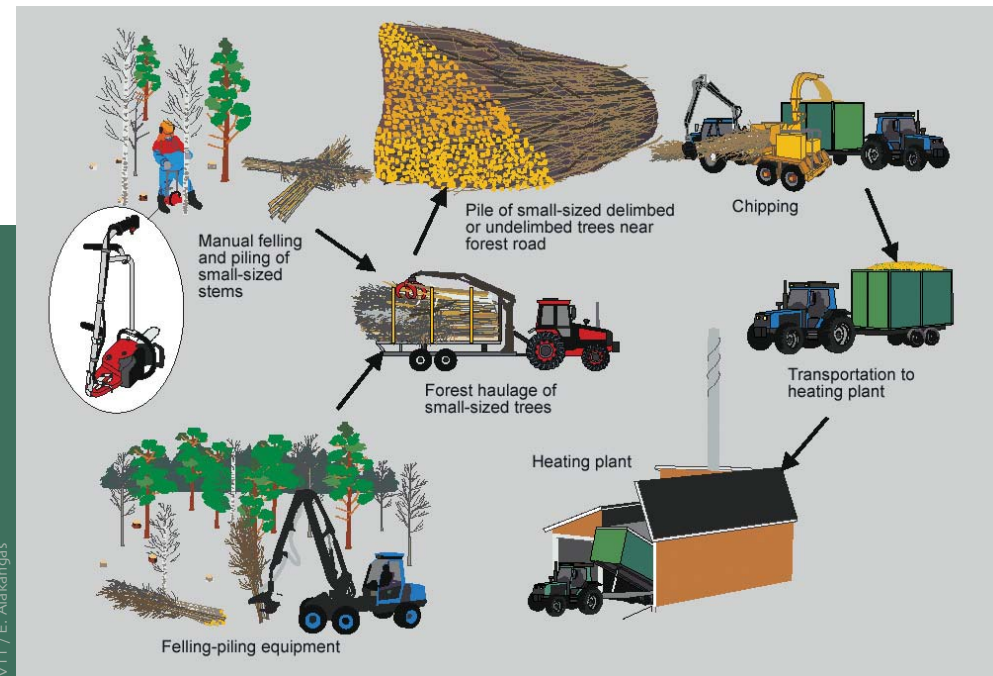


What does Northern WoodHeat aim to do?

The key issue constraining woodfuel market development is confidence: users lack confidence in existing supply chains but these will not expand or proliferate until there is further evidence of demand. Northern WoodHeat will utilise the experience and strengths of project partners from all three countries to develop sustainable local supply chains. Woodfuel production techniques that integrate with and complement existing natural resource management goals and methods will be researched and developed to meet local needs.

At the same time it will design training programmes and produce and circulate literature to improve woodfuel expertise and raise awareness and understanding of the benefits that woodfuel markets can deliver to users, producers, the wider community and the environment.



Types of woodfuel energy production

To date most woodfuel development resources have been directed towards large scale plants such as this one which generates over 400MW of heat and electricity. ▶



www.allholmskraft.com



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◀ Finland is developing co-operative district heating schemes like this plant, supplying 300 homes and several community buildings. It is fuelled by many small-scale woodchip supply operations.



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This 120kw boiler heats a Highland community centre, showing the potential for small scale woodfuel development. ▶



Torren Energy



The Northern Periphery Programme

The NPP is one of 13 Interreg IIIB programmes aimed at encouraging and supporting transnational cooperation between the regions of Europe. It provides the opportunity for organisations from the programme area to work together on joint projects concerning common issues and problems.



DEVELOPING SMALL AND MEDIUM SCALE WOODFUEL SUPPLY CHAINS



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Cover photos Highland Birchwoods and Iain Sarjeant



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Northern WoodHeat is a Northern Periphery Programme funded project managed by Highland Birchwoods with partners in Scotland, Iceland and Finland. It aims to set up small and medium scale woodfuel supply chains that optimise benefits to local communities.

All three partner countries have locally significant forest resources in peripheral areas with scattered small population centres. Additionally, they all have difficulties maintaining thinning programmes because of poor markets for the harvested material. This reduces the value of the timber crop, restricting the profitability of forestry, its contribution to rural development and options for local added value processing.

Local woodfuel markets could help to reverse this trend.



Highland Birchwoods

The participating countries are at varying stages of woodfuel development. Finland has a well established industry, but it is constantly seeking ways to further develop markets, particularly at the smaller scale. Scotland has a fledgling woodfuel industry that faces the problems of high fuel costs, variable fuel quality and lack of potential customer confidence in the security of supply. In Iceland, wood energy is almost entirely undeveloped.

Why use woodfuel?

In Europe the most widely available source of renewable energy is wood which is available in several forms: logs, woodchips and pellets. These can be used at a range of scales from domestic stoves and fireplaces to district heating and combined heat and power schemes producing energy for whole communities, and also for heat-using businesses e.g. horticulture.

Woodfuel is carbon neutral because the carbon released to the atmosphere during combustion is no greater than that absorbed while the wood was growing.

Currently woodfuel accounts for 20% of Finnish energy production, 40% of rural Austrian domestic heating and 40% of all domestic heating in Denmark. However, on a regional basis wood is an under-exploited fuel source in Northern Europe, and increased use will help meet green house gas emission and renewable energy targets.



▲ A RANGE OF WOODFUEL HEATING SYSTEMS FROM DOMESTIC TO SMALL BUSINESS SCALE

All photos on this page Highland Birchwoods

The Main Issues to be addressed by Northern WoodHeat are:

- **ECONOMICS** - The project will trial different woodfuel harvesting, production and transport techniques to determine which are economically viable at the small/medium scale and which are most beneficial to long term forest development.
- **RURAL DEVELOPMENT** - Appropriate business models for woodfuel supply will be encouraged including those based on the estate/farm, community and co-operative formats.
- **IMPLEMENTATION** - The project will help stimulate active long-term support for woodfuel markets through carefully planned and co-ordinated PR strategies targeted at key interest groups such as policy makers, forest resource managers, architects, builders and housing managers.
- **BUILDING EXPERTISE** - The findings from the project trials will be widely disseminated and educational material and training courses will be developed through international co-operation. This will help ensure further market development after the end of the project.
- **SUSTAINABILITY** - Through integrating woodfuel development with natural resource management, local energy markets and local socio-economic structures the project will improve the sustainability of woodfuel.

Iain Sarjeant



Highland Birchwoods

Further benefits of woodfuel use

As well as energy production, using woodfuel has wider positive effects.

FORESTRY: Forest thinning is often delayed or abandoned due to lack of markets for the produce. Thinning can increase the size and quality of the remaining stand but the thinning itself usually produces smaller dimension, low grade timber, which can be more appropriate for large scale fibre using industries than for local added value processing.

The lower timber incomes from thinnings and other low grade timber crops may frequently be exacerbated by high haulage costs to distant markets and can result in negative returns.

Thinnings and low grade timber can be used as woodfuel. Establishing woodfuel heating schemes in peripheral areas would use this resource locally, cutting haulage costs while increasing local forestry incomes and improving the value of future timber crops.

Research has shown that high stocking densities are optimal for

woodfuel harvests. This gives flexibility in terms of restocking, allowing exploitation of silviculturally beneficial mixtures.

EMPLOYMENT: Local employment and business opportunities will be created through the woodfuel supply chains. Small scale supply chains require less specialist equipment and therefore provide opportunities for local contractors, community woodland groups and farmers to enter the market. Moreover the improved quality of the remaining resource will further increase options for local added value processing.



Kenny Kortland

BIODIVERSITY: More mixed woodlands, and increased thinning and felling will improve the biodiversity of woodlands and forests. For example, thinning is a vital part of a project

aiming to recreate woodland habitats suitable for Capercaillie. Such management techniques will also improve landscape values and recreational values.