Northern ToSIA

Assessing sustainability of forest based activities in rural areas of the Northern Periphery

The Northern ToSIA project investigates options for improving the sustainable use of forest resources in selected regions of the Northern Periphery in Finland, Sweden, Scotland and Norway by using an innovative tool for sustainability impact assessment (ToSIA).

Northern ToSIA objectives

The project aims to:

- Test and apply the ToSIA tool in four case studies
- Develop the tool applicability and necessary instructions for use in the Northern Periphery
- Disseminate the tool and users' experiences to the whole Northern Periphery

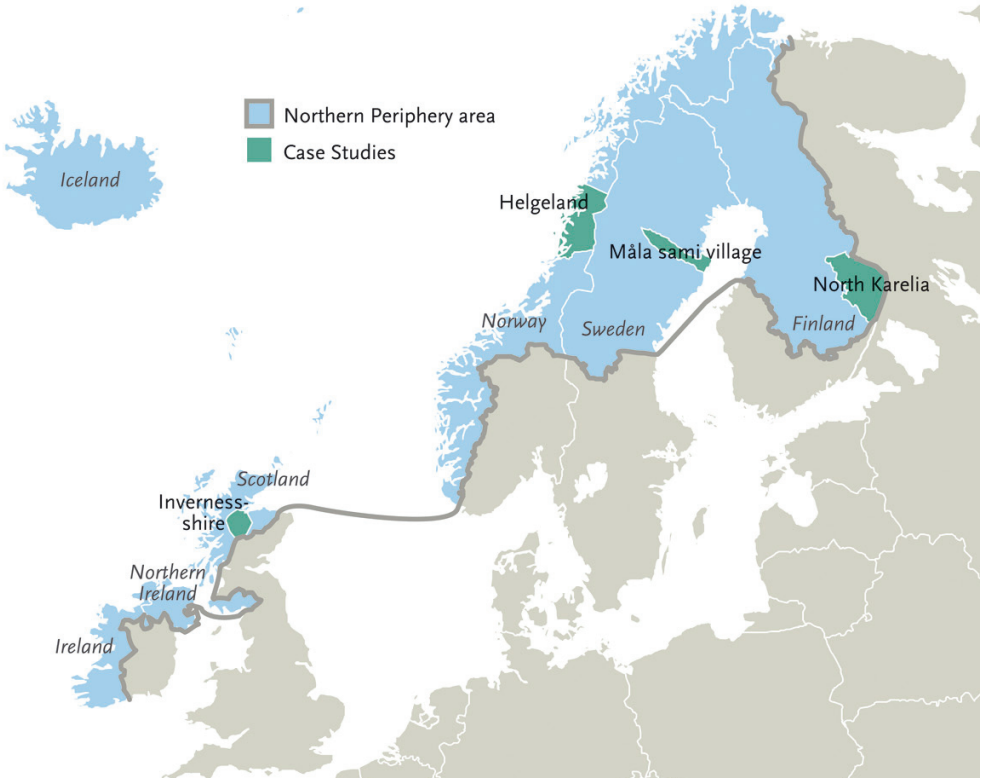
ToSIA – Tool for Sustainability Impact Assessment of the Forest Wood Chain

ToSIA analyses the sustainability of production processes in the Forest- Wood-Chain in terms of social, economic and environmental sustainability indicators. The ToSIA concept has been developed in the EFORWOOD project financed by the EU Framework Programme for R&D FP6.

Two applications in the Northern Periphery

The project applies the ToSIA tool in two real-world settings:

- Public organisations test the tool for regional development strategies
- Companies using forest resources test the tool for their sustainability assessment and reporting routines



Northern forests leading the way to sustainability

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Northern Periphery Programme 2007–2013

Innovatively investing in Europe's Northern Periphery for a sustainable and prosperous future

European Union
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Northern ToSIA

EFI

Case study in Finland

Region: North Karelia
Municipalities: Tuupovaara and Outokumpu

Questions related to sustainability issues

The aim of the case study is to analyse future directions for increased use of forests for bioenergy, especially for forest wood chips, linked with a screening of sustainability issues in North Karelia. Comparison of sustainability of centralised or distributed heat production will be done by using different sizes of heating plants to determine overall sustainability. The assessment can be included in the process of preparing the Regional Forest Programme and the Climate and Energy Programme. These programmes are a part of regional development in North Karelia.

Key elements of the case

- Supporting the development of the Regional Forest Programme and the Bioenergy Programme of North Karelia; sustainability impact assessment of increasing production and utilisation of forest wood chips
- Case Tuupovaara; energy co-operative – small size heat production
- Case Outokumpu; heating plant owned by town of Outokumpu – medium size heat production

Factors for sustainable forest use assessment

- In 2004 the total use of forest chips in energy generation in North Karelia was about 143 000 m^3, which corresponded 2.7 % of total energy use. The annual use of forest chips in heating plants could be increased by 60 %.
- Target for year 2020 in North Karelia: In heating and electricity production it has been switched from the fossil fuels to the renewable energy.
- The main growth potential in the acquisition of energy wood in North Karelia consists of felling residue, stumps and timber harvested from the first thinning and energy wood thinning.
- Ecological aspects are important because of implementation of the Forest Biodiversity Programme METSO.

Significance of forestry and forests in the region

The landscape of North Karelia is characterised by forests, hills, waterways and extensive mires. 84 % of the region falls into the category of forest land. The North Karelian forest balance has been clearly positive, since the annual increment of the growing stock has exceeded the drain by 3 million m^3 in2004-2008. Wood is a major source of energy and it is important that its use remains sustainable in North Karelia.

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