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# Different perspectives on forest related sustainability: From the Sustainable Development Goals to European forest policy

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**Webinar:** Earth Observation for European Sustainable Forest Management

# Introduction

- Historically grown consent: Forest need to managed sustainably – but what does it mean?
  - Short history of forest related sustainability
  - Different understandings of sustainability
  - Implications for SFM monitoring from a policy perspective

# A (very) short history of forest related sustainability

- 1) More than enough forests/primary production: exploitation and conversion
- 2) Scarcity of forests/industrialization: Conservation/Sustained yield
- 3) Forests come back/urbanization/tertiarization: Sustainable Forest Management/Conservation

## Forest Europe Definition of SFM:

“The stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems.”



Source: Gregersen (2013)

## Different forest management “sustainabilities” in parallel Resource management paradigms in the US Pacific Northwest, 2011

Management paradigm	Policy problem	Governance arrangement	Sustainability emphasis	Actors
<b>Industrial forestry</b>	Profitability of the forest sector	Global free markets	<b>Sustained Yield</b>	Timber industry, private (corporate) forest owners
<b>Sustained yield /multiple use forestry</b>	Timber supply & socio-economic stability of rural communities	Scientific forestry based planning	<b>Sustainable Forest Management with focus on wood production</b>	(Former) National Forest Service, Forest Scientists
<b>Ecosystem Management</b>	Loss of forest biodiversity through intense forestry	Ecosystem management based planning	<b>Ecosystem Management/ Conservation</b>	Scientists and environmental movement
<b>Social forestry</b>	Exclusion of local stakeholders from decision making	Community participation	<b>Sustainable supply of local demands</b>	Local stakeholders, social (science) activists

Source: Winkel, 2014, Global Environmental Change

# Sustainability and forest management in the SDGs

## Different sustainability “expectations” towards forests

- “Social SDGs” (e.g. SGD 1: No Poverty, SDG 3: Good Health and Wellbeing)
- “Economic SDGs” (e.g. SDG 7: Affordable and Clean Energy, SDG 9: Industry, Innovation and Infrastructure)
- “Environmental SDGs (e.g. SDG 13: Climate Action, SDG 15 Life on Land)



# Sustainability and forest management in the SDGs (cont.)

- Synergies on trade offs relating to forest (use)
- Relationship depends on the specific context

SDG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1		Red	Yellow	Yellow	Yellow	Green	Green	Yellow	Red	Green	Yellow	Green	Green	Yellow	Green	Yellow
2	Yellow		Green	Green	Green	Yellow	Green	Green	Yellow	Green	Yellow	Green	Yellow	Yellow	Yellow	Green
3	Green	Green		Green				Yellow								
4	Green	Green	Green					Green								
5	Green	Green	Green	Green												
6	Green	Yellow	Green	Green	Green		Yellow	Yellow	Yellow	Green	Yellow	Green	Yellow		Yellow	
7	Green	Yellow				Green		Yellow	Green	Yellow	Green	Yellow	Yellow	Yellow	Green	
8	Yellow	Yellow	Yellow	Green	Green	Red	Red		Red	Green	Yellow	Green	Red	Yellow	Red	Yellow
9	Yellow	Yellow	Yellow	Green	Yellow	Yellow		Green		Yellow	Yellow	Yellow	Red	Red	Red	
10	Yellow	Green	Green	Green	Green	Yellow	Yellow	Green	Yellow		Yellow	Yellow	Yellow	Yellow	Yellow	Green
11	Yellow	Yellow	Green	Yellow	Green	Green	Green	Yellow	Yellow	Green		Green	Green	Green	Green	
12	Green	Green	Green	Green			Yellow	Yellow	Green	Yellow	Green		Green	Green	Green	Yellow
13	Yellow	Yellow		Green	Green	Yellow	Yellow	Yellow	Yellow	Green	Yellow	Yellow		Yellow	Yellow	Green
14	Yellow	Yellow	Green	Green	Green		Yellow				Yellow		Green		Yellow	
15	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green		Green
16	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	
17	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green

Source: Katila, P., Colfer, C. J. P., De Jong, W., Galloway, G., Pacheco, P., & Winkel, G. (Eds, 2019). Cambridge University Press.



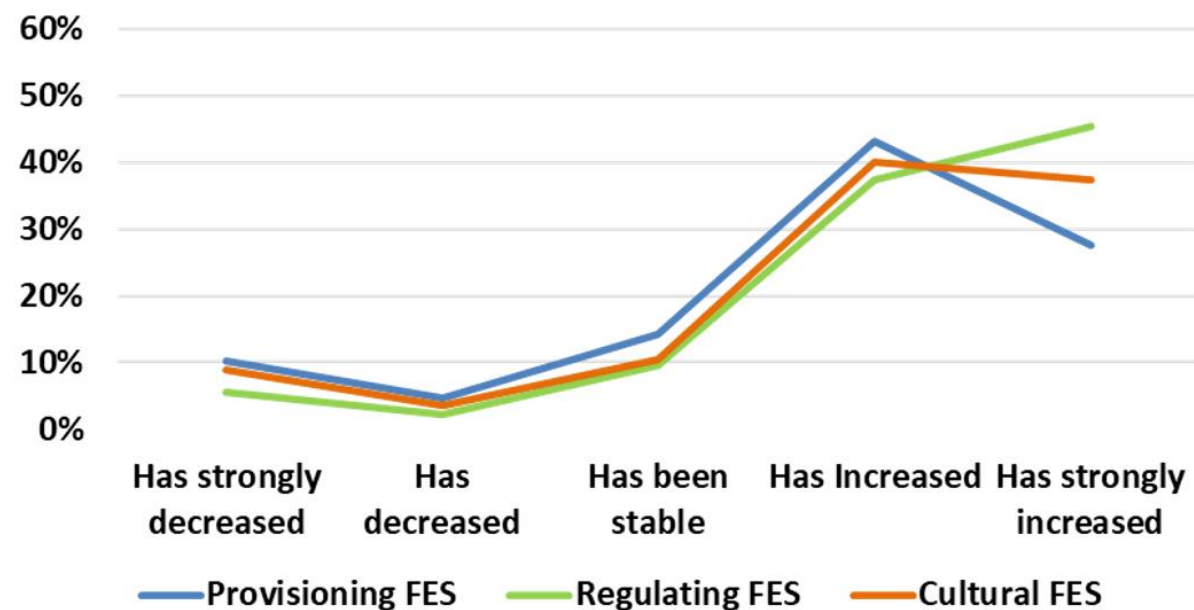
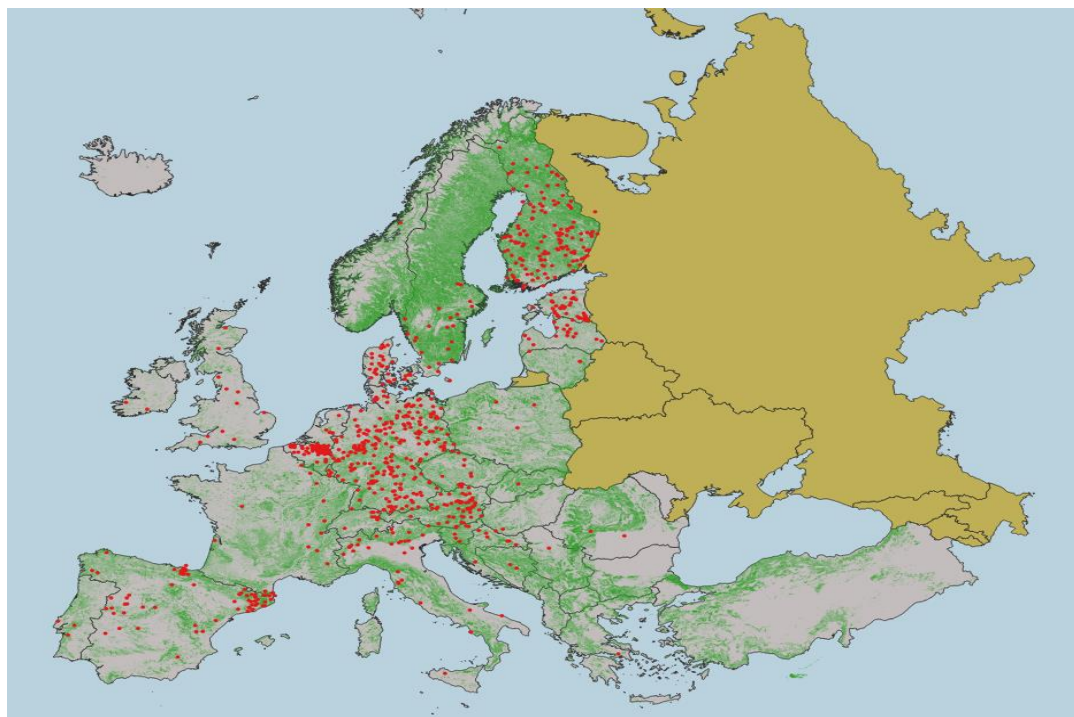
# European forest policy: Sustainability emphasis in different EU policies

Policies	Main problem / concept of forest	Main objectives / problem solution path	Governance	Implementation
<b>Sustainable forest management policy</b>	Forests for society Need to be managed sustainably in order to provide multiple services	<b>Sustainable Forest Management broadly defined</b>	'Soft' approach, communication and coordination  Subsidiarity central	Flexible and fragmented implementation
<b>Agriculture and rural development</b>	Forest not prioritised Focus on rural development and agriculture	<b>Rural development, competitiveness</b>	Provision of financial means for sustainable land use and rural development  Payments linked to social and ecological standards	Member States choose activities they wish to finance within the common framework  Implementation is regulated and monitored (11)  Member States forest related spending is biased towards economic measures
<b>Environment</b>	Forest for biodiversity and ecosystem services Needs to be conserved through ecologically sustainable management	<b>Conservation of forest ecosystems and related ecosystem services</b>	Regulatory framework approach with environmental directives  Financial means and information less central	Conservation status or ecosystem services have to be provided by applying conservation and management concepts  Flexible implementation, often delayed
<b>Energy and climate change</b>	Forests as renewable energy source and/or carbon sink	<b>Increase share of renewable energy</b>  <b>Carbon sequestration</b>	Soft approach (strategies) combined with framework regulatory policy (including binding targets)	Binding targets for renewable energy and emission reduction have to be met via national policies
<b>Industry and trade</b>	Forests as resource (commodity)	<b>Innovative and competitive forest sector</b>	'Soft' (mostly discursive and knowledge-based) approach, trade also regulation	Implementation interlinked with other forest-related <sup>(12)</sup> policies



# Perceived demands towards forest ecosystem services in Europe

Forest owner and manager survey in SINCERE and INNOFOREST, 2019 (1707 analyzed responses; Lovric et al, in preparation)



# Perceived effects of climate change on forests and forestry today and expected until 2050

Forest managers/stakeholder survey in B4EST; 2019 (539 analyzed responses, Roitsch et al in preparation)



		Total (n=1)	$\bar{x}$ today	$\bar{x}$ in 2050
1	Finland	32	4.25	4.41
2	Norway	38	4.10	4.03
3	Sweden	16	3.75	3.69
4	United Kingdom	20	3.65	3.30
5	France	93	3.16	2.74
6	Italy	61	2.73	2.67
7	Portugal	14	2.71	2.71
8	Germany	236	2.64	2.47
9	Spain	29	2.39	2.31
	<b>Total</b>	<b>539</b>	<b>2.91</b>	<b>2.83</b>

## Legend:

- 1 = Very negative
- 4 = Balance between negative and positive
- 7 = Very positive
  
- No effects observed/no changes expected: 14 for today, 11 for 2050.

# Implications for SFM monitoring from a policy perspective

1. Reliable information related to major policy issues: biomass, biodiversity, carbon, climate change impacts/disturbances, ecosystem services provision
2. Social and economic dimension of sustainability: societal demands for ecosystem services/forest owner objectives/employment/profitability
3. Cross sectoral collaboration in SFM monitoring: a) Explore scientific evidence in case of contradicting information, b) understand synergies and trade offs
4. Research on causalities of trends → cross-disciplinary collaboration



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# Thank you very much!

## References used

Katila, P.; Colfer, C.J.P.; De Jong, W.; Galloway, G.; Pacheco, P. & Winkel, G. (2019, ed): The Sustainable Development Goals: Their Impacts on Forests and People. *Cambridge University Press*. 618 p.

Pülzl, H.; Hogl, K.; Kleinschmit, D.; Wydra, D.; Arts, B.; Mayer, P.; Palahi, M.; Winkel, G., Wolfslehner, B. , et al. (2013, ed.): European Forest Governance: Issues at Stake and the Way Forward. EFI.

Winkel, G. (2014). When the pendulum doesn't find its center: Environmental narratives, strategies, and forest policy change in the US Pacific Northwest. *Global Environmental Change*, 27, 84-95.

## Links (relating to unpublished references)

<https://sincereforests.eu/>

<https://b4est.eu/>