The sustainability of the EU 2030 climate and energy framework regarding the environmental multifunctionality of forests

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Objectives of the presentation:

1. Utilization of forests in the EU 2030 climate and energy framework (2030 Framework) aiming at the implementation of the International Paris Agreement (Paris, 2015) at EU level (reduction of greenhouse gas emissions by at least 40% by the year 2030 compared with the 1990 levels)

2. Sustainability of the 2030 Framework regarding forests in the light of the conflict between the use of biomass from forests and their function as carbon storages and their other (environmental) functions

Parts of the presentation

A. The principle of sustainable development as applied to forestry
B. Regulation (EU) 2018/841 on inclusion of greenhouse gas emissions and removals from land use land use change and forestry into the 2030 climate and energy framework **(LULUCF Regulation)**

   Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources **(RED II)**

C. Proposals for a new LULUCF Regulation and a new RED in the context of the EU Green Deal

A. The principle of sustainable development for forestry

- International level: Rio Forest Principles (United Nations Conference on Environment and Development, 1992)

„Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations.“

- European level: Forest Europe (Ministerial Conference on the Protection of forests in Europe, Helsinki, 1993)

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

Forests′ functions:

economic and employment functions (provision of raw materiels for a number of industries)

multiple environmental functions (soil stabilizasion, erosion control, biodiversity protection, water circulation, air purification, carbon storage)

- Art. 5 of the Paris Agreement:

„Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases including forests. “

B. The LULUCF Regulation

- Implements art. 5 of the Paris Agreement at the EU level
- Aims at the maintenance of six land categories (the afforested land category, the deforested land category, the managed cropland category, the managed cropland category, the managed forest land and the managed wetland category) as carbon storages
- The category of the managed forest lands is the category of highest importance
- **During the reference period (2000 to 2009) the removals by sinks from forests were 372 million tonnes of CO_2 equivalent per year for the EU**

- Target of the LULUCF Regulation

No debit rule: emissions should not exceed removals during the two commitment periods (2021-2025 and 2026-2030).

- Pros of the Regulation

-Establishment of the LULUCF sector and of the managed forest land category as carbon storages

-The no debit rule can contribute to the maintenance of forests as carbon storages and to the maintenance of their multiple functions

- **Cons of the Regulation**

- **The Forest Reference Level (FRL)** for the application of the no debit rule limits its effectivity

FRL: reference value for the application of the no-debit rule

FRL establishment: MS document the balance of emissions and removals during the reference period (2000-2009)

How it works: The balance of emissions and removals during the two commitment periods (2021-2015, 2026-2030) is compared with the FRL

A decrease in sinks during the two commitment periods compared with the FRL creates debits

Result: Incorporation of existing decreases in sinks in the climate target

- **Effect of the flexibilities on forests**: Can the flexibilities substitute the function of forests as carbon storages and undermine their other (environmental) functions?
- Forest managed land flexibility: allows debits for the category of the managed forest lands (The total amount for the flexibility for the Union is 360 million tonnes of Co2 equivalent and is specified for each MS in Annex VII)
- Inta-LULUCF flexibility: allows the compensation for debits in each land category through removals in another land category
- Compensation for debits in the LULUCF sector through a further reduction in emissions in the sectors covered by the Regulation (Eu) 2018/842 (Effort Sharing Regulation)

The RED II

- **Target:** 32% share of energy from renewable sources by the year 2030
- Sustainability criteria

Different sustainability criteria

for biomass from forestry (forestry biomass)

for biomass from agriculture (agricultural biomass)

- **Forestry biomass**

A. National legislation at the country of origin of biomass protecting the regeneration and the biodiveristy of forests

Cons: the effect of the sustainability criteria depend on the level of the national legislation and its effective implementation

B. National legilsation at the country of origin of biomass ensuring the application of the no debit rule

Cons: Can the no debit rule ensure the balance between the removals and emissions?

- Agricultural biomass

The application of the land sustainability criteria remains restricted to forests of a high biodiversity value

No examination of the no-debit rule

- The application of the sustainability criteria apply to biomass-based installations with a total rated thermal capacity exceeding or equal to 20 MW
- It is estimated that about 75 percent of the wood energy currently used in the EU would not need to comply with any RED II sustainability requirements.

Results

- Limited effectivity of the sustainability criteria of the RED II
- The LULUCF Regulation can not serve as an effective boundary to the RED II

However,

- At present, the carbon storage in managed forests (-373 Mt CO2 eq. in 2010), is the main contributor to the LULUCF sinks.
- This contribution is estimated to decline by 32% by the year 2030
- Forest harvest appears to increase over time from 516 million m3 in 2005 to 565 million m3 in 2030 due to growing demand for wood, meant for material purposes and energy production

C. EU Green Deal, New Proposals

- New climate target: Greenhouse gas emissions have to be decreased by at least 55% by the year 2030 (the previous target was 40%)

A. Proposal for the amendment of the RED II (**new RED Proposal**)

- Target of a 38%-40% share of energy from renewable sources (existing target: 32%)
- Amendement of the sustainability criteria:

1. The sustainability criteria for agricultural biomass apply also to forestry biomass
2. The sustainability criteria apply to small scale biomass-based installations of a total rated capacity of 5 MW

- B. Proposal for the amendment of the LULUCF Regulation **(new LULUCF Proposal)**

1. Abolition of the no-debit rule

Overall binding Union target of greenhouse gas removals in the LULUCF sector of 310 million tonnes of CO2 equivalent

2. Flexibilities

- The managed forest land flexibility is restricted to the first commitment period (2021-2025)
- New flexibility for all land categories for the second commitment period (2026-2030)

(the access to the flexibility mechanism, for the period 2026-2030, is set at half of the maximum amount set out in Annex VII, i.e. 178 million tonnes of CO2 equivalent.)

Conclusion

- Important Improvements (abolition of the no-debit rule, application of the sustainability criteria to small scale installations)
- Shortcommings:

1. The restriction of the land sustainability criteria of the new RED Proposal to forests of a high biodiversity value
2. The dependance of the effect of the sustainability criteria on the level of the national legislation (in particular for biomass extracted outside the EU)
3. The no debit rule remains applicable to the forestry biomass extracted outside the EU (Kyoto Protocol, IPCC)
4. The flexibilities of the new LULUCF proposal, despite the improvements, can substitute the function of forests as carbon storages and undermine their other (environmental) functions