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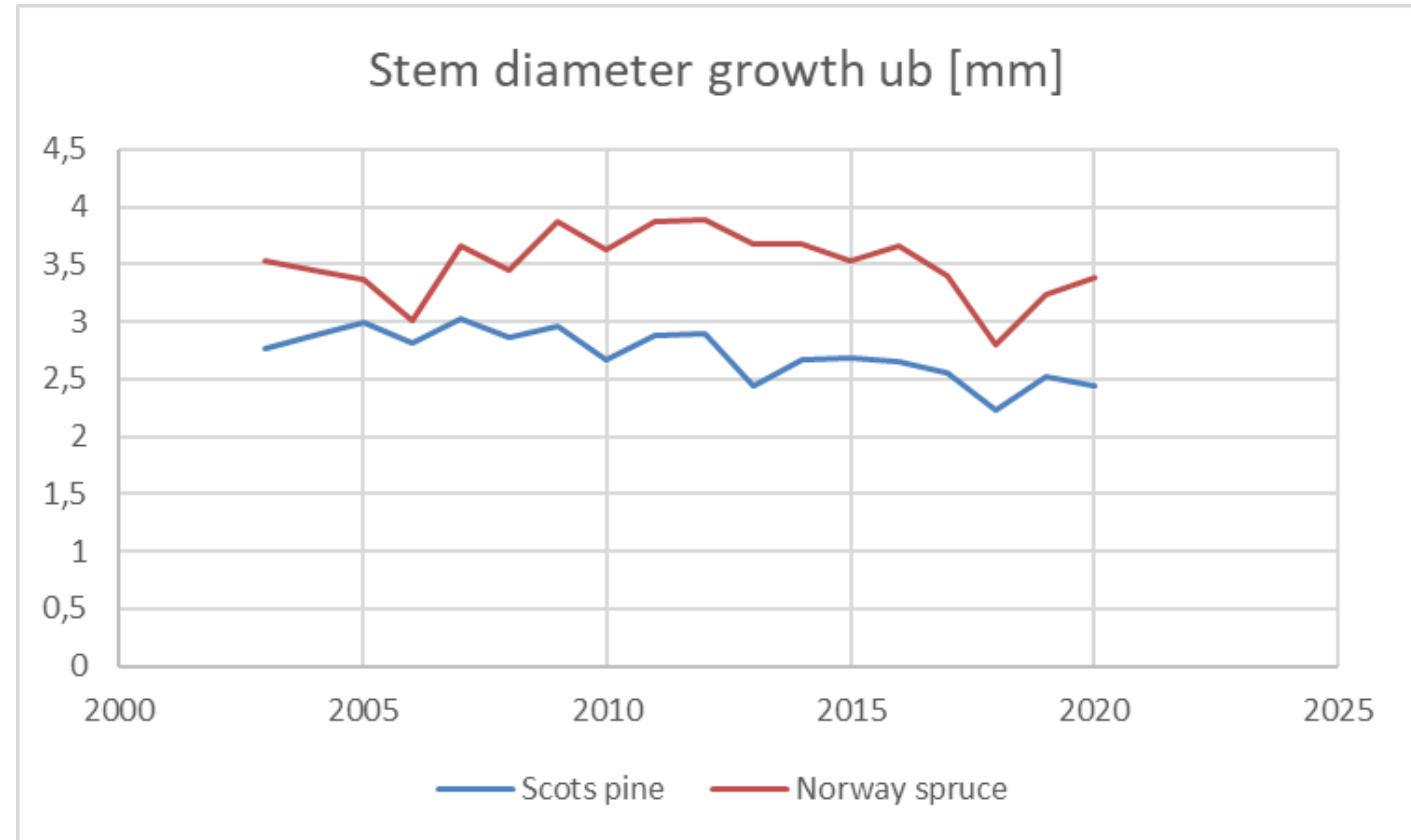
Technical issues, Natural Disturbances

- Natural Disturbances (ND) is an accounting mechanism to exclude emissions from the accounting that are beyond the control…

- Refers to <u>all</u> emissions and carbon pools at certain time

- Reference 2001-2020 per ND

- Current focus on Managed Forest Land and Afforested Land (2021-2025)

Examples

- Direct emission with known history   Wildfire

- Direct emission that has not yet occurred   Geological

- Indirect emission reducing growth   Storm, drought, bark beetles

Technical issues, Natural Disturbances

- Drought reduced growth 2018 to 82% and 80% for Scots pine and Norway spruce, respectively

- Weather effects can be both positive and negative for growth. Exclude both positive an negative outliers when calculating the reference?

- How to factor out human induced from natural?

- If the reporting is an running average (stock difference), the outliers should be based on the same methodology (different result with annual data)

Trees at least 100 years measured at bh

Technical issues, Natural Disturbances

ANNEX VI,

- identification of all land areas affected by natural disturbances in that particular year, including their geographical location, the period and types of natural disturbances;

- system for tracing deforestation, salvage logging and prescribed burning (not 2001-2020?)

- ND requires recalculation of the FRL

- where feasible, measures the MS undertook to prevent or limit the impact

- where feasible, measures the MS undertook to rehabilitate

Technical issues, Natural Disturbances

How to prove preventing and minimize consequences of ND?

Examples:

- <u>Legislation</u>: The law limits the amount of fresh dead wood left in the forest (bark beetles)

- <u>Monitoring</u>: Amount and position of forest that has been attacked by bark beetles is monitored with remote sensing and flight surveillance of wildfires

- <u>Silviculture</u>: Felling during winter to avoid root rot and planned felling "towards the wind" to avoid storm felling

- <u>Planning</u>: Network of forest roads

Technical issues, Sweden Natural Disturbances

- The Swedish EPA has an ongoing government assignment where various possible monitoring methods will be evaluated.

- Flag all NFI plots that have severe damage by type?

- A separation of growth and felling is required to determine whether drought constitutes ND. Natural (weather) effects has to be separated from silviculture (impossible?)

- There is other map-based information about, for example, Wildfire - but how can we measure all carbon pools before and after a fire?

Technical issues, ND

- How MSs contribute to a Handbook in reporting ND?

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