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Possibilities to increase energy wood production.

A case study on forest policy-practice interface in selected european countries

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SETTING THE SCENE OF THE STUDY

EU policies envisage an increased reliance on forest energy wood



PROBLEM STATEMENT: policies do not indicate concrete solutions for increasing production nor for the associated social and environmental trade-offs (practical issues left to MSs).

RESEARCH QUESTION: what are stakeholders' perspectives on possibilities to achieve EU policy goal of increasing energy wood production?

APPROACH AND METHOD: 3 countries (DE, SLO, SP)/ social science approach (face to face, Skype and phone interviews)

DATA SET

STAKEHOLDER GROUPS	DE	SLO	SP	TOTAL
Conservation (nature-conservation bodies- e.g. associations and state agencies)	3	4	2	9
Economy (wood-using industries and associations, timber-users, and users of energy wood)	13	4	2	19
Policy (ministries -including forest administrations)	4	4	1	9
Practitioners (forest-owners' associations, forest enterprises and foresters)	12	7	3	22
Science (scientific institutions, researchers and experts)	4	5	2	11
TOTAL	36	24	10	70



RESULTS

Future role of energy wood

- ▶ Germany and Slovenia > stakeholders did not perceive energy wood as destined to gain market dominance over roundwood.
 - ▶ Spain > stakeholders expected energy wood to be the main forest product in the near future (reassignment of wood resources to chips and pellets).
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Potential to increase energy wood production

- ▶ In all three countries: the goal of increasing energy wood production was seen as realistic in absolute terms (increment of growing stock larger than removals).
- ▶ Germany and Spain > need of boundaries for energy wood production.
- ▶ Germany > forest management sustainability as a limitation (soil nutrient balance, biodiversity and forest overexploitation) + need of expensive compensation measures.



RESULTS

Possibilities to apply three concrete options for increasing energy wood production

- ▶ INCREASING THE FOREST AREA MANAGED FOR ENERGY WOOD
 - SLO and SP > energy wood harvesting from currently unmanaged stands
 - DE and SP > low-profitability forests
 - All countries > Thinnings in young and middle-aged forests (improved qualities of forest stands VS damages to soil structure, problems with nutrient supply and changes in forest structures)
- ▶ CHANGES IN FOREST MANAGEMENT PRACTICES
 - DE > not a very relevant solution (planting rapidly growing trees at the edges of forests).
 - SLO > increase the share of young trees and the intensity of forestry works

RESULTS

Possibilities to apply three concrete options for increasing energy wood production

► EXPLOITING TREE COMPONENTS NOT TRADITIONALLY HARVESTED FOR ENERGY PRODUCTION

	DE	SLO	SP
Increased harvesting of logging residues	<ul style="list-style-type: none">• Reduced regeneration costs after logging, increasing revenues, help preparation of natural regeneration areas.• Negative effects on nutrient balance (small size branches, bark and leaves)	<ul style="list-style-type: none">• No problems for soil nutrients, but not financially viable.• Possible negative effects on forest fauna	<ul style="list-style-type: none">• Concerns for soil nutrients but benefits compensated problems (considering soil type and adopting specific arrangements like extracting branches without leaves)
Use of wood assortments traditionally serving material uses (pulp and paper or particleboard)	<ul style="list-style-type: none">• Negative feelings due to importance of wood-processing industry	<ul style="list-style-type: none">• Governmental subsidies and market distortions	<ul style="list-style-type: none">• Already a reality
Use of low-quality trees	<ul style="list-style-type: none">• Better leaving them in in the forest to strengthen biodiversity conservation functions	<ul style="list-style-type: none">• Positive opinions	<ul style="list-style-type: none">• Improving the overall quality of wood extracted by a stand

RESULTS

Possibilities to apply three concrete options for increasing energy wood production

► EXPLOITING TREE COMPONENTS NOT TRADITIONALLY HARVESTED FOR ENERGY PRODUCTION

	DE	SLO	SP
Use of deadwood	<ul style="list-style-type: none">• negative effects on animals > need of precise limits	x	Negative opinions due to the importance of deadwood for biodiversity conservation
Full tree harvesting	<ul style="list-style-type: none">• Already happening during thinning operations due to general trend of mechanization and growing wood prices• Conflicting with carbon and soil nutrient sustainability > need of legal limitations and effective compensations for soil nutrients	x	<ul style="list-style-type: none">• Already a reality due to fire prevention reasons (20 meters at the roadside free from small branches)• Branches and bark had high transport costs
whole tree harvesting and stumps' removal	<ul style="list-style-type: none">• Not realistic	x	<ul style="list-style-type: none">• Negative for soil erosion• Ok only if carried out in plane areas



To wrap the work up...

Energy wood was perceived as a chance to diversify rural economy, revitalize national forest sectors and contribute to climate change reduction, but that important trade-offs were associated to an increased production of this energy source which regarded especially biodiversity conservation and soil nutrients' availability.

These trade-offs weakened the feasibility of applying the three concrete options for increasing energy wood production > none of the three options was univocally perceived by interviewees.

In some instances, stakeholders' perspectives coincided with EU's policy ambitions, while in others they were discordant.

Recommendation: the weakness of EU's policies in dealing with environmental trade-offs associated to energy wood production needs to be better addressed at supranational level > clearly setting priorities and proposing concrete options for increasing energy wood production without harming the environment.



**THANK YOU FOR
YOUR ATTENTION**

