies**

Mairon G. Bastos Lima<sup>1</sup>

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The Brazilian Amazon has become a flashpoint of environmental destruction and conservation efforts, one that sums up many of the ongoing sustainability struggles of the 21<sup>st</sup> century. Brazil leads the global tropical deforestation ranking, much of it taking place in what is arguably the world's most emblematic terrestrial ecosystem, yet that is hardly a domestic story only. The Amazon, once seen as a remote place, has become a meeting point of global consumption pressures, international finance, societal discourses, and politics. It has become a land of opportunity – a dangerous “development” frontier that risks bringing the ecosystem beyond its tipping point and to collapse.

Drawing from a review of the scientific literature, trade data, local civil society organization reports, and 47 field interviews with key informants in Brazil (mostly in the Amazon), this research applies a frontier assemblage framework to shed light on the numerous factors that currently coalesce to bring about Amazon destruction – not only deforestation but also the erosion of local cultures and livelihoods, in what amounts to a so-called “disamazonization” process.

Preliminary findings point to (1) growing consumption pressures – notably beef consumption in Brazil and soy exports to Asian economies such as China, Japan and Thailand – met through highly capitalized agricultural supply chains, and (2) a migrant culture of “development as progress” in Amazon frontiers, antagonistic to nature conservation and government regulation, underscored by two imported US American discourses: a libertarian frontier ethos and increasingly dominant Pentecostal Christianity with its prosperity gospel. In that quandary, Brazilian people in the country's currently polarized political setting find themselves either as foot soldiers of that mainstream or trying to resist and often experiencing human rights abuses. Endogenous conservation-based visions of development exist and have been tested with the help of funds from Europe, but they struggle to gain scale. A new flurry of European policies with extraterritorial effects aimed at corporate due diligence and deforestation-free agricultural supply chains complete the mixture.

Anna Begemann

## **Taxomania! Shaping forest policy through financial regulation**

Presented by Georg Winkel

Begemann, A.<sup>1</sup>, Dolriis, C.<sup>2</sup>, Onatunji, A.<sup>3</sup>, Chimisso, C.<sup>4</sup>, Winkel., G.<sup>1</sup>

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The EU taxonomy has made headlines in recent years due to major concerns mainly from member states and their prime ministers but also of environmental groups over the question of what should be considered a sustainable investment including in forests and forestry. While supposedly “science based”, this new classification system has raised fears of resetting existing EU and member state sectoral policies through the “back door” of financial regulation and/or greenwashing unsustainable activities. Building on 46 expert interviews conducted in three interview rounds in 2019, 2021 and 2022 as well as process tracing, we investigate the evolution of advocacy coalitions and strategies used to influence the development of the forestry criteria for the taxonomy regulation and its climate and environmental delegated acts.

Our findings illustrate a very complex process that is connected to a diversity of sectoral policies including EU forest and nature policies and that translates into cross-sectoral alliances, highlighting strikingly different worldviews and economic and bureaucratic/political interests connected to it. Due to the rich set of strategies and deals made at different levels as well the overall lack of transparency, “science-based” decision-making is challenged to the impossible. While the forestry criteria have been excluded for the time being for parts of the regulation, fossil gas is included, pointing towards a disbalance in favour of certain economic and political interests and despite the EU Commissions goals to enhance private finance for achieving its climate commitments and the Green Deal. Its ambiguousness as well as the political struggle, questions the taxonomies’ potential as a gold standard to be copied by other countries overall.

Stephanie Bethmann, Ronja Mikoleit & Kristina Wirth

## **Quo Vadis forest gender research? A dialogue with Gender Studies**

Stephanie Bethmann<sup>1</sup>, Kristina Wirth<sup>1</sup>, Ronja Mikoleit<sup>1</sup>

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In our contribution, we sketch key developments and findings from two related, yet from our perspective still insufficiently connected research fields with rough brush strokes: gender studies and forest research. First, we assemble selected theoretical developments and analytical concepts from the rich array of interdisciplinary Gender Studies, with the aim of providing an overview and presenting key contributions that we find potentially insightful for forest research. In a second step, we turn towards the existing research on gender and forest(ry), which we compile in a non-systematic literature review. Here, our aim is to gain an overview over the diversity of approaches in existing studies. We then bring together our findings, mapping to what extent those respective disciplinary fields overlap. By this, we identify untapped potential that can further the analysis of gender in forestry by drawing on the broader variety of gender studies' approaches, but also by using phenomena related to forestry as paradigmatic case studies for questions on gendered identities, organizations, and epistemologies.

Patrice Bigombe Logo

**The German Imperial Decree of June 15, 1896 and land dispossession in Cameroon** Samuel Assembe Mvondo<sup>1</sup>, Patrice Bigombe Logo<sup>1</sup>

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**Keywords** : *Colonial State, vacant land, dispossession of populations.*

Cameroon's current land tenure system is a legacy of German colonization. It is based on the German Imperial Decree of June 15, 1896. Prior to colonization, land and forest management was governed by the customary systems and rights of the country's different communities and the interactions between them. Although Cameroon was a protectorate, it was administered as a colony with the aim of making Cameroon a production colony. The German colonial state introduced the notion of customary ownership and the dispossession of populations from unoccupied land.

It instituted land ownership by organizing the registration procedure in the colonial land register known as the Grundbuch. The dispossession of populations from land, on the other hand, was achieved through the appropriation of land known as "vacant and without master" and

expropriation. Article 1 of the imperial decree of June 15 1896 stipulates that: "The whole of Cameroon, with the exception of land over which private individuals or legal entities, chiefs or indigenous communities, may prove ownership rights or other real rights, or over which third parties may have acquired occupancy rights through contracts with the Imperial Government, is deemed vacant and masterless and forms part of the Crown domain. Its ownership belongs to the Empire".

It was this text that introduced the notion of "terres réputées vacantes et sans maîtres" (land deemed vacant and without masters) into State land law for the first time. Expropriation, the second means of dispossessing the population and establishing the State's landholding, was implemented in January 1913 in the city of Douala. After the First World War, France, which was given the mandate to administer the eastern part of Cameroon until independence, adopted this principle, adapting it to the system in force in other French colonies. A land law was promulgated in 1938, organizing the State's colonial domain and reaffirming the State's monopoly over all "vacant and unowned land": all land not subject to customary rights or private appropriation belongs to the State.

### **Colonial roots of forest inequalities in the forest resources management in the Congo Basin**

Patrice Bigombe Logo<sup>1</sup>, Sandrine Andong Essola<sup>1</sup>, Adjia Blaise Aimé<sup>2</sup>

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***Keywords** : Congo Basin, forests, statehood, governmentalisation, forest inequalities, dispossession and marginalisation of forest dwellers, extraversion of the forest economy*

The management of the Congo Basin forests is the field of expression of both historical and contextual inequalities. These inequalities are expressed within States and in their relations with the former Western colonial powers. Within the Congo Basin States, they take the form of the States domination and governmentalisation of forest management and the dispossession and marginalisation of forest dwellers in forest management. Indeed, forest inequalities are the product of colonial forest policies. They are the result of three structuring logics of forest management put in place during the colonial period and which still underpin forest management in the Congo Basin today : appropriation by dispossession of the forests, concessionary policy and the rentier logic. Subject to the colonial land tenure system, colonial forestry policies were based on the notion of 'vacant and unowned land' (herrenloses land), which became the possession and property of the colonial State and could only be occupied by the colonial government, which was the only one allowed to transfer ownership or lease it. This is the historical basis of the policy of accumulation by dispossession of the lands and forests of the Congo Basin.

The colonial State then set about organizing the harvesting of timber by colonial companies and

firms through the concessionary policy, with the aim of satisfying the consumption needs of the metropolises. The concessionary policy therefore dates from this period. Established by Great Britain and Holland in the 17th century, it was used as a basic instrument of colonial economic policy. Belgium and France adopted it through the system of colonial concessionary companies. This involved assigning a territory to a company or firm for exploitation, development and planning purposes. These companies obtained a monopoly on the exploitation of the land, resources and soil of this territory, excluding mines, and in return they paid a fixed annual royalty to the State and a percentage of the financial benefits acquired. Forests then became a rent, that means, an asset from which a financial benefit was essentially to be obtained. The policies and legislations governing the management of forest and wildlife resources in the Congo Basin today are still largely based on this colonial vision.

In the relations between the Congo Basin States and the former colonial powers, forest inequalities take the form of the capture of State sovereignty in the management of the Congo Basin forests and the extraversion of the Congo Basin forest economy. The forest colonial policies have been a vector of inequalities in the management of the Congo Basin forests.

Kathrin Böhling

### **Female professionals in forestry: status and empowerment in the Danube Region**

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Gender is a highly relevant meaning category in traditionally male-dominated forestry. In the masculine nature of the working environment, women tend to perceive themselves as being less prepared, secure, and economically capable of making the right decisions for the forest land they own or manage. Moreover, female forestry professionals in Danube Region countries are less represented in decision-making positions than their male colleagues while being more frequently employed in research, knowledge transfer, forest pedagogics, nature protection and nursery production. While caution applies to such gendered ascriptions in forest management, they do call for closer inspection of female professionals in forestry. Women have been present in the forestry workforce for many decades but have become visible only more recently.

The present contribution to the panel addresses the gap in forestry research on female

professionals' status and empowerment with empirical evidence from Danube Region countries incl. Bavaria, Czech Republic, Romania, Serbia, and Slovenia. Forestry is often characterized as traditional and mature, with a weak innovation orientation. Attention for female professionals in forestry sheds light on whether and how their careers "interrupt inequalities" and established practices in forestry. The empirical basis consists of quantitative and qualitative data, which was collected in the "Forests in Women's Hands – Fem4Forest" Interreg project (2020-2022). The survey data covers the views and perspectives of 663 women working in forestry in 10 countries, complemented with qualitative insights into female work-life realities in the forestry sector from 56 semi-structured interviews.

The study answers several research questions to examine aspects of perceived (in)equalities and empowerment in forestry, namely: (1) What motivates women to choose careers in forestry? (2) How do women perceive and experience equal treatment at work? (3) Which obstacles female professionals face in their careers? and (4) Which strategies and resources do female professionals draw on to develop agency and achieve goals? Because of the vast differences between the selected countries' forestry sectors, the contribution concludes with some reflections on the empowerment patterns of female forestry professionals in the Danube Region.

Daniel Burgas

### **Linguistic nudge effects on steering management preferences among Finnish forest owners and professionals**

Daniel Burgas<sup>1</sup>, Nina Janasik<sup>2</sup>, Janne I. Hukkinen<sup>2</sup>, Mikko Mönkkönen<sup>1</sup>

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There are several governance instruments that aim to "nudge" forest actors towards desired outcomes. The forest sector in Finland has been steered for decades towards the use of rotation forest management (RFM). However, there is growing evidence of the need for dramatically increasing the share of continuous cover forestry (CCF) practices in Finland. We experimentally investigated to which extent linguistic nudges can affect the preferences of implementing management practices in Finland. We altered official forest management recommendations comparing RFM vs. CCF thus creating a range of versions from strongly supporting RFM to strongly supporting CCF. We sent an extensive nationwide online survey to Finnish forest owners and professionals through which they were exposed to one version of the comparison texts. We collected descriptive information on the respondents as well as their willingness to practice or recommend different management practices after reading the text. We found that forest owners reacted differently according to the degree of nudge. Typically, owners exposed to neutral texts or texts with a slight nudge towards CCF hold the highest willingness to practice CCF, while nudging towards RFM or strong CCF nudge decreased willingness to practice CCF. This reaction was nuanced by the characteristics of the forest owner, particularly regarding the proximity of the

owners' residence to the forest property and the total forest area owned. On the other side, forest professionals showed no significant change in willingness to recommend CCF across the different nudged texts. Forest professionals' willingness to recommend CCF was lower than the intentions of forest owners. While our results support the potential impact of behavioral governance interventions, it also emphasizes the challenges of finding one-fits-all solutions. Moreover, the fact that forest professionals—who likely hold the strongest influence on the final decision taken by the owner—did not show a clear reaction to linguistic nudges reminds that other approaches might be needed if one intends to help the forest use system to increase the diversification of forest management.

Martin Charlier

### **"Clear the way - how opposition to clear-cutting through biodiversity inventorying shapes new imaginaries of the forest"**

Martin Charlier<sup>1</sup>

<sup>1</sup> University of Lund, Sweden

Old-growth forests are disappearing at an alarming pace due to intensive logging and are converted into monocultures, with less biodiversity and lower resilience to climate change. In a Swedish context, such forests are expected to have entirely disappeared outside of protected areas before 2070. This situation has led to a polarization of views on how forestry should be managed, and the dominant logging method of clear-cutting is met with opposition from environmental groups and an increasing share of the public opinion. One method of activism has proven successful in stopping clear-cutting of old-growth forests in the past decade: forest inventorying. Combining species knowledge with satellite imagery and open data on species observations, this form of knowledge activism mobilizes biology toward a political goal of nature conservation as well as articulates a critique of the current productivist approach advocated by the forestry industry and most political parties. The purpose of this research is to investigate through ethnographic fieldworks how the practice of biodiversity inventorying and the enskilment processes that it unfolds (in terms of education to attention and sensory exploration), contributes to strengthening place attachment and shaping new imaginaries and more sensible relationships to Nature among environmental activists.

Vanessa Cholez

Managing forests for global mitigation or for their adaptation in the face of climate change? When French national policies don't meet stakeholders aspirations

Vanessa Cholez<sup>1</sup>, Clara Therville<sup>2</sup>, Marieke Blondet<sup>1</sup>

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With an increasing demand for the decarbonization of the French economy to reach carbon neutrality in 2050, French forests represent a key lever for climate change mitigation, and current policies aim at increasing this value. At the same time, French forests are increasingly impacted by on-going climate change (droughts, bio-aggressors, fires), which alters their functioning and biodiversity, threatens their carbon sink and renewal, and is accompanied by a growing awareness of adaptation issues. Between these two seemingly contradictory trajectories, what roles are currently assigned to French forests by local and national stakeholders, and what are forest management actions aiming to achieve? As part of the FISSA project (Forecasting forest Socio-ecosystems' Sensitivity and Adaptation to climate change) – whose ultimate aim is to test complex forest management scenarios, drawn up in consultation with local stakeholders in three French territories – we have carried out two sets of qualitative surveys aimed at assessing the expectations and priorities defined for forests, one at national level, the other at local level within three regional natural parks (Pyrénées ariégeoises, Luberon and Morvan). The results of these surveys highlight three points: i) the mismatch between national policy instruments (e.g. low-carbon strategies and FranceRelance: the forest renewal plan launched in 2020) and the adaptation issues raised by French forest stakeholders at national and local level ; ii) the will and implementation of practices aimed at combining wood production and biodiversity conservation, such as maintaining a continuous cover and the irregularization of deciduous and coniferous stands, even by interventionist stakeholders ; iii) what is called in France “free evolution”, a form of rewilding, is becoming an increasingly management option by private forest owners and by ONF (public forest manager), in a way to conserve forest biodiversity and to stock carbon. This practice is corroborated by the growing importance of greening issues in these three specific areas. Finally, our research shows the extent to which national and international carbon instruments are out of step in responding to pragmatic local considerations of forest survival and human and non-human well-being.



Evelyn Coleman Brantschen

## **Linkages between forest and land-use planning at municipal level in Switzerland**

Evelyn Coleman Brantschen<sup>1</sup>, Nicole Güdel<sup>1</sup>

<sup>1</sup> BFH, Bern, Switzerland

Little is known in Switzerland on the linkages between land-use and forest planning at municipal level. With topics such as recreation or biodiversity promotion, the potential for cooperation seems high. A pilot study seeks to discover the topics dealt with, the instruments used, and the challenges met.

Brian Danley

## **Following up with forest inheritors: A survival analysis of recently inherited and recently sold non-industrial forest land in the State of Washington, USA.**

Brian Danley<sup>1</sup>

<sup>1</sup> Uppsala University, Sweden

The Pacific Northwest region of North America is home to some of the continent's last remaining old growth forests as well as various threatened species. A 2021 policy report revealed, however, that the impacts of highly politically charged forestry regulations in the State of Washington were quite small in comparison to impact of general family financial needs. In US nationally, studies on forest legacy planning reveal that most forest owners want their children or grandchildren to own their forest properties after they no longer own the forest. In contrast, the same surveys also show that a majority of US forest owners acquired their forest land by purchasing the land from a non-relative. These dynamics appear to overshadow the impact of land sales due to regulatory pressure on small landowners. We utilize the Washington State Forestland Database to conduct a non-parametric survival analysis of how long recently inherited forest properties remain fully owned by the new owners (i.e. there is no subsequent sale associated with the property) compared to forest land that was sold. Results show that inherited parcels have a significantly lower survival probability as measured by remaining solely within the ownership of the new owner relative to parcels that were sold within an 8-year period. This study quantifies how the mode of forest transfer influences the duration of the following ownership lifecycle and indicates that stewardship efforts should be tailored for owners who have recently inherited forest lands.

## **Coherence, consistency, and justice on the route to Paris: an examination of forest policy mixes toward the fulfillment of the Paris Agreement**

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Forests are a key contributor to climate change mitigation efforts and the forestry sector has been pointed out as central in creating sustainability transitions. Following the Paris Agreement and the European Parliament's climate emergency declaration, the EU has developed multiple directives and strategies around how forests should be used to strengthen their mitigating capacity. In addition, the EU has committed to ensure that sustainability transitions are conducted in a just manner. The member states now must translate these EU policies and ambitions into their own national contexts. We aim to gain insight in the coherence and consistency of EU- and national forest related climate policies as well as how they are positioned in relation to the just transition ambition. We conduct a policy analysis of the Paris Agreement, EU climate directives and strategies, and Swedish government bills, strategies, and action plans for forestry.

Sweden is chosen as a critical case as the EU member state with highest forest cover. Within the analysis we apply a three-dimensional framework of justice, incorporating distributional, procedural, and recognitional justice. We centre the analysis around problem formulations, aims, goals, targets, ascribed roles to forests, and policy instruments. We find that, whilst there are many roles and goals ascribed to EU's forests, there is no explicit focus on justice in how these should be achieved. The policies provide goal consistency and the potential for synergies in the short-term, but risk goal conflicts and trade-offs in the long-term. There is divergence in focus of policy instruments where EU policy builds on laws and regulations and economic instruments, whilst the Swedish policy focusses on social and information-based instruments. In the policy instruments, we find hints of considerations of distributional justice, but overall, the inclusion of justice considerations is very minimal. We conclude that the current EU policies and their translation into the Swedish context could be improved through stronger attention to (long-term) coherence and consistency. In addition, if the EU wants to fulfil its commitment to create just transitions, more effort needs to be given to translate this abstract ambition into tangible EU wide and national level policies.

Fulvio di Fulvio

### **Impact of the EU biodiversity strategy for 2030 on the EU forest bioeconomy**

Fulvio Di Fulvio<sup>1</sup>, Pekka Lauri<sup>1</sup>, Gusti Mykola<sup>1</sup>, Andrey Lessa-Derci-Augustynczik<sup>1</sup>, Nicklas Forsell<sup>1</sup>

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The EU Biodiversity Strategy (EUBDS) for 2030 aims to conserve and restore biodiversity by protecting large areas of the European Union. The EUBDS aims to protect 30% of the EU's land area by 2030, with 10% being strictly protected (including all primary and old growth forests) and 20% being managed closer to nature. Even though this will have a positive impact on biodiversity, it may negatively impact the EU's forest-based bioeconomy. In this study, we analyze how alternative interpretations of the EU's protection targets may affect future woody biomass harvest levels, wood products export, and the spatial distribution of areas to be protected. Using the spatially explicit global forest sector model GLOBIOM-Forest, we simulate scenarios representing a variety of interpretations and geographic distributions of the EUBDS targets. The targets would have a limited impact on EU harvest levels since the EU can still increase its wood harvest between 21% and 24% by 2100. Under a strict interpretation of the target, the EU harvest level can still be increased by 10%. Under the most likely scenario, with 10%/20% protection within each MS, there will be increased net exports in the coming decades, but a slight decline after 2050. However, if protection is intended to also represent site productivity or to re-establish a green infrastructure, then EU net exports will also decline before 2050. With the decreased EU roundwood harvest, increased harvest will mostly leak into other boreal region

Daniel di Marzo

### **Forests, Climate, Rurality and Justice: Framing justice in the European scientific and political discourse on climate land use policy**

Daniel di Marzo<sup>1</sup>

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This paper explores the intersection of rural areas, climate policy, and environmental justice within the context of the European Green Deal, scrutinising understandings of 'a just transition for all'. The investigation narrows its focus, looking at the EU's forest land-use policy sector against a backdrop of rising tension between rural communities and policy makers. Adopting an environmental justice framework, analyses of scientific and political discourse is conducted to investigate the claim that the EU's response to climate change is disproportionately burdening rural areas. Applying frame analysis, the paper systematically reviews scientific literature on EU forest land-use conflicts across 4 regions of Europe, including only case studies that state climate

change response as a driver for land use change. Furthermore, frame analysis is conducted of the EU's Land Use, Land-Use Change, and Forestry Regulation (LULUCF) and associated EU dialogue as a key component of the political discourse. Through this triangulation, the paper examines the emergence of 'rural justice' claims, highlighting the central role of rural areas in environmental and climate policy regimes and the need for their inclusion in policy deliberation processes. Preliminary findings suggest that while rural communities bear the brunt of the green transition, their participation in policy development remains limited, raising questions about justice and equity of the EU's climate action strategy.

Denis Dobrynin

### **Finland Forestry on abandoned agricultural land in Russia: future options Farmland abandonment and spontaneous forest regrowth are land-change phenomena around the world.**

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Russia holds the largest area of abandoned farmland covered with forests worldwide. These forests have no legal status, and farmland owners do not have the right to engage in silviculture and forestry. The issue of these vast illegal and unregulated forests has been raised by environmental NGOs and forestry professionals advocating for sustainable forest management on abandoned farmland (what we call "new forests"). However, pro-agrarian policymakers resist the "new forest" idea and talk about agricultural recultivation, national food security and state control over land resources. Thus, the future of trees on Russia's abandoned farmland became a political issue. Abandoned farmland management options may have global implications for the future of wood and food production, carbon sequestration and biodiversity conservation. This study aims to identify the diversity of future options for forest management on abandoned farmlands in Russia and to detect experts' justifications regarding their preferability and likelihood. The study is based on the Delphi approach – two rounds of anonymous expert evaluation with controlled feedback sharing. We present seven plausible future options for forestry on abandoned farmlands in Russia. These options include private small-scale forestry run by citizens and large-scale forestry run by companies; concession forestry; state-run forestry; carbon offset forest management; and two options for banning forestry on abandoned farmland: agricultural recultivation and business as usual (illegal and unregulated forest on abandoned farmland). We discuss the identified future options in the context of new political and economic circumstances in Russia and how they may impact the implementation of the "new forest" idea.

Zuzana Dobsinska

## **Media Discourse on Forest Ecosystem Provision in Slovakia**

Zuzana Dobšinská<sup>1</sup>, Bianka Dúbravská<sup>1</sup>, Jaroslav Šálka<sup>1</sup>

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Forest ecosystem services and their provision are present in the current environmental and forestry policy discourse. One of the arenas, where the discourse occurs is the media. Media-discourse analysis is one of the approaches used in forestry policy research. It is used in this paper to analyse the discourse on providing forest ecosystem services in selected territories – national parks and municipal forests in Slovakia. We used the Sociology of Knowledge Approach to Discourse developed by Keller (2011) for the analysis. Internet articles from the years 2009-2021 (n=202) in the most-read news portals in Slovakia, according to IAB monitor (2021), were subject to analysis using predefined criteria. The research showed that the discourse on FES occurs in Slovakia. The number of discourses increased during the monitored period, with the most significant increase since 2017. The most frequently discussed ecosystem services are biodiversity, wood production and recreation. The discourse is mainly framed around different approaches to forest management (active vs. passive), in which the actors' opinions diverge, and conflicts arise. Actors from nature and landscape protection mainly stress the need to ensure biodiversity and recreation and favour the regulatory political instruments. Forestry actors advocate for provisioning services and biodiversity and prefer regulatory political instruments. The actors participating in the discourse are mainly from the political-administrative system, non-governmental organisations, and activists.

Hanna Eckström

## **Walking the Wire - Perceptions on place, policy, and land use among Swedish forest actors**

Hanna Ekström<sup>1</sup>

<sup>1</sup> Lund University, Sweden

The values of forests are viewed in different ways based on whose voice is considered. Some see forests as a source of timber, as provisioning biodiversity, as basis for climate change mitigation, or for water availability, while others may view forests in terms of traditional ecological knowledge or recreational opportunities. With an emphasis on voluntary policy instruments alongside information and advisory services, Swedish forest actors' decision-making for balancing between these multiple uses of forests becomes increasingly important. Using semi-

structured walking interviews with a range of forest actors the purpose is to understand what, why and when forest actors make decisions in relation to policy changes. The walking interviews allow for focusing on forest actors' connections to place, with a hope to bridge between place sensitiveness and policy response. The interviews are analyzed using the approach of cognitive mapping with the purpose to find key aspects of actors' decision-making. Here, I show preliminary results from the first part of the project focusing on Swedish forest actors, to then map out what the results mean in a broader debate about synergies and tradeoffs in forest policy. The results provide basis for discussing how policy instruments connect to local experiences as an important basis for forest actors' decision-making and connects to research on relational values to nature as a separate category from intrinsic or instrumental values. In continuation, the walking interviews can be used in a so-called agent-based model to simulate a range of different forest actors and their decisions in relation to forest policies. The final goal is to create a more nuanced picture of the connection between policy, human behavior, and land use change, and to contribute to incorporating diverse perspectives in forest policy processes.

Hannah Ehrlichmann

### **Colonial legacies in the German and Cameroonian forest sector: An analysis of historical economic flows from 1892-2022**

Hannah Ehrlichmann <sup>1</sup>, Maria Brockhaus <sup>1</sup>, Grace Wong <sup>2,3</sup>

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Despite promises of economic growth and prosperity through international trade, a continued divergence in national incomes demonstrates the continuously rising inequality between countries of the global north and south. While many studies have attributed factors such as, availability of capital resources and political and economic institutions, to the uneven economic development of countries over time, very little has been said about the role of historical relations and colonial legacies in this prevailing state of global (economic) inequality. This paper aims to shed light at the impact of colonial legacies on economic inequality between countries based on a unique database on forest commodity trade between Germany and Cameroon from 1892 till 2023, derived from the German governments statistical office.

In our case study, we examine the (re)production of inequality through the related material and economic flows. We approach inequality by unpacking its different dimensions and expressions over time, namely with regards to power differences as reflected in the structure of the forest-related value chains, traded commodities and sites of production and consumption, institutional path dependencies, and the actors involved and their relations over time.

Initial findings of the trade data analysis indicate major structural inequality starting from the period of German colonialism from 1892-1912. Germany exported significantly more commodities, worth €1.27 billion in current value, from Cameroon than it imported, worth €842 million. The exported commodities benefitted the industrialization and development of the German economy, while the imported commodities mainly served the German community in Cameroon and not only did not benefit the local community and economy but in the case of weapon exports, potentially even harmed local populations. After the German colonial period, a drastically declining export of rubber demonstrates the changing ownership structures of the colonial plantations into French and British hands. From 1950 onwards, timber plank exports appeared as a new commodity, implying an emerging timber processing industry in Cameroon, however, the value of those exports never exceeded the log exports, suggesting the struggle of the local industry to establish itself. Through an additional analysis of tracing German company presence through a historical network analysis approach, this paper further aims to show how historically established structures facilitate the reproduction of colonial relations in economic flows by arguing that first mover advantages of German companies, made possible through colonial occupation, allowed companies to establish and manifest their position in the forest industry, making it harder for local companies to enter the industry.

David Ellison

## **On Forest Potential, Political Footballs and the Dynamics of EU Forest-based Climate Policy Conflict**

David Ellison<sup>1</sup>

<sup>1</sup> ETH Zurich

Where forests and forest-based resources are concerned, EU political fragmentation and polarization may well be at their maximum. A number of factors may have played an important role in the disintegration of the EU policy making process. For one, the climate challenge and increasing threats to biodiversity impose increasing pressures. What role forests and forest-based resources might play, however, is not well understood and is hotly disputed (witness, in particular, discussion surrounding substitution, carbon sequestration, the EU carbon sink and biodiversity protection). This tension has imposed new challenges and is setting new boundaries on future forest use.

The relative vitriol of these debates is perhaps best represented by the controversy over the reliability and robustness of Member state level LULUCF emission and carbon sequestration (net removal) estimates. JRC and Commission representatives accused some Member states of underestimating harvest activity and, thus, of endangering the EU commitment to the UNFCCC's Paris Agreement. Though the data provided to support these claims was found to be faulty, the JRC and Commission persisted in their claims and managed to push through important concessions in the most recent LULUCF agreement (EU/2023/839).

From a political perspective, these conflicts are propelled by structural elements of the LULUCF regulation. For one, the role of individual components of the EU LULUCF policy framework (in particular the “cap”, and the “FRL”) have promoted the political divisions described above and, in the case of the FRL, have effectively placed a wedge between two sides of the forest-related political spectrum. Though the “cap” has now been eliminated, the FRL, which requires a progressive increase in the EU carbon sink, remains a point of contention.

Whether these conflicts will continue to fester and promote future division, conflict and political disintegration remains to be seen. But comparatively simple tweaks to the policy making and negotiation processes could have gone a long way to solving these disputes. This analysis suggests that imaginative and inventive policy making, which relies in part on the role of individual actors and broader interaction with multiple perspectives, may provide a stronger foundation for successful policymaking.

## **Placing Forest Carbon, Water and Energy Cycle Synergies at the Core of Nature-Based Solutions**

David Ellison<sup>1</sup>

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Human modification of the natural landscape has profoundly altered the ways in which water is cycled over the land surface, how it infiltrates into the soil and is stored in underground reservoirs, how quickly and efficiently the land surface is able to absorb large amounts of rainfall, as well as how it modifies the surface energy balance through land-atmosphere interactions. Restoration goals could be better structured to reintegrate positive interactions between all components of the carbon, water and energy cycles of ecosystem function. To-date, this dimension is weakly represented in the broader scientific, landscape and ecosystem restoration related literature. Such knowledge gaps expose restoration goals to significant risks.

*Nature-based* and forest landscape restoration *solutions* are increasingly seen as meaningful strategies for improving the degree of ecosystem resilience and adaptation, as well as solutions for resolving our increasing climate burden. Few carbon-based strategies consider the core and fundamental components of the hydrological and energy cycles they both support and depend upon. While trees and forest naturally store and recycle water, thereby providing natural sources of atmospheric moisture even when rainfall is scarce, they also “use” and potentially deplete this same resource.

Though placing cutting-edge knowledge on the benefits of placing forest carbon, water and energy cycle synergies at the core of ecosystem restoration strategies and nature-based solutions is increasingly possible, there are many reasons why governance issues frequently get in the way. Integration of these key features of natural cycles requires a degree of policy integration that is essentially foreign to most policy-making frameworks. Most institutions that address forests and water, for example, are divided across ministerial and geographic subdivisions. And forest-water management strategies typically focus on the catchment scale, while many of the principal benefits can only be derived from larger scale regional, and frequently transboundary,



approaches. This paper will address strategies for beginning to overcome barriers to policy integration.

Jerbelle Elomina

## **Uncovering local stakeholders' subjective views on forest, mining and tourism development in Leoben, Austria using Q-method Calansan,**

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The old mining district of Leoben in Austria is known as the Styrian Iron Route and once the center of mining and research. However, as the mining boom has already gone down, alternative economic activities are needed, such as nature-based tourism and forest recreation. However, before another economic boom and bust happens, it is crucial to determine whether forestry, mining, and tourism can co-exist with the local community. Local people should be engaged in the discussion and development of sustainable solutions on the potential conflicts those multiple industries can create. This study therefore aims to investigate how local stakeholders and citizens perceive the current state of development of forestry, tourism and mining in Leoben, Austria. The local people are the individuals who either experience the impacts of economic activities or have influence on how these activities will be developed locally. To explore existing local perspectives, we conducted semi-structured expert interviews and Q-methodology: a combined qualitative and quantitative approach. The analysis reveals three typologies of perspectives amongst key industries, civil society and citizens such as: (1) development skepticism where advocates are resolutely anti-forestry, mining and tourism operations, grounded in socio-environmental concerns; (2) local benefits should be prioritized, wherein advocates support forestry, mining and tourism development as long as the benefits are tangible to the local community; and (3) community grows in tandem with the expansion of the industries or pro development. Advocates believe that industries are the reason why Leoben thrives. Points of agreement and conflict will also be discussed between the existing viewpoints. Understanding the overview of the perspectives can raise awareness of alternative points of view, promote discussions, and stimulate critical thought about the positions taken. This study will contribute for policy makers in facilitating discussions among stakeholders to communicate and possibly reach to consensus in developing the economic activities in the area. This study will contribute to the scant literature of social science studies in Leoben and to provide inputs to decision making and in revising guidelines and policies relevant to the economic activities under study.

Richard Fischer

## **Potential leakage of biodiversity risks under the EU Biodiversity Strategy 2030**

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The EU Biodiversity Strategy 2030 (EUBDS) aims to regain biodiversity through enhanced forest conservation and protection. Existing modelling results on production leakage already suggest that this may lead to an increased timber harvest in non-EU countries (*Lauri, P. et al., Schier, F. et al., Kallio M. et al.* – see abstracts in this session). Effects of such increased harvest on species extinction globally have been shown by Rosa et al. (in *Environ Sci Technol* 57, 2023). We aim to identify the potential leakage of biodiversity risks as induced by the EUBDS based on an extensive list of indicators. We create a biodiversity indicator framework and quantify vulnerability with country wise values for 26 biodiversity indicators, mainly from publicly available global databases. We weight single indicator values with country wise modelled figures on changed timber production under EUBDS implementation from Schier, F. et al. (2022). Nearly 80% of the indicators point to higher vulnerability in the affected non-EU countries. Roundwood production would be transferred to countries with, on average, lower governance quality, political awareness, forest coverage and biomass and with less sustainable forest management. These countries still have more natural habitat and intact forest landscapes, but higher risks of species extinction and lower shares of protected areas. Only a few indicators point to lower vulnerability and biodiversity risks outside the EU. Safeguards are needed to ensure that implementation of EUBDS does not cause harm to ecosystems elsewhere. In this regard, the EU regulation on deforestation-free supply chains (EUDR) might have limited effects because it hardly considers the sustainable management of existing and even expanding forests. Sustained roundwood production in the EU is therefore needed to avoid placing more pressure on more vulnerable ecosystems elsewhere. Decreasing species and habitat indicator values nevertheless call for global conservation and protection schemes. The EUBDS can be regarded as an important pioneer for the Kunming-Montreal Biodiversity Framework under the Convention on Biological Diversity (CBD). Yet, lower governance indicators in non-EU countries suggest that this framework might not sufficiently prevent leakage of risks to biodiversity. Effective land use planning is necessary to balance conservation schemes with roundwood production.

## **How are governance and socioeconomic factors linked to forest transition dynamics at the local scale in the tropics? Empirical evidence from Ecuador, Philippines and Zambia**

Richard Fischer<sup>1</sup>, Hellen Nansikombi<sup>1</sup>, Rubén Ferrere Velasco<sup>1</sup>, Melvin Lippe<sup>1</sup>, Eliza Zhunusova<sup>1</sup>, Tatiana Ojeda Luna<sup>1</sup>, Moses Kazungu<sup>1</sup>, Sven Günter<sup>1</sup>

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Forest transition (FT) is characterised by deforestation and reforestation patterns and has shaped the landscapes of most tropical countries. Studies mostly conducted at the national scale have linked the FT dynamics to governance, socioeconomic and biophysical factors. We examine the linkages of governance and socioeconomic factors to the FT dynamics on the landscape level. We collect data in 34 landscapes across different tropical deforestation contexts in Ecuador, Philippines, and Zambia covering approx. 500,000 ha. We apply factor analysis as a basis for ordered logistic regression and to explain the relation of these factors with the single forest transition phases. We find that, governance factors (institutional capacities and effectiveness, access to forest resources) and socioeconomic factors such as human pressure, type of income) explain the FT dynamics. These findings are in line with studies that focused on national levels. Higher institutional capacity and effectiveness is associated with the pre-transition phase showing a degradation of customary institutions during the process of deforestation. It emphasizes the necessity for strengthening governance including local and customary institutions, in order to curb forest loss. Astonishingly, a high non-forest income is associated with the pre-transition phase whereas a low non-forest income is associated with the early and late transition phases. As non-forest income (agriculture and non-farm) has been associated with the welfare of tropical rural households this might indicate a marginalization of the population during the deforestation process, specifically in combination with the observed increasing population pressure. Interestingly, the signs of most explanatory variables change between the pre- and early-transition phase and not as expected at the transition point between the late- and post-transition. We interpret this as indication that the underlying development pathway is already determined in early phases. Initiatives for reducing deforestation and forest degradation need to establish alternatives to the usual agriculture-based development pathway already in the pre-transition phase, because once ongoing, the destructive processes relating to deforestation are hard to reverse. Alternatives, including off-farm income opportunities, forest protection and compensation schemes should be promoted as substitutes for unsustainable agriculture already in the pre-transition phase.

Simon Fleckstein

## **Analyzing the integration between the European Union's Agricultural and Rural Development Policy and Forest Policy – an historical institutionalist perspective**

Fleckenstein, S.<sup>1</sup> and M. Sotirov<sup>1</sup>

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Forests are widely recognized as crucial allies in climate change mitigation and in addressing the rapid loss of global biodiversity. However, forests themselves have increasingly become victims of climate change and unsustainable management practices that have led to and favored extensive forest damage and a decline in forest biodiversity. Against this backdrop, the adaptation of forests to climate change and the restoration of forest biodiversity are taking a prominent place on political agendas. At the European Union level, this commitment is underscored, for example, by the latest European Forest Strategy for 2030, which emphasizes the crucial role of restoring and adapting European forests to a changing climate and halting the decline of forest biodiversity.

The Treaties of the European Union, however, do not make specific reference to forests and the European Agricultural Fund for Rural Development (EAFRD) as pivotal instrument of the Common Agricultural Policy (CAP) serves as the primary funding mechanism for forestry measures at EU level. Consequently, the attainment of European forest policy objectives critically depends on their integration into the rural development policy of the CAP. Against this backdrop, the present study analyzes the integration of EU forest policy into the CAP over time with a particular focus on climate adaptation and forest (biodiversity) restoration objectives and instruments.

Theoretically, our study draws from key concepts of Historical Institutionalism (HI) school of thought which puts special emphasis on the general stability of institutions and their policies characterized by incremental change rather than events of radical disruptions. We analyze cross-sectoral Policy Integration (PI) by means of policy change using typologies developed by Hall (1993) and Rayner and Howlett (2009) which differentiate between various levels of policy change, ranging from minor refinements or policy calibrations to shifts in policy paradigms. The longitudinal analysis starts in 1998, which was marked by the establishment of forest policy at the European Union level with the adoption of the first Forest Strategy and the Agenda 2000 reform, which established a single legal framework for rural development policy, including forestry.

Jenny Friman

## **Exploring social learning networks for enhancing multi-use forestry and rural development in Sweden**

Jenny Friman<sup>1</sup>

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Alternative forest stewardship methods have the potential to diversify primary production and provide a wider variety of income opportunities in rural regions while also improving a range of environmental services. In this study, we focus on family forest owners in Sweden and their social learning networks as representing a potential fulcrum on which the adoption of multi-use and alternative forest management practices may hinge. The aim of the study is to investigate how networks and processes of small-scale change in forest practices can facilitate social learning for forest owners. More precisely the study pays attention to how social learning can be leveraged to accelerate the adoption of alternative forest management methods and multi-use forestry and how policy interventions can build from these insights to improve rural livelihoods and biodiversity outcomes. The study has mapped research on multi-use and alternative management practices in Sweden and **interviewed forest owners** on how social learning networks support a transition to more sustainable forestry practices. The study addresses the possibilities and limitations of leveraging the existing social learning processes of family forest owners engaged in multi-use forestry and the organizations supporting such processes. In doing so, we can better understand how social learning in forestry can support the implementation of multi-use forestry methods in Sweden. We argue that such insights have the potential to improve policy interventions that enable the processes of learning and innovation among key actors to accelerate the implementation of more sustainable forest use and management while also contributing to rural development.

Derek Garfield

## **Seeds of Transformative Forestry? An Exploration of Innovative Business Models Supporting Fast-Growing Broadleaf Forestry Value Chains**

Derek Garfield<sup>1</sup>, Vilis Brukas<sup>1</sup>

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Forests are the focus of heated debates surrounding sustainability transitions in Sweden. Several streams of research on biodiversity and biomass production point to potential benefits for the Swedish bioeconomy through increasing the amount of fast-growing broadleaf species (FGBs) within the landscape. Efforts to transition this social-ecological system towards greater

sustainability and resilience entails a complex interaction of anticipation and action by a diverse array of stakeholders. Such a process includes the development of new values, technologies, and networks to produce bio-based goods and services. Innovation and sustainable business models in the forest sector are crucial to this process, but how do actors come to see FGBs as a source of value for their business and what techniques make the realization of these values possible? In this project, we interact with fifteen innovative firms across the forest sector, from forest owners to producers of value-added goods, in order to gain insight into how economic, social, and ecological values are ascribed to and produced in FGBs and how these are transmitted through the value chain. Through a series of semi-structured interviews, we conduct an analysis based on sustainable business model archetypes to describe rationales and motivations of innovators' selection of FGBs as a source for sustainable business practices. We discuss how these are operationalized into processes of economic production and how they are translated and transformed through network relationships along the value chain. Our approach builds on theoretical assumptions about change processes within socio-technical systems from a multi-level perspective. We contribute a novel methodology for engaging with systems transitions from an actor perspective that implements qualitative analysis of business models as a means of exploring the complex processes of social learning within emerging niche-networks and gives insight into innovation diffusion and niche accumulation as driving forces for system transitions.

Alessandra Giolo

### **Securitization of Natural Resources for an Integrative Water-Food-Energy-Forest Nexus in the European context**

Alessandra Giolo<sup>1</sup>

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The Baltic region, with its central role in international trade, the diverse forest functions and variety of actors involved, is the ideal location to test a new nexus approach. The proposed WEEF nexus (Water-Energy-Food-Forest) highlights the interdependence of resource security and sectors that underpin these securities. Combined with adaptive management, the newly developed nexus could enable new pathways for sustainability. The aim of the project is to map, analyse and propose a governance system where water, food, energy and forest synergies are highlighted and enhance each other through strategies that build on the scientific evidence of the involved actors and groups, and aims for long term cooperation and sustainability. Adaptive management and participatory governance are going to be used as theoretical framework aiming effective stakeholder engagement at different scale leading to informed decision-making processes. Forest governance increasingly require combinations of different methodologies, as implications of production and protection of forest resources and management impact all aspects of society: a combination of qualitative and quantitative methods ranging from interviews to experts to statistical analysis are required to reach the aims of the research. Practices and policies related

to water, food and energy security are scrutinised to identify synergies and trade offs, and results would guide towards potential solutions and set conditions of emergence for cooperation between security division for long term sustainable development. As global pressures such as climate change, rising global population and consequent demand for resources, forest are increasingly considered a viable and sustainable way to meet those demands. Setting up an efficient and collaborative agenda for governance is then necessary to avoid additional thresholds and define a safe operational space for human activities in the long term. The conceptualisation of this sustainable governance combining water, energy, food and forest sector is the overall aim of this proposed project.

Felicity Goldsmith

### **Indigenous Representations in British Colonial Business Media, Cameroon**

Felicity Goldsmith <sup>1</sup>, Grace Wong <sup>2,3</sup>, Maria Brockhaus <sup>1</sup>

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Cameroon's forests and forest lands are home to diverse indigenous peoples and local communities. Cameroon has endured many colonial administrations and missionary influences throughout its history with British, French, and German rule having all left their mark on the nations' land, plantation, and forestry sectors while realising their interests. In particular, the representation of indigeneity remains tainted within and beyond today's land use sector and forest policy arena, and its related businesses and financial services. We analyse the British colonial business media landscape to examine the dominant discourses surrounding the indigenous within the context of Cameroon's land, forests, and plantations. Through understanding the narratives that have historically been broadcast to society and the 'everyday' public via business media, a greater understanding of the current status quo within the forestry sector, and therefore the workings of 'inequality machines' and neocolonialism, can be investigated. Furthermore, business media such as newspapers and magazines, historically played a central role in the colonial enterprise, informing and shaping the entrepreneurial activities but also legitimising the colonial project and providing narratives to enable the realisation of interests and profits. Throughout this research, local and indigenous storylines are examined, considering how these representations link to the colonial enterprise. Qualitative research methods are adopted, using a systematic literature search to identify articles from four prominent British business media sources (The Economist, The Guardian, The Observer and The Times). Search criterion, in the form of two key word search strings, selected the 330 relevant articles and constructed the archival landscape of Cameroon in British colonial business media from the end of the 18th century through to the turn of the 21<sup>st</sup> Century. Newspaper articles were inductively coded using Atlas TI software with the aim to explore the main research question: How does British colonial business media represent the indigenous in the context of land, forests, and plantations in the Cameroon? Preliminary

analyses from the study suggest the emergence of multiple areas of interest with diverse and evolving framings of indigeneity across the media landscape.

Maximillian Glormann

### **Differences between private forest owner preferences across 10 social milieus in Germany**

Glormann, M.<sup>1</sup>, Strüber, P.<sup>1</sup>, Krott, M.<sup>1</sup> and Aurenhammer, P.<sup>1</sup>

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The paper/contribution will reveal, to what extent private forest owners differ in their forest related preferences or activities as well as socio-demographic and forest structures, comparing 10 social milieus (Sinus-milieus). Results are based on a new analysis of existing secondary data, from a representative survey on German society and forest owners. We will conclude on the factors, with most significant differences between the 10 social milieus as well as on those factors, with the strongest strength of relation with social milieus.

Tanja Granzow

### **The Forest-Water-Nexus: From Lack of Communication to Cross-sectoral Cooperation**

Tanja Granzow<sup>1</sup> & Sabeth Häublein<sup>1</sup>

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The water and forest interactions have recently gained more attention in the scientific literature: The interlinkages between the water and forest resources are changing with global warming, leading to an increased likelihood of severe disturbances such as floods and droughts. In order to find responses to these changing interlinkages and their effects on communities and ecosystems, numerous scholars propose to increase policy integration across the forest and water sectors. While policy integration is discussed in the scientific literature as a tool to find suitable solutions to environmental challenges, evidences of its realization are rare. In Germany, the water and forest sectors have been observed as institutionally fragmented, showing very few signs of cooperation or even communication across the two sectors. While the question of policy integration is relevant on various scales, it is the local level that is affected most severely by disturbances. It was thus our endeavor to discuss the benefits and barriers of increasing cooperation and integration with local actors. Based on semi-structured interviews and focus group discussions, we follow the question whether cooperation along the water cycle is perceived as relevant and by whom; and how this (ir-)relevance is constructed. All data was collected in six



case study areas in Germany, selected to cover different kinds of disturbances and landscapes. Interviews were conducted with both, actors from the forest and water sectors, while the focus group discussions additionally included actors from adjacent policy fields, such as agriculture and nature conservation. By analyzing the material, we aim to deepen our understanding for local perspectives on and needs of policy integration across the water and forest sectors.

Luis Guillen

### **Informational policy instruments for forest water management: How can Blue - Green infrastructure catalyze changes in Swedish forestry?**

Luis Andrés Guillén<sup>1</sup>, Irina Mancheva<sup>2</sup>, Eliza Maher Hasselquist<sup>3</sup>

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Despite their key importance for water quality and biodiversity, approximately one million kilometers of small waterways in Swedish forests lack what research would deem as appropriate riparian buffers. Improving protection along these waterways would potentially benefit their ecological functioning across landscapes and provide better social values to numerous users. A proposed practice to mediate conservation and production forestry activities in riparian buffers is applying Continuous Cover Forestry (CCF) that potentially can reduce the impacts of harvesting operations to aquatic environments and improve long-term connectivity between forested habitats. However, Sweden's soft approach to regulating forest management implies that conservation actions, both by large enterprises and small-scale forest owners alike, are mostly carried out on a voluntary basis. The reliance on forest actors' voluntary application requires a deeper understanding of the potential effectiveness of different informational policy tools, including advice, best management practices and internal protocols to guide practices. Are these tools applied and deemed necessary by forestry stakeholders to operationalize change in management within riparian buffers? Are these policies accepted by forestry stakeholders and perceived as suitable? Through focus groups and individual interviews, our project *Blue Leads Green: Using blue infrastructure to lead the way to a better forested green infrastructure* will explore forest stakeholder perceptions and attitudes towards riparian buffers managed under CCF. A first step of our analysis is to identify synergies and conflicts across goals of the multilevel policies and voluntary regimes within forest water management in the Swedish context. In the second step, we will examine in-depth the factors that shape acceptance of CCF practice. Results are expected to be heterogeneous, depending on how much impact buffer zones have on forestry activities, the owner's management objectives, their knowledge on new management methods, and the support and advice they can have access to when applying such new methods.

Teemu Harrinkari

## **International and Domestic Sources of Finnish Forest Policy**

Teemu Harrinkari<sup>1</sup>

<sup>1</sup> University of Helsinki, Finland

This study describes the composition of Finnish Forest policy subsystem and analyses what kind of policies it has produced among the different political influences deriving from national and international levels within a 20-year time frame from 1994 to 2014. The analytical approach combines Advocacy Coalition Framework, Four pathways of international influences, and Critical discourse analysis. These theories directed the qualitative content analysis of qualitative interviews and policy documents. According to the results, three coalitions were identified; Private forestry coalition and Forestry administration coalition derive their beliefs from the forestry paradigm and promote the economic utilisation of timber, whereas Environmental coalition derive their beliefs from the environmental paradigm and promote safeguarding of the forest biodiversity and the forest nature. The findings of the study indicate that forest policy has been inclined towards economic utilisation of the timber resources, undermining other ways of forest utilisation. Due to the export-dependent Finnish forest industry, international influences were recognised to diffuse to Finnish Forest policy through three different pathways, including International rules, International norms and discourse, and Markets. Legally binding international rules and non-legally binding international norms and discourse were regarded as equally important. Along with the international rise of environmental consciousness and related regulation, Environmental coalition gained leverage in the 1990s to affect Finnish Forest policy. In conclusion, the ability to generate export revenues has provided political power for the forest industries and forest owners in Finland, but the Finnish society would benefit from a more holistic consideration and commercialisation of different benefits gained from the forests in monetary terms, since it would allow the equal consideration of trade-offs related to different policy options.

Ida Herdieckerhoff

## **Ambiguity and forest-based bioeconomy: The case of forest fires in the Southern Highlands of Tanzania**

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The forest-based bioeconomy plays an important role in the transition towards a bio-based economy, offering also solutions for mitigating global climate change. In Tanzania, since the early 2000s, there has been a swift expansion of commercial tree growing, especially in the Southern Highlands. The increasing demand for timber has attracted both resident inhabitants and small and medium-scale investors from elsewhere to exploit this new investment opportunity. The spread of highly fire-sensitive eucalyptus and pine plantations has radically altered the fire regime in the landscape. The underlying driving forces of forest fires are related to ambiguous and conflicting social processes in land management. To study these uncertainties, we conducted field data collection in Iringa and Njombe regions, mapping a wide array of interpretations related to small and medium-scale plantation forestry in general and to forest fires specifically. Our research methods incorporated individual interviews, focus group discussions (FGDs), direct observations and insights from a co-researcher. While the smallholder farmers, urban-based investors, large forest companies and other actors share a common interest in mitigating the impacts of destructive forest fires, ambiguity exists in how to manage these fires. This results in a scenario where both interest in and resources for firefighting are limited. We encourage the co-creation of well-defined, transparent village fire management committees and village fire funds to ensure localised and efficient fire management.

Kendisha Soekardjo Hintz

## **Combining value chain, value network and power methods for comprehensive value chain governance analyses**

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**Keywords:** *timber products; actor-centered power; power capabilities; forest governance; mixed-methods research*

Value chain analyses of timber forest products imply the complexity and power imbalance among the (in)direct actors in a value chain, but quantifying the added value alone cannot fully capture the nuances of power and social relationships among value chain actors. To reveal a more holistic value chain governance of timber products, we propose a method that complements a value chain analysis with the actor-centered power approach. We argue that value in a chain is created not only through the appropriation of added value, but also through the social relations of actor's power sources and interests. Beside mapping the value chain and calculating the added value per value chain actors, the value network is mapped and the power capabilities of the actors are quantified. The method combines both quantitative and qualitative data collection and analysis strategies. The expected output shall uncover which actors are more powerful in monetary and non-monetary terms. It can further pave the way to devise recommendations on how the less powerful actors can increase their power capabilities, with the view to reach a more equitable value chain.

Gabriela Huidobro

## **Coordination Efforts in Wildfire Policy Integration: A comparative Study of Spain and Germany within the EU**

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In the context of the European Union (EU), where each member state has its own wildfire policies and a diversity of management actions, bringing together multiple actors with different interests' coordination is not easy. Despite discussions over a decade ago regarding the establishment of a legal framework for integrated wildfire management in the EU, progress in this regard has been limited. Nevertheless, the EU, through its array of programs and initiatives, has provided support for wildfire management and prevention projects, and has actively encouraged member states to collaborate via mechanisms such as the EU Civil Protection Mechanism. Hence, this study aims to i) identify challenges for wildfire policy integration between two countries with distinct socio-ecological landscapes and fire traditions, Spain and Germany; as well as ii) their potential coordination problems. To achieve these objectives, we draw upon insights from policy integration, intersectoral coordination, and bureaucratic politics theory. Data was obtained from nationally distributed newspapers as well as professional journals, legal regulations, and planning programs since the expansion of the EU in 1980 when Mediterranean countries were incorporated. We analysed how fire administration, civil protection, and sustainable forest management deal with wildfires at the EU, national, sub-national, and local levels and contribute to the policy instruments to meet the wildfire challenges. Additionally, we looked into the organizational interests of the bureaucracies of the two countries of study in shaping government decisions. Our hypothesis is that although forest fires represent a significant challenge for all EU territories and societies, the integration of policies and thus the existence of a legal framework for forest fire management may result in economic responsibilities for Northern European countries. Our study shows that in decentralized countries with several levels of action, where the jurisdiction of resources varies, coordination is hindered, creating challenges for implementing wildfires policies.

Dode Heim Myline Houehounha

## **Armed conflicts in World Heritage sites and conservation effort response: case of the Okapi Wildlife Reserve in Democratic Republic of Congo**

Dode Heim Myline Houehounha<sup>1</sup>

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In 1997, just one year after the Okapi Wildlife Reserve (OWR) was declared a natural World Heritage Site (WHS), it was already relegated to the endangered site list. To date, the OWR faces a persistent governance crisis, as the gold and mineral rush in several sites in Ituri province located in the Eastern of Democratic Republic of Congo (DRC), involving armed groups, has extended its extractive activities into the western part of the Reserve, making it more difficult to resolve conflicts to advance biodiversity conservation objectives. Several conservation efforts have been deployed by the ICCN (Institut Congolais pour la Conservation de la Nature) and Wildlife Conservation Society (WCS) to resolve the value conflict, but it seems that this is not enough to solve the problem. Our main hypothesis is that in a context of weak statehood, the resource becomes a curse as the rule of law that balances the intersection between extraction and conservation is poorly enforced and violently contested. Using the Delphi technique, our paper pursues two objectives: (i) to investigate the factors that limit the resolution of the armed conflict that threatens the viability of the reserve and (ii) to identify a set of priority actions based on a comparative analysis between local and expert perspectives.

Verina Ingram

## **Deforestation-free trade: ideal or illusion?**

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Globally traded commodities drive deforestation directly and indirectly. In response, zero-deforestation value chains (ZD-VC) have been promoted in various policy domains, including the recent EU Deforestation Regulation. We review current debates on ZD-VC approaches found in policy documents, peer-reviewed literature, and web-based data, with a specific focus on the policy ideas, ideals and measures these debates propose to achieve zero deforestation in relation to commodity production. This paper explores these debates. Firstly we identified five policy discourses around ZD-VC that express specific ideas about what causes deforestation and how the ideals of how it should be addressed. Secondly, we identified six approaches to attain ZD-VC that have been used in the last two decades: regulatory approaches, landscape and jurisdictional approaches, corporate pledges, voluntary sustainability standards, public-private partnerships

and due diligence mechanisms. We then (re)constructed the theories-of-change behind these approaches and linked them back to the discourses, finding that the study of discourses helps explain political preferences for one approach over another and expectations of effectiveness. We reviewed evidence on the effectiveness of different approaches finding illusions created of action worldwide, whereas few approaches target current and newly emerging hotspots of commodity-driven deforestation in tropical and temperate deforestation frontiers, despite this being crucial to achieve the goal of zero deforestation on a global scale. Also problematic are that approaches and policies are biased towards highly deforested areas and the lowest geographical context of farm-level avoided deforestation. In addition, geographical displacement of deforestation and spill-over effects from one commodity to another are hardly addressed. These findings suggest that by combining approaches the weaknesses of different approaches and blind spots could be overcome – however that this is often politically difficult given the underlying ideologies and preferences for specific policy instruments. Our findings suggest that political ideology, rather than the evidence of what approaches work and why underlies most theories-of-change. Critically exploring these illusions can offer insights for forest policy researchers and stakeholders addressing interconnected interests, cross-sectoral and transboundary interdependencies. We argue for global efforts to produce effective, well-designed, interlinked approaches in an international multi-level and multi-actor setting to achieve zero-deforestation value chains.

George Iordachescu

### **What is an old-growth forest? Assembling a socio-technological fix for saving the planet (and the economy)**

Dr George Iordachescu<sup>1 2</sup>

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The recent European Union Strategy for Biodiversity for 2030 proposes that all remaining primary and old-growth forests (OGF) in Europe be put under strict protection. According to this ambitious agenda, these complex ecosystems are essential for the EU's economic recovery. They remove carbon from the atmosphere, host a rich biodiversity and offer invaluable information for scientific advancement. The paper contextualizes the political momentum in which primary and old-growth forests become protected in Romania, the EU member state hosting the largest tracts of OGF. On the brink of extinction, old-growth forests have been regarded as windows to the past and a laboratory for finding solutions for current and future environmental challenges. Appropriate definitions, mapping and monitoring become essential for their effective conservation. This paper investigates how different knowledge regimes have shaped the understanding of old-growth forests in the Carpathian Mountains and their functioning as they turn from data sets to UNESCO world heritage, and further to fixes for EU's climate and biodiversity crises. Remote sensing

technologies and high-resolution satellite imagery are techniques currently used to map OGF across the Carpathian Mountains. However, while significant efforts have been made to identify and assess the conservation status of these forests, politicians and activists alike have started to use maps as political ammunition. In countries like Romania, scientific research has been accompanied by a robust civil society mobilization for the protection of OGF as a charismatic nature. Outside the scientists' realm, they have been produced as a digital object of desire through VR technologies, artistic interventions and participatory mapping. While this charismatic nature is slowly becoming a socio-political techno-nature aimed at fixing our multiple crises, some serious questions regarding the role of different methodologies in making OGF legible must be critically addressed. Based on expert interviews, policy and legal analysis, the paper argues that the maps and data sets about OGF which inform environmental policymaking are joint products of scientific gaze and techno-managerialism emerging from green growth discourses. This narrowing of vision can produce environmental injustice and obliterate a rich environmental history around these complex bio-cultural objects.

Kristina Johansson

### **Changing masculinities in Swedish forestry work organisations**

Kristina Johansson<sup>1</sup>, Maria Johansson<sup>2</sup>, Elias Andersson<sup>3</sup>

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Part of the reproduction of power and inequality are the flexibility and capacity for change of hegemonic masculinity (Christofidou 2021). Two decades ago, Brandt and Haugen (2000, 2005) argued that dominant representations of forestry masculinity was gradually repositioned in relation to the introduction of new technology and the proliferation of professional forestry management, from the logger to the machine operator and the organizational man. Recent studies from Sweden suggest that, today, constructions of forestry masculinity may be negotiated in tandem to the forestry industry's increasing efforts to promote gender equality. Part of such negotiation is assumptions that the reproduction of a homosocial masculine forestry culture is rooted in a specific group of "ignorant" and "backwards" men. Not only does this prevent a scrutiny of the ways in which the homosocial masculine culture is embedded in forestry organizations, it also enables other, more privileged group of forestry men to position themselves as "modern" and "enlightened" (Ringblom and Johansson 2021, Johansson et al. 2022). This presentation seeks to continue the exploration of masculinity in contemporary Swedish forestry. To do so, we draw on qualitative analyses of men's responses to a national questionnaire circulated to all women with a Swedish forestry degree and a mirror group of men in 2021. Preliminary findings show that traces of men's discursive resistance to gender equality are found in descriptions of men's disadvantages related to hiring and promotion (cf. Johansson et al 2019), however such critique is often articulated after a recognition of women's general disadvantages in forestry. Additionally,



also included in the material were acknowledgement of the assumed privileges that came with being a man in forestry, often with being a man in forestry, often with explicit reference to the masculine culture of forestry. Such a description suggests the emergent of more "hybrid" (Bridges and Pascoe 2014) forestry masculinity, characterised by a (partial) appropriation of more "equal" ways of doing masculinity in need of further analyses.

Maria Johansson

## **The gendered organisation of forest work: continuity and change in division of labour in Swedish forestry**

Maria Johansson<sup>1</sup>, Elias Andersson<sup>2</sup>

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The Swedish labour market is, from an international perspective, relatively gender-segregated and forestry is no exception. This affects the conditions for both men and women on the labour market as well as the opportunities to carry out effective gender equality work to prevent and counteract gender discrimination and sexual harassment. Within the forest sector, awareness and efforts linked to gender equality have increased through, among other things, the sector's national gender equality strategy entitled "Competitiveness requires gender equality" which was launched in 2011. In relation to the strategy a survey was conducted regarding the conditions on, and experiences of, the forest labour market of men and women with higher education degrees in forestry. It showed clear patterns of gender segregation and that women to a greater extent chose to leave the forestry sector.

In order to investigate whether, and if so, how, the increased national awareness of and initiatives for gender equality have led to any change of the conditions for men and women on the labour market, this study aims to follow up the previous survey from 2011. The sample for the survey consisted of all women with a higher education degree in forestry and a mirror group of men with corresponding education, age, and graduation year. In total, the sample comprised 1618 individuals and the response rate were 53%.

The results show that the gender segregation on the forest labour market has decreased somewhat in certain areas, but that the changes in general are limited. The vertical segregation has largely disappeared at lower and middle management level, which is partly explained by the fact that compared to 2011, women now reach these positions faster. However, the segregation remains at the company management and board level. At the same time, women in managerial positions who experience themselves as the most vulnerable in working life regarding gender discrimination and violations, which may indicate that the numerical changes have not been fully

followed by a changed organizational culture.

Aymani Kan

## **Fatal attraction to win-win-win? Contestations in the media on Nature Conservation Agreement in Sabah**

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Contestations around forests and lands have a long history in Sabah, and the divergent interests of the ruling State, private business and indigenous and local peoples have played out in narratives in policies and media since colonial times. Coalition building among actors is one avenue of influencing policy and securing benefits from policy outcomes.

In this paper we examine policy coalitions related to the Nature Conservation Agreement, a controversial carbon credit trading scheme in Sabah, Malaysia, by identifying joint narratives about development and forests/lands as put forth by both state and non-state actors featured in print media. This analysis enables us to identify discourse coalitions, but also to advance our understanding of argumentation shared by particular actors, and the narratives that are constructed and employed by actors. Relevant articles from October 2021 to January 2023 were coded to identify the media frames, actors, and their arguments. Using discourse network analyser (DNA), three coalitions were identified: 1) Local rights defenders; 2) NCA promoters; 3) Process sceptics. Actors for or against the NCA both emphasise the importance of managing forests and local development within Sabah, but closer examination of arguments reveal that coalitions have different visions of who is to be included for decision-making and who will benefit from it. Discourses on development and resource management in Sabah are not without contestation, even though alternative options for more just development are still absent. The NCA is an ongoing case, and new events have unfolded since January 2023—where coalitions have adopted new strategies to (de)legitimize the case for NCA, including attempts to bring in new allies to expand their coalition.

The way in which carbon trade is framed as a triple-win solution for economic development, climate change and local autonomy also reveals the persistence of neoliberal ideologies that have shaped much of the development policies in the state. While the coalitions identified from this case may not be new or surprising, they are important to consider, as they forge path dependencies for future development pathways and policies in Sabah.

Maarit Kallio

## **Leakage impacts of the EU's climate and biodiversity policies on the global forest sector**

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Several policies that affect the utilization and management of forests in the European Union member states and Norway have been implemented or are under development in the EU. Among them are the EU Biodiversity Strategy for 2030 and the regulation of the inclusion of greenhouse gas emissions and removals from land use, land use change, and forestry in the 2030 climate and energy framework. Our study aims to assess the impacts of these two policies. The scenarios with and without the policies are quantified by employing the global forest sector model FORMEQ. The model projections are based on the circumstances accounting for the recent changes in the global geopolitical environment, decline in economic growth, trade embargoes, and increase in energy costs. Policies are projected to result in reduced harvests in many of the EU member states. The results also confirm the leakage phenomenon that is well-recognized from the previous literature: unilateral policy actions that change wood harvests or forest industry production in one region elicit opposite actions in other regions. Owing to the increased costs of forest industry products, some of the forest product consumption will also shift to products made of other materials that have a higher environmental footprint. We evaluate the magnitude and geographical direction of roundwood harvest and forest industry production leakage from the EU to the rest of the world. Further, the impacts of the leakage on some environmental indicators are considered.

Anna Karlsson

## **Negotiating landscape values between forest owners and planners**

Anna Karlsson<sup>1</sup>, Vilis Brukas<sup>1</sup>, Ida Wallin<sup>1</sup>

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Landscape fragmentation that threatens biodiversity and ecosystem functioning, along with unfulfilled national environmental objectives, places significant pressure on current Swedish forestry practices. While the needs for diversified forestry and better accommodation of landscape scale are widely acknowledged, their realisation is lagging behind. This emphasises the necessity for substantive changes in forest management plan, as a central informational policy instrument in Swedish forestry that, on voluntary basis, arranges forestry activities in space and time. After recent cessation of forest management planning by the Swedish Forest Agency, currently planning is concentrated in the private sector. Forest planners are typically affiliated with industrial forest actors and their focus on timber procurement hinders the adoption of a landscape perspective. Thinking landscape scale is also challenging for individual forest owners who normally focus on forest values within their estates. Thus, successful adoption of landscape perspective needs both, reframing of the routines of forest management planning and finding a constructive approach to balance owners' managerial priorities at estate level with nurturing their interest to contribute to enhancement of environmental and social values on a landscape scale. Guided by the theory of knowledge management, we conduct ethnographic observations of planning operations followed by semi-structured interviews with forest planners, to examine their motivation, expertise, and working routines in elaborating forest management plans. Combined with data from a survey on owners' needs and ways to acquire knowledge, these findings will feed into testing enhanced approaches to forest management planning on case estates, co-created between scientists, planners at forest owners association Södra and experts from the Swedish Forest Agency.

Christine Katz

## **Doing Gender while doing nature?! The interconnection of nature and gender in forestry and its meaning for societal nature relations**

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The majority of empirical research on gender and nature relations is done in the realm of land use, agriculture and forestry. Mostly an identity and structural perspective on gender is established thereby, i.e. it is looked at working and social conditions of women in their interplay with power relations. Empirical analyses which are attached to (de-)constructive theories and/ or conceptualizing gender as a process category - as doing gender - are deficient as well as sustainability (and intersectional) approaches integrating e.g. ecological, social, economic and cultural aspects or focusing on the interconnection between their symbolic-discursive and material relations and interacting dominance patterns.

In the contribution I will reflect critically the consequences for gender and nature relations if different gender categories are applied in research on forest nature management. Focusing on practical work of German foresters the approach “doing gender” (Gildemeister & Wetterer 1992) is discussed in its interaction with “doing nature” and as an effective (and needful) way of identifying the interconnected hegemonic patterns in the linkages between gender and nature in their symbolic and material dimensions. Thereby the gendered quality of different management practices and their gendered performances of power towards nature and femininity is scrutinized. The transformative potential of nature management practices centered on reproductive principles is discussed.

Jumpei Kobayashi

## **Dynamism of hardwood production in rural Tanzania**

Jumpei Kobayashi<sup>1</sup>

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Tanzania is one of the most deforested countries in the world, losing about 400 000 ha of forest every year. One of the reasons behind this is the increase in the urban population due to the growth of the Tanzanian economy, triggered by the oil price hike since 2003. The demand for timber for charcoal, building materials and furniture in urban areas with expanding residential areas has increased, driving people in rural areas without a stable income to log and sell natural timber. In other words, the link between urban demand for timber and a stagnant rural economy has led to the scarcity of natural hardwoods such as African mahogany (*Khaya anthotheca*), which has led to forest degradation. While natural forests are rapidly diminishing in many parts of

Tanzania, there are examples of smallholders in the Amani region of north-eastern Tanzania maintaining natural forests by producing and selling non-native hardwood timber instead of natural hardwood timber. Rural communities in the Amani region are not fully self-sufficient in food due to low productivity and animal damage on their farmlands, and have had to compensate for shortages by purchasing it. The inhabitants had a source of income from a small mixture of diverse plants, such as spices and fruit trees grown in the farmland, which incorporated *C. odorata* into the mix. *C. odorata* was introduced to the Amani region by the German colonial government in the early 20th century. At that time, the colonial government introduced various exotic plants to the region and used the difference in mountain elevation to conduct environmental application trials. After Tanzania's independence, part of the area was designated as a nature reserve in 1997, and *C. odorata* began to grow wild in the nature reserve and surrounding areas. In the Amani region, rural communities used the native *C. odorata* as building and furniture material, but when the establishment of the nature reserve banned the felling of trees, residents began to take seedlings from the reserve and plant them in their farmland. As natural hardwoods became increasingly scarce, the Tanzanian Government began to impose high royalties on the felling of natural trees in order to conserve natural forests. This tax system encouraged urban timber merchants to buy *C. odorata* planted in the Amani region, which was not subject to taxation, thus establishing a circular forestry industry within Tanzania.

Felicien Kengoum

## **Beliefs and Cooperations in REDD+ actors policy networks structures in the DRC**

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**Keywords:** *DRC; REDD+; Advocacy Coalition Framework; Policy Network Analysis; DRC.*

The UNFCCC promotes inclusiveness of forest-based climate change mitigation policy processes (UNFCCC, 2011; DRC, 2012). This is based on acknowledging that diversity of actors' stances influences national policy processes to achieve reduced emissions from deforestation and forest degradation (REDD+) within tropical countries (Brockhaus et al. 2014), including in the Democratic Republic of Congo (Kengoum et al. 2020). However, actors have a multitude of beliefs about the relevance of their respective roles and of the policy options that align with their interests. Their considerations of what options are the most appropriate to ensure effective and equitable forest-based climate change mitigation play a role in the way they chose to cooperate through advocacy coalitions within policy networks to achieve their individual or collective goals.

By investigating actors' advocacy coalitions within REDD+ policy networks in the DRC, this study attempts to understand how their ideas and beliefs affect collective action in the REDD+ policy

domain. Specifically, the analysis addresses three questions. Firstly, what are actors' ideas and beliefs regarding REDD+ options in the DRC? Secondly, which actors are sharing the same stances and rationales and what coalitions have formed? Thirdly, how do these shared and contrasting beliefs affect collaboration within policy networks to achieve policy results.

The analysis is based on a set of stances indicating policy beliefs and policy network data collected on site in DRC and online, between February 2023 and January 2024 from 82 respondents representing 64 governmental and nongovernmental national and international organizations of the DRC REDD+ policy domain. The paper applied an advocacy coalition framework to the study of the climate mitigation and forest policy domain in the country with the tropical forest resources of Africa.

Susanne Koch

**What 'counts' in international forest policy research? A study on valuation practice and habitus in an interdisciplinary social science field generating forest-related knowledge, data and evidence**

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In this paper, we shed the spotlight on international forest policy research as a scientific field that plays a crucial role in generating social science knowledge, data and evidence on how forests are governed, managed and used. As the field has become increasingly diverse in terms of disciplines, actors and themes, the question what type of knowledge, data and evidence counts as scientific and relevant needs to be answered empirically, since standards of 'good science' vary across fields and are negotiated by their members. We link Bourdieu's praxeological theory and valuography to examine implicit values, norms and orientations that guide international forest policy research. Based on conference ethnography of International Forest Policy Meetings and reflexive interviews with scholars in the field, we identify two dispositions characterising dominant habitus in forest policy research: an objectivistic understanding of scientificity, and an affective orientation towards forest practice. They reflect in the set of values enacted, including methodical rigour, representativeness, innovativeness, responsiveness and usability/applicability, along with an attachment to forests as shared and connective subject of concern. We explain the prevalence of these values through field-habitus theory with the socio-historical conditions from which forest policy research in the Global North emerged. Accounts of its history emphasise the emancipation from scientific forestry, and its distinctive identity as a forest-focused field encompassing a wide range of social sciences. However, our findings suggest that forest policy research has not yet achieved full autonomy, as the value characteristics of 'good' science are still aligned with those of the 'mother disciplines' and oriented at expectations of external actors. Forest policy research

has not yet developed a regime of valuation that does justice to its interdisciplinarity, which prevents the field from utilising its full potential. Prevailing habitus lowers the relevance of normative scholarship that expresses more radical or transformative visions challenging orthodox paradigms. It entrenches an inequality between different strands of research within the field, without anyone intending this. Our study gives input for reflecting values, norms and orientations driving forest policy research, and seeks to encourage debates on its nature, purpose and future in science and society.

### **Gender and geography as inequality dimensions in forest research: insights from a multi-method study**

Susanne Koch<sup>1</sup>, Olena Strelnyk<sup>1</sup>, Camilla Tetley<sup>1</sup>, Shizuku Sunagawa<sup>1</sup>, Nelius Boshoff<sup>2</sup>, Similo Ngwenya<sup>2</sup>, Rodrigo Costas<sup>3</sup>, Jonathan Dudek<sup>3</sup>, Amani J. Uisso<sup>4</sup>

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Inequality has become a core topic of forest research. Forest scholars have investigated how gender and socio-economic status impact on forest use, how power asymmetries shape forest politics and governance, and how professional norms contribute to the marginalization of women in the forest sector. However, to what extent the forest science community is itself structured by inequalities is just beginning to be explored.

We address this gap with a multi-method study that investigates inequalities and their epistemic effects in global forest research. Using Bourdieu's praxeological sociology of science as theoretical perspective, we employ bibliometrics, ethnography and content analysis to study how inequalities manifest and shape research conducted in the field, with a specific focus on the dimensions of gender and geography.

In this talk, we share insights from on-going research, whereby we present a) a snapshot of bibliometric results showing inequality patterns at publication level and b) empirical data showing how inequalities are impacted by scientific valuation and cooperation. The qualitative findings are based on reflexive interviews with forest governance scholars located in different countries across Europe and Africa, as well as on participant observation of collaborative meetings taking place in the course of international research projects. They indicate the significance to critically examine the interrelation of structural conditions and agency in science through an empirical focus on scientific practice.

The paper seeks to contribute to a reflexive and critical discussion on how prevailing conditions and practices of doing forest science may reproduce gender- and geography-related inequalities, but also how they can be researched and addressed.



Niak Koh

## **Flows of finance and diverging interests and discourses in frontier governance in Mai Ndombe, DR Congo**

Niak Koh<sup>1</sup>, Maria Brockhaus<sup>2</sup>, Niina Pietarinen<sup>2</sup>, Alizee Ville<sup>2</sup> and Grace Wong<sup>1,3</sup>

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Forest-agriculture frontiers are being converted either to agro-industrial practices and conservation interests throughout the tropics, often pursued under the guise of ‘sustainable development’. These transformations have not led to expected win-win social and ecological outcomes and benefits are often reaped by powerful and capital-rich actors (and the State) who are remote from these landscapes. We argue that such outcomes are a consequence of infrastructures that have persisted since colonial times – from the “infra” or underlying material, social and political framework, the physical infrastructure of roads, mills or tourism, to the paper infrastructure of lists, accounts, laws, and regulations which enables the capture of economic or ecological rent (Li 2019).

This study examines the material flows of finance, and the different actors and interests they represent, in the case study of Mai Ndombe in DR Congo, a forested region highly coveted for conservation values and development aspirations. Understanding that frontier change is driven not only by local people’s behaviours and land-use practices nor national policies alone, this paper applies a telecoupling approach and leverages on diverse opensource data (LandMatrix, Global Forest Watch, Forest Carbon Partnership, ORBIS, OCCRP Aleph) to examine global flows of public and private finance and trace corporate ownership of diverse investments in the region. We find financial and discursive flows in activities such as logging, sustainable forestry management, mining, conservation and REDD+, while the problem framing of deforestation drivers remain at the local. Our preliminary analysis highlights the complexity of transnational influences on frontier change and competition development and conservation interests, the reach of persistent infrastructures beyond boundaries and their consequences on local contestations and forest commons governance.

Agata Konczal

## **Restoring the forest or restoring the state? An anthropological exploration of forest restoration discourse**

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The paper takes a closer look at the state-forest relationship. It uses the example of the Polish state and Polish forest and forestry discourses and analyses how and when the state creates discourses about the forest to serve its current objectives and policies. Tracing the historical approaches of the Polish state(s) to forest restoration practices, the paper looks at past actions since 1918 through which the Polish state has restored the forest to trace the discursive practices of forest nationalisation. Combining historical perspectives with contemporary discussions of forest restoration linked to the European Union initiatives (Biodiversity Strategy, Forest Strategy) and global institutions, the text offers an analysis of the power relations inscribed and embodied in nature management activities. The paper touches upon a broader reflection on nature management and the power relations inscribed and embodied within it and examines how “the environment” and environmental issues have been constructed as domains requiring state regulation and protection. Focusing on planting rather than cutting, and restoring rather than deforesting, the article describes the use of environmental governance policy tools to maintain power over discursive and material actions in relation to the landscape by states and/or international institutions. It also introduces the concept of “Green Frontiers” (Konczal, 2022) – areas where nature conservation is pushed out to marginal areas, that, as a result, become constructed as “nature refuges” firstly by policies and political decisions and secondly by material actions that are outcomes of these policies. This article is embodied in a forest anthropology perspective.

Juhani Koponen

### **Forestry aid –‘Finnish model’ meets developmentalism**

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An idea deeply rooted in Finnish national imagination is that forestry is something in which the Finns excel and where they have much to give to the rest of the world. This belief has also guided Finland’s development cooperation throughout its history. Although the volumes of forestry aid have fluctuated and are now declining, it has been consistently present in Finland’s development cooperation from its beginnings in the 1950s to the present. However, its forms and practices have undergone a sea change. This paper traces the historical trajectory of the Finnish forestry aid and offers an explanation for its idiosyncratic course. The argument is that Finland’s forestry aid must be seen as a blend of a Finnish forestry ‘model’ and key ideas of international developmentalism. It started as support to forest industries with machinery, technical assistance and some teaching, and went on to afforestation projects with elements sensitive to environment and gender. These were then complemented, and to some extent replaced, by nation-wide planning assignments and sectoral programmes. Project approach, however, made a comeback

and lately the focus has been on village and private forestry and commercial plantations. This broadly reflects the big shift in international developmentalism from modernization to poverty reduction with emphasis on environment and good governance and the move from the developmental agency of the state toward that of private actors. But the approach of the Finns has often differed from other donors in the sector; e.g. they have been less interested in conservation or community forestry. The paper argues that this is due to the influence of an underlying forestry 'model', implicit rather than explicit. The model stands on three assumptions. (1) Forest is an assemblage of trees which can and must be used sustainably for economic purposes. (2) The level and knowledge of forestry is exceptionally high in Finland and is usable in different environments. (3) Sustainable forestry requires private, preferably small-scale, land ownership. The paper draws on long-term research on the history of Finland's development cooperation based on extensive documentary materials, interviews and personal observations.

Kaisa Korhonen-Kurki

### **Overlaps and tensions within actor networks and EU policies towards the implementation of the Biodiversity Strategy and the Nature Restoration Law**

Kaisa Korhonen-Kurki<sup>1</sup>, Dalia D'Amato<sup>1</sup>, Mihai Adamescu<sup>2</sup>, Salla Rantala<sup>1</sup>, Samuli Pitzen<sup>1</sup>

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The Earth systems are faced with multiple crises, of which the biodiversity crisis is recognised as perhaps the most severe and complex, in combination with the climate and pollution crisis. The 2019 EU Green Deal (EGD) represents an ambitious plan for a more radical response to such challenges towards transforming the EU into a more sustainable and yet prosperous society, in a just and inclusive way. In the context of the Green Deal, the new EU Biodiversity Strategy for 2030 (BDS2030) aims at protecting, conserving and enhancing European biodiversity and associated ecosystem services, as central elements to transformative change. The effective implementation of the BDS2030 is challenged, among other things, by the heterogeneous landscape of actors involved in the co-creation of knowledge and in decision-making processes related to biodiversity, as well as by horizontal policy incoherence, which involves policies beyond biodiversity, such as agriculture and forestry. In this study we further explore such challenges by examining the biodiversity science-policy arena at the EU level, and look at overlaps and tensions in roles and responsibilities within actor networks, as well as within existing policies, relevant to biodiversity, including in relation to forest. We base our analysis on social network analysis of key organizations operating in the EU science-policy interface (n=20) as well as a document analysis of EU policy documents (such as EU forest strategy) from key sectors relating to biodiversity and forests. We particularly focus on the Nature Restoration Law as an example of cross-cutting policy process that provokes different knowledge needs within the science policy arena. The preliminary

findings show that the EU science-policy interface hosts several actors with overlapping and conflicting positions and interests, and such diversity is similarly reflected in the policies analysed.

Miriam Knödler

### **Profit over subsistence? The role of private corporations, the state and academia in embracing an ecofeminist forest concept as part of an agroecological transformation – The case of Sweden**

Miriam Knödler<sup>1</sup>

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In recent troubling times which require systemic change, agroecology demands a conceptual transformation. It is a counter-hegemonic approach, which aligns with radical theories like ecofeminism. It envisions a future which includes forests as important parts of a new socio-ecological landscape. An ecofeminist forest concept, which this study elaborates, is a visionary idea which can describe an agroecological future. But is this the future humankind and forests will see? In Sweden, forests build the backbone of an exploitative bioeconomy, which is established by the main stakeholders of private corporations, the state and academia alike. Forests cover most of Sweden's land and hence assume an important role for agroecology. Yet forest concepts, which shape how humans perceive the forest, influence decision-making and change within the forest and beyond and therefore affect agroecological transformations, often remain invisible. Their power is unmentioned. To identify the conceptual possibilities of an agroecological shift in the case of Sweden, this critical, interview-based study thus uncovers how corporate, governmental, and academic forest concepts look like. It analyses whether these particular concepts might be changed in order to lay the conceptual groundwork for an ecofeminist, agroecological future. The results show that private corporations, the state and academia hardly foresee any rethinking of current forest concepts. Both current conceptualizations and their semi-alternatives exacerbate a logic of domination that perceives the forest within the terms of a productivist, profit-driven agenda. This picture of the forest perpetuates into a future of intensified forest exploitation that severs potential alignment with ecofeminist, agroecological ideas. In fact, the main stakeholders interlink like a Borromean knot, which manifests a capitalist idea of the forest and puts profit over subsistence. Not the least academia has therefore a responsibility to reconsider its positionality which forecloses structural change. The visionary ideas of an ecofeminist critique can blaze the trail.

Juulia Kuhlmann

### **Women forest owners' pathways towards active ownership**

Juulia Kuhlman<sup>1</sup>

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Finnish forest policy and research usually understand “active forest ownership” as a masculine and timber production-centric concept. The objective of this talk is to discuss how women forest owners perceive the concept of “active forest ownership”. Active forest ownership can be seen as term, describing the empowerment of women forest owners. Furthermore, the steps women have taken towards this empowerment are discussed. Twenty-two semi-structured interviews were conducted to study these questions. The results were analysed through the framework of diverse pathways, which looks at the interaction between human agency and structure. The findings suggest that “active forest owner” is a more diverse concept for women forest owners than that described in Finnish forest policies or research. Furthermore, women’s paths towards active forest ownership are diverse, but have many commonalities. These results indicate that forest policies would need to include a wider perspective of “active forest ownership” to address a larger proportion of forest owners and create more inclusive policies.

Anu Laakkonen

## **What could be the role of politicians and political decision-making in the corporate foresight practices of SMEs?**

Anu Laakkonen<sup>1</sup>, Aleksi Heiskanen<sup>1</sup>, Annukka Näyhä<sup>2</sup>, Janni Kunttu<sup>1</sup>, Anne Toppinen<sup>1</sup> & Elias Hurmekoski<sup>1</sup>

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The operating environment of forest-based sector is constantly changing. The highly topical sustainability transition has brought forests and forest resources in the global spotlight. Therefore, it would be important for both companies and political decision-makers to understand better the numerous change factors and diversity in stakeholder views, and the related future developments in them arising from the different perspectives and interests related to utilizing forests. Corporate foresight as a strategic approach could help these actors to notice changes in the operating environment and seize the arising opportunities while navigating through uncertainties.

This study investigated the possible role of politicians and political decision-making in the corporate foresight practices of small and medium sized enterprises (SMEs) within the Finnish forest-based sector. The study merged qualitative interview data and quantitative questionnaire data collected from SMEs during 2022-23.

According to our findings, the interviewed SME managers perceive that to support their future operations, political decision-making should be predictable, and they should be able to trust that regulations and policies do not hamper business viability. However, politicians and other decision-makers as well as cities, municipalities and other public organizations were not seen as important data sources or participants for foresight practices. As data sources, politicians and decision-makers were used relatively little (43% use) and only 24% of SMEs perceive them as extremely important or important. Similar pattern can be seen with cities, municipalities and other public organizations with 47% usage and 23% perceiving as extremely important or important.

In addition, the SME managers perceive corporate foresight process as rather internal and closed process. However, to tackle global sustainability challenges, active collaboration with different cross-sectoral actors and taking into consideration their perspectives is crucial. Hence, engagement in open and networked foresight process could provide interesting future avenues for the SMEs foresight practices. Here especially seeing political decision-makers as data sources and participants in the process can be fruitful. This would be important as the role of public discussion and collaboration between different actors will become even more common in the future.

Chenmei Li

## **Exploring Chinese Engagement in the Forest Sector of the Democratic Republic of the Congo**

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Tropical forests in the Global South are sites of diverse discourses, interests and power structures. Together they form a historically established machinery that produces and maintains social inequalities within and among societies. Characterized primarily by becoming the main importer of tropical wood, China has emerged as a prominent player in Democratic Republic of the Congo (DRC), which raises the question about the impacts of such rising presence on the existing inequality machineries. Specially, this paper explore the China's trade and investment engagement with DRC in the forest sector, how such engagement associates with changes in discourses, interests and power structures, and do these changes contain risks of reproducing inequalities or potential to disrupt them.

Our data corpus is built using mixed method. We constructed a timber trade dataset between DRC and its trade partners including China, combining different sources. In addition, archives such as concession maps, operation assessment of operators from different years and qualitative interviews and field observation notes were collected in Kinshasa during October to end of November of 2023.

We identified three stages in the history of DRC's wood export: before 2000, to 2008 and after 2008, during which period China established as main trade partner of DRC. Trade pattern associate with the process of Chinese operators established themselves starting with informal small-scale trade activities to current seven industrial concessionaires, holding 28% of DRC's concession surface. There are significant behavioral diversities among Chinese operators, yet flexibility, especially for vertically integrating other industries, is a key factor contributing to the rising presence of Chinese actors in timber and other traditional forest-land related agriculture and mining. In contrast, actors with other nationalities of capital reported challenges in timber but eagerly are entering new markets justified by the premises of alternative livelihood especially carbon credit. Further argumentation on the relation between Chinese engagement and inequality machineries will be subject to later analysis.

Sandra Liebal

**Participation of the public needs evidence-based decisions: An analysis of the environmental and science communication about forest restoration of different forest stakeholders**

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In recent years, the vitality of forests has significantly decreased in Germany due to climate change and bark beetle calamities. Large-scale disturbances to existing forest structures have occurred. The forest dieback and the question of how to treat forests in Germany in the future have become a major issue in German media. Many forest stakeholders entered the discourse about the future forests e.g., by staging their own positions and claims, providing information, and offering participative actions like tree planting events or educational programs. This paper examines the extent and quality of provided information about forest dieback and reforestation by different forest stakeholders and investigates if the way of communication is in line with best practice in environmental and science communication.

Eva Lieberherr

**Policy Integration, Drivers of Change and Contextual Factors: Evidence from the Swiss Canton of Grisons**

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Natural hazards are cross-cutting problems, spanning different natural resource sectors. Addressing these requires system thinking and systemic responses. Policy integration is proposed as a means to address such cross-cutting issues. This article analyzes policy integration in natural hazard management in the Canton of Grisons, Switzerland. The main focus of the work is to evaluate how policy integration evolved in the canton from 1870 to 2020 and identify the main drivers of change. The research is based on a mixed method approach. A semi-systematic literature and document review is performed to analyse the historical and legislative context. Subsequently, a detailed policy integration analysis is carried out based on the framework defined by Candel & Biesbroek (2016). This framework distinguishes four dimensions of policy integration: (1) policy frames, (2) subsystem involvement, (3) policy goals, and (4) instruments. The findings show an increase in the amount of integration for all dimensions. We have identified different drivers of change as well as contextual factors - namely socio-political drivers, technical/scientific knowledge, federal legislation & guidelines, and natural events – which have influenced policy integration.



Stefanie Linser

## **Unearthing Biodiversity Data Gems: The Potential of Forest Biodiversity Indicators in the UNECE Region for Evidence-based Monitoring of Biodiversity in Climate Emergencies**

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***Keywords:** forest biodiversity, climate change, anthropogenic pressures, indicators, monitoring, forest monitoring, data availability, PSR, UNECE region, forest policy*

Climate emergencies and other anthropogenic pressures necessitate urgent action to mitigate biodiversity loss, underpinning the importance of developing robust monitoring tools. This study investigates the untapped potential of forest biodiversity indicators within the United Nations Economic Commission for Europe (UNECE) region and their applicability in tracking changes in forest biodiversity under environmental duress. A comprehensive analysis was carried out on national forest and forest-related reports across the 56 UNECE member countries to identify existing national biodiversity indicators utilized or applied within these reports. The goal was to unearth existing national biodiversity indicators used or mentioned within these reports, often overlooked in international reporting frameworks. The results revealed an abundance of data-centric indicators offering previously unexplored insights into forest biodiversity reporting efforts. This study aims to evaluate the feasibility of integrating these unearthed indicators into international reporting, with a particular focus on their potential for scaled-up data availability. We further probe the accessibility, replicability, and reproducibility of these indicators, highlighting existing data gaps in international forest biodiversity monitoring. This focus on data robustness is designed to fortify the reliability of future biodiversity assessments. A key outcome is the classification of all indicators used in the UNECE countries into eight thematic topics and the assessment of the role of the indicators in relation to the PSR model to support evidence-based decision making. Our findings have broad implications for forest management, forest and conservation policies, as well as international reporting methodologies. By assembling available methodologies and indicators in the UNECE region we are leveraging underutilized data which can enhance our understanding of forest biodiversity dynamics and offer a more holistic assessment of the status of biodiversity. This research further underscores critical considerations for indicator selection in anticipation of future biodiversity trends under escalating climate emergencies, thereby ensuring that monitoring efforts remain relevant and effective.

Theresa Klara Loch

## **Uncovering the Significance of Social Networks in Forestry Research: A Systematic**

## Review

Theresa Klara Loch<sup>1</sup>

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To gain profound insights into the social dimensions of forest management, this study focuses on the analysis of social networks, a field that has seen rapid expansion in the natural resource management sphere since the early 2010s. Within the realm of forestry research, social network analysis (SNA) and theory have shed light on social processes, governance, and the transmission of knowledge. Networks between different actors have been described as crucial for developing legitimate forest biodiversity conservation policy and been identified as highly relevant for forest managers' engagement. To comprehensively assess the use of social networks as both a theory and method in forestry, I undertook a systematic literature review to analyse the existing applications of social networks in forestry research, addressing a gap in targeted research. Guided by PRISMA standards, a thorough analysis of 121 articles sourced from Web of Science was conducted. The initial findings underscore the versatile applications of social networks in forestry research, with 41 articles employing SNA. These studies utilized qualitative, quantitative, or mixed methods, with a proclivity toward quantitative approaches, often employing surveys for large-scale network analyses. Several papers, however, delved into in-depth case studies of specific regions or locations. The overall analysis reveals that social networks foster learning and knowledge sharing, exerting a positive impact on forest management, conservation behaviours, and policy development. A multitude of knowledge types – including interpersonal communication, peer learning, and professional expertise – influence decision-making within these networks. Despite the significance attributed to social networks in the respective articles, a notable lack of a theoretical foundation in social network theory in forestry research exists. While the critical role of social networks is acknowledged, it remains insufficiently explored, thus obscuring their importance and neglecting the rich theoretical underpinnings of social network theory. In an early conclusion, this exploration of social networks in forestry research underlines their pivotal role in shaping our understanding of forest management, conservation efforts, and policy development. However, it also highlights the urgent need for more robust theoretical foundations to fully unlock the potential in this field.

Anu Lounela

## **Making and unmaking sociomaterial relations and politics forests with trees in Central Kalimantan**

Ana Lounela<sup>1</sup>

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This paper discusses the socio-material qualities of human-tree relations in the re/territorialisation processes of political forest formation in the wetlands of Central Kalimantan. It suggests that trees play a specific role in re/territorialisation processes and in the formation of political wetland forests with 'shifting affordances of wet, dry and in-between environments' (Krause 2017, 406). The term 'political forest' was coined in the 1990s by Nancy Peluso and Peter Vandergeest. It suggests that political forests emerge through the processes of territorialisation and landscape transformation, along with the production of new forms of governance, authorities and social orders. The anthropology of wetlands, in turn, explores the everyday experiences of people in the midst of these multi-scalar projects, also emphasising that the actions of residents profoundly shape the wetland and its governance (Lounela 2021; Nygren and Lounela 2023). Recently, anthropologists have been interested in studying the role of plants not as resources, but as parties or companions interacting with humans, suggesting that plants and human and more than human engagements are crucial in shaping landscape making processes (Head et al. 2014; Tsing 2012; 2015) and territories (Besky and Padwe 2016). This article focuses on the role of trees in the territorialisation processes in Central Kalimantan, Indonesia. My questions are: 1) what is the role of trees in the production of territories in the socio-natural peat landscapes; and 2) what kinds of relational, material and temporal qualities do trees bring to human territorial strategies and practices.

Francesco Loreggian

## **Italian forest policies for associating forest sector's actors: an urgent response to (forest) land abandonment processes**

Francesco Loreggian<sup>1</sup>, Nicola Andrighetto<sup>2</sup>, Giulia Cecchinato<sup>2</sup>, Mauro Masiero<sup>1</sup>, Davide Pettenella<sup>1</sup>, Laura Secco<sup>1</sup>

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Forest management can be vital for socioeconomic development in rural regions both in terms of income diversification and the provision of multiple benefits under the form of ecosystem services. Active forest management may also improve community and landscape resilience, by protecting them from risks, such as forest fires or landslides, whose magnitude and probability may be higher

in absence of land management. On the contrary, land abandonment and fragmentation might hinder forest management in many countries especially in Mediterranean Europe and are among the most challenging problems in Italy, where only 15.5% (out of 11 Mha) of forests have a management plan in place. Management of small and scattered parcels is often not profitable therefore many owners give it up, accelerating forest abandonment as well as land value decay and ultimately fostering cascade effects in terms of environmental degradation and enhanced social inequality, which affect forest-related communities. This wicked problem is connected to socioeconomic dynamics, such as demographic decline and abandonment of rural marginal areas (especially mountainous ones) and is exacerbated by climate change. Various initiatives to address these issues have been supported through, e.g., the European Union Rural Development Programs and Common Agriculture Policy, or by means of regulations, to aggregate forest owners and to encourage the development of forest-related supply chains in rural areas. Within the framework of the LIFE ClimatePositive project, we assessed which solutions were prompted by policy initiatives to promote associative models and assess whether and to what extent these are encouraging forest management in Italy. We built on a policy review integrated with semi-structured interviews targeting a sample of 25 cases across Italy. Results show that several models have been developed – e.g. consortia, value-chain agreements, network contracts, associations etc. - often pushed from policy, but also originating from the bottom as social innovations. Associative models seem to be a viable solution to activate forest management, but different models should be used to fit different contexts, actors and objectives. Integration and cooperation of different models and policies are needed to result in the effective activation of forest management benefiting rural areas and society at large.

Marko Lovric

### **Fostering Research and Innovation in the European Forest-Based Sector: The Co-Design Approach of the EUFORE Project**

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Forests, forestry and the forest-based sector are seen as central in reaching the EU's ambitious plans for a sustainable circular bioeconomy. However, European forests are under increasing pressure, both due to environmental processes and increased human activities. To overcome the challenges faced by forests and to unlock their full potential, innovative solutions based on improved knowledge are needed. This is also emphasized by the EU forest strategy for 2030, which recognizes the importance of research & innovation for the transition of the entire forest-based value chain, with the aim of achieving a sustainable economy by 2050 while ensuring all

forest ecosystems are restored, resilient and adequately protected. To support the implementation of the new EU forest strategy and related EU policies, the EUFORE (European Forest Research and Innovation Ecosystem) project has been designed to assess and outline research and innovation needs, and to provide a platform for increased EU-level R&I cooperation and building of synergies (e.g., joint funding) for forestry and the forest-based sector. Here we present how the co-design process has been set-up; from the stakeholder identification, assessment, engagement and decision making. We also provide overview of analyzes that have been prepared in order to diminish the knowledge-imbalances among participating stakeholders, such as review of relevant policies, R&I activity, funding and governance.

## **Supply & demand of forest ecosystem services in Europe; distribution, determinants, and policy implications**

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Forests supply multiple ecosystem services, categorized into provisioning (e.g., wood), regulating (e.g., climate change mitigation, biodiversity protection) and cultural (e.g., recreation) services. The latter two categories are globally under-supplied and face increasing societal demand. European policies stress forest management for multiple ecosystem services, including regulating services. However, there exists a knowledge gap in mapping these services; they are mapped by different methods on different geographical scales, making the comparison between them very difficult. The problem is cofounded with the general lack of their spatially explicit demand. In this study we aim to rectify these shortcomings. Primary data is drawn from two European-level surveys; first one with forest owners to assess the supply of forest ecosystem services, and the second one with general population to assess their demand. This survey-level data is then extrapolated with spatially referenced data and machine learning to vast majority of Europe's forest on a 1 x 1 km spatial resolution. The results show geographic distribution of this supply & demand, their interactions and relation to the independent variables that were used in their extrapolation, such as tree species composition, growing stock, ownership, protection status and distance to the city. The policy implications of results are discussed, in terms what their implications are for the fulfilment of tenants' multifunctional forestry – where it practically exists, where it does not, where it matches to the societal demand, and where it does not.

Natasa Lovric

## **Charting Future Perspectives for next generations of forest professionals in the Forest-Based Sector**

Nataša Lovrić<sup>1</sup>, Teppo Hujala<sup>1</sup>, Päivi Pelli<sup>2</sup>

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The forest-based sector assumes a pivotal role in the global response to pressing challenges, including climate change mitigation, biodiversity preservation, and the sustainable stewardship of finite resources. This study embarks on an exploration of the multifaceted dynamics inherent to this sector, the evolving European Universities, and their profound involvement in shaping the next generation of forest professionals through the expansive network of European Bioeconomy Universities (EBU) collaboration. Synthesis of expert opinions regarding the future trajectory of sustainable forest management (Hurmekoski et al. 2019; Lovrić et al. 2023) have emphasized interdisciplinary work and use of innovative policy instruments important for shaping the forest-based sector. Within the EBU alliance the leading academic institutions have forged symbiotic partnerships and committed to the delivery of state-of-the-art educational and research opportunities. This illustrates metamorphosis towards a pedagogical paradigm underpinned by interdisciplinarity to the tenets of sustainable forest management, as promoted by the EBU. To fulfill this promise strategic intelligence is needed on the evolving knowledge and competence requirements for the future professionals, as well as on the changes of operating environment and the very fabric of the growing green job market. With a methodological combination encompassing Delphi surveys literature and an innovative Horizon Scanning assessment we explore the complex landscape of factors at play, and discuss the pivotal role assumed by universities in shaping the mindsets of future forest professionals, who must navigate the complex challenges ahead in the forest-based sector towards sustainability.

Marjo Maidell

## **The right tool for the job? Developing behavioral tools in advancing ash fertili-zation in Finnish private forests**

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To mitigate climate change, we need to support the implementation of activities that absorb and store carbon in forests. In Finland, understanding and guiding non-industrial private forest (NIPF) owners' decision-making is the key for the implementation of these activities. Utilizing the Behaviour change wheel (BCW), we test a theory-based approach for designing behavioural tools to mitigate climate change in Finnish forestry. We select ash fertilization, a forestry activity that has climate change mitigation potential, as a case study and suggest possible behavioural interventions that could promote its implementation. By interviewing 19 Finnish NIPF owners and qualitatively analysing the factors affecting their decision-making on ash fertilization, we identify obstacles and design classical nudges, nudges encouraging deliberation, and boosts. Among the interviewed NIPF owners, the effects of ash fertilization were mostly seen positively. Many trusted the expertise of forest professionals and assumed that other forest owners' views are similar to theirs. Within our group of forest owners, the most significant concern connecting those forest owners who had not implemented ash fertilization, was uncertainty about profitability. As the effects of ash fertilization are long-term and its cost is considered high, decisions on ash fertilization often follow reflective, attentive processes. In addition, we identified possible underlying cognitive biases that were influencing decisions on ash fertilization. The suggested interventions address the specific concerns of the forest owners, take into account the underlying heuristics and encourage forest owners to engage in the reflective decision process, partly by providing tools facilitating the decision-making. The findings of this study can be utilized to draw conclusions on the applicability of the BCW to other forestry decisions and to design behavioural tools on ash fertilization for this kind of target group.

Ekaterina Makrickiene

## **Recent changes in Lithuanian forest policy and their possible effect on private forest owners**

Ekaterina Makrickiene<sup>1</sup>

<sup>1</sup> Vytautas Magnus University, Lithuania

*Key words:* forest policy, Lithuania, private forest owners

The recent and unprecedented process of reaching a National Agreement on Forests presented a significant challenge for the Lithuanian Ministry of Environment. The challenge lay in the need to incorporate the diverse array of stakeholders and their respective interests. Private forest owners, along with their representatives and associations, actively participated in the discussions throughout this process. While a National Agreement on Forests was not ultimately reached, changes to the Lithuanian Law on Forests were planned, and these changes are expected to directly impact the private forest sector. This presentation aims to outline the challenges faced by the private forest sector prior to the National Agreement on Forests and to explore the potential effects of both the National Agreement on Forests and the current legal changes on the private forest sector in Lithuania.

Yves Paul Mandjem

## **Foreign policy as an instrument of (re)production of inequalities : the case of FLEGT in the Congo Basin forest sector**

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*Key words :* Congo Basin, Foreign policy, VPA-FLEGT, (re) production of inequalities.

Initially a domain exclusively reserved for States to preserve their vital interests relating to their power and security outside of their territories, the field of foreign policy has gradually broadened over the last decades to include subjects, such as the environment, and new actors such as the European Union (EU), an international organisation. As a result of these evolutions, the European Initiative against illegal logging in tropical forests, or FLEGT for short, can be seen as an instrument of the EU's external action on tropical forests. This instrument is implemented outside of Europe, through bilateral agreements known as Voluntary Partnership Agreements (VPAs), signed between the EU and some tropical countries that produce and export timber to the EU's territory. As regulatory tools for implementing European external action on tropical forests, the



FLEGT-VPA signed with certain Congo Basin countries are restructuring the landscape of forest governance in these countries, and are also suggesting behaviours to the actors involved in these implementation processes.

Using a constructivist approach, this paper aims to make a contribution to Foreign Policy Analysis (FPA). Using Bourdieu's sociology of the 'field', we analyze the process of implementing an EU foreign policy instrument on forests, specifically in Cameroon. We analyze the changes orchestrated by this process both in the structure of Cameroon's forestry sector and in the "*habitus*" of the actors involved. In particular, this research shows that (1) the VPA-FLEGT process is taking place in Cameroon in a context of inequality characterized by the 'unjustified' difference in access to material and symbolic resources, which it accentuates to the benefit of European actors. (2) That, this difference in access gives rise to a struggle for control of power and forest resources between the European and Cameroonian parties. (3) It also inspires actors on the Cameroonian side to mobilize strategies of resistance in various forms, ranging from inertia to the instrumentalization of time, the hidden aim of which is to (re)take total or partial control of their system of governance.

Lenka Marcineková & Petra Palátová

### **Are the objectives of the European Union's Forestry Strategy reflected in the policies of Slovakia and the Czech Republic?**

Lenka Marcineková<sup>1</sup>

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Since the publication of the EU Forestry Strategy, no analysis of how it is reflected within the Member States' national policies has been carried out. Therefore, this study aims to assess how recent national and regional policy developments in Slovakia (SK) and the Czech Republic (CZ) coincide with the EU Forestry Strategy, as well as to assess what are the main policy priorities, controversies, or implications. CZ and SK share a common history, in which forest sectors have always played an important role. At the end of the 1980s, most Czech and Slovak forests were in state use, with the hierarchical top-down management of forestry. After 1989, the transformation towards a market-oriented economy began, and CZ took a different path than SK introducing a concession model in the state forest enterprise "Lesy ČR". This model is being used in "Lesy ČR" to this day, making it the most successful state forest enterprise within UNECE region in terms of profit. In SK this transformation meant that conservation, protection, and enhancement of forests became a primary goal of Slovak forest policy, which led to various implications. In both countries, multifunctional forest management is applied, and there is a strong orientation towards ensuring sustainable standards, however, the implementation can be difficult to evaluate. Both countries also fight with the climate change effects, while in the CZ these efforts abound in importance because of the greater negative impacts on forests. Active versus passive forest management is

an ongoing conflict in these countries, as well as wood production versus forest conservation. While forest owners in SK and the CZ naturally prefer the economic function of forests, the public considers ecological value as the most important element of forest. Although the results show a high degree of similarity across these countries, there are differences, and even greater ones among other EU countries. Therefore, we might benefit from revision and agreement on EU forestry objectives.

Aristarik Maro

### **Discursive power: Leanings from the translocal owner of small-scale forest plantation in Tanzania**

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*Key words: Discursive power, translocality, small-scale forest plantations, Tanzania*

The growth of plantation forest in the last decade is estimated to increase up to 55.8 ha globally (FAO (2020)). The increase contributed to the world's solutions towards key global concerns on climate change, deforestation, land degradation, and desertification. Despite all these benefits, in Tanzania, the increase led also negative societal and environmental impacts especially those that are land related issues. This paper investigates the impacts of veiled discursive powers by local actors to small-scale translocal tree growers, various ways in resolving land and forest related conflicts and best practices applied in managing such conflicts the in other similar countries in the world. A conceptual framework is drawn based on the concepts of power relationship between the translocal who is a key researcher and local actors who live in the case study village with power of information and able to influence witnesses in the conflict resolution processes. A personal drawn researcher-investor relationship practical experience, is used to envision more light in the handling of the conflict resolution processes, that divulges a number of observations leading to the undertaking of this study. It discloses that, there is un-even playground in resolving land related conflicts between translocal tree investors, who depends most on local middle-men and the local actors in such communities. Therefore, local actors have greater influence on decisions pertaining forest plantations by translocal in their respective vicinity.

Anne Matilainen

## **Who succeeds with a challenging customer group? - The impact of forest advisors' values and attitudes on the outcomes of the advisory process**

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Several studies have analyzed the factors affecting the outcomes of forest advisory methods. However, significantly less focus has been put on the forest advisors' personal role in the process, even though their impact is equally important. The forest advisors' personality, values, attitudes, and behavior influence how and what information is brought to the discussion with forest owners, which in turn impacts the success of the advising process. Through understanding the effects of these issues, service providers can consciously change their advising methods to improve performance.

This study aims to map out what kind of opinions do the forest advisors have concerning different forest uses and how do they perceive the knowledge and decision-making capacity of forest owners. In addition, the aim was to understand how these opinions as well as forest advisors' values and personality influence the advising processes. The focus is on the advising processes targeted to more passive forest owners, who constitute a more challenging customer group for the advisors.

The data was gathered by using an e-questionnaire, which was sent out to the Finnish Forest Centre's advisors (n=50). In addition, the characteristics of the advised forest owners (n=1514), outcome of the advising process in a form of implemented forest management activities, the used contact method as well as the general customer feedback were collected from the Forest Centre's database. The data was analysed by using statistical methods. One preliminary finding is that the more positive opinion the advisers had on the forest owners' own skills and knowledge regarding forest related issues, the better was their success rate in the advising process. Among other factors, the success rate is also impacted by the advisor's age and sex compared to the ones of advised forest owner.

Ronja Mikoleit

## **Same Same But Different: “The Forest Ranger” in a changing climate**

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In 1960, Herbert Kaufman published a monography of his seminal ethnographic case study titled “The Forest Ranger: A Study in Administrative Behavior”. Our contribution originates from our fascination with the fact that many of his key observations still hold true in Germany today – despite being located on another continent, in a different political, administrative and economic (sub)system, and more than sixty years of rapid societal and environmental change later. This suggests there to be a relative stable structural core within (public) forest management, which we identify in the foresters’ positionality within a hierarchical administrative context, shaped by a territorially defined general, individualized and emotionally anchored (sense of) responsibility, which until today seems relatively unaffected by the otherwise very dominant developments of professional differentiation in modern societies. In light of rapid climate change and ongoing renegotiations of human-environment relationships, pressures on this system and related professional practices appear stronger than ever before. Between 2018 and 2022, large-scale forest dieback in Germany has altered entire landscapes at a rapid pace. In many regions, large areas of drought and bark-beetle damaged trees have been removed, and in some places, forests have disappeared completely. What happens when the physical forest and societal interpretations of it change, widening the disconnection to established forest management concepts and routines, while key administrative structures remain relatively unchanged? We examine these dynamics using qualitative interviews and participatory observation from a case study in south-west Germany. We present results from our reconstructive analysis, focusing on patterns of public and professional forest-related perceptions and practices – how do different people, citizens and foresters alike, perceive, deal with, and react to these developments in strongly affected regions? What are the associated embodied practices and bodies of knowledge under pressure, and how do they relate to the structural core of (public) forest management? By relating Kaufman’s findings to our study results today, we reflect on dynamics of continuity and change in the public forest administration and human- forest relationships alike. We end with some critical conclusions on internal and external organizational capacities for change and dealing with critique.

## **Forms of collaborative approach to support integrated landscape approach**

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In times of polycrises there is a vast need for structural and practical changes in natural resources governance. Sectoral and temporally limited governance practises cannot cover constantly changing circumstances and different practices in landscape s Responsive decision making that promotes collaboration between actors from different sectors could foster a holistic approach to natural resource governance and thereby support sustainability transformation. However, there is a need to a deeper understanding of methods and processes that support collaboration in practice. To address this gap in research, we conduct a scoping review to identify and synthesize literature related to applied methods that foster collaboration in natural resource governance. We aim to learn from applied methods and practices and how they could support an integrated landscape approach (Reed, Deakin, and Sunderland, Integrated landscape approach could answer to the need for just transition and help to tackle new waves of ecological colonization that can be caused by incautious resource extraction for green transition. The scoping review is a joint effort by a team of international scholars. The literature search identified 19 155 records, but through intensive literature screening the team identified 384 relevant articles. While this scoping review is an ongoing process, preliminary findings include that there is a wealth of different methods and tools available related to: knowledge co creation, participatory mapping, participatory modelling and scenario development, participatory research, games and visualizations, creating common understanding, encouraging inclusive participation and creating consensus and agreements. However, we find that the majority of these tools fail to create long term changes and build collaborative partnerships.

Krzysztof Niedzialkowski

## **Forest policy responses to climate change: Advocacy coalitions, epistemic communities and the Implementation of the New EU Forest Strategy 2030 into the Polish forest policy**

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The New European Union Forest Strategy 2030 (EUFS) introduced ambitious goals related to the role of forests in climate change mitigation and biodiversity protection that for some European Union (EU) member states might seem overly ambitious, particularly concerning that forest policy is not a prerogative of the EU institutions. In Poland, the EUFS raised serious concerns among the key actors within forest policy. The goals of this paper are to: 1. identify advocacy coalitions in the Polish forest policy subsystem; 2. explore beliefs regarding climate change mitigation and adaptation, including the dominant views in the Polish scientific discourse concerning forest management; 3. investigate the attitudes of coalitions towards EUFS. The paper uses the Advocacy Coalition Framework as a theoretical frame and its data collection methods include a review of Polish scientific literature on mitigation and adaptation of forest management to climate change, desk research and 30 semi-structured interviews with representatives of various groups. We argue that the relatively slow pace of adopting climate change mitigation measures in Poland is caused by the strong position of the state forest agency that does not consider climate change as a pressing issue and assumes that it can be dealt with the regular policy instruments without the need for major policy changes. This path dependency is additionally strengthened by the party politics and particularly by the fact that forest policy has been controlled by a party with a Euro-sceptic agenda. By addressing the specific case of the implementation of the EUFS in Poland, this paper aims to fill a gap in the existing literature on forest policy responses to climate change and to contribute to the bigger debate on the governance arrangements and hindering/enhancing factors that impact the integration of policy-making on forest and climate change.

Daniela Nousiainen

## **Burn them all? – Analysis of the current forest bioenergy dispute**

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Replacing fossil fuels with renewable energy resources is one of the main solutions on the EU's journey to sustainable energy production and global climate change mitigation. EU ambitious goals is to reach 40-45% share of renewable energy by 2030 (Renewable Energy Directive, REPowerEU). The perceptions of interest groups about the role of forest bioenergy in this transition vary greatly. Various actors present their views in newspapers, letters, campaigns or statements. This study focuses on the current forest bioenergy debate using the principles of discourse analysis. The main objective of the study is to determine potential bridges among actors involved in the forest bioenergy dispute. The study also explores perceptions of the actors about each other and the effect of the debate on actors' activities. The study consists of two parts – 1) an analysis of over 100 written sources (newspapers, opinion papers) and 2) eight semi-structured interviews with actors of the debate. Based on the interview results collected to this date it can be said that there is a common understanding across interviewed actors in certain areas that can be considered as bridges. All interviews stated that there is a lack of research-based information, especially in decision-making. It was also commonly agreed that forest bioenergy should not be banned, but rather there must be an adoption of clear sustainability standards. Last but not least, all interviewees expressed their concerns about the future of forests (also) as resources of bioenergy. The results of this ongoing study will provide valuable information that supports the forest bioenergy-related discussions' facilitation. Information can also be considered in preparation for participation in negotiations or when making an actor's own communication strategy. The study is ongoing (and currently paused due to maternity leave) and its methodology and pre-results will be presented in the IFPM5.

## **To be or not to be active in the EU non-legally binding policies? Comparing case studies from Slovakia and Finland**

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***Keywords:** downloading, the European Union, Finland, forest policy, Slovakia, uploading*

Even though the EU does not establish a common forest policy in its founding treaties, its impact at the national level of forest policy in forest-rich countries is considered significant. Theorists assume that countries with high domestic regulation and economic importance of the sector are

active at the international level, in order to upload their policies to minimize transaction costs for the subsequent implementation. The paper aims to demonstrate whether these presumptions apply also to non-legally binding policies, such as the de facto forest policy of the EU. The research is conducted in two EU Member States with high forest cover and long traditions of forest management, Slovakia and Finland, such as case studies. The results are based on document analysis and interviews with relevant domestic actors in both countries. In Slovakia, despite a more than three-decades-long transformation process, forest policy is characterised by a strong influence of governmental actors, centralisation, and the prevailing hierarchical use of policy instruments. With the growing importance of the ecological functions of the forest, the traditionalist approach of the forestry sector is coming under pressure. Finland is the most forested country in Europe. As an industrialized country, it is highly dependent on forest resources, and forest policy is traditionally linked to macroeconomic policy objectives. Both Member States are limited by the size, the population size and related capacity to act in uploading their policies to the international level. However, significant differences in the strategies they use to advance their interests showed up. Slovakia's success in uploading policies is dependent to a large extent on the personal skills and capabilities of representing actors. The non-governmental actors are active at the national level, however, in the EU, they are limited by finances, language barrier and in some cases also the lack of interest. Finland places a high emphasis on the active representation of its interests, and the involvement of various actors from the private sector and scientific community. The link between active participation in international policy-making and subsequent implementation was not found to be significant, according to the specificities of the researched area.

## **Exploring forest conflicts in the EU – what did we learn?**

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**Keywords:** *forest conflicts, EU, urban forest, nature conservation, conflict intensity*

Finland Forests play an important role in climate change mitigation. Humanity counts on forests in various sectors and even aspects of everyday life. Therefore, forests are under constant pressure to fulfil the demand for forest products and services. Various interests may often lead to conflicts over forests, i.e. forest conflicts. Even though conflicts in general are usually perceived negatively, sometimes they can trigger positive changes. The present research maps forest conflicts in 28 countries (27 EU member states + the UK), analyses their main characteristics and explores possible emerging patterns. We collected 84 forest conflict cases in total during the content analysis of academic literature from the period 1999-2020. Location, type of conflict, intensity and main stakeholders were assigned to each conflict case. Based on the results of this analysis we observed that most of the conflicts collected in the study occurred in and around urban areas. The second most common category was conflicts over forest conservation. In terms of conflict intensity, the majority of the cases were restrained, i.e. low-intensity intensity conflicts, followed by open conflicts. Open conflicts are characterized by the presence of a protest, lawsuit,



or petition. Six conflicts involved certain levels of violence and they are therefore categorized as violent. In the final stage of the research analysis, we discovered that repeating characteristics of 75% of cases can be grouped into three emerging patterns: forest protection conflicts, conflicts over the development of forests and conflicts over the recreation of forests. Based on the research results we can discuss that effective communication with all important stakeholders, a transparent planning process and proper involvement of all stakeholders in the participatory decision-making related to forests are important approaches to prevent high-intensity forest conflicts in the EU.

Blaise-Pascal Ntirumenyerwa Mihigo

### **Historical and contemporary roles of the legal frameworks on inequality in the Congo basin forest sector: the case of Democratic Republic of Congo**

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The Democratic Republic of Congo (DRC) homes the largest forest area in Africa and in the Congo Basin, the second biggest tropical forest after Amazonia. This State is also well-known as one which faced a dramatic colonial logging history. Blood rubber is among the concepts which indicates how traumatic was the colonial footprint in the forest sector of the DRC. Human rights violations reached the highest rate during the reign of the King Leopold II. Some scholars described this colonial period as one of the awfulest in the history of humanity (Ibanda, 2017) considering that there was genocide (Weisbord, 2010).

From colonial period to date, the forestry sector of the DRC has been regulated by different domestic and international legal frameworks. Across the time, these forest legal frameworks pursue different goals, implicated different actors with different agendas, driven by different needs and using different power relations. It is expected that these legal frameworks guarantee the respect of human rights and a balanced access to forest resource. Human rights violations and unequal access to forest resource issues perpetrated during colonial era and observed to date in the DRC forest sector raise questions on the content and the implementation of these legal frameworks and reflections on their transformation.

The paper considers international and domestic legal frameworks since 1885 (Berlin Act) to 2022 (law on the promotion and the protection of indigenous people pygmies) related to the access to forest resources by the indigenous people and the local community (IPLC) and the human rights violation in the context of the DRC forest sector.

Barbara Öllerer

## **Perceptions of Societal Transformations and Organisational Responses in the Austrian Forestry Sector: Gendered Impacts on the Workforce**

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The Austrian forestry sector, like many other national forestry sectors worldwide, has a long tradition of facing societal transformations, and is currently experiencing them at an accelerated pace. These transformations encompass the impacts of the climate crisis, urbanisation, migration movements, and social insecurities. Furthermore, there is a notable shift in public sentiment regarding the management of forests, which subsequently reshapes the relation between environmental issues and production in forestry.

Consequently, work organisations operating within the forestry sector confront the task of adjusting to these changing conditions. This paper aims to illustrate both the perceptions of change by organisations and the practices employed by these organisations in hiring, promoting, and recognising the contributions of their workforce within the context of these transformations. It looks into whether these practices change, and if they do, in what ways this relates to the societal changes mentioned above. The research contributes to our understanding of how the societal and discursive transformations are perceived by the organisations. Additionally, the paper harbours a broader ambition of investigating whether these transformations have influenced gender equality and diversity strategies and measures in the organisations, both pre-existing and newly implemented.

A series of interviews conducted with key representatives from management and human resources within organisations in the Austrian forestry sector constitutes the basis for the paper. It is supplemented by a qualitative analysis of policy documents and mission statements from these organisations.

When traditional forestry is challenged, it might shape work, organisations and strategies in different ways. Focusing on work organisations, the paper describes their perceptions of societal transformations and of necessary changes, the tools they use to adapt, and their own organisational understanding. It additionally explores the prevalent work identities and who is impacted by the adaptations of the organisations, and discusses what relationship that bears on potential power relations.

Veronica Olofsson

## **Impacts of EU policies on social-ecological dynamics in drylands of Senegal, Brazil and Spain - lessons for EU policy coherence for sustainable development**

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Distal flows of ideas, commodities, finance and people are influencing development pathways in drylands. We use results from participatory processes in drylands of Senegal, Brazil and Spain, where a range of actors have identified future aspirations, current concerns, and actions and actors shaping pathways towards the aspirations. From this previously collected data we identify which aspirations, concerns, actions and actors that have distal connections, and focus specifically on how EU policies affect these distal connections, as the EU has high ambitions in the field of sustainable development, both within the member states and in its interactions with external countries, and has a strategy for policy coherence for sustainable development. In this study, we approach how the EU policies influence possibilities to reach the SDGs in drylands through a bottom-up based policy analysis.

In Senegal, we have identified the dependence on external organizations and donors for funding of development activities, and the implication that have on priorities, alignment and sustainability of interventions in relation to land management and agricultural activities. Such development activities are highly encouraged by EU regulations on international partnership funding development projects in third countries. In Spain we identified the Common Agricultural Policy (CAP) as having a high impact on the agricultural system and as not being sufficiently adapted to the local contexts of dryland agriculture. In Brazil we identified land concentration and the influence of trade as concerns impacting the socio-ecological systems. The high demand for certain commodities, amongst these the EU demand for soy, have accelerated land concentration as well as deforestation in our case study area. The common denominator is the lack of including the dominant perspectives of dryland contexts in EU policies that might have distal impacts on these regions.

## **Disputed energy transitions - a critical perspective of dislocation of local communities in wind energy projects**

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The transition to renewable energy sources is a topic overtaking the general as well as political discourse globally. Clean energy is recognized as one of the main cornerstones in achieving economic and social sustainability globally, and wind energy is increasingly gaining attention and expanding rapidly throughout the globe. Over 46 % of the Brazil's energy production and over 80 % of all electricity consumed comes from renewable sources, making the nation one of the leading countries in the energy transition globally. Since the early 2000's wind energy has expanded greatly, and the Northeastern region of Brazil is currently the main producer of wind energy in the country. The *Caatinga* biome, covering 10 % of Brazil's land area and consisting of a unique and endemic landscape sees the highest number of wind energy parks installed and being planned. Consequently, the biome is considered the most vulnerable to physiological changes, environmental degradation and desertification due to human activity. All whilst being the least protected biome by national legislation in the country. In the past decade, local populations have raised concern about the region's rapidly expanding wind energy sector, and legal conflicts over land ownership and territorial disputes are extensive. Dislocation due to the installations of wind energy parks is occurring, pointing to the social impacts of the energy transition. Instead, economic incitements and investments are leading the way, highlighting the necessity to uncover the various implications of the energy transition in relation to environmental policies as well as social inclusion in decision-making. In this paper we investigate the national policy regulations for the protection of the *Caatinga* biome and how that correlates with investments in the wind energy sector in tandem with the impacts thereof with a particular focus on the dislocation of local communities. Current studies often neglect the interlinkages with policy regulations and dislocation, a distal impact we aim to explore and broaden the perspectives of.

Anna Ott

## **Ontological conflict over forests in Inari/Aanaar: Sámi's fight for preserving and renewing**

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Old-growth forests in the Sámi homeland, the part of Sápmi situated in Finland, are key reindeer pasture areas (Ott, 2019), but Sámi are not the only ones laying claims to these forests. Sámi have therefore found themselves repeatedly and since early 2000s increasingly in conflict over forests (Raitio, 2008; Saarikoski and Raitio, 2013). This paper explores the newest conflict developments involving Sámi reindeer herders, Finnish state-owned enterprise Metsähallitus, the Finnish forest industry, and Inari common forest. Data gathered during fieldwork in Aanaar (Inari) and Helsinki, including interviews, news articles, and fieldnotes on exhibitions at Sámi museum 'Siida' and dance performance 'Matriarkaatti' (Matriarchy), was analyzed to establish what is at stake for different conflicting parties and how Forest Steward Council (FSC) certification scheme impacts on the conflict. Utilizing narrative analysis, two narratives were found that perform different conflict realities but highlight similarly that questions regarding land ownership and land use lie at the core of the conflict. Applying a political ontology lens (e.g., Blaser, 2009; de la Cadena, 2010; Ehrnström-Fuentes and Böhm, 2022), the two narratives were analyzed to show how the conflict over forests is a conflict of clashing ontologies and perceptions of development as well as how FSC standard for Finland is an ontological practice. The conflict narrative constructed by Sámi representatives highlights the need to conserve all remaining forests important to Sámi reindeer husbandry as well as the radical interdependence of Sámi, reindeer, and the land, thereby posing an ontological challenge to the dualist separation between nature and culture and dominant forest definitions that underline other conflicting parties' conflict narrative. Sámi conflict narrative further problematizes how FSC standard for Finland favors scientific knowledge over traditional, place-based knowledge but it also reveals how Sámi have applied the standard as a worldmaking tool to their benefit. FSC standard for Finland is thus found to both close and open spaces for Sámi way of understanding and engaging with forests and to obscure and reveal the pluriverse simultaneously.

Minna Pappila

## **Conflicting interests in the standard setting process of the PEFC forest certification scheme in Finland**

Tiina Piironen<sup>1</sup>, Minna Pappila<sup>1</sup>

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In Finland, natural forest elements like mature trees, decaying wood, and burned zones have drastically declined due to intensive commercial forestry. Finnish forest management prioritizing economic gains over ecology and insufficiently addressing biodiversity loss and climate change has sparked criticism. Over 90% of Finnish forests used for economics are PEFC certified, underscoring PEFC standards' potential for ecological sustainability. A revised Finnish PEFC certification standard was enacted in December 2022. This revision prompts an investigation into how the process affected ecological criteria stringency and addressed forest biodiversity loss and sustainability. Past standards did not include environmental actors, but this time, regional environmental authority and environmental research representatives joined, though conflicts led to their departure. Our research explores the PEFC certification standard-setting process using the Advocacy Coalition Framework (ACF). By interviewing stakeholders — mainly those involved and others linked to PEFC — we analyze ecological vs. economic perspectives, actor influence, science's role, and process fairness. Our study reveals factors boosting PEFC's ecological criteria, noting process limitations and lack of external incentives as reasons for marginal enhancements in the new PEFC standard.

Mi Sun Park

## **Transformation to forestry transition on sustainable development**

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The study of forest transition, the change from shrinking to expanding forests, has a long history since the 1990s. Forest transition focuses on the change in forest cover (quantitative) and forest volume (qualitative). Forest transition pathways were identified by drivers. Countries facing the problems of deforestation and forest degradation try to control causes of deforestation and forest degradation following forest transition pathways. Innovative approaches are developed and adopted to increase forest cover in forestry. In particular, adopting ecosystem services approaches, diverse services of forest ecosystems were classified and applied for sustainable forest management. Not only timber production but also multi-services of forests are targeted in

forestry. Forest services can be improved by integrating with non-forestry such as agriculture, tourism, and public health. Agroforestry, forest tourism, and forest therapy have been developed. In addition, forestry can provide us with forest-based solutions for enhancing quality of life through mitigating climate change and improving urban resilience. Forest-based products and technology created forest bioeconomy. Beyond conventional forestry, forestry is expanding its niche in society. This phenomenon can be named as the forestry transition. Following dynamics of societal transitions, forestry transition is described with the five stages: experimentation, acceleration, emergence, institutionalization and stabilization. The policy actions for creating an enabling environment are recommended in forest transition.

Maddy Pearson

### **Bringing hybrid woodland into being: Challenging ‘one or the other’ storylines through landowner visions of a diverse middle ground**

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This paper speaks to two central questions – how forests should appear and what kinds of forests they should be. Exploring these questions in the UK context, draws attention to the discourses and power dynamics that emerge between those developing policy, providing grants, advancing the media landscape, and those owning and managing land. Two years of our empirical research with 100+ landowners and managers, explores the balance between tree planting and using natural processes to achieve woodland expansion. These approaches tend to be situated as opposing strategies by policy communities and the media, contributing to a ‘one or the other’ framing of approaches, and in turn, to a ‘one or the other’ framing of the ensuing woodland as planted or natural. These binaries render opaque the situation on the ground. We show that the majority of land managers occupy a middle ground. They have an interest in, and a desire for, approaches that balance the benefits and drawbacks of both strategies, often employing both across their land holdings. Emergent from this too is an increasing interest in hybrid approaches. The use of polarised language, storylines and ‘one or other’ policy tools, tends to entrench power structures and imbalanced dynamics that can disenfranchise land managers seeking middle and hybrid approaches. We debate the impact of this promoting the design of woods that best suit the perspectives of experts with particular agenda’s, rather than the more holistic and nuanced visions of landowners and managers seeking to produce more diverse woodland outcomes.

Mireia Pecurul-Botines

## **Meeting the European Unions' Forest strategy goals: a comparative European Assessment**

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The new Forest Strategy for the 2023 for the European Union was adopted in July 2021, creating a new policy drive for policymaking. While the implementation of the EU Forest Strategy is accompanied by debates around the principle of subsidiarity and competencies for forest policy, until now no systematic scientific assessment has been conducted which looks at to what extent countries meet these goals. This study aims at: i) assess to what extent do the national and sub-national forest policies of European countries align with the EU's goals; and ii) identify opportunities and challenges for enhanced implementation.

This study refers to 15 countries and 3 regional cases ensuring a variety of socio-economic contexts and forest related conditions. We applied mixed methods based on comparative content analysis. Specifically, a total of 221 policy documents were analyzed through a content analysis, and a vast number of semi-structured expert interviews (69) conducted based on a common interview guideline that was translated into national languages were conducted.

The results of this comparative assessment show that the level of alignment of national implementation with the new EU forest Strategy depends on each country implementation



trajectories. In most of the countries significant policy efforts are devoted to defining sustainable limits and practices for forestry whilst advancing at the same time new measures on protecting, restoring, and enlarging EU forests. Climate change and their impacts are acting as trigger for putting forest higher in the policy agenda and getting more attention of public opinion and media. However, there is a general lack of mechanisms and participatory planning addressing different ecosystem trade-offs and involving concerned societal groups and scientists systematically in goal formulation. Moreover, there is an increased polarization between conservation and forestry, which results in multiple level and regional governance structures that are not well coordinated. A lack of human and economic resources constrains, in some cases, the ability of public administrations to conduct public management of forest goods and services, and to achieve ambitious goals - embedded in more complex policy frameworks. We conclude with 9 policy recommendations to make forest governance a reality.

Niina Pietarinen

### **“We might need to give up something” - Readiness of Finland to adopt the New EU Forest Strategy for 2030**

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Environmental policymaking has shifted from largely state-dominated, to a multi-level, shared responsibility of national and transnational actors alike (Arts & Leroy, 2006). Finland, with comparatively high forest cover and contribution of forest industry to national GDP, faces the challenge of ongoing biodiversity loss despite a long history of national forest legislation and programmes. When the European Commission published “the New EU Forest Strategy for 2030” in 2021, emphasizing environmental outcomes, it was welcomed by the Member States with varying reactions; the traditionally timber-oriented countries, including Finland, resisting the strategy.

This study analyzes Finland’s readiness to ‘adopt’ the EUFS by assessing primary and secondary data through a critical institutional policy analysis lens and policy integration framework (Nilsson & Persson, 2010; Di Gregorio, 2016). Readiness to adopt EUFS is assessed by analyzing objectives of national forest-related policies, action plans, and legislation in relation to the objectives set out in EUFS. To capture a full understanding of the readiness, the study considers policy documents from fields of forest, biodiversity, climate change (adaptation and mitigation), energy, bioeconomy, and rural development. Furthermore, semi-structured expert interviews were conducted to increase understanding on actors’ views on national forest-related priorities and factors affecting those.

The initial findings indicate that the existing policy documents seem to primarily align with the EUFS through goals supporting the economic functions of forests. However, a lack of coherence and communication amongst actors in Finland suggests the absence of a unified forest vision.

Other gaps are related to lacking political will for adopting the EUFS, partly legitimized by concerns that Nordic forestry expertise and needs are ignored in the EU. Among most forestry actors, “the productivity reflex” – more production and extraction as a solution - is a dominating response to climate, energy, and biodiversity crises. Meanwhile, environmentally oriented forest actors suggest strengthening forest carbon sink and socio-cultural uses of forests. These findings imply several challenges for the implementation of the EUFS. Meanwhile, opportunities might arise due to changing preferences of private forest owners, and national climate and biodiversity ambitions.

## **Industrial tree plantations in the Globalized Era: Uncovering actors, finances, and discourses**

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Globally, forests are placed high on political agendas, yet deforestation and land use change continue at an alarming rate. Deforestation is often facilitated by global commodity trade networks, financial flows, unbalanced power relations and institutional and legal frameworks (Brockhaus et al. 2021). Global markets are putting pressure on the remaining intact tropical forests, increasing resource extraction, and changing landscapes and livelihoods (Yawson, 2020). The socio-economic impacts of industrial tree plantations (ITPs) have been largely studied in South-East Asia, South America, and Africa, and the predominantly negative impacts on local communities are well documented (e.g. Malkamäki et al. 2018). What has received less attention is, who are the actors that invest in ITP's, through what processes those actors have gained access to land, and who ultimately benefits from the ITP investments.

We study these questions through plantationocene lens, focusing on the aspect of core–periphery dualism between countries and on the political economy explanation for how plantations became the discursive ideal in the land-use sector (Wolford, 2021). We apply the theory on financialization (Epstein, 2005) to investigate how financial markets, institutions, and economic motives drive environmental change in the forest sector, enforced by the narrative of development and productivity. Following the conceptualization from Overbeek et al. (2012) who identified the stages and actors present in the execution of an ITP investment, the goal of the chosen research strategy is to bring together the critical political economy and the forest business approaches.

We carry out this study through two case studies of ITPs in the State of Sabah, Malaysia. Primary data is collected through interviews and field visits, and the secondary data includes policy documents, corporate reports, and data on ownership and financial flows available on open access databases. This study will contribute to the earlier literature on the effects of distant flows of knowledge and resources that determine who gets access to what kind of nature.

Samuli Pitzén

## **Promoting climate policy integration in privately owned forests: What about policy acceptance?**

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In Finland, forests have gained a central stage in climate policy. Recent calculations by the Natural Resources Institute have pointed out that the national carbon sinks have diminished, jeopardising Finland's carbon emission related commitments in the EU. This has highlighted the need to reconsider current forest management practices and find novel ways to promote climate actions in forestry. This calls for more explicit integration of climate and forest policies. Policy integration refers generally to the coordination and alignment of traditionally separate policy domains. It has previously been largely studied as a process mostly involving policy actors and taking place in formal governance settings. However, as approximately 60 % of the forests in Finland are privately owned, acceptance of climate measures by forest owners is an important aspect also regarding policy integration. In this study, we develop the connection between policy acceptance and policy integration and analyse acceptance of novel policy measures for promoting carbon sequestration in privately owned forests. Moreover, as knowledge has been found as relevant to policy integration and acceptance, we examine the various knowledge claims used while taking different stances to forest management. As data, we utilise qualitative and quantitative material of forest owners' views collected via a survey and workshop discussions. We find a division between productivist and conservationist orientations amongst the forest owners. On the one hand, climate targets are suggested to be best promoted by active forest management. On the other hand, attention is drawn to the protection of existing carbon sinks such as protected forests. Our data suggests that there is a notable degree of distrust in knowledge regarding carbon dynamics in forests. To conclude, we propose possible avenues for the integration of climate policy in forest management practices.

Fredy David Polo Villanueva

## **EU countries' multilateral forest-climate governance interface: unveiling its architecture and exploring its effects on domestic climate policies**

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Since the 1990s, the European Union (EU) has been taking a leading role in international environmental governance. However, while climate governance has been and remains a highly important issue on the EU's agenda, forest governance has been relegated to being mainly governed at the international level by non-legally binding agreements, the most relevant of which is the Ministerial Conference on the Protection of Forests in Europe. Scholars have found that EU climate policy is affecting national forest governance, but little is yet known about the influence of non-EU multilateral governance arrangements, addressing simultaneously climate and forest, on the domestic climate policies of EU member states. Hence, this study aims to: i) map the institutional architecture of the EU member states' multilateral forest-climate governance interface, and ii) explore how participation in such an interface influences (or not) the density of climate policies adopted by each EU country. To do so, we exploit the database of multilateral agreements at the forest-climate interface by Polo Villanueva et al (forthcoming) to map and institutionally characterise the arrangements addressing both issues, climate and forest, and on which the EU member states participate. We then conduct a binomial logistic regression to determine whether the number of arrangements on the climate-forest interface in which a EU member country participates influences (or not) the number of climate policies, in total and across different sectors, adopted at the national level. We hypothesise that greater state involvement at the international forest-climate interface will result in a higher density of domestic climate policies, specially those linked to the forest and agricultural sector. This research contributes to the scientific literature that comparatively explores EU member states' foreign policy as a tool for identifying the challenges of EU forest policy integration.

Sabaheta Ramcilovic-Suominen

## **Why the EU needs to rethink its bioeconomy strategy if it is to contribute to globally-just and decolonial post-growth and post-carbon futures**

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Recognized as a key enabler and an end goal for the European Green Deal, the European Bioeconomy strategy has a central role in shaping the green and just transition in the European Union (EU 2022), and as such it frames the forest use strategies as well. As the European Commission is working on the revised bioeconomy strategy, the political attention is firmly on the economic growth, techno- innovation, and geo-political security (EU Council conclusions; Swedish Presidency conference), which contradicts the growing societal demands for a more just, fair and postgrowth futures in Europe and beyond (e.g. Beyond Growth conference, Green Social Summit). With the focus on substitution of fossil with biological materials, eco-modernism and techno-optimism, hierarchical human-nature relations, and insufficient and reductive framings of justice these policies risk to exuberate extractivism and dispossession across global peripheries, including those in the so-called Global South, reproducing the regimes of oppression, structural injustices, and violence, creating ‘green sacrifice zones’ green and neo colonialism. This presentation builds, but also expands the scope of our recent report, to better outline the feminist, decolonial and Global South perspectives on justice and notions of good life. It provides key policy recommendations for shifting from the extractive, neocolonial tendencies ingrained in the green transitions and bioeconomy discourses, while at the same time advancing our understanding about alternative ways of relating, governing, and organising. Learnings for understanding the “political forest” are given. The commentary first identifies the root causes for continuity of extractivism and injustices in the green transition and bioeconomy policy approaches, including: (i) anthropocentric views on human-nature relations, (ii) colonia-capitalist nexus and the systemic and institutional regimes of domination, with the associated economic growth imperative and the neoliberal views on nature. Second, it draws on the existing alternatives to propose a set of shifts towards fairer and a more just post-carbon world, including a shift: (i) from anthropocentric and hierarchical to relational value systems, and (ii) from Eurocentric, extractivist and neocolonial economic and political paradigm to feminist, decolonial and globally just post-growth paradigm.

Tapio Rantala

**Legitimacy of EU forest-related policies in digital media discussions: linking theories and**

## **empirical findings**

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The new strategic EU guidelines and legal regulations that partially override the competence of member states will increasingly affect the legitimacy of forest-related policies, also at the national levels. The implementation of new policies requires reasonable public support and willingness to cooperate, especially in countries like Finland, where more than 10% of the population are private forest owners and many others engage in forest-related recreational activities. The research series examined the perceived legitimacy of the EU forest policy, social values used in the evaluations, identification with political communities, and the support of politicians in public discussions on social media platforms and discussion forums of news media. Theoretical basis and methods for the analysis of textual data were employed from political science and social psychology. Most evaluations regarding the legitimacy of the EU forest policies and the exercise of power by the EU were negative across all data sets. In this context, trust in the competence of the EU concerning forest issues was predominantly low and self-identification as European was also weak. The evaluations of politicians involved in EU-induced forest policy decision-making were also mostly very unfavorable. The fair distribution of benefits and burdens among both European nations and domestic citizen groups was the most common social value used to assess forest policies. Legitimate policy was also deemed to require fair compensation for both one's own nation and private forest owners for their conservation measures. Following concerns about distributive justice, the preservation of national sovereignty and the right to autonomous decision-making emerged as the second most frequently mentioned social values. The next highest emphasis was placed on economic objectives and private ownership. The values related to nature protection and climate protection were brought up much less frequently than in the previous studies on national level policies and the same applies to values related to democracy, good governance, and fair markets. The comprehensive theoretical framework developed in this study is useful for the analyses of various public policy discussions; however, the text-analytical methodology is not only limited to fixed categories and therefore it can be flexibly applied in different contexts and countries.

Alexandra Rasonanana

## **The struggle of conservation territories expansion in Central Africa: insight from DRC on the symbolic role of demarcation and power relations of actors**

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Significant international financial incentives have been invested in central Africa to establish new conservation territories. To date, up to 15% of the Central African forestlands are officially protected for biodiversity conservation, with increasing restrictions imposed to forest dependent communities. This quest for more biodiversity protection in the Central Africa, driven by international actors, has resulted to demarcation of conservation territories in which boundaries are mostly visible on maps and legal papers than in the targeted territories. Using the long-term US-funded biodiversity conservation programme in Congo Basin countries known as Central Africa Regional Programme for the Environment (CARPE) as a case study, this paper aims to analyse the process of conservation territories expansion and to what extent it has affected actors' power dynamics as well as the associated diverse and divergent interests. Drawing on the symbolic politics as theoretical and analytical framework, we question whether and why the territorialisation of biodiversity conservation policies under CARPE has fallen into symbolic demarcation strategy in which ambitious spatial demarcations are poorly enforced and overstated to hide inefficiency and injustice of biodiversity conservation programmes. We collected a mix of qualitative and quantitative data through face-to-face interviews and field observations, triangulated with a review of policy and programmatic

Lena Riemann

## **Filling in the gaps: What forest policy research can learn from communication science**

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Various studies from forest policy science and related fields emphasize the role of communication for successful stakeholder and conflict management, science-policy transfer, participation and policy implementation. However, when it comes to defining successful communication and identifying its enablers and barriers, most research lacks substance. This article aims to i) summarize the research findings on communication in forest policy and related fields, ii) identify research gaps, and iii) fill those research gaps with findings from communication science. First, a Systematic Literature Review was conducted in order to find out in which context communication and forest are being addressed together. The identified articles could be grouped in thematic areas (e.g. education, science-policy transfer, public perception, PR/marketing), and were analyzed according to their underlying theoretical models and perspectives. It was found that few articles are backing their research on models and theories from communication science and if so, occasionally outdated models are used. To fill those theoretical gaps, an overview of mostly used and recent approaches in communication science is given. Based on those findings, a structural approach to define and measure effective communication was developed that is specifically applicable to the context of forest policy science and related research fields. This framework can be used by further evidence-based research on forest-related communication in order to make the findings more substantial and comparable.

## **How feasible is effective mass communication about forestry issues? An analysis of effective communication among and across sinus milieus.**

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It is common practice in public relations and marketing to group individuals into target groups, in order to develop communication strategies tailored specifically to the needs of the desired addressees. In this paper I employ a framework that groups individuals belonging to civil society based on shared lifestyle, values and belief systems. I do so by applying the concept of sinus milieus. My research question is to find out whether communication directed towards the broader public can be more effective if it is tailored to sinus milieus and, if there are differences and similarities in the effective communication towards specific milieus. Based on communication science literature, I have developed an operationalizable framework for effective communication.



I used this framework to design a survey that was conducted in cooperation with the Sinus institute, so that the analysis allowed to distinguish respondents by their affiliation to certain milieus. The survey results gave insights into factors that enable effective communication by milieu. The findings were tested through a comparative analysis of the media messages of two or more public figures who communicate about forestry. The results show that certain factors for effective communication can be identified for each sinus milieu and that in part those factors overlap, and in part they differ. Another interesting finding is that certain factors can be identified that are valid for communication across milieus and therefore for reaching the broad mass of the population

Richard Rimoli

### **Predicting with Property Right Index for Forestry: a new governance indicator ready to use?**

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*Key words: property rights, forestry governance, indicators*

This paper aims to assess the validity of the Property Rights Index for Forestry (PRIF) as a governance indicator and its links to other socio-environmental and economic indicators. The study compares PRIF to other consolidated general environmental and socioeconomic governance indices as well as to specific forestry and environmental indicators. The results show that PRIF is in line with the analysed governance indicators and other results found in the literature. The individual components of PRIF (assess, withdrawal, management, exclusion, and alienation rights) were found to be more useful than the aggregated value when screening for correlations with indicators of the related forest socio-economic systems (SES), offering better explanatory rights components to understand the status and dynamics of these complex systems.

Radek Rinn

## **Assessing the Alignment of Forestry Subsidies with Forest Bioeconomy Principles**

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The concept of bioeconomy is gaining prominence in the European Union (EU), as reflected in EU strategic documents and their subsequent integration into the national strategies of EU member states. Forest bioeconomy is linked to forestry, and EU member states are increasingly committed to incorporating its principles into their public policies. Czechia and Slovakia share similar historical development in the realm of forestry, neither country has yet formulated its own bioeconomy strategy, however they both provide financial support to their forestry sectors. This raises questions about the target conformity of the financial support allocated to forestry with the forest bioeconomy principles outlined in the EU documents - "Bioeconomy: the European way to use our natural resources - Action plan 2018," "A sustainable bioeconomy for Europe: strengthening the connection between economy, society, and the environment - Updated Bioeconomy Strategy 2018," and "EU Bioeconomy Strategy Progress Report - European Bioeconomy Policy: Stocktaking and future developments 2022." Our study delves into the financial support provided under the European Structural and Investment Funds in these two countries. The research follows a structured approach, initially assessing the economic justification of public policy measures aimed at supporting the forest bioeconomy. The rationale for these goals is grounded in normative theories of economic policy and public finance. Subsequently, we evaluated the alignment of the stated objectives in the EU documents related to forest bioeconomy with the objectives of selected economic instruments in forestry policy. Effectiveness is evaluated based on the degree to which these policy measures align with the set objectives and their actual achievement. We monitor effectiveness using the stated objectives of the measures and the extent to which these objectives are met. Additionally, we consider the amount of funding allocated to these measures. Our study reveals a mixed landscape, with some financial support aligning well with EU forest bioeconomy principles, while others do not meet these standards. Future research could explore changes in alignment over time during the ongoing grant period, providing valuable insights into the evolving landscape of bioeconomy support in these countries.

## **Assessing the Emergence of the Bioeconomy Concept in the Mekong Region: A Comparative Study of Thailand, Vietnam, and Laos**

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The bioeconomy concept has received extensive attention in developed nations, particularly in Europe and North America, while other regions of the world warrant a deeper exploration from both scientific and practical perspectives. Our research aimed to assess and compare the status of the bioeconomy concept in the Mekong region across three countries: Thailand, Vietnam, and Laos. The primary research questions revolved around how the bioeconomy concept is perceived by government and industry representatives, the obstacles hindering its development, the prerequisites needed for its growth in the region, and whether it is reflected in official strategic documents. Our study employed a comprehensive methodology, encompassing qualitative document analysis and the distribution of an online questionnaire to stakeholders in the public and private sectors of these countries. The findings revealed that although the bioeconomy is acknowledged in numerous institutions in Southeast Asian nations and is closely intertwined with sustainability and the circular economy, a well-defined vision for the bioeconomy is missing, leading to a lack of specialized bioeconomy strategies. Moreover, the results indicated that the bioeconomy concept is nascent in these countries and is perceived as facing significant obstacles, notably a dearth of expertise, inadequate government support, and limited technological advancement. The study underscored the indispensable role of the forestry sector in the bioeconomy concept. We propose further research into economically valuing the bioeconomy to facilitate its adoption and greater engagement of key policymakers within individual countries, with a particular focus on Thailand, Vietnam, and potential comparisons with selected European nations to advance its development.

Todora Rogelja

## **Massive Open Online Course (MOOC) on Gender equality and diversity in forest-related sectors (MOOC ForGEDI) as a Tool for Bridging the education – practice gap**

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Despite the rising importance of social issues, such as in political goals (e.g., Sustainable Development Goal No. 5), the aspects of gender equality, diversity, and inclusion remain underrepresented in forest education, policy and practice. This is partially due to a lack of competent educators and trainers worldwide (UN International Conference on Forest Education 2021), which leads to ill-equipped professionals and a lack of an adequately skilled labour force to fulfil contemporary market requirements. Such professionals do not have the capacity to recognise and address gender equality diversity and inclusion aspects in forestry and forest-related domains (e.g., climate change, bioeconomy, rural development). Such a serious mismatch and the need for integrating gender and diversity aspects into forest curricula was also recently voiced in the International Forestry Students Association Open letter. MOOC ForGEDI was developed as an initiative under the IUFRO Task Force on Gender Equality in Forestry with

the aim to respond with its capacity to bridge the existing educational gap, which hampers sustainability transitions. Supported by SLU Global and the University of Padova, MOOC ForGEDI gathered more than thirty world-leading experts. They voluntarily engaged over the course of several years and brought their knowledge, expertise and perspectives into designing materials in readily accessible and understandable steps. With three weak structures, the course provides the learners with a conceptual basis for describing and understanding gender equality, diversity and inclusions (Week 1); builds skills to analyse and critically reflect on situations and barriers (Week2); equips them with tools and resources for advancing the situation on the ground (Week 3). The MOOC ForGEDI will be launched on the Future Learn Platform on March 6th 2024, and this contribution will share the challenges in course developments and highlight the first impressions since starting the running course.

### **Forest Genetic Resources and Forest Reproductive Material at the cross-section of multiple policy domains in Europe: Example of policy transposition in selected European countries**

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Various global initiatives, such as the Sustainable Development Goals (SDGs), the Global Biodiversity Framework, and Green Deal policies, now demand transformative actions to meet biodiversity and climate targets. Forests remain in the midst of the contested policy goals and inevitable trade-offs among policy instruments. Forest Genetic Resources (FGR) and their related forest reproductive materials (FRM) are of key importance for ensuring biodiversity and fostering the resilience of forest ecosystems. New restoration initiatives (e.g. 3 Billion trees) bring an

increasing need for appropriate and sufficient FRM. Despite efforts like EUFORGEN (2021) to ensure sustainable FGR conservation and management, the integration of concepts of FGR and FRM in European policies remains uneven and often implicit on the pan-European, European, and country levels. So, the conservation and deployment of FGR and FRM remain faced with numerous gaps, including under-recognition, weak horizontal coordination, poor vertical integration, insufficient financing, and lack of political will. Studies rarely apply system perspectives and do not focus on identifying policy gaps that hamper FGR and FRM deployment. Even fewer studies address the transformative potential of specific policy instruments to overcome FGR and FRM policy gaps and deploy their full potential on national and local levels. Our research, part of the Horizon Europe project OptFORESTS, addresses this gap by examining how existing and upcoming European policies address FGR and FRM and applying them to Italy and Slovenia. Grounded in system theories and polycentric environmental governance, our approach involves desktop research, content analysis, and expert interviews in a policy gap analysis (PGA). Through policy mapping, we identified over 30 policies influencing FGR and FRM, categorising them into eight policy domains and highlighting inconsistencies within and among these domains. We also observed that European policies are translated to national levels at a ratio of at least 1:3, indicating increasing complexity as we move from pan-European to national and local levels.

Jaroslav Salka

### **The Dynamics of Knowledge Transfer in Slovakia's National Forest Program: Insights from the RIU Model and Actor Power Analysis**

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Knowledge transfer is increasingly recognized by both scientists and policymakers, particularly in the drafting of strategic documents related to forestry, such as national forest programs. This process is intricate and hinges on the ability of decision-makers to persuade all pertinent stakeholders to embrace scientific solutions to existing challenges. Through this, knowledge transfer can help establish vision, define strategic objectives, outline measures, and even mitigate potential conflicts concerning forest usage and conservation. This presentation seeks to dissect the knowledge transfer mechanisms in Slovakia, employing the RIU model. This model assists in pinpointing the vital phase – be it research, integration, or utilization – that is paramount for overall success. Furthermore, to provide a comprehensive understanding of stakeholder dynamics, a power analysis has been incorporated. Our research methodologies encompass direct observation, document evaluation, and semi-structured interviews. The findings indicate a stark contrast between the operational logic of the scientific-research system and the political-administrative system. However, it is evident that scientists can significantly influence and

contribute to the collaborative crafting of strategic documents. The presence of a proficient facilitator and influential stakeholders or groups is pivotal. As strategic documents are ratified and processes involving cross-sectoral coordination and multilevel governance become necessary, certain actors emerge with dominant influence, significantly impacting the document's quality.

Caroline Satorato

The limits to timber traceability: mapping origins from a decade of implementation in Pará, Brazil

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Timber extraction is a key proximate driver of forest degradation in primary and naturally regenerating forests across the Amazon. Yet we still lack elementary understanding of the supply-chains that link consumers across the world to timber extraction and associated socio-ecological impacts. Here we use data from Brazil's systems for licensing, origin control and commercialization of timber products (timber transport data and logging permits substantiating these), as well as remote sensing-derived data on forest disturbances due to logging, to assess the extent to which timber products can be traced to origin, facilitating assessments of legality and sustainability. We focus on the case of Pará – a top timber producing state in Brazil and contested forest frontier – using data for the period 2009-2019 to quantify connection between reported activities (i.e., volume commercialized, area authorized for extraction) and observed forest activity (i.e., area of forest exploited). While nearly all roundwood entering the supply chain in this period can be linked to existing logging permits, about half of the volume can be connected to a polygon that delineates an area authorized for logging and 42% to coordinates only. When looking at the forest area identified as exploited (through remote sensing), only 22% of all areas mapped in the period spatially overlaps polygons of authorized areas. Using polygons describing wider land tenure, an additional 23% may be spatially associated with logging permits we can geolocate only with coordinates, with the remaining forest exploitation subject to a complex patchwork of actor accountability (and the lack thereof). We highlight that having a well-delineated polygon does not guarantee the volume is fully traceable just as having only a coordinate does not imply a lack of traceability. By documenting limitations of the existing traceability systems, this study provides inputs to the debate surrounding the effectiveness of existing environmental regulations in Brazil, identifying loopholes in existing systems that need to be addressed in order to improve policy implementation. It also provides practical insights on how shortcomings in

transparency and data quality of the existing traceability system can be overcome to help identify illegality risks and sustainability shortcomings.

Elina Savolainen

## **Performance of REDD+ - action-based results in reducing carbon emissions across diverse political landscapes: A Qualitative Comparative Analysis**

Savolainen, Elina H<sup>1</sup>

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Climate change is one of the biggest challenges our planet and humanity are experiencing and there is an urgent need to find solutions aiming not only to reduce the greenhouse gas (GHG) emissions, but to address the complex problems of land use change, deforestation, loss of biodiversity, and inequality. Reducing emissions from deforestation and forest degradation (REDD+) is a multi-objective initiative designed not only to reduce the GHG emissions from deforestation and forest degradation, but to generate non-carbon co-benefits of livelihoods, poverty, biodiversity, and indigenous rights.

By applying a Qualitative comparative analysis (QCA), this study compares 11 various countries' national political contexts over time and explores particularly the role of REDD+ policies and measures in order to identify changes that enable or hinder countries from achieving carbon-effective, cost-efficient, and equitable (3E) results.

The study builds on three previous REDD+ QCA of various REDD+ countries' progress and the longitudinal data is gathered by over 30 REDD+ experts with global and in-depth country experience during four different data collection rounds in 2012, 2014, 2016, and 2023

The results show a set of enabling conditions under which countries have achieved a positive outcome in reducing emissions. The analysis reveals importance of enhancing (1) effective forest legislation, (2) strengthening national ownership and political leadership, (3) increasing inclusiveness of the policy while having (4) the REDD+ policies and measures in place.

Franziska Schier

## **Assessment of Possible Production Leakage from Implementing the EU Biodiversity Strategy on Forest Product Markets**

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The EU Biodiversity Strategy (EUBDS) for 2030 aims at regaining biodiversity by strengthening the protection of nature in the European Union. This study models and analyses possible impacts of the EUBDS on the production and trade of forest-based products in the EU and non-EU countries in two alternative scenarios. Implementing EUBDS measures would allow a maximum EU roundwood production of roughly 281 M m<sup>3</sup> in 2030 in the intensive and 490 M m<sup>3</sup> in the moderate scenario. Since in the reference scenario, the EU roundwood production amounts to 539 M m<sup>3</sup> in 2030, this represents a reduction of –48% and –9% in 2030, respectively. Until 2050, the production further decreases and accounts for 42% and 90% of the reference production. Globally, the EU roundwood production deficit is compensated partly (roughly between 50%–60%) by increasing production of roundwood in non-EU countries (e.g., USA, Russia, Canada, China and Brazil) whereas the remaining share of the EU production deficit is no longer produced and consumed worldwide. In the EU, reduced roundwood availability leads to a lower production of wood-based products, although, apparent consumption of wood-based products remains similar. This is mainly caused by significantly lower export volumes of wood-based products and, for some product groups, by significantly increased imports as well. This is partly due to unchanged assumptions regarding income and thus, demand patterns. However, on a global level, decreased production and consumption of wood-based products could lead to a growing use of non-bio-based resources to substitute wood-products. Our study also shows that the magnitude of effects strongly depends on how much the use of forest resources is actually restricted.

## **Knowledge transfer through power strategies: Slovenian forestry case about Living Labs**

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*Key words:* *knowledge transfer, RIU Model, Slovenia, Living Labs*

In the efforts to maintain and improve alpine mountain forests as a key element against natural hazard risks for people and objects, current research results can make a decisive contribution to a climate-adaptive protective forest management. Yet, the implementation of innovative science-based solutions by policymakers and practitioners often fails due to conflicts with forestland users. To integrate science more successfully into practice, the EU Alpine space project MOSAIC aims to trigger the knowledge transfer by using “Living Labs” in Slovenia. The Living Labs follow the transdisciplinary approach of EU research programmes which count on increased participation of multiple actors and communication of scientific information. Based on the "Research-Integration-Utilisation" (RIU) model of knowledge transfer the study's objective is to compare the Living Lab with the RIU model's integration forums which are places where scientific information is exchanged between actors. Furthermore, the study will identify additional factors of knowledge transfer, beyond increased participation and communication of scientific information. Our results show that the factors of actor's interests and power resources to push the implementation are the crucial ones. If they are linked with the Living Labs, the transfer of science based innovative solutions might be improved based on empirical data about actors in Slovenia.

Ronja Schröder, Anna Saave & Jana Holz

## **Taking care of the forest as a part of nature - conceptual thoughts and empirical insights**

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With our contribution we aim for an introduction and exploration of the concept 'care' in relation to forests and the study of forest utilization, protection and destruction. Our main questions are: What conceptual and critical potential lies in the application of the care concept for the study of human-forest relationships? And further, how can one study the societal, economic, and subjective relations with nature in the context of forest utilization through the lens of care? 'To take care of the forest' is a commonly used expression that does imply very different and sometimes conflictual meanings and practices. Care taking in the context of forest utilization is always connected with social and political power structures, different forest management traditions as well as economic rationales. On a subjective level, a caring relation with forests can also be linked to family traditions as well as mental and physical health. Currently, global warming and biodiversity loss as well as potential solutions for these socio-ecological crises, such as a bioeconomy or a circular economy, transform how forests need to be and are taken care of.

In our contribution, we will firstly provide an introduction to conceptual approaches of 'care' rooted in feminist theory (cf. Tronto 1993) and the study of reproductive relations (cf. Biesecker & Hofmeister 2006). In recent years, concepts of care have been increasingly applied and developed further for the scientific study of human-nature relations. We discuss in which ways care concepts are suitable for the study of human-forest-relationships. Secondly, we provide empirical insights based on our field research in Finland, Germany and Canada. These highlight the potential for critical analysis inherent in studying forest utilization through the lens of care. Based on the three case studies we will then, thirdly, elaborate on three dimensions of human-forest-relationships: forest utilization, forest protection and forest destruction. We synthesize how these dimensions are on different levels intertwined with care and care taking. We close by elaborating on 'care taking' as a vital part of human-forest relationships and show how this can transform forest utilization, destruction and protection.

Hanna Siiskonen

## **Changes in the forest-related EU policy from the 1990s to the 2020s**

Hanna Siiskonen<sup>1</sup>

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During the 2020s, the whole world has confronted several crises, which have affected forest policy. Forest sector's operational environment has been changed rapidly and the acceptability of forest use is in transition. Currently, the forest-related EU policy is more legally binding compared to the 1990s and 2010s. Transition towards more binding regulation has questioned the role of EU as regulator since EU does not have legal right to regulate a common forest policy (Pülzl et al. 2013). The lack of competence in common forest policy has resulted in disunity, conflicting and overlapping policy objectives in the forest-related EU policy (Wolfslehner et al. 2020).

The aim of this study was to conduct a comprehensive analysis of the evolution of the forest-related EU policy from the 1990s to the 2020s. The research method was document analysis which involved Multi-Level Perspective as an analytical framework. By adapting Multi-Level Perspective, the study aimed to recognize the drivers that influenced EU regulation and examine policy transitions.

Since the 1990s sustainable development has been a critical driver of forestry policy. However, in the 2010s, the focus shifted towards bioeconomy, while concerns about biodiversity loss and climate change began to overshadow economic objectives. In the 2020s objectives related to climate change and biodiversity loss were emphasized in the EU policy. Along with changes of objectives, interpretation of sustainable development is currently in the transition from weak sustainable to strong sustainability and it is already evident in the EU policy.

At the global level, the EU is taking the global responsibility of the green transition, since the other international agreements have been suffered non-legally binding regulation and lack of competence. Recent events in the world politics such as withdrawal of the United States from the Paris Agreement in 2017 has shown how weak international agreements are in current regime. In the future the international forest policy would need more legally binding regulation to control the current and future crises since the voluntary-based non-legally binding regulation is not enough. Future governance must be responsive to evolving drivers and manage the competing use of forest resources in comprehensive sustainable way.

Franz Sinabell

## **Economic Valuation of Protective Forests and Political-Economic Factors in Alpine Regions – Insights from Austria**

Hans Pitlik<sup>1</sup>, Peter Reschenhofer<sup>1</sup>, Franz Sinabell<sup>1</sup>

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Protective forests in alpine regions play a pivotal role in safeguarding residential settlements and infrastructure from gravitational hazards like landslides, avalanches, and rockfalls. In Austria, the existence of these protective forests renders many areas habitable, offering tangible economic benefits that, until now, remained unquantified. This study provides a pioneering estimate aimed at informing decision-making for the cost-effective management of protective forests in Austria. Our endeavor is intricate due to the multifaceted nature of protective services and their provision. The benefits derived by communities residing beneath protective forests exhibit characteristics akin to a local public good. Meanwhile, forest management strategies to preserve protective quality entail substantial opportunity costs for many owners. Balancing forest management to maximize protective services differs markedly from profit-driven approaches. Ownership may be vested in communities, private entrepreneurs, or farmers with distinct wealth accumulation goals. Depending on property rights and forest ownership structures, the associated costs are distributed across various societal groups, influencing incentives for protective forest management. Effective governance emerges as a cornerstone in ensuring that protective forests fulfill their vital function where they are most needed. This paper offers initial economic benefit estimates and surveys relevant political-economy and sociological literature pertaining to incentives for providing ecosystem services in the context of local public goods. Additionally, it draws upon concepts from similar environmental and institutional economic contexts to shed light on the intricate interplay between protective forests, economics, and society.

Stefan Sorge

## **Identifying influential factors and related development patterns in five governance innovations in European forests**

Stefan Sorge<sup>1</sup>

<sup>1</sup> University of Freiburg, Germany

In times of increasing climate change and biodiversity loss, forest management approaches need to be adapted to ensure sustainable provision of forest ecosystem services (FES) as contributions that ecosystems make to human well-being. This research presents insights from the application of a structured and at the same time flexible systems-based analysis approach for the identification of influencing factors of forest governance innovations that are demanded by societies. Forestry systems are conceptualised as socio-ecological-technical systems that pose particular conditions for novel governance approaches. Accordingly, we analyse these context conditions in five different regions across Europe and study how these influence the emergence and development of governance approaches. The examples include novel payments schemes and compensation approaches for biodiversity restoration and offsetting tourism activities as well as new actor alliances and networks for connecting local businesses with local providers of FES. The outcome shows that the studied governance approaches are closely influenced by context conditions in which they emerge, and vice versa. While we observe common patterns in influencing factors that seem to play a key role across cases such as the multi-stakeholder approach in Eisenwurzen, Austria, and the biodiversity compensation scheme Habitat Bank, Finland, we were also able to identify particular conditions for governance design and work. These are the involvement of multi-stakeholder network, initial financial support, long-term continuity, understanding the local context and historical development, combining and structuring local knowledge with “global scientific” input, identify related innovations for knowledge exchange and co-learning, identify capacity needs and preparing for external events (social/natural hazards). For the future of sustainable forest governance innovations, assisting their emergence and facilitating the reflection on their development is key to enabling their potential.

## **Policy (dis)integration of natural resource management in the Alptal: A case study of governance interplay**

Ladina Steinegger,<sup>1</sup> Fredrik Pettersson,<sup>1</sup> Veronika Schick,<sup>2</sup> Martin Stuber,<sup>3</sup> and Eva Lieberherr<sup>2</sup>

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Pressing environmental challenges, such as natural hazard management in the context of climate change, have sparked scientific and practitioner attention to develop governance mechanisms that take a holistic and cross-sectoral approach. The challenge is to coordinate the interests, policy objectives and instruments of the sectors concerned in such a way that they support each other. Policy integration has been promoted as a means of coordinating and aligning objectives and instruments across policy sectors. The common assumption is that policy integration enables better policy outcomes. Evidence for this is sparse, however, and research on policy integration is fragmented in its approaches. Consequently, the question arises whether and how policy integration is an optimal solution for solving societal problems. In this article we address this question of policy integration by studying how the regional governance level interplays with the local level. Our empirical analysis is a case study of local governance in the Alptal (municipality) in the regional governance of canton of Schwyz (constituent state), Switzerland. We conducted a historical analysis of archival documents on water management – and its interplay with other natural resource sectors - in the Alptal as well as a policy integration analysis of legislative texts in the Canton of Schwyz from 1848-2021. We find that the degree of policy integration in the canton of Schwyz has increased over time. Today, it considers the interests of water use, protection against water and water protection and tries to coordinate them. This integrated water management at the regional level influences the Alptal (local level) to such an extent that historically pivotal collaborative self-governing bodies may no longer be fit for purpose. Thus, with policy integration at the regional level (canton Schwyz) a disintegration at the local level (water management of Alptal) takes place.

Patrick Strüber

**An analytical concept for addressing private forest owners, from different Sinus-milieus, applying local learning labs.**

Strüber, P.<sup>1</sup>, Glormann, M.<sup>1</sup>, Krott, M.<sup>1</sup> and Aurenhammer, P.<sup>1</sup>

<sup>1</sup> Georg-August- University of Göttingen

Private forest owners, today, belong to a considerably large share to social milieus, whose lifestyles are far away from classical, traditional forest-thinking, so called forest-distant milieus. These forest owners are increasingly difficult to be reached, by associations, advisors and other actors. In order to enhance the building of climate resilient forests for the future in Germany, we develop an approach, addressing private forest owners as well as other society, interested in forests, tailored to their social milieus. This contribution will outline our step-wise approach and the concept behind developing, implementing and evaluating milieus-tailored activities in trans-disciplinary learning-labs.

Meelis Teder

**Collaborative Governance Platforms: The Case of the Failure of the Estonian National Forest Programme**

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Managing the conflicting expectations of forest policy is a complex management task. By 2016, the tensions surrounding Estonia's forest policy had grown to the point that the media referred to the situation as a "forest war".

The process of drafting the Estonian Forestry Development Plan until 2030 was launched in March 2018, and the plan was to be submitted to the Estonian Parliament in the spring of 2020. The drafting of the central periodic policy document was designed as a collaborative governance platform with a lead committee of 35 members (including 7 scientists) from 31 different organizations (ministries, universities, stakeholder NGOs). As an innovative solution, professional facilitators were hired to ensure a constructive debate. However, the policy debate process failed badly after all deadlines were missed. In December 2020, the new Minister of the Environment dismissed the lead committee and started looking for ways to restart the process. At the end of March 2021, a new lead committee was established. It included 7 scientists who were not members of the previous committee, and 2 civil servants.



In the spring of 2023, parliamentary elections were held in Estonia. Currently Estonia is in a state of parliamentary crisis. Due to the high politicization of forestry issues in Estonian society, the new ministry responsible for forestry, the Ministry of Climate, has not started the process of approving the Forestry Development Plan in Parliament. As of February 2024, the National Forest Program is still awaiting discussion by politicians and final approval.

We present an analysis of the design and process of this collaborative approach, highlighting the factors that helped and hindered agreement on the platform. Our analysis is based on a collaborative theory of governance (Ansell & Gash, 2008), in-depth interviews with members of the first lead committee (N=34), and document analysis. The findings contribute to the theory of collaborative governance by distinguishing between facilitation and mediation, and offer practical lessons for similar forms of collaboration in the future.

Oliver Truffer

## **Politicization of the EU Forest Strategy at the Member State Level: Implications for forest management**

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The forest can take a central role in the efforts to mitigate climate change. Several factors, however, inhibit a clear delineation as to what this role entails. One set of factors includes the large variation of interests, legal frameworks and forest policy paradigms with related forest management practices of EU Member States. Another set of factors relates to the potentially conflicting goals of sequestering carbon in wood products and sequestering carbon in standing forests (sinks), all while providing other forest ecosystem services. This latter potential antagonism is also reflected in the EU Forest Strategy which aims to enhance the multifunctionality of forests, promote long-lived wood-based products as well as non-wood based products such as ecotourism and other aspects linked to multifunctionality. Depending on Member States' interests, priorities and forest policy paradigms, these potential goal conflicts or trade-offs within the EU Forest Strategy may lead to politicization at the national level and to very different forest management strategies. In a systematic literature review, we zoom in on the forest management practices across Europe, map them and analyze them according to their contribution to mitigate climate change, be it in wood sinks or wood products.

Rina Tsubaki

## **Does social media play a 'shadow' role in making forest policy public? A case study on TikTok and Instagram**

Rina

Tsubaki<sup>1</sup>

<sup>1</sup> European Forest Institute, Finland

**Paper abstract:** Social media have widely been used in forest research to explore public communication and engagement around forest policy issues. Yet, while the existing studies focus on what happens on social media, not much has been done to understand what platforms show in relation to what users do. Studying the user experience on social media platforms not only complements research that uses a large volume of data. It questions digital platforms' role in making forest policy issues accessible online. Social media has the potential to shape public opinion and policy discourse due to its popularity as an information and communication platform. A wide range of user data, including registration data like location and age group, as well as web activity, including clicks, likes, and view duration, allows social media platforms to create a unique experience for each user. Consequently, personalization could affect the uptake of forest policy narratives among those interacting on these platforms. As social media platforms can play a significant role in making certain narratives more accessible than others, a user could potentially be exposed to polarized content and narratives that could influence their perceptions, beliefs, and behaviors. This paper aims to respond to the following questions: How does personalisation influence forest policy narratives encountered on social media platforms? Where personalisation takes place, what types of narratives do platforms show based on user behavior? It will take a case study approach to compare two platforms, namely TikTok and Instagram (tbc), to explore the user experience around a highly contested forest policy issue.

Vilja Varho

## **Futures literacy in forestry education**

Vilja Varho<sup>1</sup> & Tuula Jyske<sup>2</sup>

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Forestry is facing multiple challenges and drivers, such as geopolitical tensions, degradation of natural resources around the world, and the changing climate. At the same time, forests play a crucial role in the green transition, and the demand for biological resources is increasing. Recent growth in the forestry sector has resulted largely from increasing production volumes rather than high-value products. There is need to increase the value created through new products, while contributing to the green transition, to Finland's climate neutrality target and to stopping the loss of biodiversity. Forest policies are created in a dialogue of forest practitioners, policy makers,

citizens and other stakeholders. Often the implementation of policy requires changes in the forestry practices.

Forestry professionals need futures literacy, i.e., the ability to envision, prepare for and contribute to new forestry policies, practices, and futures. Futures literacy also brings flexibility to their work and to the forestry sector in general, helping even to prepare for unexpected events. An important part of futures literacy is the ability to recognise one's own expectations and values. The need for futures literacy extends to all levels of practitioners and experts in forestry sector, from forest management and logging to product design, industry, and the cascade use of biomass. In addition, forest policy makers, lobbyists and other policy stakeholders need to look at potentially rapidly changing policies, technologies, markets and natural environments.

We conduct regional workshops to identify needs and gaps regarding futures literacy in the Finnish forest education. The participants represent different levels of forestry education as well as other key stakeholders. The results help to redesign education to be more robust in the face of different futures, in turn making forestry practitioners more aware of alternative futures and their place in them.

Alizee Ville

### **It takes two to trade: who shapes flows of wood trade in Congo basin, and how?**

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**Keywords:** *Timber trade data, politics of numbers, Democratic Republic of Congo, Cameroon.*

Demand for timber in, and exports (referred to here as flows of timber) to wealthy nations have led to extensive deforestation in the countries of origin over the past decades (Rudel, 2005). Though seemingly modest on the global scale (only 1% of global traded wood volumes in 2021), Congo Basin exports volumes are rapidly increasing – by 173% in Cameroon between 2004 and 2012 (Mahonghol et al, 2016) – with irreversible effects on forest cover. Simultaneously, Congo Basin countries have enacted policies that restrict or prohibit the export of specific forest products, to slow the decline of forest cover and increase value-added. Addressing deforestation in the Congo Basin must therefore include a better understanding of how these flows are shaped. We ask: how do global forest agreements and national policies affect timber flows? And because it takes two to trade, how do national and international actors facilitate or hinder the flows of timber commodities in Cameroon and DRC?

We draw from Ecologically Unequal Exchange, allowing us to critically appraise the mechanisms which sanction asymmetrical transfer of natural resources through trade, and their effects on monetary and socio-ecological aspects. Through critical discourse analysis of the policies that act as these mechanisms, namely the Log Export Ban in Cameroon, and Moratorium on logging concessions in the DRC, we investigate underlying problematizations and assumptions embedded in policy formulation. Through interviews (n = 82), we explore how different actors perceive the role of domestic forest policies in shaping forest governance, and the strategies that they adopt in abiding or bypassing them, by inquiring about preferences in traded wood species, and tactics of resistances.

We show that ecologically unequal exchange remains the guiding principle of international timber trade, where historical trade partners retain a strong influence on policymaking. However, the apparent change in flow trajectory (China and Vietnam being the main destinations) and of preference in wood species, seem to show that Cameroon and the DRC are forming new patterns of trade with different trade partners, thereby bypassing existing policies. This work hopes to provide a more nuanced picture of the mechanisms underlying the unequal flows of timber.

Leonie Wagner

### **Exploring the Linkages between Forest Damage Events and Psychological Ownership among Private Forest Owners**

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Germany's forests are in crisis due to climate change, experiencing dry summers, storms, and widespread damage from pests and diseases. This has impacted all tree species, with visible damage and the need to reforest 490,000 hectares of land (BMEL 2023). By understanding how private forest owners experience ownership and severe damage events due to climate change valuable insights can be gained to better meet their needs and inform policy decisions and implementations. Originating from Organizational Theory, psychological ownership has been extensively studied in various domains, its application within the context of private forest ownership is relatively novel. Lähdesmäki & Matilainen (2014) were the first to examine the way ownership perception reflects in the forest management decisions. However, the role of psychological ownership in managing forest damage events and the potential consequences, such as amplified responsibility or resignation, remain unexplored. The existing literature on forest damage events primarily concentrates on the economic significance for the forest industry and ecological consequences, neglecting the psychological impact on forest owners (Deuffic & Ní Dhubháin, 2020). Although severe storms and windthrows have been shown to alter forest owners' identities and led to shifts in awareness and emotional responses, the psychological

effects of major forest damage events remain largely unexplored (Meier-Glaser et al., 2015). The impact of forest damage events on forest owners' psychological ownership and subsequent management responses has not been investigated yet, leaving a significant research gap. This study sheds light on the emotional and cognitive processes triggered by forest disturbances and their implications for forest owners' attitudes and behaviours. The central research questions are (a) What are the different dimensions and manifestations of psychological ownership that can be observed among forest owners and how do these feelings of psychological ownership arise? (b) How does the extent of psychological ownership influence the capability of forest owners to handle severe forest damage event? (c) How does a severe forest damage event impact the relationship between private forest owners and their forests in terms of their feelings of ownership?

Venla Wallius

### **Stakeholder views on the future of Finnish forests and their utilization: Implications for policymaking**

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Forests are an integral part of the society and culture of highly forested countries, such as Finland. Various societal actors, organizations and individuals have their own forest-related values, attitudes, needs, and expectations. In the transition from our current fossil-based economy towards a more sustainable circular bioeconomy, forests, wood and wood products substituting fossil-based products and materials likely play a key role. However, the opinions on and the visions of the future of Finnish forests and their utilization varies significantly. This leads to an active and often heated forest-related public discussion in Finland and poses challenges to forest-related policymaking. Taking diverse viewpoints and perceptions into account in policymaking, as well as building collaboration between different societal actors is crucial in creating a fair, socially accepted and environmentally sustainable bioeconomy transition. Further, it is important to create understanding of the viewpoints of others in order to find solutions to our common issues. Effective, coherent and transparent policymaking requires critically exploring the future visions of different stakeholders. Consequently, the aim of this study is to explore i) how the role of forest-related policymaking is perceived by various societal actors, and ii) what are the desired future visions related to forests, forest utilization, and forest-related policies, and how these align between different actors.

To this end, approx. 65 qualitative semi-structured interviews are conducted in May-November 2023 with various stakeholder groups along the Finnish forest value networks. Interviewees include forest-based companies, policymakers, environmental organizations, forest users such as hunters and hikers, as well as interest organizations. Results will reveal the varying needs,

expectations, and challenges in forest-related policymaking. Moreover, the study will show what kind of forest policies will support the realization of desired forest-related futures and how the collaboration between actors could be enhanced. This, in turn, can support policy coherence and the reconciliation of various policy aims across sectors, creating synergies instead of conflicts.

This study is a part of the “Future-oriented collaborative business models as a remedy for the sustainability transition: Finnish forest-based sector as an empirical arena for the creation of a transition framework” Academy of Finland project no. 340756

Jerylee Wilkes-Alemann

## **Women and the forestry profession - A literature analysis**

Jerylee Wilkes-Allemann<sup>1</sup> and Sharon Moller<sup>1</sup>

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Forestry has been over the decades considered a traditional, male-dominated industry. In many countries women do not appear in stereotypical role models in forest-specific work. With this study we aim to disentangle the current situation in order to understand the role women play in forestry at the Swiss and international level. To do so we have run a literature review and expert interviews. Our results show that women play an important role in the forestry sector all over Europe. In comparison to other areas, the proportion of women in forestry is also highest. The proportion of female students at forestry universities has also risen sharply in recent years. However, there are still few female professors. The proportion of women in management positions has, on the contrary, increased.

Georg Winkel

## **Five Frontiers in global forest policy. Assessment and trends for the future.**

Georg Winkel<sup>1</sup>

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In this presentation, which will be done based on collaborative work of a larger team of authors, we do assess the current state of international forest governance. Specifically, first, we identify major trends related to the global setting in which forests are placed, e.g. political, socio-economic and environmental changes. Subsequently, we identify five major global forest “frontiers” (understood as friction zones where major changes in forest ecology and forest related socioeconomies occur) that are connected to specific forest policy problematizations and policies. Those are a) a land use change frontier with deforestation and restoration, b) a biodiversity conservation versus bioeconomy frontier, c) a tenure and rights frontier, d) a urban-rural frontier

and e) a climate change frontier. Arguably, the five frontiers are interconnected, but still they can be mapped out and, while globally represented, are connected to specific spatial settings as well. The presentation concludes with mapping the specific forest transitions that occur along these frontiers, and policy responses, as well as research gaps for forest policy analysis for the years to come.

Grace Wong

### **Distal flows, distant benefits and local injustices: the financialisation of tree plantations in Sabah frontiers**

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Forest and agricultural spaces in Southeast Asia have been subject to contestation throughout history. Various actors have shaped forest-agriculture landscapes through the territorialization of spaces, in shaping of political narratives and in determining allocation of resources. The increasing involvement of international actors such as multinational corporations and global development agencies has introduced new dimensions to these dynamics.

One central question is then who are benefitting from former and current forest and land use dynamics? What and who is enabling such transformations? We argue that social and environmental outcomes in forest-agricultural frontiers have histories rooted in distal flows of ideas, commodities and finance, and a critical global political economy perspective help to dissect the different actors' underlying worldviews and aspirations for development and gain.

In the north Borneo state of Sabah, tree plantations were seen as a silver bullet to poverty reduction, sustainable development and to meeting global and domestic demands for timber and biomass. Our case study of the Bengkoka Peninsular, built on a literature review and interview material, is one of the poorest regions in Malaysia, despite the presence and promises of domestic and international actors and activities. Distal flows are deeply linked to these dynamics.

Shifting cultivation practiced by the local Rungus people in the Bengkoka Peninsula was deemed as "primitive" by the Sabah government, a common colonial trope, and a resettlement and afforestation programme to plant 60,000 ha of *Acacia Mangium* was introduced in 1982 to encourage "start of a new life". Initial financing came from a World Bank loan, and expertise were provided by the World Bank, and Australian and Japanese forestry and development consultants. As of today, plantation management, harvesting and processing is linked to complex and

constantly changing public-private corporate structures with diverse flows of financing, including Australian, American and Finnish equity funds with global investors, accompanied by varied sustainability discourses. Such investments have led to territorial exclusion of local land users, who have also gained some power from every day acts of resistance amidst precarity, desperation and conflicts.

Stephen Wyatt

### **Canada's messy experiments with multiple forest policy instruments**

Stephen Wyatt<sup>1</sup>

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The vast majority of Canada's forests are under state control – a situation that could suggest a certain hegemony in forest policy. However, each province determines its own forest policy which must also accommodate Indigenous rights, strong commercial interests, societal debates about non-timber forest values and the role of governments. Provinces also establish policy for more than 24 million hectares private forests (more than many other countries). The result is a wide variety of forest policy tools including strong regulation, soft regulation and control, market-based instruments, multi-actor planning and consultation processes, and information and extension services. Within this diversity, there is a general trend away from regulation and towards informational policies, including multi-actor consultations and participatory planning. This presentation will focus on the provinces of Quebec, New Brunswick and Nova Scotia, with differing proportions of public and small-holder forests. In all three provinces, strong regulatory frameworks were applied on public forests while informational, institutional and economic tools were used for private forests. Ongoing debates about forest policy in these provinces have generally led to an expansion and strengthening of informational policies to complement or replace regulations. However, each province has adapted these general approaches to their specific context and so we see a variety of policy choices along with similar policies being applied in different ways or with different objectives. These variations allow us to consider the advantages and challenges of these policies, along with the cumulative effects where one policy may act to enhance the effectiveness of another, or to reduce it. While many actors will defend their policy choices, it is unlikely that any would consider that their province has found the perfect solution. Unfortunately, insufficient effort has been made to evaluate the effectiveness of differing approaches within a complex and ever-evolving web of policy instruments. Nevertheless, Canadian experience suggests such evolution will continue as we struggle to meet goals of effectiveness, equity, sustainability and acceptability in dealing with the tremendous challenges facing our forests.



Mirjana Zavodja

Presented by Špela Pezdevsek-Malovrh

### **Urbanization shaping a future of municipal forests in Slovenia**

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*Key words:* *municipal forests, 3L Model, Slovenia, urbanization.*

In Eastern Europe urbanization is progressing and changes the economic, political and ecological environment of municipal forests. E.g. budgets of urban municipalities are growing, the number of ecologically-driven voters is increasing and the ecologically valuable green spaces are diminishing. A survey based on a 3L Model and covering 33% of municipal forest area in Slovenia evaluates the contribution of the municipal forests to the transforming needs of citizens. A focus of the study is on the marketable and non-marketable goods and services in the forest, efficiency, profitability, innovation and sustainable forests and trees. The results provide recent scientific information for reloading forest policy in Slovenian urban municipalities. documents. We deepened our empirical studies and policy ethnography by scrutinizing one of the largest landscape conservations under CARPE which known as Kahuzi Biega-Tayna-Maiko landscape located in the Eastern of Democratic Republic of Congo. Our results show that a wide range of conservation initiatives, in a context of weak state bureaucracies like DRC, have been reduced to a symbolic demarcation that has failed to reconcile biodiversity conservation with local development objectives. Historical analysis of the CARPE programme reveals that power relations and informal interactions among actors involved in the formulation, implementation and benefit-sharing processes have been significantly affected by donors' preferences and the short-term features of related foreign aid. The persistent contestation and violence in many conservation areas in Central Africa, including those receiving CARPE funding, calls for a paradigm shift in biodiversity conservation policies, as the continued practices of enclosure produce and reproduce varied social inequalities and injustices towards forest-dependent communities.

Fafali Roy Ziga-Abortt

### **The FLEGT case of “External Europeanization” in Ghana and Cameroon**

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The business models of tropical timber production have long been configured around illegal practices that cause environmental degradation and hinder socioeconomic progress in the Global South. However, the global corporations trading timber often point to regulatory governance weaknesses in the jurisdictions where they source timber as hindering efforts to address illegalities in their supply chains. In an innovative response, the European Union (EU) combines mandatory due diligence for timber imports – the EU Timber Regulation (EUTR) – with EU Forest Law Enforcement, Governance and Trade (FLEGT) voluntary partnership trade agreements (VPAs) that offer finance, technology transfer, and capacity building to support domestic regulation in timber exporting countries. Through process tracing, we assess the extent to which the EU's efforts have been effective in reinforcing state-led regulatory governance to reduce illegal logging in Cameroon and Ghana. This allows for understanding the potential of external Europeanization, a theoretical approach explaining how and why countries (and the businesses they regulate) outside of the EU might adapt their domestic governance institutions and processes to EU rules and norms. As the EU considers similar approaches to regulate forest-related illegalities and deforestation in global agricultural supply chains, it is important to take stock of past and on-going policy efforts. We find that the causal mechanisms embedded in FLEGT have lost their transformative potential due to unfinished domestic reforms, the technocracy of supply chain traceability systems, and market leakage. Our findings suggest the VPA deliberations underpinning supply-side efforts have not shifted the power balance but rather distracted from the reality that there will be winners and losers as the countries shift toward a more transparent and accountable political economy.

Ivana Živojinović

## **Restitution of forests and forest land to churches in Serbia — Impacts on forest management in the Braničevska eparchy**

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**Keywords:** *forest restitution, private forestry sector, church ownership, forest management, case*

The process of forest restitution has had a significant impact on the forestry sectors of various countries in Central-Eastern and South-eastern Europe over the past three decades. While extensive research has been conducted on the process of forest restitution, there has been relatively less focus on its specific effects on forest management. This research aims to assess the outcomes of the forest restitution process by examining the return of forest property to the church in Serbia and analyzing its consequences on forest management. By exploring the case of Braničevska Eparchy, this research provides a local-level perspective on how the de facto policy instruments of forest restitution have influenced the private forestry sector and its management practices. To date, a total of 32,337.52 ha of forests and forest land have been returned to the Serbian Orthodox Church, accounting for 1.4% of the total forest area. The largest portion was returned to the Braničevska Eparchy, totaling approximately 6,700 ha. This research investigates the process of initiating and implementing forest restitution while examining the current state of forest management practices within the analyzed church-owned forests. We conducted 13 in-depth expert interviews with key actors from the national and local levels, as well as representatives from the Braničevska Eparchy as the forest owner and a private company responsible for managing the church forest. Preliminary findings suggest that the restitution process in Serbia was primarily driven by requirements imposed during EU accession negotiations. The process began nearly two decades ago with the adoption of the Law on Restitution of Property to Churches and Religious Communities in 2006. The resurgence of the church as a "large" forest owner has brought about changes in the forestry sector. Furthermore, restitution has indirectly stimulated entrepreneurial development in the private sector through the emergence of private companies specializing in forest management. This study contributes to the understanding and discussion of the challenges faced by current and future management strategies in Serbia's private forestry sector, as well as their implications at the policy level.

