



Forests are the dominant land cover in most of the Nordic-Baltic countries. The management of forests for improved delivery of ecosystem services, mainly wood and fibre is a key factor in the envisaged transition towards a bio-based economy. In this context forests have a key role in forming the basis for or nature based solutions including: food, clear and clean water and air, carbon sequestration, habitats for plants and animals, soil formation, aesthetics, cultural, and social services in the Nordic-Baltic forests.

Improving our understanding of the function of ecosystem/environmental services in a changing world is of high scientific importance. To meet this the Nordic-Baltic network of forest research organisations were formed under the name *Centre of Advanced Research – Environmental Services* (CAR-ES). The overall aim of CAR-ES has been to provide the best knowledge for informed decision – making on forest management concerning continued provision of environmental services (ES) in the Nordic-Baltic area.



Photo: Lars Högbohm

CAR-ES–A platform for forest research networking

CAR-ES has been actively working for 15 years and has established itself as a nave for environmental research within the participating organisations and for the region. Over the years a number of workshops and meetings have been organised in all the Nordic/Baltic countries, where results have been presented and discussed and new joint research projects have been initiated. Via the CAR-ES network we also have been able to create a ‘critical mass’ of researchers in specific topics, which have supported local initiatives, as well as functioning joint participation in larger European-level actions and networks.

CAR-ES has facilitated knowledge exchange not only within research topic but equally important between topics. The internal network also provides young researchers, in particular, a possibility for international presentations and the ever-important building of personal networks.

Key topics

CAR-ES has focused on several key topics that involve sustainable forest management (SFM) and implementation of research-based policies in the whole region. Some of the questions addressed in relation to provision of environmental services were:

- Impacts of climate change
- Bioenergy policy
- Intensified harvesting
- Ash recycling
- Peatland forestry
- Forestry and water
- Forest buffer zones
- Biodiversity and SFM
- Afforestation legacies
- Forest carbon management

Future challenges

As a society we are facing a number of challenges not least in the light of the ongoing climate change. Forests and forest ecosystems play a key-role in this respect and the CAR-ES topics are central.

Forest and forestry is also high on the international agenda not least within the European Commission. Questions raised in connection with 'Green Deal for Europe', 'Fossil free Europe', and Bio-economy all have implications on how we conduct forestry. In addition, more specific EU policies and directives that are introduced that affect forests and forestry: Biodiversity Strategy 2030 and the new Forest Strategy.

In order to meet these challenges good research is needed and should be communicated. Here international networks like CAR-ES play an important role by highlighting regional aspects.

Dissemination

We have summarised current knowledge emerging from the CAR-ES net-work in a series of Fact Sheets. More information can be found at <https://nordicforestresearch.org/car-es/>

Voices of some CAR-ES participants on the value of networking

"A great pathway for further collaboration!" Zane Lībiete (Latvia)

"Comparing national results gives unique insights" Bjarni D. Sigurdsson (Iceland)

"We have been able to learn from each other. As an example the production of wet area maps to Finland was inspired by the example of our Swedish colleagues" Leena Finér (Finland)

"Combining knowledge and data has made it possible to synthesize provisioning of various ecosystem services within the North European region" Lars Vesterdal (Denmark)

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