



NORDREGIO
Nordic Centre for Spatial Development

Bioeconomy and regional development

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Nordregio Forum
November 12, 2014
Keflavik, Iceland



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Nordic Council of Ministers

The Nordic Working Group on Green Growth – Innovation and Entrepreneurship

Nordregio acts as the secretariat for four working groups under the Nordic Committee of Senior Officials for Regional Policy (EK-R). The working groups develop proposals for specific initiatives for the "Nordic regional-policy collaboration programme 2013-2016"

Nordic Working Group on Green Growth – Innovation and Entrepreneurship is chaired by Director Kaisu Annala from the Ministry of Employment and the Economy in Finland.

”EU” Bioeconomy

“Bioeconomy includes **primary production**, such as agriculture, forestry and fishery,

- and **industries** that use of process biological products, such as food – wood – pulp and paper - chemical – bio tech - and energy production .” (EC2014)



European Bioeconomy Observatory: EU Source of information on Bioeconomy

Bioeconomy is "glocal" – both global and local

Biomass cannot (usually) be easily or cheaply transported long distances.

It means establishing many interconnected local production plants that are integrated with other nearby industries.

(McCormick & Kautto 2014)

Nordic Bioeconomy studies in 2014

- Nordic Innovation /Gaia: Creating value from bioresources (“numbers, innovation ecosystems”)
- NCM/Innogate: A bioeconomy for the Baltic Sea region (“actors, Nordic & Baltic”)
- NCM/Matis: Future opportunities for Bioeconomy in the West Nordic region (“Arctic”)
- Nordic Working Group for Green Growth / Nordregio: Bioeconomy in the Nordic region (“regions, regional development”)

(A fruitful co-operation between the Nordic study groups in 2014!)

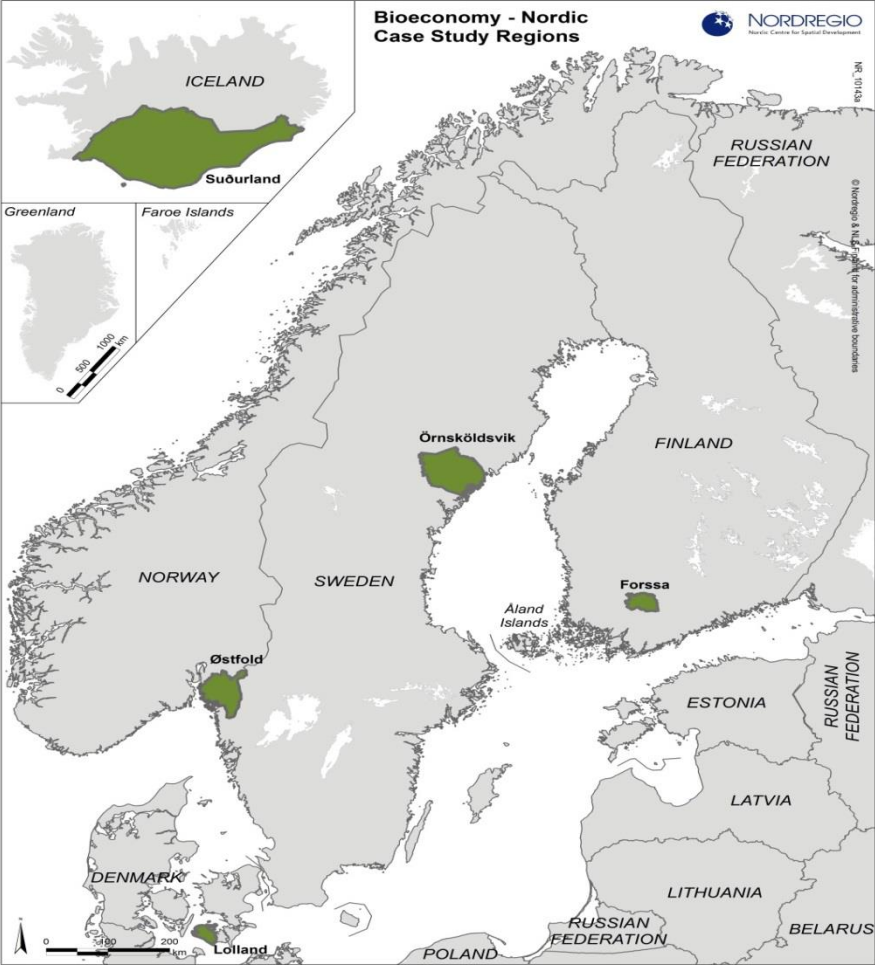
Nordregio study on Nordic Bioeconomy 2014

- Case study of regional bioeconomy in five Nordic countries
- The case study regions were selected to provide rich data and examples of good practices on bioeconomy in Nordic regions
- Literature reviews and document analyses, followed by study visits and interviews in each case study region in 2014.
- Main issues: role of regions, enabling conditions, impeding factors, findings & suggestions



Nordic regional case studies on bioeconomy

(Nordregio 2014)



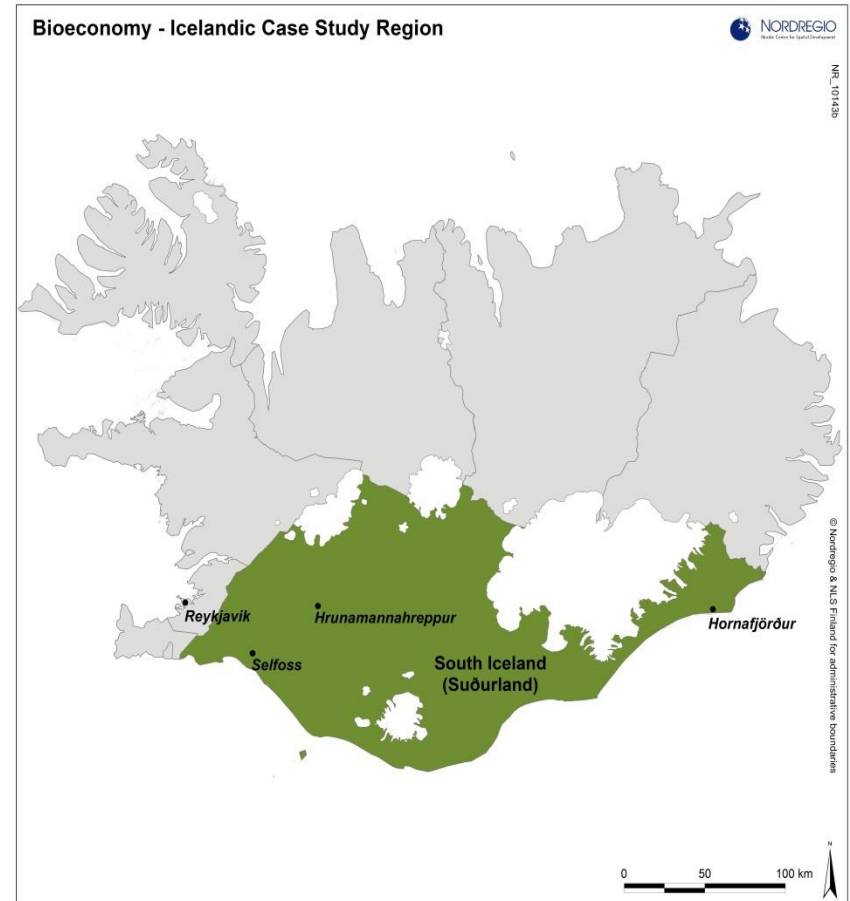
South Iceland

40% of the Icelandic agricultural production stems from the region.
Agriculture, fisheries, tourism

Enabling conditions/

Impeding factors:

Presentation by Liisa Perjo



Lolland, Denmark

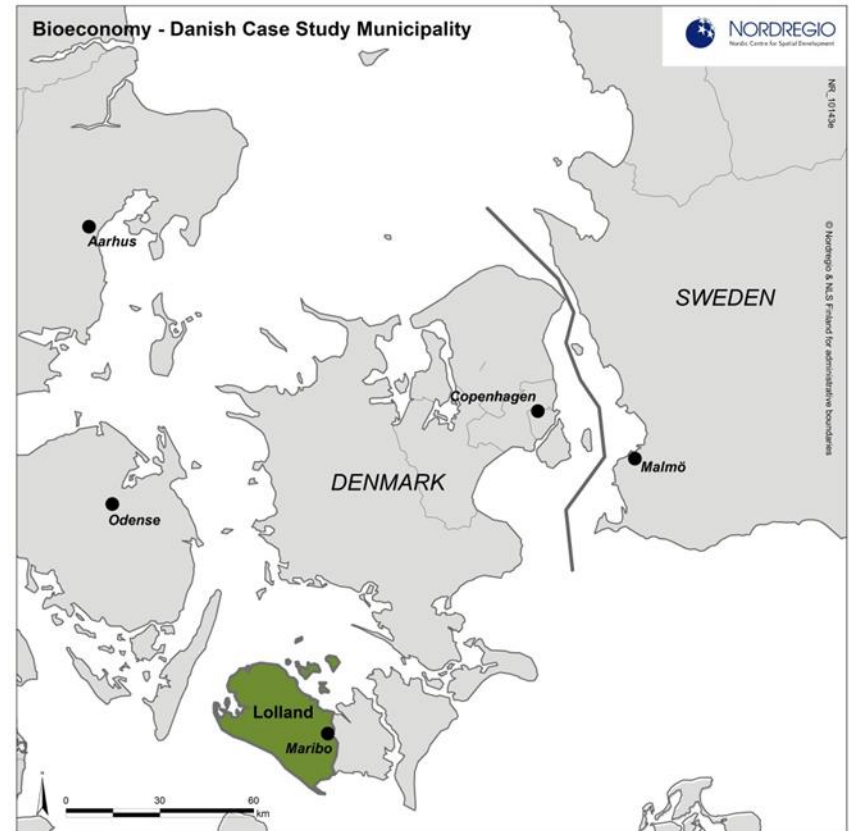
(Special focus: Green Center, Lolland)

Enabling conditions

Tradition of green growth and renewable energy, provision of Community Testing Facilities (CTFs) for green growth, support from local communities and business sector to bioeconomy-related activities

Impeding factors

Structural challenges of industrial development, out-migration, dependence on public subsidies



Forssa, Finland

The Forssa sub-region

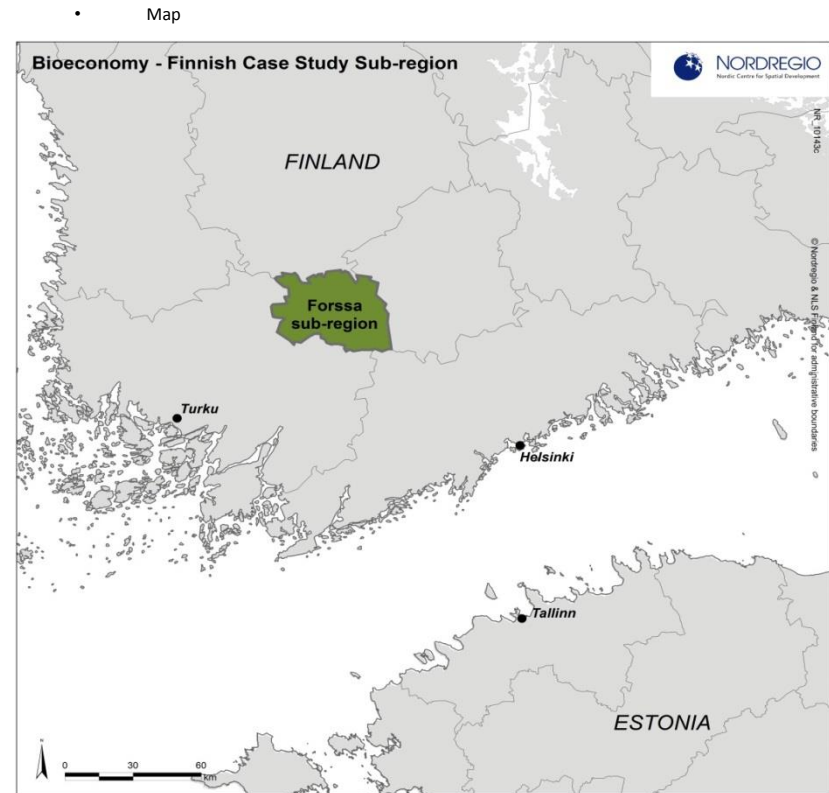
- Tradition of agriculture & industry
- Research e.g. MTT , Cleantech companies, large-scale biorefinery initiative
- Envi Grow Park & Brightgreen Forssa initiatives

Enabling conditions:

- Good location
- Active public-private cooperation
- Intensive national & international networking

Impeding conditions:

- Old mindset: “smokestack industry”
- Shortage of qualified labour



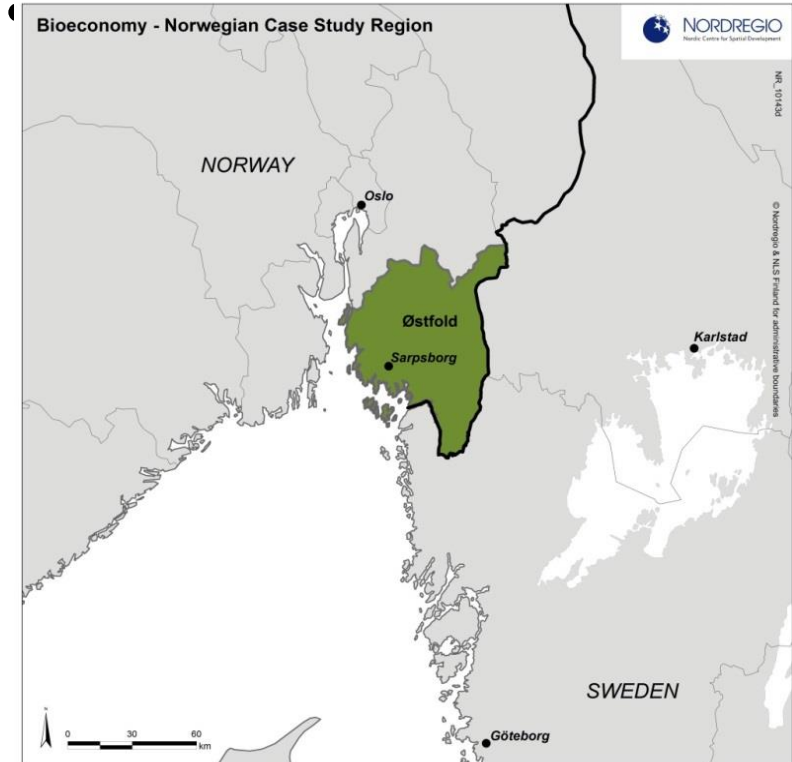
Østfold, Norway

Enabling conditions:

- The knowledge base & reputation created by the locomotive company Borregaard
- Public support system as an additional asset

Impeding factors:

- The competitive situation in Norway between fossil fuels and the biomass
- Challenges related to raw material (access, price, infrastructure)



Örnsköldsvik, Sweden

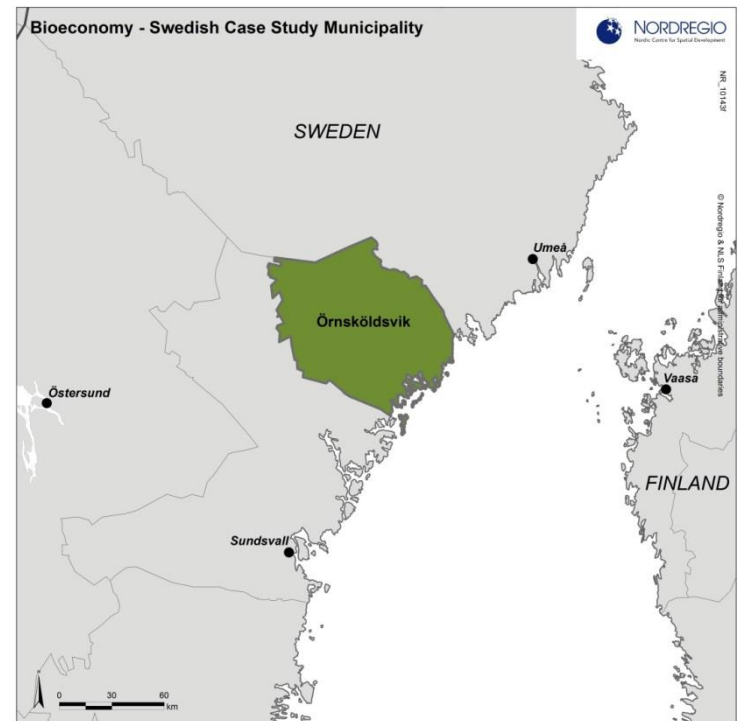
A long tradition of forestry industries
(pulp mill activities in the early 20th
century)

Enabling Conditions

- Accessibility to natural resources
- Public-private co-operation and long-term financial commitment
- Processum initiative

Impeding Factors

- “The market was not there – yet”
- regional mindset



Nordic bioeconomy case study: Conclusions (1)

- The adoption of the bioeconomy concept varies significantly—not only among but also within the Nordic regions. Some Nordic regions have largely adopted the term “bioeconomy”, whereas some other regions are only just becoming familiar with the term.
- The intensity of regional co-operation between actors varies among the Nordic case-study regions, e.g.
 - intensive public–private co-operation and a cluster management organization (Örnsköldsvik)
 - locomotive company but without intensive regional co-operation (Østfold)
 - fragmented actor structure with numerous smaller bioeconomy organizations, (South Iceland)

Nordic bioeconomy case study: Conclusions (2)

- The Nordic cases illustrate the importance of the long-term commitment in developing a regional bioeconomy (e.g. VINNVÄXT in Örnsköldsvik)
- A variety of national approaches on bioeconomy e.g. Finnish national bioeconomy strategy in 2014 and national bioeconomy policy document by Danish Bioeconomy Panel in 2014.
- A common desire in the Nordic regions: focus on true implementation on the bioeconomy including scaling up of pilot plants to larger-scale facilities
- A genuine interest among the bioeconomy actors in learning from other Nordic actors, and also in building co-operative Nordic relationships. The increased international visibility of the Nordic bioeconomy actors welcomed.
- The Nordic bioeconomy has the potential to create and sustain jobs both in urban and in rural regions, while also being beneficial for the environment.

Nordregio work on bioeconomy continues...

- Nordic Working Group on Green Growth Innovation and entrepreneurship has started an In-Depth Study on Industrial Symbiosis
- Input/Output analysis of Nordic good practice or "rising star" bioeconomy regions: euros, jobs, direct and indirect impact (focus on agriculture, forestry, and marine)
- Preparation /matchmaking projects e.g. Realising Bioeconomy



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Photo: Kjell Nilsson

Thank you!

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