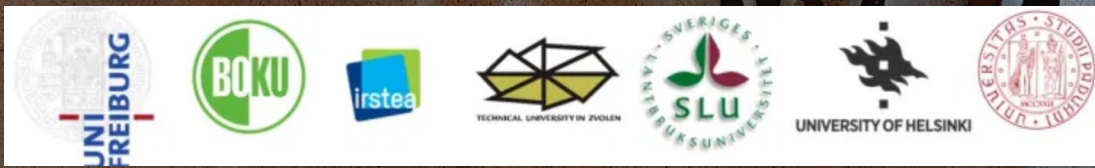


PerForm

We are a network of scientists investigating societal perceptions of the forest-bioeconomy across Europe.

Find out more

www.perform-bioeconomy.info



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A Journal of the Human Environment



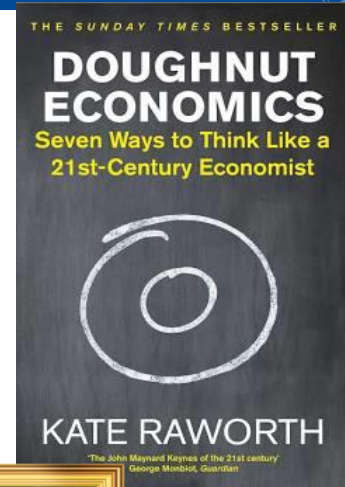
Special Section:
Social dimensions of a forest-based bioeconomy

HIGH NATURE VALUE FARMLANDS, NATURA 2000, EUROPE • SHARED SOCIO-ECONOMIC PATHWAYS • HUMAN-LARGE CARNIVORE COEXISTENCE • MANGROVE CONSERVATION, MEXICO • MAKING ECOSYSTEM SERVICES OPERATIONAL, HIMALAYA • SEDIMENT TRANSPORT, YELLOW RIVER, CHINA • LEAD LEVELS IN GAME MEAT • GOVERNING OFFSHORE FISHING, CARIBBEAN • BIODIVERSITY NET GAIN, ENGLAND • IGLUAÇU NATIONAL PARK, BRAZIL

Why is this important?

Rethinking economics is not about finding the correct [model] (because it doesn't exist), it's about **choosing or creating one that best serves our purpose** – reflecting the **context** we face, the **values** we hold, and the **aims** we have.

(Kate Raworth)





“The bioeconomy should be understood as a **political project**, not simply or primarily as a technoscientific or economic one.”

(Goven and Pavone 2015)

Social science: power struggles, discourses, who is involved and why? Winners and losers?

Actors



Forest Owners

ENGOS

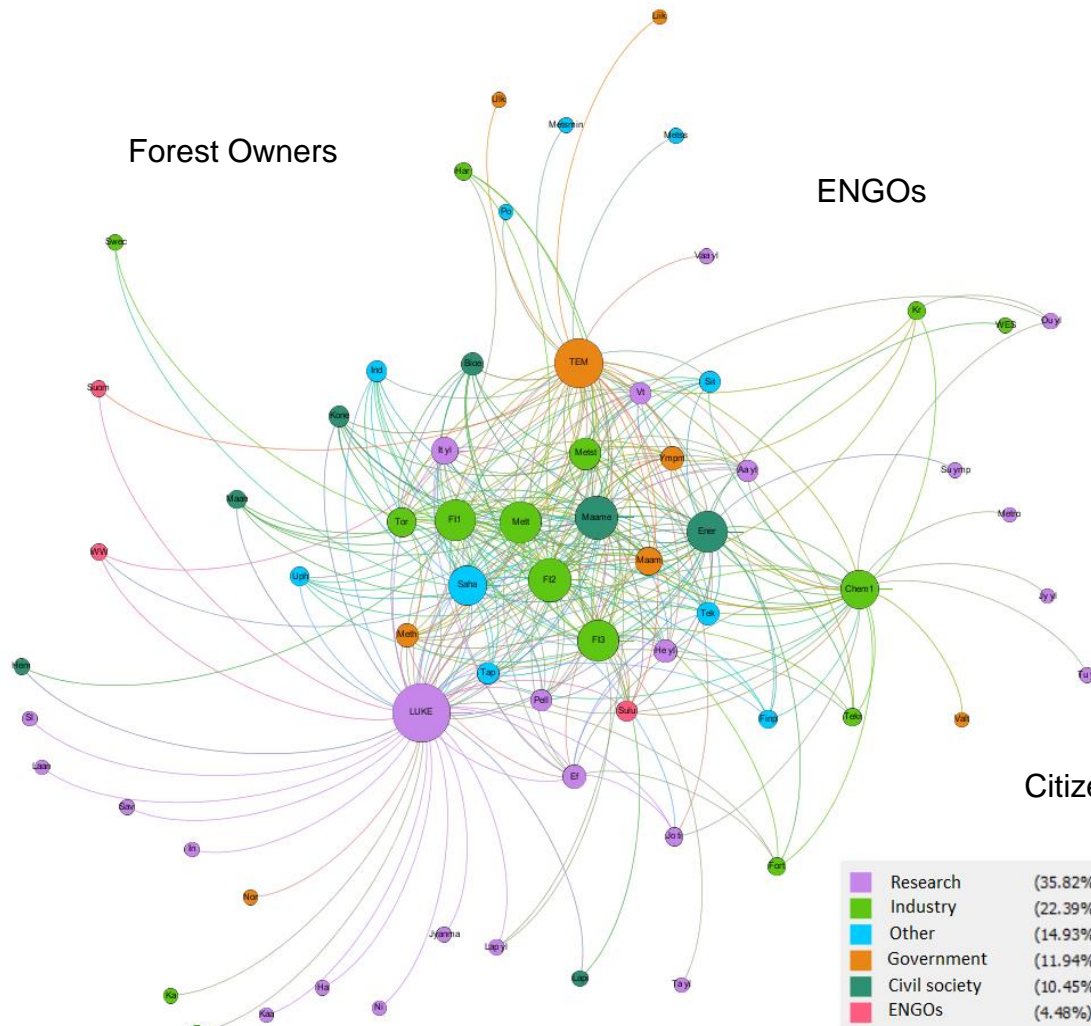
Forest Industry

Researchers

Policy makers

Citizens

Media



Actors



Stakeholders	Key findings	References
Governments	Green growth, innovations, jobs	Kleinschmit et al. 2017; Pülzl et al. 2017
Landowners/ Forest Stakeholders	Resource intensification, Communication tool	Stein et al. 2018; Hodge et al. 2017; Giurca 2020;
Industry and Businesses	Business ecosystems, economic growth	Giurca & Späth 2017; Giurca & Metz 2018; Giurca 2020
ENGOS	Growing opposition	Riemann et al., (Forthcoming)
Citizens	Lack of awareness	Malkamäki et al. (Fothcoming)
Students	Too little prepared	Masiero et al. (2020)
Researchers	Legitimizing political agendas ?	Holmgren et al., 2020

The role of researchers?



- Science and policy - interlinked processes of collective meaning making;
- Researchers co-produce certain visions or **'imaginaries'** of **sustainable futures.**



Sustainability Transformations



- Different dimensions: technological, material, organizational, institutional, political, economic, and socio-cultural;
- Explicit focus on societal change towards more **sustainable and equitable futures**.



<http://www.candidraymarketing.com/home/butterfly-transformation/>

(Markard et al., 2012)

Sustainability Transformations



- Normative endeavors;
- Value judgements influence how societies value well-being of present- vs future generations;

(Pickering and Persson 2019)

Imaginary



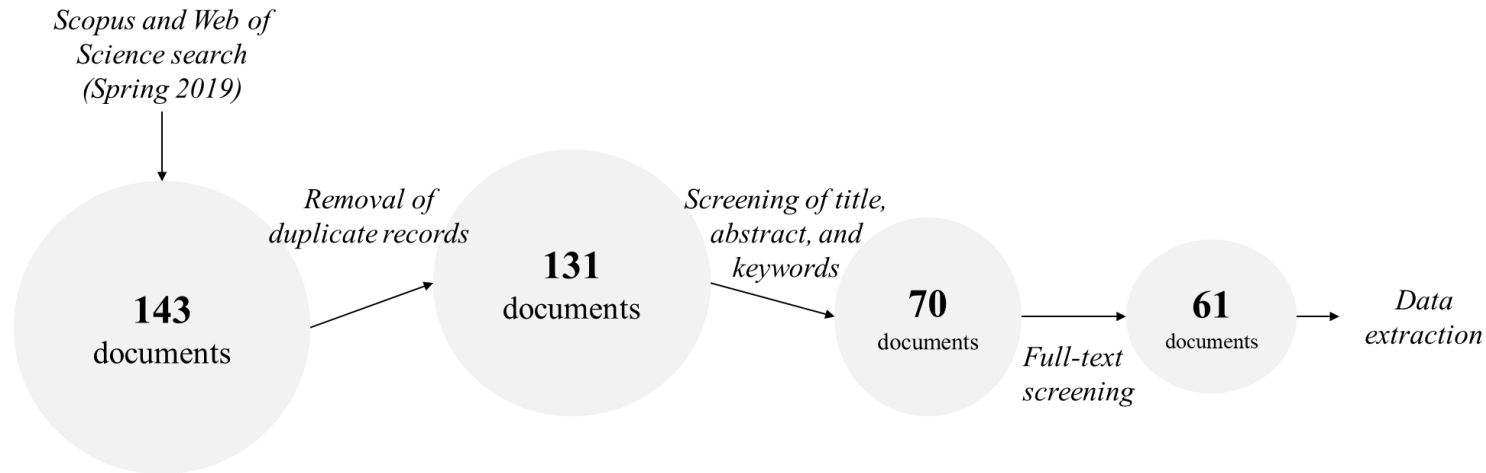
- Collective ways of thinking and seeing;
- An inherent part of scientific knowledge production;
- May configure and/or disrupt present political decision-making along with behaviors;



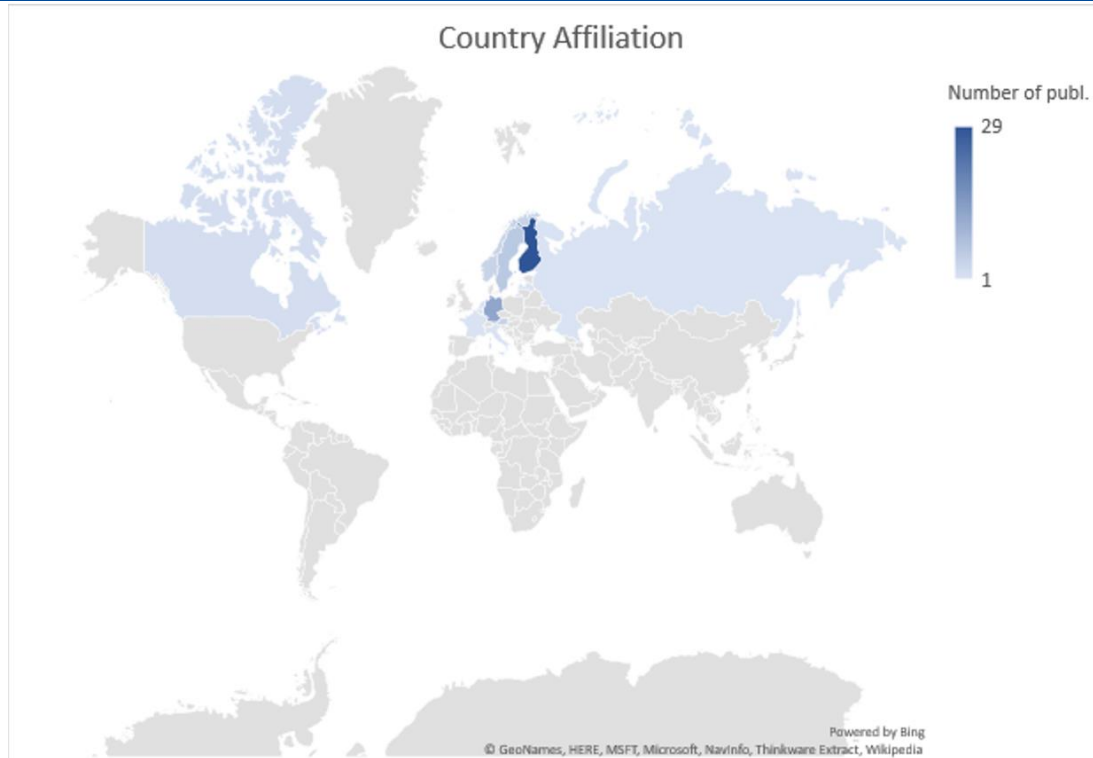
(Jasanoff 2015)

1. To what ends are forest-based bioeconomy transformations considered desirable?
2. What changes are called for in order to pursue desired forest-based bioeconomy transformations?
3. Which measures and agents of change are deemed relevant for forest-based bioeconomy transformations?

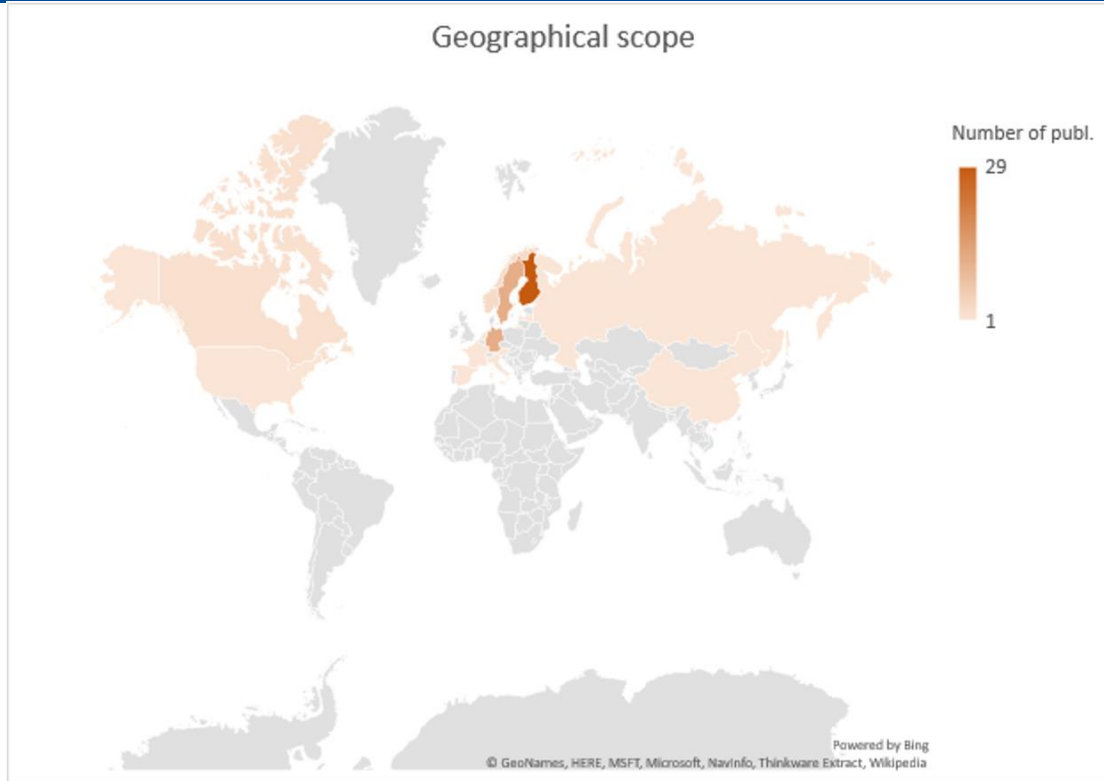
Materials and Methods



Eurocentric bioeconomy



Eurocentric bioeconomy



Three types of bioeconomy



	Type I bioeconomy	Type II bioeconomy	Type III bioeconomy
Illustrative references	Georgescu-Roegen (1975a,b, 1978)	OECD (2009, 2017a,b,c)	Langeveld et al. (2010) EC (2012, 2018)
Definition	An ecological economy, that is compatible with the biosphere	A science-based economy driven by industrial biotechnology	A biomass-based economy
Nature/economy relations	Struggle against entropy and coevolution with the biosphere. Economic development in line with biological evolution	The cell is a factory Technology has the power to “correct God's mistakes”	Biomass replaces fossil fuels and mining to produce energy and materials

(Vivien et al. 2019)

Back to the RQs



1. To what ends are forest-based bioeconomy transformations considered desirable?
2. What changes are called for in order to pursue desired forest-based bioeconomy transformations?
3. Which measures and agents of change are deemed relevant for forest-based bioeconomy transformations?

1. Towards what end?

- Decarbonize and maintain economic growth;
- Potential pathway towards sustainability;
- Fundamental societal transformation;



2. What changes are called for?



- Industrial renewal/mutation;
- (Improved) forest management practices;
- Systemic change (social, political, economic);



3. Measures and agents of change



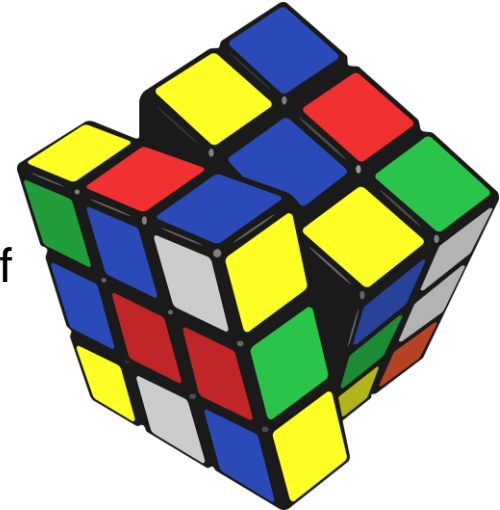
- Transformation through political support/restrictions;
- Transformation through inclusion, collaboration and transparency;
- Transformation through information;



Key messages



- **The dominant way** of seeing desired ends is through the lens of existing bioeconomy policies;
- **Objects of change** related to forest industry renewal - >R&D, materials, production processes, forest management practices, industrial networks etc.
- **Measures** typically involve soft and voluntary modes of governing e.g., public funding investments in R&D, private–public collaboration, broad stakeholder participation to create legitimacy etc.



Strategies



- Expand on topics currently associated with forest-based bioeconomy transformation;
- Adopt a more problematizing and critical approach;
- Seek interaction with other social science disciplines;

Outlook



“As humanity’s context, values and aims continually evolve, so to should the way that we envision the economy”

(Kate Raworth)

