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Interim Report **IR-02-038**

WOODPOINT - A network of mechanical wood processors.

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Innovative Rural Development Initiatives

Case Study 9: WOODPOINT

A network of mechanical wood processors

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Introduction

WOODPOINT is a network of enterprises engaged in the mechanical wood-processing industry in Finland's western coastal region of Ostrobothnia. The network's member companies are involved in all types of wood processing, including carpentries, joineries, and sawmills. They produce a wide range of wooden products, from houses and furniture components to industrial packaging.

WOODPOINT's headquarters are located in the center of Vaasa, the region's largest city, and is run by project leader Stefan Råback and four other employees. Råback is fluent in both of the region's official languages, Finnish and Swedish.

The network caters to the entire region, providing its member companies with services intended to help them in the development of their businesses. These include consultations in the fields of marketing, investments, and technology. WOODPOINT also organizes educational courses and workshops for its members and assists them with national and international trade fair participation. Most importantly, the network advises and aids members in obtaining subsidies from funds provided by the Finnish government and the European Union.

Since its creation in 1996, WOODPOINT has more than doubled its membership to a current 195 companies (April 2002). The largest member company employs a workforce of up to 370, while the smallest members are true one-man-shows.

"There are approximately 240 small and medium-sized enterprises in the region, of which almost 200 are WOODPOINT members," Råback said in an interview with IIASA's ERD team. "There is no serious company in the region that is not a member. Those that are not members are very small companies that mostly operate only two months a year."

WOODPOINT itself is a sub-unit of the regional Coastal Forestry Center that, in turn, operates under the guidance of Finland's Ministry of Agriculture and Forestry. However, the network receives no financial support from the Coastal Forestry Center, instead relying solely on external money from both government sources and private investment.

The network's member companies are spread throughout Ostrobothnia's 18 municipalities. For the following case study report, IIASA's ERD team visited four WOODPOINT member companies in two provinces—Vöyri and Pedersöre. These four companies are briefly introduced below but will be described in more detail further on in this report.

1) Norrtimber—a sawing company specializing in the processing of round section timber for the construction of log houses.

2) Nyqvist Elementhus—a com-

Image 1 Typical wooden houses in the municipality of Pedersöre.

Image 2: Birch tree logs at Kvalitimber, a WOODPOINT member company in the Pedersöre municipality.

pany producing wooden pre-fabricated element houses.

3) Kvalitimber—a sawing company owned by a former cross-country skiing champion that caters to companies requiring specific wood forms.

4) Lappfors Snickeri—a company fabricating machine-carved wooden components, primarily for the furniture and house interiors industry.

History of WOODPOINT

The idea for the WOODPOINT project stemmed from a study on small mechanical wood-processing enterprises in Ostrobothnia, carried out in 1996 by Peter Mattbäck at the Coastal Forestry Center. In that study, Mattbäck discovered that there were a surprisingly large number of companies in the region involved in mechanical wood processing, but that most of these were virtually unknown to each other as well as to the public. In an effort to help these companies develop better business strategies, Mattbäck hired Stefan Råback to create WOODPOINT.

"It was quite difficult to build up such a project," said Råback. "It was a lot of hard work getting information on the companies, collecting the necessary money, and even finding a name for the project."

After finishing his Forestry studies at the University of Helsinki, the now 32-year-old Råback returned to his hometown of Vaasa. He grew up bilingual (Finnish and Swedish), which is perfect for the network considering 85% of WOODPOINT's members are of Swedish origin.

Råback said the English name "WOODPOINT" had been chosen because English was a language that was "international and understood worldwide."

Throughout most of 1997, Råback worked on his own at WOODPOINT, collecting some 70–80 member companies before the project was expanded. Mårten Lövdahl joined in May 1988 as the project's coordinator and was followed by information technology advisor Leif Häggman in 1989.

Häggman, a former cross-country skiing champion, only works part-time at WOODPOINT since he also owns the mechanical wood-processing company Kvalitimber, which will be described in more detail later in this report. Häggman primarily helps member companies get started on the Internet.

Although he has no official training in computer programming, Häggman also produced a software tool in Microsoft Excel that facilitates the measuring and price calculation of timber. The program is available to customers for 60 Euros with updates costing 20 Euros.

WOODPOINT was able to expand yet again in May 2000, when local financers agreed to donate more money after expressing their satisfaction with the project and its results. Two further staff members—an advisor for marketing issues and another one for technical matters—were hired.

Peter Mattbäck, the man whose innovative idea marked the beginning of WOODPOINT five years ago, is still the acting chairman of the network. "Back then, there were no plans to develop a project as large as WOODPOINT," said Råback. "It often still amazes me that we were able to build up a network like this."

WOODPOINT Management—Structure, Budget, and Administration

WOODPOINT is a special unit operating under the guidance of Ostrobothnia's Coastal Forestry Center (called "Metsakeskus Rannikon" in Finnish), which in turn, falls under the guidance of the Finnish Ministry of Agriculture and Forestry. A representative of the Coastal Forestry Center told IIASA's ERD team that the Center receives 50% of its funding directly from the national government, with the rest coming from other governmental funds as well as private donations.

The Coastal Forestry Center's main task is the development of regional forestry, such as the construction of roads, yearly cuttings, and the regeneration of forests. Several projects, such as WOODPOINT, exist under the supervision of the Coastal Forestry Center. However, all of these projects get separate funding from various other sources.

WOODPOINT rents its offices in the center of Vaasa from the Coastal Forestry Center, which is also responsible for the network's administration. Due to the lack of a showroom at the network's relatively small premises, a wall in Råback's office is used instead. It is plastered with the many media articles that have been written about WOODPOINT over the past six years. Many of the items produced by member companies are also on display here.

Although the network is responsible for its own funding, only a small part of its budget comes from private investment. In 2001, WOODPOINT's total annual budget of 368,332 Euros (2,190,000 Finnish Marks) was provided by four different sources (Table 1 and Figure 1). Of these four, only 13% (48,774 Euros) came from private funding. The remaining 87% came from governmental and European Union sources.

In more detail, 50% (179,961 Euros) of the yearly 2001 budget was provided by the regional "Employment and Economic Development Center," also known as the TE-Center. This center is run by various Finnish ministries, such as the Ministry of Trade and Industry, the Ministry of Agriculture and Forestry and the Labor Ministry. Approximately 40% of the subsidies granted the by the TE-Center are provided by the Finnish government, while the remaining 60% is European Union money.

A further 21% (79.048 Euros) of WOODPOINT's annual budget in 2001 came from the Regional Council of Ostrobothnia and 16% (60,547 Euros) was from the region's 18 municipalities.

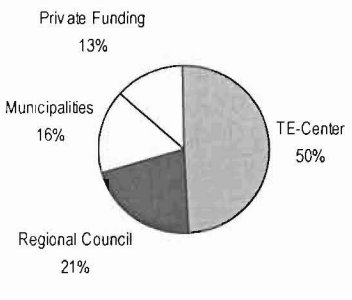
WOODPOINT also collects yearly membership fees of 50 Euros from each company. Råback said: "This fee is purely symbolic. We didn't think it was a very good idea for members to think they were getting our services for free. I think they take us seriously because they pay." Member companies also pay for services they have specifically requested.

Råback said the network's five employees are responsible for all operational decisions while strategic decisions are taken by WOODPOINT's board. The board is made up of the network's biggest financers as well as eight member companies and the network's five employees.

Table 1 and Figure 1: WOODPOINT's 2001 budget by currency (Finnish Marks and Euros) and as % of total.

	Finnish Marks	Euros
TE-Center	1,070,000	179,961.10
Regional Council	470,000	79,048.33
Municipalities	360,000	60,547.65
Private Funding	290,000	48,774.50
Total	2,190,000	368,331.60

Source: (Both Table 1 and Figure 1) WOODPOINT



WOODPOINT Services

All of the four WOODPOINT member companies visited by IIASA's ERD team underlined the important role the network had played in obtaining subsidies for them. Råback said that so far WOODPOINT had helped 100 of the network's 195 members obtain subsidies from the TE-Center.

The TE-Center will grant subsidies of some 15-35% for the buying of machinery and the construction of new buildings, while subsidies for developing purposes, such as for marketing, can amount to a maximum of 50%.

Råback said WOODPOINT provided members with information about available subsidies before helping them with the necessary application paperwork. "We then present these applications at the TE-Center, which then decides if the subsidy will be granted," he said.

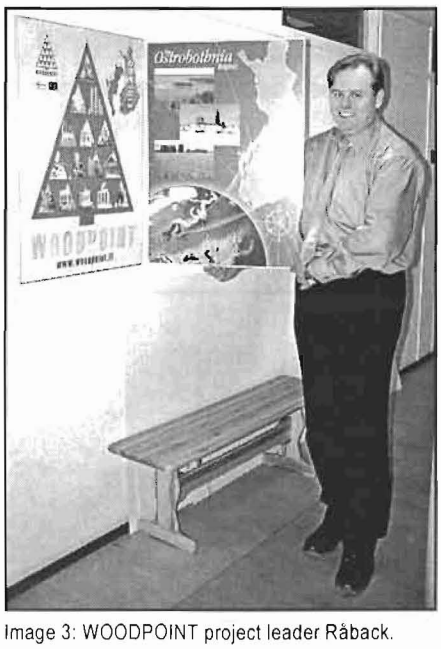


Image 3: WOODPOINT project leader Råback.

WOODPOINT also promotes interaction between its members for business purposes as well as promoting and helping companies participate in fact-finding travels, exhibitions, and trade fairs. On average, the network takes part in some five national and international trade fairs a year.

Peter Norrgård, owner of the company Norrtimber, told IIASA's ERD team that he had especially profited from WOODPOINT's exhibitions as it had helped him meet new clients. He said: "The network also helped me learn more about the other member companies and what they are doing."

Over the past years, WOODPOINT organized several educational courses and workshops for its members. These ranged from general workshops for all members on a specific topic, such as wood drying, to specially tailored courses for individual companies, such as courses on how to use a specific machine. Råback said specialized consultants had been hired for this work and that they were paid per assignment. In 2000, an average of some 2.5 persons a day were involved in some form of WOODPOINT education.

These courses and workshops, however, have been stopped for the moment and the network has not yet decided when and if they will resume. "We want to focus more on helping the companies develop their business, we don't have the time nor the necessary staff for organizing these things," Råback said, adding: "Getting the funding for these courses from the TE-Center simply requires too much administrative paperwork."

As part of their marketing strategy, WOODPOINT also has its ownmagazine that is printed four to five times a year and provides information on member companies. Råback said the magazine was regularly distributed nationwide to some 1,300 businesses that it considers to be potential clients for its members—such as building societies. In March 2001, the magazine was printed in color for the first time.

"The magazine is a good way to make the market aware of our members and their products," said Råback. "It's also good advertising for us. However, we want the spotlight to be on them not on us."

Among its many services, WOODPOINT also offers consulting on issues dealing with better marketing strategies, more resourceful production technology, and more efficient investment and development plans, as well as helping member companies learn how to use information technology.

"We have helped some 60 member companies create their own websites. This is not a big figure but at least it's a start. Without our help and our advertisement on the benefits of the Internet, probably only 30 of these companies would have websites today," Råback said.

However, of the four companies visited by IIASA's ERD team, three had homepages and only two said they had profited from these. Of

these two, one belongs to Leif Häggman, the part-time WOODPOINT employee responsible for the network's information technology.

The company visited by IIASA's ERD team without a homepage, Nyqvist Elementhus, had no plans of acquiring one in the future. The owner, Roy Nyqvist, said: "We already have enough work without an Internet site. If we had an Internet site, then we would have more clients. If we had more clients, we would have to increase our production. If we increase our production, then we need more employees."

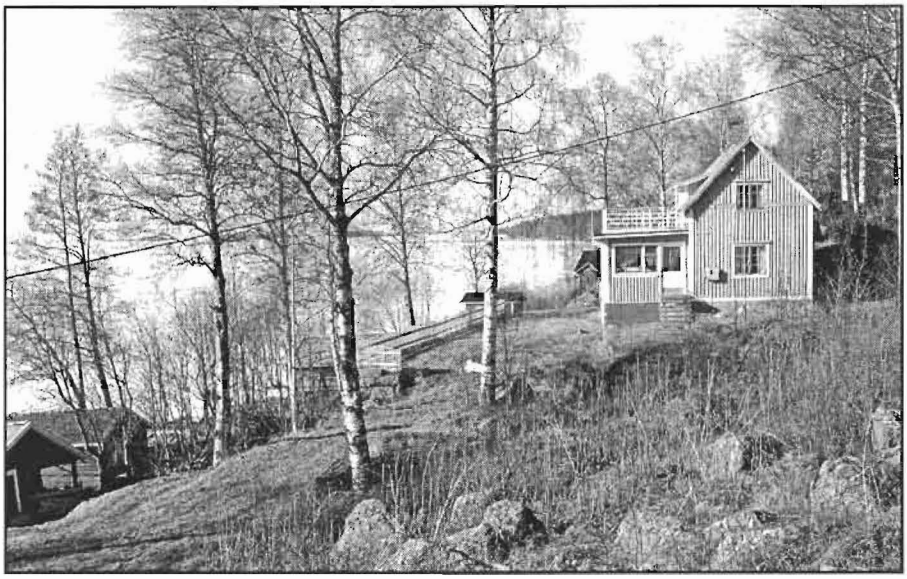


Image 5: Wooden houses along the coastline in the municipality of Vaasa.

WOODPOINT and New Technologies

WOODPOINT not only helps its members create their own Web sites, it also visibly places a lot of emphasis on its own homepage, which boasts an average of some 25,000 visitors a month.

During the visit of IIASA's ERD team to the network's headquarters, WOODPOINT was in the process of creating a new and more sophisticated site. We were able to view examples of the new homepage that, like the old one, will also be available in three languages—Finnish, Swedish, and English.

Råback said that while the current website primarily gives information on WOODPOINT itself, the new homepage would focus more on the member companies. The new site will have its own search engine and will be organized according to production items.

Although WOODPOINT is planning and designing the pages itself, a local IT company is responsible for the programming. Råback said the IT company was providing the service for free. "We were able to convince them that they could also get a lot of customers by making our site," Råback said.

WOODPOINT also has a state-of-the-art database with detailed information on all its member companies. As most of the information is confidential, this database is obviously not on the Internet and is also not available to members. It is purely for the use of WOODPOINT employees, who regularly document all the work that WOODPOINT has undergone with each individual company.

"The database helps us tremendously. This way we can be informed about every single thing that goes on between our member companies and ourselves. We can find out about these things via the database and therefore don't have to bother each other with questions," said Råback.

Image 4: Typical northern European red wooden houses in the municipality of Vöyri.

WOODPOINT's

Member Companies:

Norrtimber

Norrtimber is a one-man company specialized in the processing of round section timber for the construction of small and medium-sized log houses. The enterprise belongs to Peter Norrgård, a 35-year-old former farmer who also designs and constructs log houses upon request. His business is situated on his family's farm in the municipality of Vöyri in the region of Ostrobothnia. The closest urban area is the city of Vaasa, which is some 40 kilometers away.

History of Norrtimber

The Norrgård family is, like so many rural inhabitants in Ostrobothnia, of Swedish origin. The family lived off agriculture for many years but were forced to look for other alternatives when Finland joined the European Union in 1995 and, as a result, prices for poultry and eggs dropped radically. Peter Norrgård said: "The EU was not the only reason I got into wood processing, but it was one of the main reasons."

Although the Norrgård family sold all their chickens back in 1995,

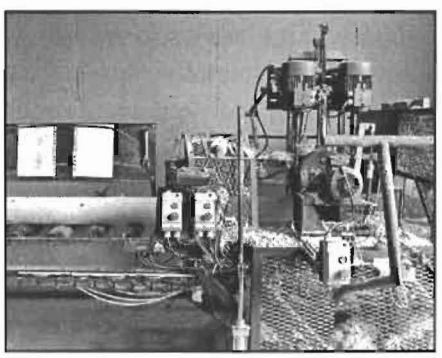


Image 6: Sawing machine for round section timber.

Image 7: Entrance to the Norrtimber Company.

they still live off agriculture in summer. They have some 56 hectares of grain fields, of which 46 hectares is their own land and 10 hectares is rented property.

In the winter, the Norrgårds live off Peter's mechanical wood-processing business. Peter Norrgård primarily uses pinewood, which can only be processed in cold temperatures due to the color-changing effect of heat on this wood type.

Norrgård's idea to start such an enterprise stemmed from the municipality's suggestion, which was based on the region's lack of such industry. Norrgård told IIASA's ERD team that his main business was not agriculture but mechanical wood processing.

WOODPOINT project leader Stefan Råback said: "Norrtimber is a very good example of a one-man company in a rural area. It started from nothing and is now selling its houses for a good price throughout the whole of Finland."

Norrtimber's Operation

Norrgård has set up his enterprise so that he can work entirely on his own. He performed his wood-processing procedure impressively for us during the visit of IIASA's ERD team to his premises. We were also impressed by the orderly and clean way in which Norrgård works.

With the help of a crane, Norrgård can move the heavy timber onto his processing machines. A sawing machine first peels off the bark, leaving a round log with an extremely smooth surface. Another machine then grooves and mortises the log, creating small rectangular and circular shaped indents respectively. This second procedure allows for the logs to be fitted on top of each other for construction purposes.

The timber is either provided by the clients themselves, if they are forest owners, or Norrgård has to order it himself and arrange for its delivery at his company premises. Although most of the waste from the bark is not used, Norrgård is able to sell some of it to companies that require it for building purposes. This type of leftover is, for example, used for the building of athletics running tracks.

The logs also have to be cut to the right lengths and carefully num-

Image 8. Peter Norrgård and his crane.

bered in accordance with the design of the log house. This is to facilitate construction for his customers. Sometimes, Norrgård is asked along to help with the actual construction.

Norrgård is also often asked to design the houses completely. Although he has never had any formal training in design, he can make the complex technical drawings required by hand. He has designed large houses, small summer huts, dollhouses, saunas, barbeque shelters as well as furniture such as tables, chairs, and beds. He has also made wooden components for house interiors such as staircases.

We were impressed by the creativity of his designs, which we were able to witness through photographs. Norrgård also has two of his log houses on exhibition at the front of his premises.

Investment and Turnover

In 1995, WOODPOINT helped Peter Norrgård obtain subsidies from the TE-Center. These subsidies helped him cover some of the costs for his sawing machines, as well as for the construction of a new storage hall and for an advertisement brochure. The brochure spreads over both sides of a glossy A-4 sheet, and has photographs of Norrgård's constructions. The brochure does not include a price list.

Norrgård told IIASA's ERD team that the wood-processing machines initially cost 50,455 Euros, but that they were now easily worth double because of all the technical improvements he had undertaken. In the near future, he is planning the construction of yet another storage hall, which also implies that his business is doing well.

The Norrtimber Company has an annual turnover of some 100,000 Euros. Norrgård said this sum varies from year to year, as it is dependent on the amount of orders he receives and the size of the houses requested.

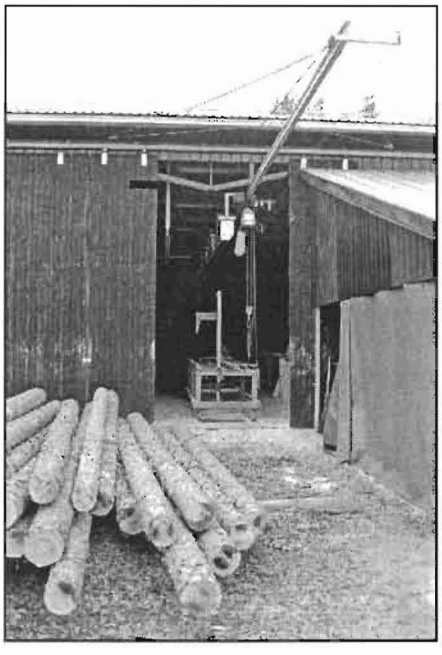


Image 9: Another view of Norrgård's crane.

Problems

Although the Norrtimber Company appears to be flourishing in spite of it's remote geographical location, the area may generally be a bit too rural and lacking in infrastructure for other young people of Norrgård's age.

Norrgård said he liked the area, because it was the place of his birth, and aded that he plans to remain there. If his business should expand within the next years, we can imagine that finding workers might become a problem. Norrgård sometimes has a part-time employee but this person is from the area and only helps out at the Norrtimber Company when he has time.

WOODPOINT's Råback admitted this was a general problem in the region. "There is very little infrastructure in the countryside here and this is a big problem, especially for young people. The main activities for people between the ages of 20 and 30 are fishing and other activities in nature."

Råback said there were some youth centers that served as meeting points for young people, but we doubt that this will be enough to attract them to the area. Råback said WOODPOINT was not involved in activities to help improve the region's infrastructure. He added the network simply did not have the time for such activities.

WOODPOINT's Contribution

Peter Norrgård said his business had profited from WOODPOINT in various ways. He said the network had helped him gain new clients and learn more about other member companies. But above all, he said WOODPOINT had helped him obtain vital subsidies.

Råback pointed out that WOODPOINT had also helped Norrtimber obtain the timber it required from Metsalitto, one of the region's largest forest companies.

"Norrtimber needs logs of a certain diameter and of a certain length, if not he cannot make his constructions. He needs logs that are all of the same diameter," Råback said. "To get such a special size, he would normally have to buy hundreds of hectares of forest and cut thousands of cubic meters of wood. We make sure he gets what he needs."

WOODPOINT's

Member Companies:

Nyqvist Elementhus

Nyqvist Elementhus, a company producing pre-fabricated wooden houses, is located in the middle of woods in the municipality of Vöyri and can only be reached via a dirt road. The closest urban area is the city of Vaasa, some 60 kilometers south. But despite the remote location, company owner Roy Nyqvist employs four full-time and one part-time worker and almost has more orders than he can cater to.

History of Nyqvist Elementhus

Roy Nyqvist inherited the business from his father, who in 1969 had transformed the family farm into a company producing small wooden elements for houses. At the time, the Swedish-speaking family had been unable to live off agriculture and the father had taken on a second job on a construction site. Nyqvist said that back then, several other companies in the area had started up similar businesses but that all had gone bankrupt after a few years.

The Nyqvist company, however, ex-

Image 11: Entrance sign at Nyqvist Elementhus.

panded slowly over the years and received a real boost in 1983, when Nyqvist was able to obtain subsidies for the first time. Nyqvist was then able to hire employees as well as build larger halls for working and storage. His brother became his business associate in 1989.

A few hectares of the premises are still used for agricultural purposes. Instead of cows, the Nyqvist family now has small grain fields for private use only.

Nyqvist's Operation

Nyqvist Elementhus produces prefabricated houses from scratch and has the latest technology in mechanical wood processing to do so. This includes a wood-drying device that circulates warm air throughout one of three large halls on the premises.

The company either orders the logs it requires from specialized companies or receives the wood from clients who own their own forests. The wood is then cut into narrow planks in the main hall—formerly the old barn—before going through the high-tech wood-drying process that can take up to eight days.

The pre-fabricated house is then put together, wall-by-wall - including glass windows provided by Skala, the biggest window producers in Finland. The walls are then painted in the requested colors and packaged for transport.

Investment and Turnover

Due to a lack of subsidies in the late 1960s and throughout the 1970s, the company had to be set up entirely with private money. IIASA's ERD team was unable to discover how the money for the investment had been obtained.

"They invested a lot of money over the past two to three years and they succeeded in improving their business," said Råback.

After the 1983 subsidies, Nyqvist was able to expand his business significantly and now has a turnover of 400,000 Euros, of which 40% is for the purchase of raw materials. The company, however, still relies heavily

Image 10: The Nyqvist Elementhus Company.

Image 12: Sawing machine at Nyqvist Elementhus.

Image 13: A "ready-to-deliver" element house.

Image 14: A view of the Nyqvist Elementhus factory and its surroundings in the municipality of Vöyri.

on subsidies of an undisclosed amount.

"The company would not have survived without subsidies," Nyqvist said. "Without the subsidies, I would have had to find another job."

During the visit of IIASA's ERD team to Nyqvist Elementhus, we were surprised to discover that the company not only lacks a homepage but also lacks any form of advertising, whether in the form of brochures or posters. The only brochure they have provides technical drawings of their houses. We found it odd that Nyqvist has no plans for advertising in the future.

"This is a remote area but we don't need advertising. My family and this business has been around for a while so people in the area know us," said Nyqvist. "We can't have more clients! We would need more employees and higher production."

Nyqvist, however, then said he did plan on doubling the number of his employees within the next two years. With already three large halls on the premises, Nyqvist is constructing yet another major hall for storage.

Problems

The only problem addressed by Nyqvist was the fact that transportation trucks often had difficulties finding their way through the woods to the company.

"You can almost say that they are situated in the middle of the wilderness," said WOODPOINT's Stefan Råback.

But despite this, Nyqvist said: "Sure this is a very remote area but I wouldn't want to live anywhere else."

WOODPOINT's Contribution

When asked how and if WOODPOINT had helped his company, Nyqvist said the network had helped them obtain subsidies and had provided advice on how to invest this money properly. Nyqvist also told IIASA's ERD team that WOODPOINT had helped him obtain "exactly two new customers."

WOODPOINT project leader Råback told IIASA's ERD team that with the help of the network, Nyqvist had received "very big subsidies" of over 30% to buy both wood-processing machines and to construct halls.

Image 15: Roy Nyqvist and one of his wood-transporting tractors.

WOODPOINT's

Member Companies:

Kvalitimber

Kvalitimber is a sawmill specialized in catering to companies requiring specific wood forms of unusual shapes, lengths, and widths. The company was founded by 36-year-old Swedish-speaking Leif Häggman, a former cross-country skier for Finland's elite national team. Häggman is also employed by WOODPOINT as a part-time information technology advisor, giving member companies technical support with their Web sites and other computer-related issues. He also created WOODPOINT's software tool for facilitating the calculation of timber volumes and values, although he never officially learned computer programming. The Kvalitimber Company is situated in Lappfors, a small town with some 300 inhabitants and some 120 kilometers north of Vaasa in the municipality of Pedersöre.

Image 16: Sign at the Kvalitimber Company.

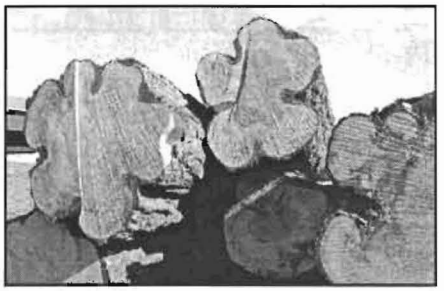


Image 18: Sawed pine tree logs.

History of Kvalitimber

After completing his forestry studies in 1993, Häggman considered setting up his own business due to the poor employment prospects in the region. At the time, he was still competing full-time in cross-country skiing for Finland and traveling with the national team some 200 days a year.

"The reason I chose this business was because it allowed me to continue my skiing career," Häggman told IIASA's ERD team.

In 1994, Häggman founded Kvalitimber together with his brother and the owners of another company from the area, Lappfors Snickeri, a maker of machine-carved components for items such as furniture, boats, and fences. Lappfors Snickeri still owns one-third of Kvalitimber. The two companies neighbor each other on land they lease from the municipality.

At first, Kvalitimber only sawed wood, but then fierce competition forced it very quickly to become more specialized. They began sawing specific forms upon the requests of their clientele and were able to demand higher prices.

When IIASA's ERD team visited the site, Häggman had recently received an order from a Helsinki client who required a plank of wood for a sauna bench. He requested a knotless plank of an unusually long length and width. "A piece of wood like this is very difficult to find," Häggman said. "But we did the job because we know this particular client will pay whatever he has to for such a piece of wood."

Kvalitimber's Operation

Kvalitimber have one medium-sized hall for administrative and storage purposes as well as two big halls for sawing and storage. The most commonly used woods are birch and pine.

The company can boast the latest

Image 17: Leif Häggman standing on birch tree logs at the premises of his Kvalitimer Company

technology in sawing machinery such as a special "band saw" that costs approximately 50,456 Euros (300,000 FM) and is used for bigger logs. "This saw was one of our biggest investments," Häggman said.

Unlike less expensive saws, the "band saw" is computerized and can make measurements digitally. Häggman said this is not only time-efficient but also allows for more precise measuring.

Investment and Turnover

Kvalitimber was created with private investments before it applied and received subsidies in order to expand. The company's biggest expansion occurred in 1998 when it began exporting to Sweden and Norway.

"If you add up all the money that was invested into Kvalitimber from 1994 up until now, then about only 20% of that sum was money from European Union subsidies," Häggman said.

Kvalitimber had an annual turnover in 2001 of 201,825 Euros (1.2 million FM) and Häggman said that figure would increase significantly in 2002.

The company does not advertise at local and regional levels because Häggman feels they have no need for it. The six-times national cross-country champion said: "Having been a sports celebrity definitely helped the business. People knew me as a sportsman and they came to visit Kvalitimber out of curiosity. My popularity put Kvalitimber into the media."

However, Kvalitimber does advertise on the web, with a very simple homepage that Häggman claims earned the company its clients in Sweden and Norway.

Problems

Häggman admitted that building up a business in mechanical wood processing in Finland was difficult. "This is not an easy business. It's especially tough to get started in this region if you don't own your own forest."

Otherwise, Häggman had faced no form of opposition to his enterprise, neither personal nor political. Although he had traveled extensively as a professional athlete, the recently married Häggman said he was happy to be living in the small town where he had been born. He said he had no problems with the remoteness of the area or its lack of entertainment for younger people like himself.

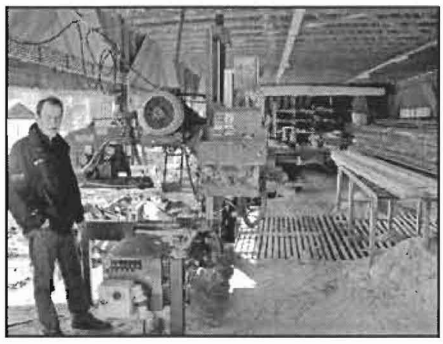


Image 21: Häggman and a sawn plank of pine wood.

WOODPOINT's Contribution

It was difficult for IIASA's ERD team to rate the objectivity of Leif Häggman's statements concerning WOODPOINT, for the simple reason that he is employed at the network as a part-time information technology advisor. Nevertheless, Häggman said WOODPOINT had helped Kvalitimber improve its advertising strategy.

WOODPOINT project leader Stefan Råback told IIASA's ERD team that Häggman had received subsidies twice since 1994—once for the purchasing of machinery and the other time for the construction of storage and sawing halls.

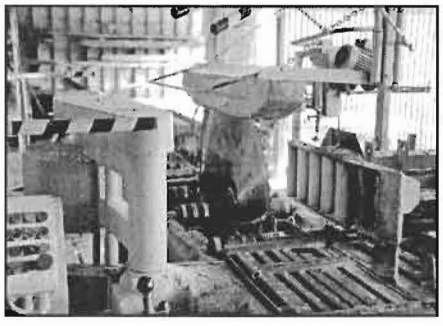


Image 19: A circular saw at Kvalitimber.

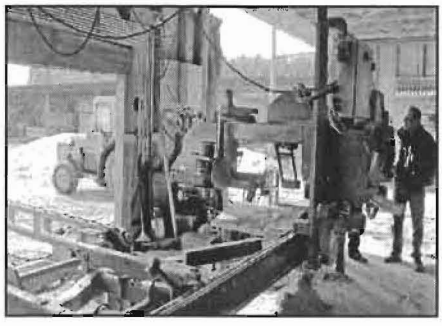


Image 20: Häggman and his digital band saw.

Image 22: Birch logs at the Kvalitimber Company.

WOODPOINT's

Member Companies:

Lappfors Snickeri

Situated in the small town of Lappfors in the municipality of Pedersöre, Lappfors Snickeri is a company producing machine-carved wooden components primarily for the furniture and interiors industry. Owned by Swedish-speaking brothers Christer and Sture Nylund, the company also fabricates wooden components for boats as well as toys for a Helsinki store. The Nylund brothers inherited the company from their father and currently have four employees. They also own one-third of the neighboring Kvalitimber Company described earlier in this case study report.

History of Lappfors Snickeri

Founded in 1945 after World War II, the first products made by Lappfors Snickeri were wooden brushes, brooms, boards, and larger pipes for the transportation of water. The latter was to become the company's main product a few years later before window and door components followed suit. However, from 1958 to 1967, Nylund senior was forced to find employment elsewhere when the wood industry suffered a financial crisis.

In 1976, Christer and Sture, who had both been working in other industries, took control of Lappfors Snickeri by buying out all those who had acquired stakes in the company over the previous years.

Two major investments were made in 1989 and 1999 that allowed Lappfors Snickeri to expand significantly. A new hall was constructed and high-tech machinery was acquired. One of these machines, an Austrian-made digital and computerized woodcarver, is programmed to recognize the shape of a component automatically and reproduce it exactly. They also continue to make use of an older woodcarving machine in which the saws and the measurements have to be installed manually.

The Nylund brothers helped finance the neighboring Kvalitimber Company and still own one-third of it. They did so because Kvalitimber boss and part-time WOODPOINT advisor Leif Häggman is a childhood friend of theirs. In fact, their fathers used to jointly own a sawmill in the 1960s.

Lappfors Snickeri's Operation

Lappfors Snickeri currently has four employees working in two halls crammed with specialized and high-tech carving machines. Christer Nylund told IIASA's ERD team they would require yet another enlargement very soon.

The company also creates special components of thick, bent wood

Image 24: Logo of the Lappfors Snickeri Company.

Image 26: The Lappfors Snickeri Company.

Image 23. Wooden furniture components

Image 25: Lappfors Snickeri owner Christer Nylund

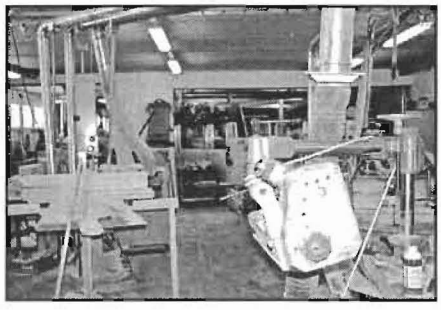


Image 27· Wood carving and sawing machines.

Image 28: A typical road in the rural municipality of Pedersöre in western Finland.

for boats and they require a special machine for this complicated process. For this job alone, the brothers had to employ one full-time worker.

Kvalitimber provides around 30% of the wood needed at Lappfors Snickeri, while the rest is bought from Finland's wood giant UPM. Lappfors Snickeri specializes in carved components that are then delivered to the requesting companies, who assemble the pieces themselves. Furniture components, for example, are delivered to a store some 67 kilometers down the road.

Investment and Turnover

Lappfors Snickeri only received subsidies once in 1999 for the purpose of buying a very expensive Austrian-made CNC woodcarving machine, which is digital and computerized. They may require subsidies once again to expand and build a new hall, as their machines are currently squeezed into two medium-sized halls. The brothers told IIASA's ERD team that they have an average annual turnover of 42,046 Euros (250,000 FM).

Problems

Christer Nylund told IIASA's ERD team that Lappfors Snickeri had no major problems, mentioning only the fact that they would need another hall and more employees. However, at the moment they can afford neither. Occasionally they receive extra help by taking on trainees for a maximum of three months. Sture Nylund said the remoteness of the area posed no problems, neither for their business, for their clientele, nor for transporting their goods.

WOODPOINT'S Contribution

WOODPOINT project leader Stefan Råback underlined the financial help Lappfors Snickeri had obtained from the network. WOODPOINT was vital in helping the wood-carving company receive subsidies to buy the expensive CNC machine that had to be imported from Austria.

Sture Nylund told IIASA's ERD team that WOODPOINT had helped him build a Web site two years ago. "However, this did not improve our business in any way," he said. "We have enough customers as it is, we don't need others. The customers we have, we were able to obtain on a one-to-one basis. This is the type of business we like. This is how we like to do business."

Image 29 A view of the Lappfors Snickeri and Kvalitimber Companies in the Pedersöre municipality.

Analysis of Statistical Data

The four WOODPOINT member companies that IIASA's ERD team visited are situated in two municipalities in the coastal region of Ostrobothnia, which is in the province of Western Finland. These municipalities, Vöyri and Pedersöre, have very similar landscapes. Pedersöre, however, is further north and has gentle rolling hills while Vöyri is very flat. Both municipalities are along the coast of the Baltic Sea—more specifically: the Gulf of Bothnia—although both have very short shorelines.

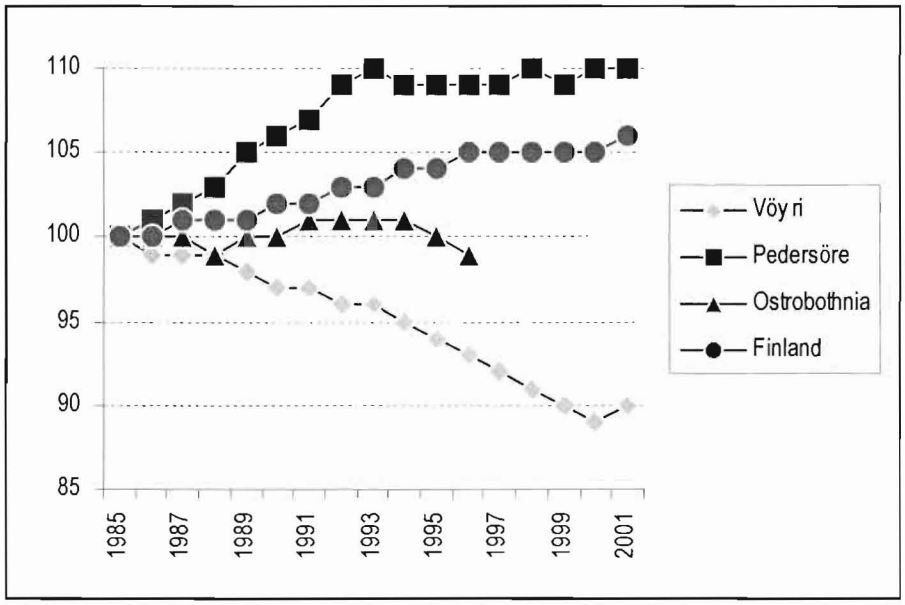
Population Statistics

Vöyri is the smaller of the two municipalities with a total area of 427.12 km^2, of which 424.86 km^2 is land and 2.28 km^2 is water. Pedersöre is almost twice that size with a total area of 823.65 km^2, of which water covers a considerably larger area of 33.16 km^2, and land amounts to 790.49 km^2 (Source: The National Land Survey of Finland, 01/01/2000). In these statistics, the water areas exclude the Baltic Sea.

Although Pedersöre is almost double the size of Vöyri in terms of land area, it has approximately three-times more inhabitants. In 2001, the population of Pedersöre reached 10,260 while Vöyri had 3,566 (see Table 2).

According to the 2000 edition of the Statistical Yearbook of Finland, Pedersöre also has a higher degree of urbanization

Figure 2: Total Population—Vöyri and Pedersöre (Municipalities), Ostrobothnia (Region), Finland (Country), 1985-2001 (Index: 1985=100).



Source: Statistics Finland.

Table 2: Total Population (Vöyri, Pedersöre, Ostrobothnia, Finland).

	Vöyri (Municipality)		Pedersöre (Municipality)		Ostrobothnia (Region)		Finland (Country)	
	Total	1985=100	Total	1985=100	Total	1985=100	Total	1985=100
1985	3,965	100	9,311	100	200,815	100	4,910,664	100
1986	3,930	99	9,408	101	200,923	100	4,925,644	100
1987	3,935	99	9,488	102	200,765	100	4,938,602	101
1988	3,915	99	9,583	103	200,895	99	4,954,359	101
1989	3,904	98	9,768	105	201,157	100	4,974,383	101
1990	3,842	97	9,874	106	201,670	100	4,998,478	102
1991	3,849	97	10,003	107	201,972	101	5,029,002	102
1992	3,801	96	10,120	109	202,333	101	5,054,982	103
1993	3,794	96	10,225	110	202,477	101	5,077,912	103
1994	3,754	95	10,180	109	202,162	101	5,098,754	104
1995	3,713	94	10,131	109	200,857	100	5,116,826	104
1996	3,682	93	10,162	109	199,836	99	5,132,320	105
1997	3,658	92	10,171	109			5,147,349	105
1998	3,630	91	10,194	110			5,159,646	105
1999	3,588	90	10,150	109			5,171,302	105
2000	3,551	89	10,258	110			5,181,115	105
2001	3,566	90	10,260	110			5,194,901	106

Source: Statistics Finland.

Table 3: Total age groups for Vöyri, Pedersöre, and the region of Ostrobothnia, 31/12/2001.

	Vöyri		Pedersöre		Ostrobothnia	
	Total	%	Total	%	Total	%
0-4	196	5.5	795	7.7	9,521	5.5
5-9	193	5.4	918	9.0	11,039	6.4
10-14	254	7.1	938	9.1	11,413	6.6
15-19	221	6.2	782	7.7	11,350	6.5
20-24	177	5.0	638	6.2	11,361	6.6
25-29	148	4.2	546	5.3	9,752	5.6
30-34	201	5.6	549	5.4	10,558	6.0
35-39	215	6.1	616	6.0	11,133	6.4
40-44	220	6.2	651	6.3	11,198	6.4
45-49	236	6.6	658	6.4	12,430	7.3
50-54	260	7.3	742	7.2	13,120	7.6
55-59	235	6.6	579	5.6	10,925	6.3
60-64	195	5.5	453	4.4	9,121	5.3
65-69	194	5.4	334	3.3	7,807	4.6
70-74	178	5.0	354	3.4	7,352	4.2
75-79	174	4.9	324	3.2	6,668	3.8
80+	269	7.5	383	3.8	8,335	4.9

Source: Statistics Finland.

than Vöyri. Approximately 60% of the population in Pedersöre lives in built-up urban areas, while in Vöyri only 40% does.

Also, the population of Vöyri has steadily decreased between 1985 and 2000 (see Figure 2) from 3,965 to 3,551 before only ever so slightly recovering in 2001. In stark contrast, the population of Pedersöre steadily increased from 9,311 to 10,260 within the same time span.

The population in the region of Ostrobothnia remained fairly steady between 1989 and 1994, at approximately 202,000 inhabitants, before starting a downward slide until 1996. In Finland as a whole, the total population increased minimally from 4,910,664 in 1985 to 5,194,901 inhabitants in 2001.

The municipality of Vöyri

Returning to the situation in Vöyri: the municipality has not only had a population decrease over the past 16 years, it also has an unusually

Tables 4 and 5: Population by age and sex for Vöyri, Pedersöre, Ostrobothnia, Lansi Suomi, and Finland, 31/12/2001.

Males								
	0-4		5-14		15-64		65+	
	Total	%	Total	%	Total	%	Total	%
Vöyri	108	6.1	235	13.3	1,098	62.3	320	18.2
Pedersöre	409	7.8	941	18.1	3,224	63.3	595	11.4
Ostrobothnia	4,963	5.8	11,615	13.5	57,006	66.4	12,252	14.3
Lansi Suomi	50,839	5.6	115,011	12.7	615,348	68.4	118,201	13.2
Finland	146,445	5.7	329,065	12.9	1,756,651	69.2	305,436	12.1

Females								
	0-4		5-14		15-64		65+	
	Total	%	Total	%	Total	%	Total	%
Vöyri	88	4.8	212	11.7	1,010	55.9	495	27.5
Pedersöre	386	7.5	915	17.9	2,990	58.7	800	15.8
Ostrobothnia	4,558	5.2	10,837	12.4	53,942	61.8	17,910	20.5
Lansi Suomi	48,209	5.1	109,374	11.6	596,636	63.5	185,963	19.7
Finland	140,347	5.3	315,730	11.8	1,719,292	64.7	481,935	18.1

Source: Statistics Finland.

Figure 3: Population by age and sex in Vöyri, 31/12/2001.

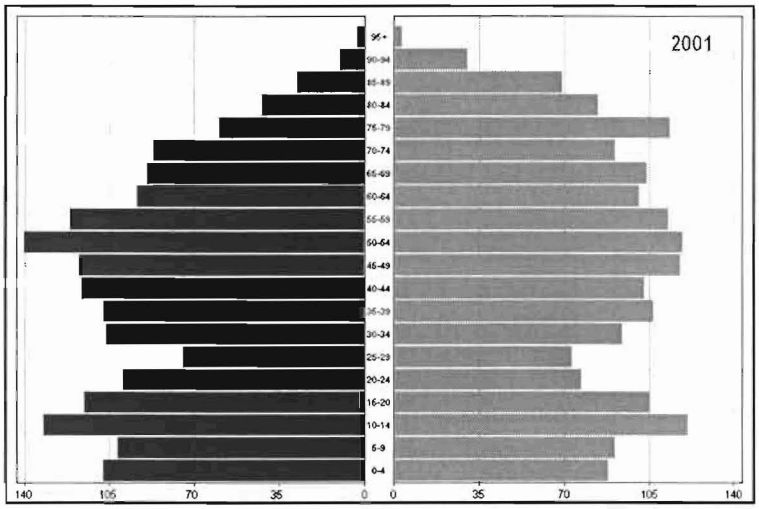


Figure 4: Population by age and sex in Pedersöre, 31/12/2001.

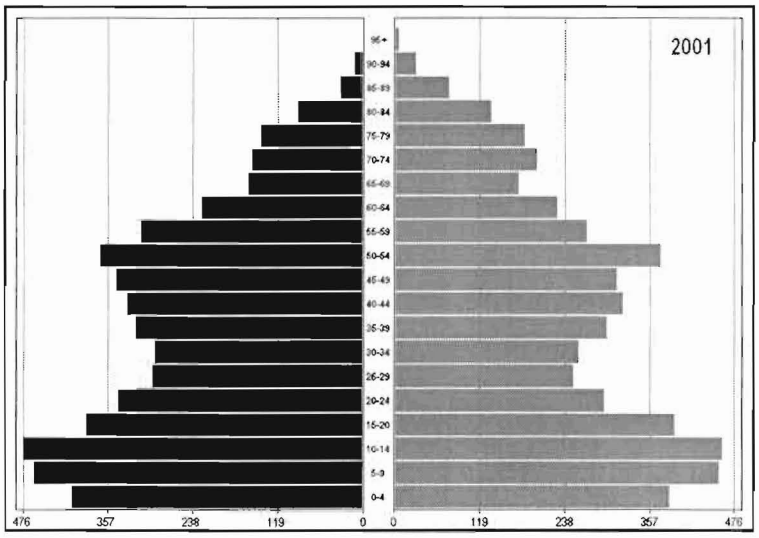
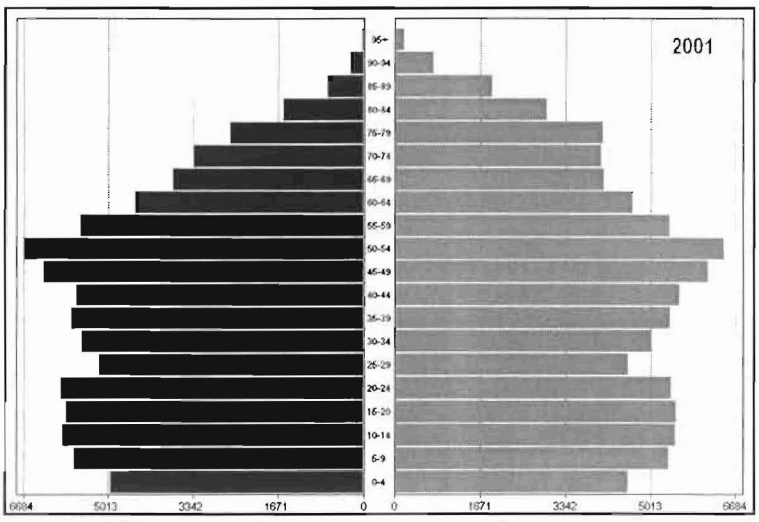


Figure 5: Population by age and sex in Ostrobothnia, 31/12/2001.



Source: Statistics Finland.

high number of old people. In 2001, around 7.5% of the population was over the age of 80! When split up into age groups of five years as in Table 3, we see that the number of people in the age group 80+ is larger than in any of the other age groups.

As can be seen in Tables 4 and 5, the majority of people in Vöyri over the age of 65 is female (see Figure 3). In the younger age groups, there are significantly more men, especially between 15 and 64.

Returning to Table 3, we see that the 25-29 age group comprises the lowest number of people: 4.2% of the total population of Vöyri. The two surrounding age groups also have low percentage figures of 5.0% for the 20-24 group and 5.6% for the group aged between 30 and 34. This suggests a high out-migration of young people.

Although there is no general trend in the migration statistics for Vöyri, Table 6 and Figure 7 show that between 1976 and 2000, the out-migration figures have mostly been higher than those for in-migration. Since 1994, the figures for total net migration have been negative.

Although the number of live births in Vöyri has been relatively stable from 1976 to 2000, it has always been exceeded by the number of deaths (see Table 6). This has caused a birth deficit for most years (see Figure 7) in which negative figures have been posted in all but two occasions (1978 and 1986) over the past 16 years. In 1999 and 2000, the birth deficit contributed significantly to the population decline.

Overall, Vöyri is a sparsely populated rural area with a steadily decreasing population as well as a dramatic aging of the inhabitants and a relatively low number of young people. Since 1976, the munici-

Table 6: Population change in the municipality of Vöyri, 1976-2000.

	Vöyri							
	Population	Live births	Deaths	Excess of Births	Total in-migration	Total out-migration	Total net-migration	Population growth
1976	3,995	44	49	-5	77	98	-21	-26
1977	4,010	57	59	-3	82	76	6	3
1978	4,043	46	44	1	111	80	31	32
1979	4,009	30	47	-17	107	124	-17	-34
1980	4,005	35	63	-28	112	93	19	-9
1981	4,043	43	53	-10	134	85	49	39
1982	4,036	40	68	-28	102	83	19	-9
1983	4,023	39	51	-12	88	91	-3	-15
1984	3,989	48	58	-10	76	95	-19	-29
1985	3,965	34	59	-25	61	52	9	-16
1986	3,930	45	42	3	69	99	-30	-27
1987	3,935	41	60	-19	93	64	29	10
1988	3,915	39	62	-23	76	79	-3	-26
1989	3,904	52	53	-1	94	111	-17	-18
1990	3,842	44	53	-9	67	115	-48	-57
1991	3,849	43	45	-2	106	97	9	7
1992	3,801	43	47	-4	87	87	0	-4
1993	3,794	39	65	-26	98	77	21	-5
1994	3,754	38	52	-14	76	105	-29	-43
1995	3,713	37	48	-11	77	111	-34	-45
1996	3,682	30	43	-13	112	130	-18	-31
1997	3,658	41	53	-12	99	109	-10	-22
1998	3,630	31	50	-19	96	105	-9	-28
1999	3,588	43	69	-26	100	115	-15	-41
2000	3,588	30	57	-27	106	114	-8	-35

Source: Statistics Finland.

pality has both a birth deficit and net-outmigration.

The municipality of Pedersöre

Population figures in Pedersöre differ significantly to those in Vöyri. It has to be kept in mind that Pedersöre, although rural, is more urbanized than Vöyri. In contrast to the general trend in rural areas of Europe, Pedersöre can boast a steadily growing population (Table 2 and Figure 2) that increased from 9,311 in 1976 to 10,260 in 2001. In fact, between 1985 and 2001 the population in Pedersöre increased by about the same amount as the population in Vöyri decreased.

As can be seen in Table 3 and Table 5, the aging of the population in the municipality of Pedersöre is by far not as dramatic as in Vöyri. In fact, the highest numbers of people are in the 5-9 and 10-14 age groups, which comprises 9.0% and 9.1% of the total population respectively. However, these numbers do decline in the 25-29 and 30-34 age groups.

The number of people in Pedersöre over the age of 80 marks 3.8% of the population. Once again we can see that there are more females in the older age groups: Table 4 and Table 5 show that 15.8% of the

population over 65 are women; only 11.4% are men (see Figure 4).

In the region of Ostrobothnia, the 45-49 and 50-54 age groups are the largest, while the five-year age groups above the age of 70 are the smallest (Table 3 and Figure 5). As in the two municipalities mentioned in this case study report, the majority of the region's population over 65 are females. Overall, we see that Pedersöre follows the regional trend more closely than Vöyri.

Unlike figures for Vöyri, the number of live births in Pedersöre is higher than that of deaths (Table 7 and Figure 8). In fact, population growth in Pedersöre appears to be mostly due to a steady and mostly increasing number of live births.

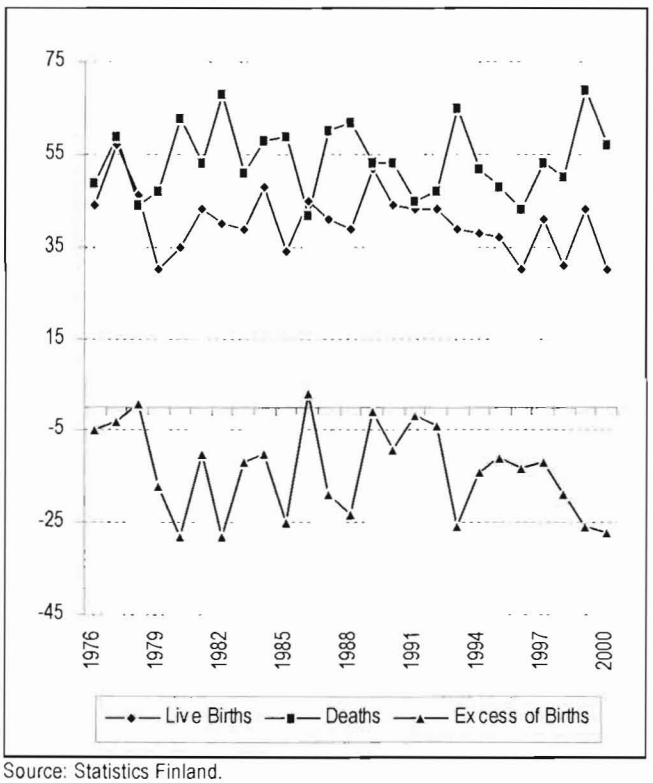
After a relatively stable phase, the numbers for total net-migration dropped noticeably between the years 1994 and 1999 (Table 7 and Figure 9) before increasing slightly in 2000. With the exceptions of 1994, 1995, and 1999, population growth in Pedersöre has always recorded positive figures.

Table 7: Population change in the municipality of Pedersöre, 1976-2000.

	Pedersöre							
	Population	Live births	Deaths	Excess of Births	Total in-migration	Total out-migration	Total net-migration	Population growth
1976	8,707	142	70	70	353	274	79	149
1977	8,432	124	67	57	260	237	23	80
1978	8,530	151	76	74	247	278	-31	43
1979	8,585	120	72	47	249	224	25	72
1980	8,696	122	79	43	284	214	70	113
1981	8,865	145	64	81	309	223	86	167
1982	8,951	135	68	67	253	218	35	102
1983	9,076	138	73	65	252	213	39	104
1984	9,203	132	84	48	313	231	82	130
1985	9,311	147	87	60	267	223	44	104
1986	9,408	146	60	86	243	235	8	94
1987	9,488	151	84	67	285	280	5	72
1988	9,583	156	99	57	293	251	42	99
1989	9,768	157	70	87	367	275	92	179
1990	9,874	200	96	104	248	254	-6	98
1991	10,003	178	76	102	227	199	28	130
1992	10,120	182	76	106	222	212	10	116
1993	10,225	180	94	86	227	223	4	90
1994	10,180	156	92	64	202	315	-113	-49
1995	10,131	171	88	83	228	362	-134	-51
1996	10,162	176	75	101	266	337	-71	30
1997	10,171	153	71	82	302	378	-76	6
1998	10,194	155	79	76	313	367	-54	22
1999	10,150	140	73	67	283	397	-114	-47
2000	10,258	152	73	79	345	315	30	109

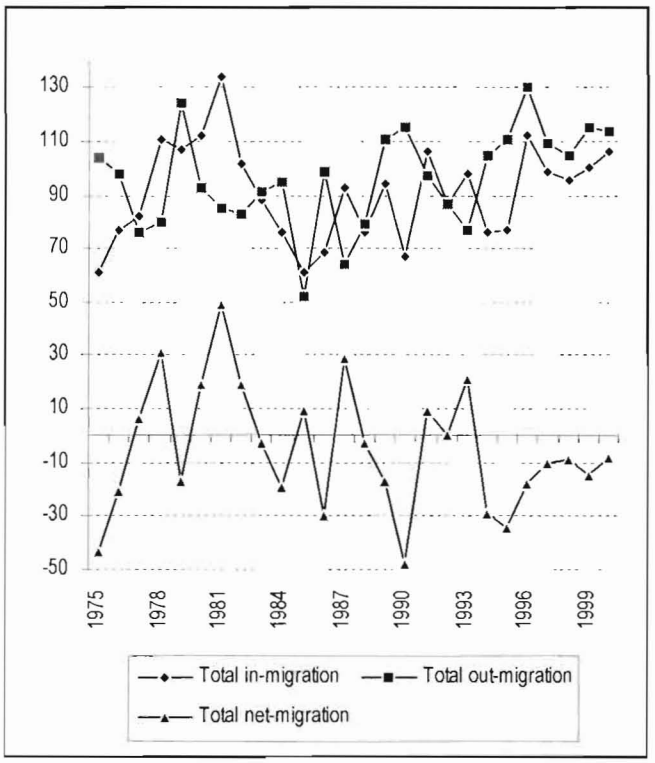
Source: Statistics Finland.

Figure 6: Population change in Vöyri, 1976-2000 (Live births, deaths and excess of births).



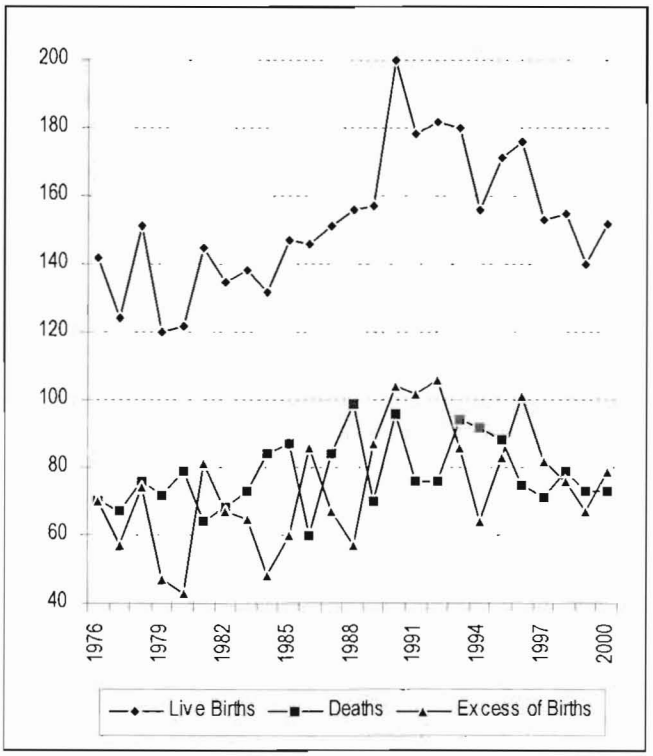
Source: Statistics Finland.

Figure 7: Population change in Vöyri, 1975-2000 (Total in-migration, out-migration, net-migration).



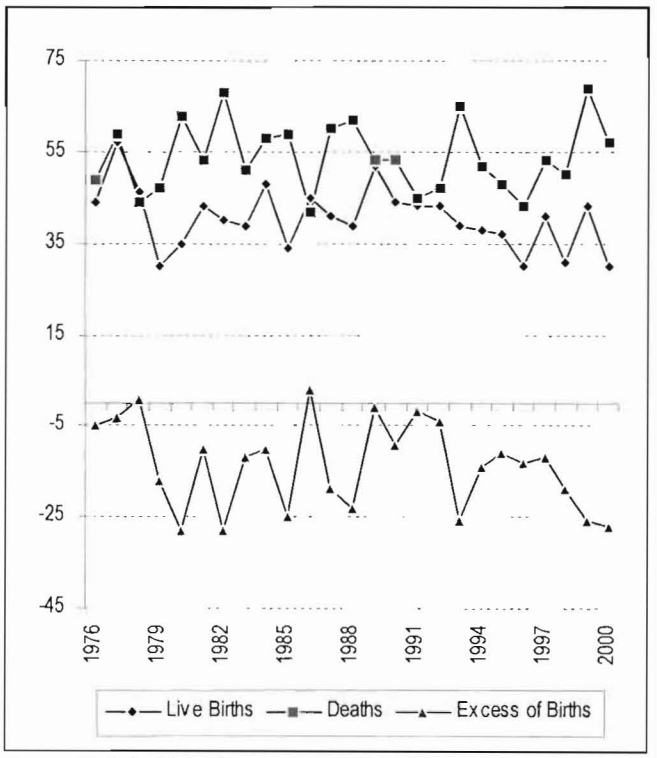
Source: Statistics Finland.

Figure 8: Population change in Pedersöre, 1976-2000 (Live births, deaths and excess of births).



Source: Statistics Finland.

Figure 9: Population change in Pedersöre, 1975-2000 (Total in-migration, out-migration and net-migration).



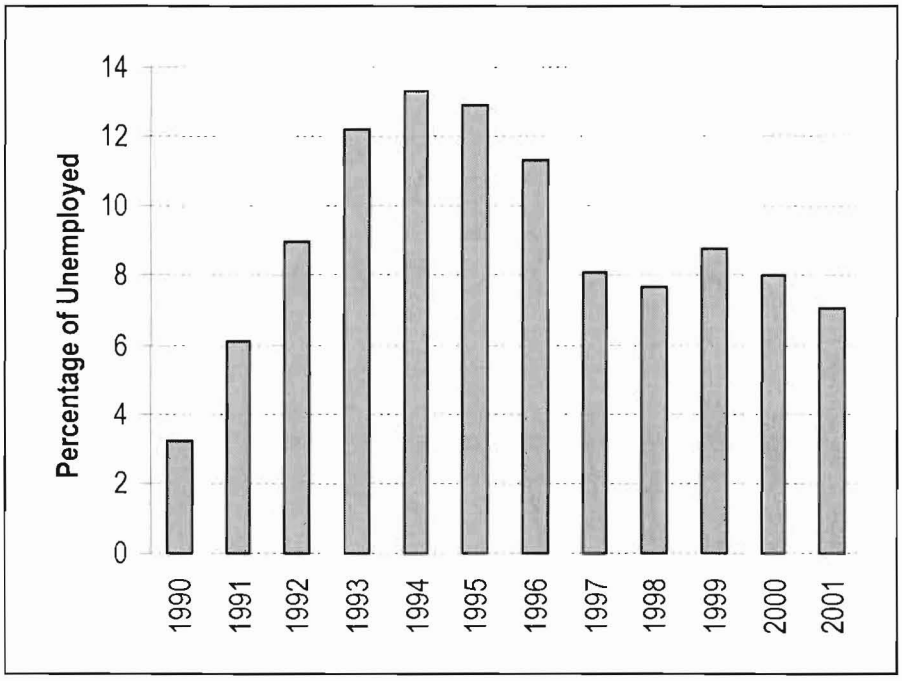
Source: Statistics Finland.

Employment Statistics

Unemployment in Ostrobothnia fluctuated throughout the period 1990-2001, dropping to 3.2% in 1990 and rising to 13.3% in 1994, and is currently at 7.1% (Figure 10). Unemployment figures have been roughly at the same level for the last five years. Compared to Ostrobothnia, the unemployment rate for Finland as a whole was 12.5% at the end of 2000 (Table 9). Surprisingly, in the case study municipalities Pedersöre and Vöyri, unemployment rates were relatively low, at 6.7% and 6.1% respectively (Table 9).

The number of jobs in Ostrobothnia, Pedersöre, and Vöyri between 1993 and 2000 is shown in Table 10. In Ostrobothnia and Pedersöre, the number has increased steadily since the beginning of 1993 (with a slight decrease in 1999 for Ostrobothnia and in 1995 for Pedersöre), while in Vöyri the situation has varied greatly between years. There are currently

Figure 10: Unemployment in Ostrobothnia, 25/12/2001.



Source: Statistics Finland, 25/12/2001.

Table 8: Share of employed population bewteen the ages 15-75 in Vöyri, Pedersöre and Finland, 2000.

	Number of inhabitants	Population between the ages 15-75	Employed between the ages 15-74	The share of employed between 15-74
Vöyri	3,551	2,471	1,551	62.8
Pedersöre	10,258	6,896	4,697	68.1
Finland	5,181,115	3,904,373	2,554,657	65.4

Source: Statistics Finland.

Table 9: The number of employed in Agriculture and Forestry in Vöyri, Pedersöre, and Finland, 31/12/2000.

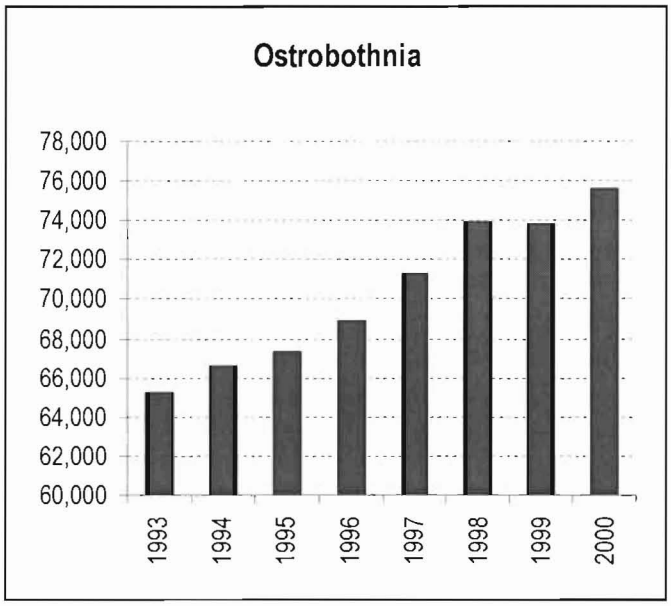
	Number of inhabitants	Employed	Employed in Agriculture + Forestry	% of employed in Agriculture and Forestry	Unemployed	Unemployment rate in %
Vöyri	3,551	1,457	293	20.1	94	6.1
Pedersöre	10,258	4,381	643	14.7	316	6.7
Finland	5,181,115	2,236,553	104,774	4.7	318,104	12.5

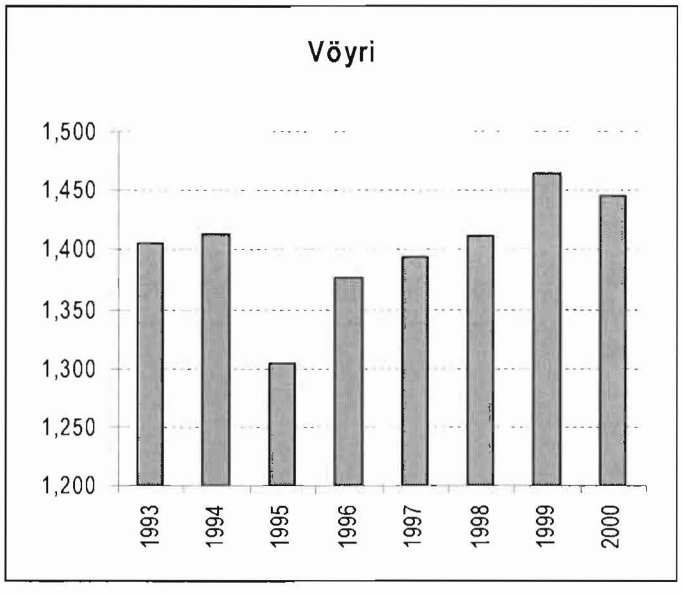
Source: Statistics Finland.

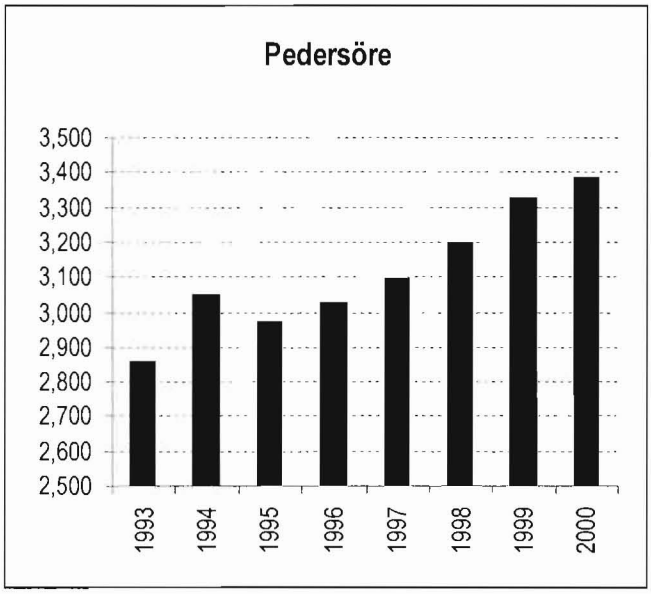
more jobs than in 1993 (Table 10 as well as Figures 11, 12 and 13). This definitely reflects the recovery of the era of economic depression experienced during the last decade in Finland.

The population working in agriculture and forestry is proportionally remarkably higher in the municipalities of Pedersöre (14.7%) and Vöyri (20.1%) as compared with the share of 4.7% for the whole country (Table 9). The proportion of the employed population between the working ages of 15 and 74 is somewhat higher in Pedersöre (68.1%) than the average in the whole of Finland (65.4%). In Vöyri this figure is somewhat lower at 62.8% (Table 8).

Figures 11, 12 and 13: Number of jobs in Vöyri, Pedersöre, and Ostrobothnia, 20/02/2002.







Source (all three figures): Statistics Finland.

Table 10: Number of jobs in Vöyri, Pedersöre and Ostrobothnia, 20/02/2002.

	1993	1994	1995	1996	1997	1998	1999	2000
Vöyri	1,406	1,413	1,304	1,377	1,394	1,411	1,464	1,446
Pedersöre	2,861	3,047	2,972	3,024	3,096	3,201	3,326	3,387
Ostrobothnia	65,255	66,548	67,289	68,936	71,353	73,889	73,792	75,563

Source: Statistics Finland.

The Region of Ostrobothnia

Situated on the western coast of Finland along the Gulf of Bothnia in the Baltic Sea, Ostrobothnia is a region with large expanses of plains, lakes, and forests. Picturesque wooden houses, mostly painted in that darker shade of rich red so common in north European countries, are a distinctive feature of the area. Vaasa, with a population of 57,014 (Statistics Finland, 31/12/2001), is the only large city in the region.

With 173,533 inhabitants (Source: Statistics Finland, 2001) Ostrobothnia is in the province of western Finland, called "Lansi Suomi" in Finnish, and is divided into 18 municipalities. Compared to the European Union average of 115 inhabitants per km^2, Ostrobothnia is sparsely populated, with on average just 22.7 persons per km^2 (Source: Eurostat Regio, 1999). The region is, however, not among the most thinly populated regions in Finland, a country with a total population of a mere 5,171,302 (Source: Statistics Finland, 1999).

Known as "Pohjanmaa" in Finnish and "Osterbotten" in Swedish, some 53% of the region's population has its roots in Sweden (Source: Statistics Finland, 1999). While most of Ostrobothnia's Finnish-speaking population lives in urban areas, such as the city of Vaasa, the Swedes prefer the rural countryside. Surprisingly, these Swedes often don't speak or understand Finnish.

Ostrobothnia has a land area of 7,673.8 km^2 of which approximately 5,717 km^2 or 74.5% is forestry land (Source: Finnish Forest Research Institute, 1997). As in most of northern Europe, the majority of forests in Finland are privately owned. The tradition of entrepreneurship is stronger in Ostrobothnia than in other regions of Finland. Of all the employed in Ostrobothnia, 1.5% are working in mechanical wood-processing businesses while 1% of the region's entrepreneurs are also active in this industry (Source: Statistics Finland, 1999).

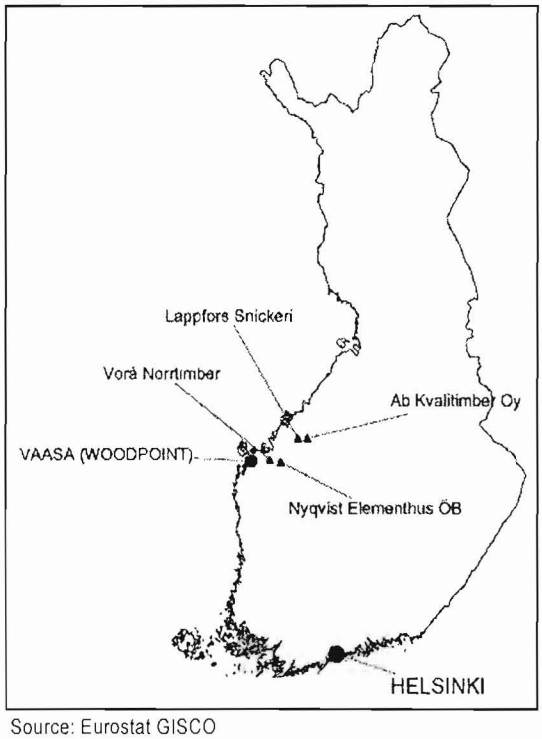
In terms of natural history, Ostrobothnia is a narrow coastal plain of clay. Along the Gulf of Bothnia, the plains slope southwest from the upland areas. The land in this area is mostly used for agriculture, dairy farming, and forestry.

The land in Ostrobothnia is still emerging from the last ice age. The weight of the continental glaciers depressed the land over which it moved, and even now, 100 centuries after its recession, the land is still rising through the process of isostatic rebound. In Ostrobothnia, uplift is more rapid than in other parts of Finland, amounting to 80 or 90 centimeters a century. The process means that the land area of the region is growing slightly every year (Source: Karlsson, 1997).

The southern part of Ostrobothnia is considered Southboreal while the rest belongs to the Midboreal forest vegetation zone. It is characterized by long winters and relatively short growing seasons (Source: Finnish Forest Research Institute, Metsien kunto ja monimuotoisuus, p.84). The climate close to the sea is, however, characterized as maritime. Temperatures remain relatively low in the spring and relatively high in the autumn. Spring and summer are dry in relation to the generally moist climate. The growing season, in which the daily mean temperatures are above 5 degrees Celsius, lasts approximately 160 days.

All of the above-mentioned factors show us that Ostrobothnia is a problematic region. Ostrobothnia suffers from its remoteness as well as from a climate that cannot be considered optimal.

Map 1: The region of Ostrobothnia.



Source: Eurostat GISCO

Forest Resources

Most of Ostrobothnia's forest resources are managed by the regional Coastal Forestry Center (Rannikon Metsakeskus). The area covered by this Center differs from the area within the political boundaries of Ostrobothnia in that it excludes the municipalities of Vähäkyrö, Isokyrö, and Laihia, and instead includes the municipality of Kokkola—which is in the neighboring region of North Ostrobothnia, called "Pohjois-Pohjanmaa" in Finnish (Source: Finnish Forest Research Institute).

This unusual land division occurred because the Coastal Forestry Center wanted to manage municipalities with a Swedish majority. For statistical purposes, the Coastal Forestry Center calls this new land area "Ostrobothnia," although it differs from the political land area of Ostrobothnia. For the purpose of this particular section of the report, IIASA's ERD team has chosen to use the Coastal Forestry's Center's definition of Ostrobothnia.

For the subsequent statistics, it is important to understand the following terminology used by the Finnish Forest Research Institute: the difference between "forestland" and "forestry land" is that the latter includes less productive lands such as scrubland, wasteland, roads, and depots. In other words, forestland is more productive than forestry land. The mean annual increment of the stand on forestland is 1 m^3 per hectare at minimum.

According to the country's latest national forest inventory (VMI 9, 1997), land areas in the Coastal Forestry's Center's definition of Ostrobothnia that are covered by forests amount to 5,270 km^2, of which 4,710 km^2 are forestland. Surprisingly, 85.1% of Ostrobothnia's forestry lands are privately owned, marking one of the highest percentages of private forestry lands in the whole of Finland. Some 61% of forestry lands

Table 11: Ownership of forestry land in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000).

	Ostrobothnia	Southern Finland	Finland
Forest ownership	**%**	**%**	**%**
Private	85.1	73.4	53.7
Companies	1	11.9	7.8
State	2	8.3	33.4
Others	11.9	6.3	5.1
Total	**100**	**100**	**100**

Source: Statistical Yearbook of Forestry 2001. Forest resources, p.45, Table 1.5. Finnish Forest Research Institute.

Table 12: Distribution of forestry land into mineral-soil sites and mires in Ostrobothnia (1997), Southern Finland (1996-2000) and Finland (1992-2000) (1,000 ha).

	Ostrobothnia		Southern Finland		Finland	
Land class	**Area**	**%**	**Area**	**%**	**Area**	**%**
Mineral-soil sites	367	70.0	8,731	73.1	17,168	65.8
Spruce Mires	63	12.0	1,199	10.0	2,298	8.8
Pine Mires	79	15.1	1,807	15.1	4,930	18.9
Treeless Mires	15	2.9	214	1.8	1,714	6.6
Mires total	**157**	**30.0**	**3,220**	**26.9**	**8,942**	**34.2**
Mires drained	**116**	**73.9**	**2,504**	**77.8**	**4,812**	**53.8**
Total Forestry land	**524**	**100.0**	**11,951**	**100.0**	**26,110**	**100.0**

Definition of Forestry Land

Forestry land consists of the following sub-classes: 1) Forest land: the mean annual increment of the stand is 1m3 per hectare at minimum 2) Scrub land: usually characterized by very rocky or paludified soil, where the mean annual increment of the stand is less than 1m3 per hectare, but more than 0.1m3 per hectare 3) Waste land: naturally treeless and the mean annual increment of the stand is less than 1m3 per hectare

Definition of Mires classes used

1) Spruce mire: a general name for a group of mire types scattered with more or less stagnated spruce trees 2) Pine mire: a general name for a group of mire types scattered with more or less stagnated pine trees 3) Treeless mires: a general name for a group of mire types too watery for the formation of forest vegetation.

Source: Statistical Yearbook of Forestry 2001. Forest resources, p.50, Table 1.10. Finnish Forest Research Institute.

Table 13: Share of growing stock volumes by tree species on forestry land in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000) (mill. m³).

	Ostrobothnia		Southern Finland		Finland	
Tree species	mill. m3	%	mill. m3	%	mill. m3	%
Pine	18.2	36	558.3	41.4	939.7	46.9
Spruce	21.3	42.2	558	39.6	687.5	34.3
Birch	9	17.8	206.5	14.7	304.9	15.2
Other broadleaves	2	3.9	60	4.3	70.6	3.5
Total growing stock	**50.4**	**100**	**1408.2**	**100**	**2002.6**	**100**

Source: Statistical Yearbook of Forestry 2001. Forest resources, p.61, Table 1.21. Finnish Forest Research Institute.

Table 14: Distribution of forest land according to tree-species dominance in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000).

	Ostrobothnia	Southern Finland	Finland
Tree species	%	%	%
Pine	57.1	56.6	64.7
Spruce	29.5	30.8	24
Other coniferous	-	0.1	0.1
Silver birch	1.8	4.4	2.5
Downy birch	8.5	5.4	6.5
Aspen	0.7	0.5	0.3
Alder	0.8	0.6	0.4
Other broadleaves	0.1	0.1	0
Treeless	**1.4**	**1.5**	**1.4**

Source: Statistical Yearbook of Forestry 2001 Forest resources, p. 52, Table 1.12. Finnish Forest Research Institute.

Table 15: Drain in Ostrobothnia, 1995-1999 (m³/year).

	m3/year	%
Annual increment of the growing stock	**2,080,000**	**100.0**
Maximum sustainable drain	1,802,000	86.6
Naturally dead trees + nature conservation + other land use	278,000	13.4

Source: Pohjanmaan Puualan Kehitysstrategia 2000-2006, p.3. WOODPOINT 2000.

throughout Finland are privately owned (Table 11).

Soil Class Distribution on Forestry Land

For the following statistics, the Finnish Forest Research Institute has split the country into two halves: Northern Finland and Southern Finland. Ostrobothnia is one of 12 regions in Southern Finland. According to the Institute, the forestry land in Ostrobothnia is roughly divided into mineral soil sites and mires. In Finland, forestry land can be classified as mire if it has a peat-layer or if peat-forming plants cover more than 75% of the area.

While most of the forestry land in Ostrobothnia is located on mineral soil (3,670 km²), approximately 1,570 km² or 30% are considered mires. This distribution is below the overall Finnish average of 34.2% but above the 26.9% average in the southern half of Finland (Table 12).

After World War II, forest drainage became a common practice with forestry in Finland to increase the area of productive forestry land. This led to a draining of approximately three-quarters or 73.9% of the peat lands in Ostrobothnia. This proportion is similar to that in Southern Finland (77.8%) but considerably higher than that in the whole of Finland (53.8%) (Table 12).

Volumes and Use of Timber Resources

In 1997, the total growing stock volume on forestry land was 50.4 mill.m³ (Table 13), less than 2.5% of Finland's total volume. Spruce

Table 16: Drain in Ostrobothnia, 1995-1999 (m^3/year).

Type of activity	m3/year	%
Total roundwood removals	1,280,600	88.7
Wastewood left on logging sites	163,400	11.3
Realized drain (by logging)	**1,444,000**	**100.0**

Source: Pohjanmaan Puualan Kehitysstrategia 200-2006, p.3. WOODPOINT 2000.

Table 17: Planned roundwood removals in 2001-2005 in the area of the Coastal Forestry Center in Ostrobothnia.

	Ostrobothnia			
	"Roundwood removals 1995-1999"		Planned roundwood removals	
Timber assortment	m3/year	%	m3/year	%
Commercial roundwood removals	**1,223,600**	95.5	**1,510,000**	95.9
Pine logs	172,600	13.5	240,000	15.2
Spruce logs	278,400	21.7	330,000	21.0
Hardwood logs	9,200	0.7	10,000	0.6
Pine Pulpwood	315,600	24.6	430,000	27.3
Spruce Pulpwood	242,000	18.9	270,000	17.1
Hardwood Pulpwood	205,800	16.1	230,000	14.6
Fuelwood and other domestic use	**57,000**	4.5	**65,000**	4.1
Total roundwood removals	**1,280,600**	100.0	**1,575,000**	100.0

Source: Pohjanmaan Puualan Kehitysstrategia 2000-2006, p.3. WOODPOINT 2000.

Table 18: Mean growing stock volumes and annual increments in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000).

	Ostrobothnia	Southern Finland	Finland
Mean volume, m3/ha	106	125.1	97
Mean increment, m3/ha	4.4	5.4	3.9
Annual increment percentage	4.2	4.3	4

Source: Statistical Yearbook of Forestry 2001. Forest resources, p. 68, Table 1.28. Finnish Forest Research Institute.

is the most common tree in the growing stock (Table 13). Pine, however, has the largest share, covering 57% of the forestland area of Ostrobothnia (Table 14).

Between 1992 and 1996, the annual increment of the total growing stock was estimated at 2.10 mill.m^3 per year (Table 15). The realized drain, or the volume of the stands logged (which includes waste wood from felling) between 1995 and 1999 was 1.444 mill.m^3 per year (Table 16). The difference between these numbers indicates that more logging could be practiced while still applying sustainable forestry.

However, the volume of the maximum sustainable drain will be reduced by approximately 0.278 mill.m^3 per year (Table 15). This is due to the volume of trees that die naturally each year and to an increase in areas reserved for nature conservation. Therefore, the estimated maximum sustainable drain by logging volumes can only reach 1.8 mill.m^3 per year (Source: Pohjanmaan Puualan Kehitysstrategia 2000-2006).

In order to prevent the decrease of forest resources, the realized drain must not exceed the maximum sustainable drain. The maximum sustainable drain of logs is of vital importance for the mechanical wood-processing industry as it directly affects a company's potential production figures within a certain period. The different parts of a drain are shown in Table 15 and are compared with the annual increment of the total growing stock.

According to a WOODPOINT report (Source: Pohjanmaan Puualan

Kehitysstrategia 2000-2006), pine cuttings in Ostrobothnia increased while cuttings of spruce were at a maximum between 1998 and 2000 (Table 17). There is also a large potential for the logging of pine pulpwood (Table 17). However, not a single larger-scale mechanical wood-processing company in Ostrobothnia uses logs from broad leave trees such as birch (*Betula pendula* and *Betula pubescens*), aspen (*Populus tremula*), and alder (*Alnus glutinosa* and *Alnus incana*). According to WOODPOINT, small to medium-sized enterprises in Ostrobothnia could find new business opportunities by using these broad leave trees.

The mean growing stock volume in Ostrobothnia for 1997 was 106.0m^3 per hectare. In Southern Finland, this amounted to 125.1m^3 per hectare between 1996 and 2000, while in the whole country the figure was only 97.0m^3 per hectare between 1992 and 2000.

A mean annual increment of the growing stock in Ostrobothnia was estimated at 4.4 m^3 per hectare, while in Southern Finland it was 5.4 m^3 per hectare and in the whole country the average was 3.9 m^3 per hectare (Table 18).

Table 19 shows the total removal of roundwood in 2000. Spruce is the most removed log in Ostrobothnia, Southern Finland, and the whole country with 61.1%, 60.5% and 56.2%, respectively. Ostrobothnia's share of pine logs (37%) and hardwood logs (1.7%) is below the national average (39% and 4.8%). However, pine is the pulpwood with the largest removal volume (411 m^3) and shares (45.8%) in Ostrobothnia, exceeding shares for Southern Finland (38.3%) and the whole country (45.0%). The share of spruce pulpwood is remarkably lower in Ostrobothnia (29.1%) when compared to that of Southern Finland

Table 19: Total roundwood removals in 2000 in Ostrobothnia, Southern Finland, and Finland.

Timber Assortment		Ostrobothnia		Southern Finland		Finland	
	Tree species	1000 m3	%	1000 m3	%	1000 m3	%
Logs	Pine	218	37.3	8,680	34.3	11,379	39.0
	Spruce	357	61.1	15,306	60.5	16,372	56.2
	Hardwood	10	1.7	1,331	5.3	1,392	4.8
	Total	584	100.0	25,316	100.0	29,143	100.0
Pulpwood	Pine	411	45.8	7,944	38.3	12,448	45.0
	Spruce	261	29.1	8,761	42.2	9,901	35.8
	Hardwood	226	25.2	4,043	19.5	5,332	19.3
	Total	897	100.0	20,748	100.0	27,682	100.0
Fuelwood	Pine	23	12.1	625	16.0	802	17.2
	Spruce	31	16.3	700	17.9	777	16.6
	Hardwood	136	71.6	2,590	66.2	3,096	66.2
	Total	190	100.0	3,915	100.0	4,675	100.0
Total	Pine	652	39.0	17,249	34.5	24,629	40.0
	Spruce	649	38.8	24,766	49.6	27,051	44.0
	Hardwood	372	22.2	7,964	15.9	9,820	16.0
	Total	1,672	100.0	49,979	100.0	61,500	100.0

Source: Statistical Yearbook of Forestry 2001. Roundwood markets, p. 173, Table 4.14. Finnish Forest Research Institute.

Table 20: Age structure of forest stands in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000).

	Ostrobothnia	Southern Finland	Finland
Age class	**% of forest land area**	**% of forest land area**	**% of forest land area**
Treeless	1.4	1.5	1.4
< 20	21.3	18.3	16.0
21-40	19.5	21.8	18.4
41-60	13.7	16.6	17.0
61-80	12.5	15.7	15.6
81-100	14.2	13.3	11.2
101-120	11.3	7.9	7.0
121-140	4.4	3.3	4.4
141+	1.8	1.7	9.2

Source: Statistical Yearbook of Forestry 2001. Forest resources, p. 54, Table 1.14. Finnish Forest Research Institute.

Table 21: Forest stands by development class in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000).

	Ostrobothnia	Southern Finland	Finland
Development classes	**% of the forest land area**	**% of the forest land area**	**% of the forest land area**
Open regeneration area	1.2	1.2	1.2
Small seedling stand	6.0	6.4	6.5
Advanced seedling stand	16.4	14.1	14.4
Young thinning stand	28.2	32.0	33.1
Advanced thinning stand	23.6	26.4	20.7
Mature stand	16.8	13.7	12.8
Shelterwood stand	0.1	0.2	0.3
Seed-tree stand	0.6	1.0	1.1
Low-yelding	**7.0**	**5.1**	**9.9**

Definitions of Development Classes:

1) Open regeneration area: treeless or scattered with retention trees left on a regeneration site **2)** Small seedling stand: dominant height of the seedlings <1.3m **3)** Advanced seedling stand: dominant height >1.3m and diameters at breat height (1.3) normally below 8 cm **4)** Young thinning stand: stand on a thinnning stage, logging removals consists primarily of pulpwood **5)** Advanced thinning stand: stand on a thinning stage, consists primarily of logs **6)** Mature stand: stand is to be regenerated in the next logging operation**7)** Shelterwood stand: a remaining stand after felling that aimed for natural regeneration with 150 to 300 trees per hectare left on a site **8)** Seed-tree stand: normally 30 to 150 trees per hectare left standing for natural regeneration. **Source:** Statistical Yearbook of Forestry 2001. Forest resources, p.34. Finnish Forest Research Institute.

Source: Statistical Yearbook of Forestry 2001 Forest Resources, p.56, Table 1.16. Finnish Forest Research Institute.

(42.2%) and the whole country (35.8%).

Forest Stand Characteristics and its Silvicultural State

Forest stands in Finland currently have a more even age structure than in the pre-World War II period. This is also true of Ostrobothnia, which has a larger share of stands under the age of 20 (21.3%) than Southern Finland (18.3%) and the whole of Finland (16.0%) on average (Table 20). Table 21 shows the development classes in Ostrobothnia, which have a low share of shelterwood (0.1%) and seed-tree stands (0.6%) when compared to Southern Finland and the whole country. Otherwise, Ostrobothnia's proportions of development classes do not differ significantly from those in other regions of Finland.

The silvicultural states of stands in Finland are classified as such: Good, Satisfactory, Passable, and Low-Yielding (Table 22). These grades do not vary significantly between Ostrobothnia and the whole of Finland. But when compared to Southern Finland, Ostrobothnia has fewer stands that are considered "Good". Southern Finland, however, has fewer "Passable" stands than Ostrobothnia. Approximately 73% of the forestland in Ostrobothnia received ratings of either "Good" or "Satisfactory."

Regeneration of Stands

According to the Coastal Forestry Center in Ostrobothnia, only 9% of mature forest stands are naturally regenerated using shelterwood and seed-tree methods; the rest are re-

Table 22: Silvicultural state of forest stands in Ostrobothnia (1997), Southern Finland (1996-2000), and Finland (1992-2000).

Evaluation	Ostrobothnia % of forest land area	Southern Finland % of forest land area	Finland % of forest land area
Good	33.4	44.9	36.6
Satisfactory	39.2	37.5	35.7
Passable	20.4	12.6	17.7
Low-yielding	7.0	5.1	9.9

Definitions of evaluation classes for the state of the stand.

Good - The tree species is suitable for the growing site and the management of the stand is according to the requirements of good silvicultural practice.

Satisfactory - The stand is slightly too low in tree density and volume.

Passable - The density and volume of the stand is too low and the stand is lacking good silvicultural practice or the stand is not managed at all.

Low-yielding - Forest regeneration has failed on the site and the dominant tree species is either not suitable for the growing site or the stand suffers from different forest damages or the stand is remarkably low in volume and density.

Source: Statistical Yearbook of Forestry 2001. Forest resources, p. 35. Finnish Forest Research Institute.

Source: Statistical Yearbook of Forestry 2001. Forest resources, p. 59, Table 1.19. Finnish Forest Research Institute.

generated artificially through planting or sowing. In the early 1970s, it became common practice to regenerate old spruce (*Picea abies*) stands with pine (*Pinus sylvestris*) after clear felling. Therefore, as much as 57% of the area, excluding peat lands, is now pine-dominated. However, the planting of spruce is becoming increasingly popular again (Source: Karlsson, 1997).

Environmental Issues

For over a decade, conservation issues regarding the clear-cutting of old growth forests in Finland have provided stormy debates. Because these forests provide a natural habitat for many endangered species, environmental non-government organizations (NGOs) such as Greenpeace, WWF, and the Finnish Nature League have often protested against logging operations in Finland.

However, these protests do not affect the region visited by IIASA's ERD team, since most of the country's old growth forests are in Eastern and Northern Finland. Ostrobothnia, in Western Finland, has some 100 hectares of protected old growth forest (Source: Finnish Forest Research Institute). Table 20 shows the low share of old stands in Ostrobothnia. In Ostrobothnia's non-protected forests, the share of stands over 140 years of age is low.

Approximately 95% of Finland's forests are certified by the Finnish Forest Certification System (FFCS), which is in accordance with the Pan European Forest Certification System (PEFC) but is not mandatory. The certification aims at promoting ecologically, economically, and socially sustainable forest management, and serves as a market-oriented means for doing so in the consumer's interest. Products made with wood from a certified forest are entitled to a so-called "eco-label" intended to highlight its high environmental quality.

The largest shares of nature conservation areas on forestry lands are in Northern Finland, at 18.4% (Source: Statistical Yearbook of Forestry 2001. Forest resources, p.48, Table 1.8. Forest health and biodiversity, p.96. Finnish Forest Research Institute). There are fewer protected areas of forestry lands in Southern Finland (1%) primarily due to the large amount of privately owned forests. Ostrobothnia has almost no such areas while the whole of Finland can boast some 10.4% of protected lands. In this report, the term "conservation areas" refers to areas hosting nature reserves, national parks, and peat land reserves with no form of forestry.

However, the proportion of so-called "*key biotypes protected by law*" is relatively high in Ostrobothnia, covering some 3.4% of forestry land, including both state- and private-owned lands (Source: Statistical Yearbook of Forestry 2001. Forest health and biodiversity, p. 96, Finnish Forest Research Institute). The term "key biotype" refers to a particularly valuable area of land that is protected under Finland's Nature Conservation Act (Source: The Finnish Forest Research Institute). Key biotypes are normally relatively small patches inside commercial forests.

Evaluation

Human Factors

During the visit of IIASA's ERD team to WOODPOINT and four of its member companies, our impression was that the network had served to benefit the businesses of members and, as a result, had improved their standards of living. WOODPOINT employees are often in the field visiting their members, and our impression was that they do care about them and the state of their businesses.

Through various educational activities and trade fair participation, WOODPOINT also contributed to an increase in the knowledge and working skills of their members. Peter Norrgård, who runs the one-man Norrtimber Company in the municipality of Vöyri, told IIASA's ERD team that he had especially profited from various trade fairs organized by the network.

In the past, WOODPOINT also organized courses and workshops for its members. These were performed in classroom style or were tailor-made to suit the needs of a particular company. Specialized consultants were hired to carry out these courses and workshops. However, these activities were dropped in 2000 because of the huge amounts of administrative paperwork involved in finding funds for them. WOODPOINT project leader Stefan Råback said they might be resumed in 2003, but a decision has not yet been made.

"At the moment we are focusing only on helping our members with their business matters," he said.

When asked if WOODPOINT had contributed to an improvement in the quality of life in the region, Råback said he believed the network had helped make Ostrobothnia more attractive for younger people. This is because WOODPOINT had helped member companies expand, allowing them to create more employment opportunities.

Image 30: A river in the municipality of Pedersöre.

"We try to develop the companies so that they become interesting working places for younger people," said Råback. "We can't claim that people have started moving into the region because of these companies, but people who already live here have been able to find new jobs at these companies."

Råback underlined a problem common to the whole of Europe. Younger people in rural areas of Finland are moving to larger towns and cities. He said this problem was evident in Ostrobothnia.

"The further away you are from the city of Vaasa, the bigger the problem is that younger people are going away," he said. "I think WOODPOINT has succeeded in keeping at least some of the young people not only in the area, but also in the areas that are further away from larger urban areas."

Råback said the problem usually starts when young people go to study in a larger town or city and then stay there after completing their studies. "The problem is that the bigger companies are located in or near the bigger cities and usually offer better working places with higher salaries."

When asked if WOODPOINT had directly contributed to improving the region's infrastructure, Råback said: "There are other projects and organizations involved in improving local services and possibilities for young people in the countryside. Our job is to develop the wood-processing industry and the efficiency of our member companies. If our member companies are doing well then they can hire more people."

The network does not have projects or activities to support families with children.

Economic Viability

In our opinion, WOODPOINT appears to be a semi-governmental organization that is fairly autonomous and responsible for its own funding. Only 13% of its annual budget for 2001 came from private funding. Some 50% came from a fund provided by the Finnish government and the European Union, 21% was from the Regional Council of Ostrobothnia, and the remaining 16% came from the municipalities. During the visit of IIASA's ERD team to WOODPOINT's headquarters in the center of Vaasa, we had the impression that the network's financial arrangements were quite transparent.

As a result of the interviews carried out with the network's four member companies, we believe that WOODPOINT's biggest contribution was the provision of financial consulting services. WOODPOINT has helped 100 of its 195 member companies obtain subsidies from the Finnish government and the European Union. The four member companies interviewed by IIASA's ERD team underlined the importance of this help.

In terms of creating new employment opportunities in the region, Råback estimated that altogether some 100 new jobs could have been created due to WOODPOINT's efforts. However, he added: "Member companies also have activities in which WOODPOINT is not involved—especially the bigger companies—so it's difficult to say which jobs were created as a result of WOODPOINT and which were created as a result of other company activities."

In a nutshell, Råback concluded: "The network helps companies improve their basic financial situation so that they can create new jobs for local people, as well as for people who want to move into the region from other parts of Finland."

Resources and Environment

WOODPOINT is a regional network for businesses working in mechanical wood processing, and its members make use of local renewable resources. All member companies produce or deliver wood for the manufacture of high-quality products and use only regional trees to do so. Not a single one of the 195 member companies imports wood from another region.

In environmental terms, we discovered that two of WOODPOINT's member companies use the highly disputed and apparently highly toxic CCA-process for the impregnation of wood. These companies are the small-scale Sangrunds sawmill and the larger Paras Company that specializes in the impregnation of sawn wood.

This process, which is based on a chrome, copper, and arsenic formula, is the most efficient method of impregnation for wood that is exposed to harsh outdoor conditions. However, the European Commission is currently considering a ban on the sale of all arsenic-treated wood to consumers, restricting its use to only a small and limited number of essential industrial applications (Source: EU document IP/01/1786 dated 11/12/2001). Processes affected by the possible ban include CCA and the less popular DFA, which is based on a formula of dinitrophenol, fluoride, and arsenic.

In a risk assessment study by the European Commission, the Scientific Committee on Toxicity, Ecotoxicity and the Environment (SCTEE) confirmed risks to human health and nature caused by CCA-treated wood, and even discovered a few new hazards. (Source: European Commission Draft Working Document ENTR PE 2001/144/E3 Arsenic). The risks identified by the SCTEE included, among others:

1) Risk to children's health from playground equipment containing arsenic-treated wood.

2) Significant increase in the risk of lung cancer from arsenic-treated wood for home heating, as well as a significant effect on the environment from uncontrolled burning of arsenic-treated wood.

3) Effects on aquatic organisms in low phosphate marine waters, arising from arsenic leaching of treated wood, as well as potential risks from unpredictable long-term leaching behavior of arsenic in special waste landfills.

After identifying these risks, the European Commission staged an open Internet consultation on the matter from 6 December 2001 to 8 February 2002, with the aim of allowing stakeholders to express their opinions. In an official statement on its website (http://europa.eu.int) dated 8 April 2002, the European Commission announced it had received 156 replies, of which some called for the complete ban on arsenic-treated wood, arguing that alternatives

exist, while others suggested its prohibition would have an adverse impact on their economic situation.

In an open letter addressed to the European Commission and dated 6 February 2002, the president of the Finnish Forest Industries Federation, Timo Poranen, said Finland's woodworking companies were "severely worried" about the possible ban. Poranen argued the ban would "surely have a negative economic impact on the woodworking industries not only in Finland by also in the member countries throughout the European Union." He made no mention whatsoever of the health hazards caused by CCA-type processes.

IIASA's ERD team were surprised to discover a 19-page "Scientific Response to the Restrictions on CCA" (EU document: ENTR PE 2001/144/E3 Arsenic) prepared by three companies from the United Kingdom, which in its summary claimed: "A risk assessment using current data and principles would conclude that there is no scientific justification for restricting the use of CCA in Europe."

WOODPOINT project leader Stefan Råback told IIASA's ERD team that the network's two member companies using the CCA-process were not considering alternatives. Råback said this was because the CCA-process is the most effective means of wood impregnation. IIASA's ERD team considers this regrettable. We also believe these companies could hamper their chances on European markets as potential customers become more environmentally conscious.

WOODPOINT itself organizes no environmental initiatives and offers its members no courses in cleaner means of production. In our opinion, this indicates a lack of problem awareness in this rural initiative.

Science and Technology

WOODPOINT has visibly placed a lot of emphasis on information technology. At their headquarters in Vaasa, network employees regularly make use of the Internet and other computer tools in their daily work. During the visit of IIASA's ERD team, WOODPOINT was in the process of creating a new and more detailed Web site, as explained in detail earlier in this case study report.

The network also has its own state-of-the-art database with details on all member companies, as well as accounts of all interactions between WOODPOINT and its members. We were impressed by their old and new Web sites, both in three languages (English, Finnish, and Swedish), as well as with their database.

WOODPOINT has one part-time employee, Leif Häggman, who serves as information technology advisor. Häggman has helped some 60 member companies set up Web sites. Three of the four companies we visited had Web sites. Norrtimber company owner Peter Norrgård told IIASA's ERD team that he was pleased with his homepage, which had helped him gain new customers.

Häggman has also created a computer program in Microsoft Excel that facilitates the measuring and price calculation of timber. Member companies can purchase this software tool for 60 Euros.

Political Factors

Although WOODPOINT is officially a sub unit of Ostrobothnia's Coastal Forestry Center that works under the guidance of Finland's Ministry of Agriculture and Forestry, the regional political elite appeared unaware of the network's existence.

In an interview with IIASA's ERD team, the mayor of the city of Vaasa, Markku Lumio, said he had never heard of WOODPOINT. Lumio, however, also admitted he was still new to the region as he had only been in office for eight months. He said there were perhaps others in the regional government who knew more about projects such as WOODPOINT.

Råback was not worried about this, explaining that WOODPOINT reported its activities and those of its members to representatives from all 18 municipalities in the region of Ostrobothnia. According to Råback, it was not easy for politicians to obtain information about what was happening in each of the municipalities.

"We don't really need support from the local or regional political elite—at least not at the moment," said Råback. "We started small and it's been our good results that have made it possible for us to get financial aid from the local municipality. We don't need political assistance for this."

Råback pointed out that while it was good and important to let local politicians learn about the project, WOODPOINT's emphasis

had always been placed on "working hard and achieving good results."

WOODPOINT has obviously never needed the support from the political elite to obtain money for its own existence or to receive subsidies for its members. In fact, from its 2001 budget, we can see that 16% of funding comes from the municipality and 20% from the Regional Council of Ostrobothnia.

Summary

Following our visit to Finland, we concluded that WOODPOINT was an overall success. Although the network heavily depends on governmental funding, it can also be considered as a bottom-up initiative, since the idea derived from the case study report of one man, Peter Mattbäck.

With his sights firmly set on realizing his idea of a network to unite the region's small and medium-sized mechanical wood-processing enterprises, Mattbäck employed Stefan Råback to set up the project. In his case study report, Mattbäck discovered that there were a number of such businesses in Ostrobothnia, that they were virtually unaware of each other and unknown to the regional public, and, therefore, that they were relatively weak and unsuccessful.

The four WOODPOINT member companies visited by IIASA's ERD team were all convinced of the network's benefits. All four companies mentioned ways in which WOODPOINT had contributed to the profitability of their businesses. These ranged from assistance in obtaining raw materials to help in getting started on the Internet and creating a homepage.

But perhaps the most important point is that WOODPOINT helped all of these four companies to obtain vital subsidies. Without these subsidies—of which 40% comes from the Finnish government and 60% from the European Union—not one of the four companies would have been able to survive. WOODPOINT advised these companies on the different kinds of subsidies that were available and helped with the necessary paperwork.

WOODPOINT, however, has not had a huge impact on the employment situation, nor is it directly involved in improving regional infrastructure to suit the needs of younger people. Young people will not be migrating into the rural areas around the city of Vaasa as a result of WOODPOINT's efforts. However, the network did throw small and medium-sized wood-processing enterprises a lifeline by helping them set up better business strategies. In this respect, we can say that it has contributed to improving the standard of living.

We must point out that we find it regrettable that the network has stopped organizing educational course and workshops for its members. WOODPOINT told IIASA's ERD team that it had dropped this activity in 2002 due to the enormous amount of paperwork involved to get necessary funding. Råback said educational activities may return to the agenda in 2003, which we can strongly recommend.

IIASA's ERD team also finds it lamentable that two of WOODPOINT's member companies still use the highly toxic CCA-process for wood impregnation, which the European Commission is currently considering banning. In our view, this indicates a regrettable lack of environmental awareness from the side of WOODPOINT.

Otherwise, WOODPOINT is doing well and continues to receive requests from academic and entrepreneurial institutions wishing to visit and study the network. While many university students from Helsinki are currently conducting studies, guests from neighboring Sweden especially want to visit WOODPOINT to gain ideas for the setting-up of similar networks in their own country. Råback said they have had to reject many requests in an effort to reduce the number of visitors as network employees were left with little time to get their work done. In fact, WOODPOINT even had difficulty fitting in a visit by IIASA's ERD team. Yet another sign of the network's success.

Image 31: A round-section timber house.

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