



FOREST ECONOMICS DEPARTMENT NEWSLETTER

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Departmental personnel

Messenger: Riitta Kemikari

Typists, calculators and research assistants: Mikko Tervo, Maija-Liisa Soveri, Brita Sjöstrand, Anna-Leena Simula, Rakel Seppälä, Pirjo Saramäki, Erkki Raittila, Helena Päivinen, Antti Peltonen, Seppo Mattila, Seija Malinen, Maija Kuusijärvi, Aune Kankunen, Tuomo Hemmilä, Erkki Heikinheimo.

Prof. Osara's secretary: Marja Immonen

Research secretary: Marja Harmanen

Researchers: Hannu Vehviläinen (forest labour), Sampsa Sivonen (regeneration economics), Esko Salo (removal measurement), Aarne Reunala (structural change in forest ownership), Pertti Mikkola (waste wood), Pentti Kuokkanen (nursery economics), Kari Keipi (fertilization economics), Heikki Juslin (consumer behaviour), Michael Jones (land tenure), Buddhi Jha (Finnish scholarship), Jouko Hämäläinen (economics of thinning), Terho Huttunen (wood consumption), Jan Heino (social benefits of forests), Matti Heikinheimo (standard of living of forest workers), David Cope (land-use economics).

Extra-departmental researchers: Heikki Kunnas (forestry in national accounting), Velja Pekka Järveläinen (silvicultural behaviour of forest owners), Prof. Seppo Ervasti (forest balance).

Research specialist (acting): Dr. Matti Palo (forecasting and optimization models).

Professor emeritus: Prof. N. A. Osara (Finland's forestry in the world economy).

Professor of business economics (acting): Prof. Lorenzo Runeberg (plastics and wood).

Head of department: Prof. Lauri Heikinheimo.

Colloquium

The next colloquium will be on Monday, 29th March, at 2:15 p.m. in the department's conference room. Klaus Rantapuu, of the institute's Department of Forest Technology, will talk about the influence of mechanization in logging.

Klaus Rantapuu: The influence of mechanization in logging

The last 20 years has seen important changes in logging operations, with both direct and indirect results. The most important measure of mechanization in the 1950s and the beginning of the 1960s was the transfer of barking from the forest to the roadside or to mills. The ending of hand-barking has produced an increase in productivity of 100 %, reducing the labour force by half. At the end of the 1950s and beginning of the 1960s, the use of power saws became common and by the end of the 1960s they were also being used as limbing tools by most loggers. The influence on production of the power saw has therefore been great.

Mechanization of cross-country transport has been fast. At the beginning of the 1960s, most of the timber was transported to the roadside by means of horses. At the end of the 1960s, the share of horses in transport was only about a quarter. In northern Finland, for example, practically no horses are now used in logging. Labour requirements have been further reduced by the ending of floating in small streams.

Mechanization has enabled logging to become more a year-round operation. This also influences labour requirements. For example, it is possible to use horses only in the 3 or 4 winter months. If one special forestry tractor does the work of 4 horses, then 1 tractor working all the year in one shift does the work of 16 horses; used in 1 1/2 shifts, it does the work of 24 horses.

The reason for mechanization has been the need to reduce costs or to limit the rise in costs. From the point of view of the organizations in charge of logging, mechanization has been a success, since costs have been lowered. However, from the point of view of the national economy, there are some doubts, since mechanization has been the main reason for unemployment in and migration from the development areas, and the costs of these in the national economy should also be counted.

A part of the savings in costs from mechanization, furthermore, is more apparent than real, or is in the nature of income transfers. For example, statistics of horse and tractor transport in a company cannot be compared, as it is probable that horses are working on increasingly difficult cutting areas, while machines are working in better conditions. Furthermore, the low income of contractors working with special forestry tractors indicates that part of the savings of mechanization on the part of the companies may have been financed by capital obtained by the contractors from other sources.

While, of course, mechanization cannot be opposed, a serious question is whether from the point of view of the national economy mechanization has developed too fast.

Although the main reason for unemployment and migration has been the mechanization of logging, there have been some recent signs that there is already a shortage of labour in forestry. There are many reasons for this. Forestry work today is one of the heaviest types of work. Rationalization in some cases has resulted in the work becoming heavier and more monotonous, surprising as this may seem. Furthermore, studies have shown that the general health level of forest workers seems to be quite poor. Accidents often occur in forestry work. It is therefore natural that the younger generation, especially, is not keen to choose forestry work.

One reason for the low prestige of forestry work has been wage policies. The piece-work wage system means that incomes of forestry workers become lower as they get older, although this is against general principles. The wage level is low considering the nature of the work. The work is heavy and must be carried out in varying, often difficult weather conditions. Besides days lost through bad weather, the use of machines may also cause workers to lose working hours or days through having to wait for machines to be repaired. Lost working days mean lost income. The journey to work is also often long and uncomfortable (e.g. bad roads, the necessity to go home before bathing, etc.).

Taking all these aspects into consideration, we have the right to consider why the wage level in forestry should not be substantially higher than in industry. In the short term, the companies' labour policies in forestry may be profitable for them. In the long term, this may be reversed, since it will take several years before highly mechanized logging systems are in common use in Finland, resulting in logging costs being lower than the present costs of manual labour.

Kullervo Kuusela: Cutting possibilities and nature conservation in Lapland

(Summary of the colloquium of 8th March, 1971)

The field work for the Fifth National Forest Inventory was completed in Lapland (the two northernmost forestry board districts) in the summer of 1970. This area includes a number of national parks, while the northern part consists of protection forest near the Arctic tree limit. Recent proposals have been made for the establishment of a further 879 000 ha of national parks, of which 312 000 ha consists of dense, productive forest. The proportions of forest land and growing stock on the various categories of land are as follows:

	Forest area, %	Growing stock, %
National parks (as on 1.1.1970)	1.8	2.1
Hill forests (over 300 m above sea level)	16.7	15.5
Protection forests below 300 m above sea level	13.8	13.6
Forests economically exploited without restrictions	67.7	68.8
Of this, proposed new national parks	7.7	7.9

These figures indicate that a substantial part of the growing stock is in hill forests and protection forests. If these are excluded from cutting, and the growing stock on poorly productive land elsewhere is also not taken into account, only about 60 % of the area's growing stock is left for commercial cutting.

The potential annual cut from the whole area is 5.37 million m³. Cutting possibilities in the various categories of forest are as follows:

National parks	8.0 %
Hill forests	15.9 %
Protection forests below 300 m	10.7 %
Economically exploited forests	73.4 %

Between 1953 and 1969, the wood-processing industries in Lapland have developed their capacity to make full use of the area's timber resources. If the protection areas, hill forests and the proposed new national parks are entirely excluded from cutting, these industries will be faced with a shortage of timber unless they change their traditional logging areas.

Discussion

The discussion after Professor Kuusela's presentation ranged around the comparability of cutting and recreational use. Professor Kuusela explained that in the conservation areas there had been under-cutting, and cutting amounts had been less than the gross increment. In the last three to five years, there had been a tendency to leave these areas out of cutting, because of regeneration difficulties or simply because they were Finland's last uncut areas. Cutting need not always interfere with recreation, however. Because of the long rotation period in Lapland (150-160 years), large areas always remain outside current cutting. At present, about 25 % of Lapland shows no trace of cutting and another 25 % has not been cut for at least 30 years. Here is space for recreation. In reply to a question concerning regeneration on hill areas, which are those most favoured for recreation, Professor Kuusela explained that most of these areas are under pine forest, which is easily regenerated; the current growing stock is old, about half over 200 years. The problems are greater, however, where there is old spruce and birch.

Professor Heikinheimo observed that the question is whether economic growth should be decreased for social benefits. The two things were difficult to compare. People in Helsinki and other towns are in favour of increasing recreational opportunities, but these may be at the cost of the local inhabitants of Lapland, whose livelihood is dependent partly on forestry. Professor Kuusela pointed out that cutting provides an important source of winter income.

Personnel

Anna-Leena Simula, a forestry student, started work in the department on 18th March as assistant to Heikki Juslin.

Marja Parviainen has left the department to take up a secretarial job with Fincell.

Marja Immonen will finish working as Professor Osara's secretary at the end of March, but will continue in the department until Professor Osara comes back from Nigeria. On April 13, she will take up a job for 5 years as secretary at the Lääketieteen kemian laitos of Helsinki University medical school.

Lectures

Heikki Juslin is this week giving the following lectures:

- March 23rd "The roles of family members in the choice of building materials for owner-occupied houses", at Kalastajatorppa, Helsinki, in connection with the Day of Marketing of Wood-Based Products.
- March 23rd "The concept of attitude, attitude organization and attitude change", at the Ranger School at Tammela.
- March 24th "Propensity of private forest owners to sell timber", also at the Ranger School at Tammela.
- March 26th "Product features, marketing and product planning", at a course on consumer behaviour arranged by the business-management educational organization RASTOR at Insinööritalo, Ratakatu 9, Helsinki.

Departmental news

Professor Runeberg is acting as head of department during the absence of Professor Heikinheimo in Gainesville, Florida, for the 15th IUFRO Congress.

On his way back from Nigeria, Professor Osara will be participating in the 7th session of the General Committee, Conference of the Co-operative Programme of Agro-Allied Industries, a FAO-UN meeting being held in Geneva from 31st March to 1st April.

David Cope will be at Pallastunturi from 7th to 25th April to carry out the interviewing for his research project on the use of the national park. He will be assisted by Kari Keipi and Jan Heino until April 14th.

Work in the institute almost ground to a halt on March 4th, which was the institute's ski-ing day at Ruotsinkylä. Those who did not want to ski the 11-km long trail were able to go for a brisk walk in a temperature of minus 18° C. Afterwards, there was a sauna and pea soup to warm them up again.

The three foreign members of the department are all members of the Finland Alumni Association, which organizes social activities for Finnish-government scholarship holders. The first number of the association's annual newsletter, Finland Alumni News, has just been published, edited by Michael Jones.

Correction

With reference to Buddhi Jha's reappointment to the Indian Forest Service, mentioned in the last newsletter, it should have been stated that the method of recruitment to the Indian Forest Service of the members of the Bihar State Forest Service was declared illegal by the Patna High Court last year. After examining the matter, the Government of India made a new selection at the end of the year.

Bibliography

There have been no new publications by the department since the last newsletter, but the editors' attention has been drawn to the following, which was omitted from the bibliography in Folia Forestalia 87.

Ervasti, Seppo, Lauri Heikinheimo, Viljo Holopainen, Kullervo Kuusela & Gustaf Sirén. 林業経済 (The development of Finland's forests in 1964-2000). Forestry Economist, no. 4. Tokyo, 1967.

Style in research reports

One might wonder why so many research reports are dull and uninteresting. In this connection, the following remarkable statement was found in a book on research methods published in America:

"A style that is pleasing from a literary or esthetic point is an "extra". The investigator reporting his research has no obligation to be colorful or elegant in his writing, or to hold the reader's interest by a lively style ..."

("Research methods in social relations", by Claire Sellitz, Marie Jahoda, Morton Deutsch, Stuart W. Cook. New York, 1959, p. 451).

Letter from America

A first-hand report of the Wild West comes from our roving professor, who tells us of the impressions he and his colleagues obtained on their arrival in the U.S.A. last week. It seems they had a hot welcome, what with brushes with the secret service, luggage searches (both searched and searched for) and official inspection of the IUFRO working documents in case they were some Communist plot. It seems the customs missed the vodka and Lasse's copy of Pravda, which surely might have caused the whole group to be refused entry. The weather was hot, too, with an unseasonable 25° which made Finnish winter clothing rather out of keeping. After a quick look at Philadelphia zoo's famous flamingo pool at the airport post-card shop, the intrepid travellers were on their way south to the hot, sticky, steaming swamps of Florida, where even the

University at Gainesville keeps a sacred alligator on the campus. The campus covers 1000 hectares, and there are 2400 students, who apparently go around barefoot carrying blankets, babies and dogs. With the convenience of modern, high-speed air transport, Lasse had an extra six hours during his first day in America to write the preface to the department's annual report and to make a start on the four manuscripts he took along as bed-time reading.
