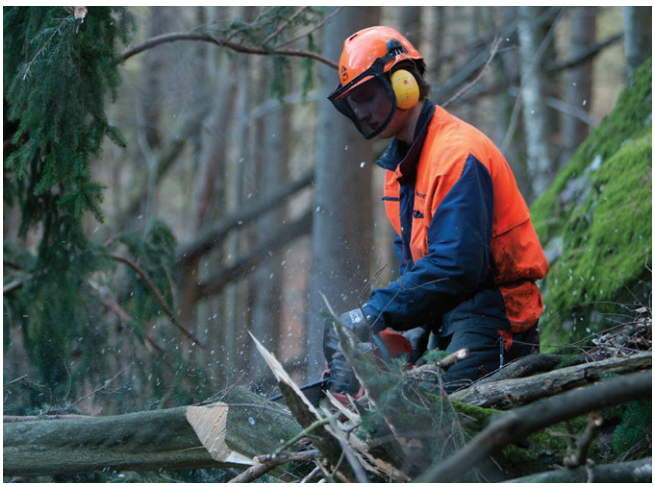
Biomass to the masses



The rise of the biomass energy industry has caused a steep rise in competition for access to this valuable resource. Prices have risen to unprecedented levels in some regions, leaving many businesses in economically challenging positions. FOROPA, a two year project based in Austria, aims to ease some of this resource competition by making improvements to supply chain management across Southeast Europe.

The use of woody biomass for energy has picked up great momentum in recent years, with countries such as Austria having introduced it with great success as a source of modern heating. This has, however, led to a situation in which the traditional users of similar wood assortments within the woodworking industry are now struggling to remain viable. Competition between material use and energetic use is high, especially for low quality biomass previously only used for pulp milling and chipboard panelling.

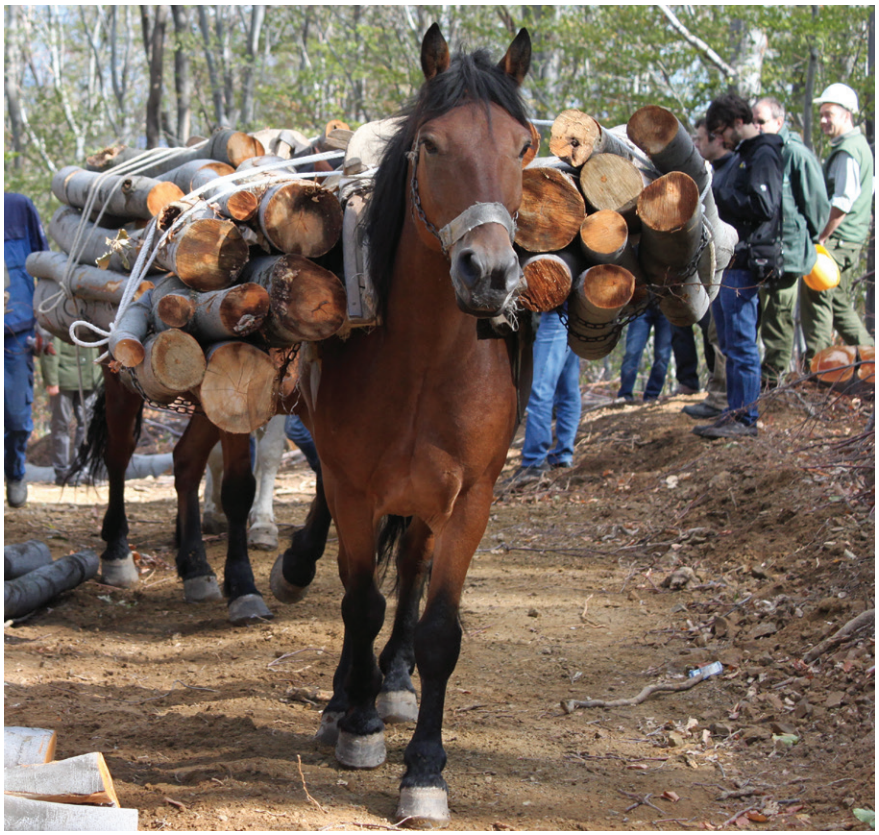
Roland Oberwimmer represents a wood cluster organisation, Holzcluster Steiermark GmbH, which works with people from the woodworking industry in Styria, Austria. "Our clients have been voicing concerns that prices for woody biomass are going to reach a level at which their business will no longer be attractive, and these voices have been getting ever louder," he says. "Many of them believe that the two industries cannot coexist with each other."

"The project, named FOROPA, aims to promote and strengthen clusters and networks in order to enhance the use of lignocellulosic biomass in Southeast Europe"

With the problem reaching boiling point, Oberwimmer and his colleagues decided that something had to be done. They realised that they had two strategies available to them that could help relieve some of the financial pressure on the woodworking industry: either increase the available biomass on the market, or bring the cost of biomass down. After speaking with representatives of the forest owner's association in Styria, however, they were surprised to find that the businesses involved in biomass heating were also struggling.

They were in agreement with us that action needed to be taken either by improving the supply chain or by getting access to new sources of biomass," says Oberwimmer. "This was the starting point for our project, focusing on the efficiency of existing supply chains where we can improve the cost structure in the mid term. At present, a lot of by-products from timber harvesting remain unused in the forest, and so by making it economically viable to transport this biomass out, we can increase the total amount available."

The project, named FOROPA, aims to promote and strengthen clusters and networks in order to enhance the use of lignocellulosic biomass in Southeast Europe. Relevant existing national and regional entities will be coordinated in order to encourage and foster innovation of all actors along the biomass utilisation chain, including private and state



PROJECT PARTNERS

- Wood cluster Styria Ltd. (lead partner), Austria;
- Centre for Research & Technology Hellas/Institute for Solid Fuels and Technology Applications, Greece;
- TIS Techno Innovation South Tyrol scpa, Italy;
- Forest Association Styria, Austria;
- Slovenian Forestry Institute, Slovenia;
- National Forest Centre, Slovakia;
- University of Natural Resources and Life Sciences Vienna – Institute of Production and Logistics, Austria;
- Transylvania University of Brasov, Romania;
- Association of Private Forest Owners "Our Forest" Čelinac, Bosnia and Herzegovina;
- PE Srbijasume, Serbia;
- FORZA, AGENCY FOR SUSTAINABLE DEVELOPMENT OF THE CARPATHIAN REGION, Ukraine;
- Graubünden Holz, Switzerland;
- Biomass Energy Graubünden, Switzerland

forests, logging and transport enterprises, biomass traders and converters, primary wood processors and heating plant operators.

Interest in unused residues - branches, treetops - had already risen amongst some entrepreneurs working for the supply chain companies, and so initially the project set out to speak to the various stakeholders about their problems and what they needed to create a more efficient supply chain. This was done through intermediaries such as the private forest owner association and various cluster organisations.

"Through the intermediary groups, we carried out structured interviews and workshops with the relevant stakeholders," states Oberwimmer. "We then used data from these to carry out analyses and try to come up with suggestions of how to improve the situation. Research institutes were integral for this process, as they also were able to highlight areas in which technological solutions could be easily introduced."

In 2014, work so far has involved formalising and creating pilot cases, which consist of small on-site test runs for focused improvements of the supply chain. This is being done in cooperation with the same enterprises that were interviewed in the initial stage of the project, and Oberwimmer believes that the continuing feedback they are receiving from them is a key aspect of the project. "The longer we keep up these levels of communication, the more likely it is that we will provide solutions that make sense, money and can be

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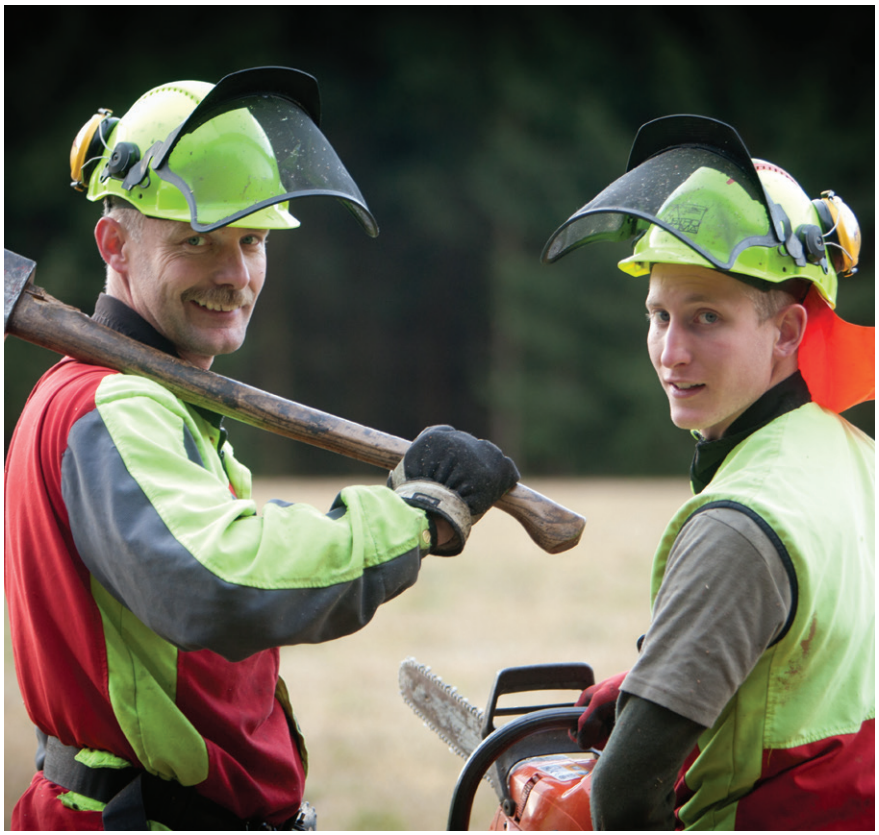

incorporated and developed into the enterprises' business models. It is in this way that the project continues, in smaller spin-offs at company level."

With the project still only a year in, the implementation phase is not yet complete, but the impact that the scientific approach has had is already tangible. There is plenty of academic literature regarding biomass available through journals and online, but as yet there is no unified or agreed upon approach to the topic, especially when it comes to supply chain management. "Bringing a unified methodology to the intermediaries and the end users has, I think, helped to change the state of mind of some in the sector by ostensibly showing the added value that this kind of approach can bring," says Oberwimmer. "It has also provided us with an incredibly useful dataset about the supply chains in Southeast Europe."

Forestry policy necessarily remains a national agenda in Europe, but the lack of a unified policy means that the difference in practice between countries is sometimes huge. The basic set up remains the same: forests are owned privately, and the biomass is harvested by small enterprises, but differences in technology can vary wildly. "In Styria, the supply chain management of biomass is fully mechanised, with a lot of information and communication technology integrated into the process," states Oberwimmer. "If you go across the border to Slovenia, however, the huge machines suddenly become chainsaws, and the sophisticated transport vehicles become tractors or even horses."

"Despite these differences, when you look beyond the technologies, the needs of the supply chains are often the same. They want to get biomass at the right price, at the right time, of the right quantity and of the right quality to the right place."

With the project due to end in November 2014, there will still be much room for improvement in the supply chains of Southeast Europe beyond FOROPA. Initial plans for the project involved technology transfer from countries with more developed forestry industries to some of the less developed ones, but Oberwimmer believes that the real gap between regions actually lies in organisational innovation. "In certain areas, we found that intermediary groups like forest owner associations simply did not exist, meaning that heating plants were often left to organise the transport of products from thousands of different forest owners. We hope in the future to be able to support the foundation of these types of groups."

AT A GLANCE

Project Information

Project Title:
FOROPA: Sustainable Networks for the Energetic Use of Lignocellulosic Biomass in South East Europe

Project Objective:
Project objectives comprise (i) introducing innovative solutions and standards for a forest biomass-based supply chain management by building research networks and clusters, (ii) improving local biomass supply chains through cross border cooperation, (iii) closing innovation gaps by transferring know-how between stakeholders and regions, and (iv) strengthening the competitiveness of forest biomass in the energy market in the SEE area and beyond.

Project Duration and Timing:
24 months, December 2012 to November 2014

Project Funding:
Total amount 1.72 mio EUR. 15% State contribution (national), 85% ERDF/IPA contribution

MAIN CONTACT

Mr. Roland Oberwimmer
Mr. Roland Oberwimmer studied wood technology, strategic forest products marketing, and operations research applications at the BOKU, Vienna, and at the University of Helsinki. He has a 10 years' experience in the fields of market research, cluster policy, and wood technology. At Holzcluster Steiermark, he is responsible for the development and implementation of international projects. Since 2009, he is doing project coordination within the programmes FP7 and ETC.

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