An online workshop was held autumn 2021 to engage stakeholders in discussions of benefits and challenges to governing sustainability of forest management and production, harvesting and use of wood for energy. Presentations from research, consultancy, ministries, businesses, certifications and associations formed the basis for discussions on the following topics:

- 12 October: Sustainable forest management and bioenergy in the Baltic states
- 13 October: Verification of compliance with sustainability requirements for forest bioenergy
- 26 October: How to calculate and model where and when forest bioenergy can help to save carbon emissions?
- 27 October: Research to underpin future policies related to sustainable forest management and wood enduses

Video recordings are available from the SNS project website.

Key messages included the following:

1. Policy decisions should be based on science and practical experiences to ensure that the intended impacts are achieved in a timely manner without unnecessary costs and administrative burdens (less opportunism, less opinions without data, less emotionally based decisions). Report for annual networks 3

2. Forest protection strategies and implementation should be improved to find a balance between protected and non-protected areas and clarify what it means that an area is protected. There is currently confusion among forest owners with what they can and need to do.

3. Forest protection terminology should be context specific, for example for “old-growth”, “residues”, and “stem wood”. There is no one-size fits it all. Stem wood as a category include many assortments depending on species, size and quality.

4. Be aware that protected forests were often created for wood production. There is lack of knowledge on how to convert managed forest into multi-layered, natural, resilient stands and it will take time. Some experiences may be available from forest agencies

5. More knowledge is needed on continuous-cover forestry. There are challenges with regeneration and root rot and lack of knowledge on implications for carbon stocks and biodiversity.

6. Previous and current management may already allow for the desired biodiversity, sometimes including drainage and fertilization. It may even be necessary to ensure the long-term existence of desirable ecosystem features and habitats.

7. Do not forget social and economic implications for local people in the attempt to solve global problems with climate and biodiversity. Their management and commitment is more likely a part of the solution than a hindrance.

8. Top down prescriptive legislation may not be the best tool to achieve various sustainability goals. Enforcement can be a challenge in specific local conditions and

unintended consequences may occur without local judgement. Forest owners are usually closest to the forests and their multiple values.

9. Desired changes in management practices should be financially incentivized if they lead to loss of income. Consider use of market instruments such as payment for ecosystem services. Start by working with the most interested forest owners.

10. It is hard to imagine transition to renewables in the near future without significant use of forest-based bioenergy, as it plays a significant role in many countries' renewables energy portfolio.

11. Unutilised potential wood resources are available, for example broadleaf stands in Lithuania of low wood quality and low biodiversity value, or logging residues in Latvia, but there are limits to how much the harvesting can be increased.

12. Local end-use of forest biomass provide good opportunity to check the sustainability of the supply base. Sourcing takes place within a distance of about 100 km.

13. Forest carbon modelling is critical to formulation of effective forest and climate policies. It is critical to understand possible trade-offs between carbon storage and substitution effects, and impacts of conversion to continuous-cover and set-aside forests. More work is needed for models to better simulate developments in different conditions.

14. Policy–science dialogues are important to keep regulatory frameworks relevant in complex and dynamic realities, integrate regulatory frameworks of different sectors, and bridge the gap between specific scientific knowledge and policy needs to generalize.

15. Develop Best Management Practices to help make high-level more stable sustainability criteria relevant in local conditions.

16. Ensure a high quality of the information basis. Continue to correct misconceptions and use anecdotal evidence. Apply responsible conduct of research, systematic review, and monitoring and evaluation system.