level of earnings or the income level. The U.N. expert committee defined in 1961 the partial factors which affect the standard of living to be:

- Health
- Housing
- Working conditions
- Security
- Human rights
- Education
- Leisure time and Recreation
- Clothing
- Nutrition

The following is a consideration of forest workers' income level and of the partial factors affecting the standard of living, as defined by the U.N., viewed with regard to the forest workers' social position, paying particular attention to the possibilities in the hand of governmental authorities to influence each separate standard of living factor. The presentation is mainly based on the study by Heikinheimo et al., "Level of Living of Forest Workers in Finland" (Helsinki 1975).

**INCOME LEVEL IN FOREST WORK**

The income level of forest workers or their earning level is believed — widely in the world — to be rather poorly able to compete with that in other occupations, such as industrial work for instance. It should be noted when evaluating the income level that the forest workers' annual and daily working hours are greatly variable, depending for instance on job payment and on the terrain and weather conditions. Moreover, the greater part of those engaging in forest work are farmers or agricultural workers who work in the forest during part of their working time only.

Another factor which should be taken into consideration in any income comparisons are the costs which the forest worker incurs by travelling and by his own work implements, if any, such as a motor saw. In the work in forest surrounding and in variable weather usually no equally efficient utilisation of the working hours can be achieved as industrial work for instance. Comparisons meant to be reliable should be based on the workers' annual incomes because a family cannot be kept up long with high but sporadic daily wages, to take an example.

In order to guarantee the forest workers a fair and just wage level and in view of the significance which forestry and timber economy have in Finland, the Forest Wages Act was passed in 1961, which decrees that forest work wages should be equivalent to no less than the average level of earnings of the workers in the wood conversion industry. However, the forest workers' organisations have not been happy about the continuous validity of this law because it may detract from the workers' degree of organisation and from their own initiative to take care of matters through the trade unions.

One of the greatest evils in forestry work encountered when working on a job wage basis: the aging forest worker's earnings and his economic position deteriorate continuously, starting at 35 years already; Finnish studies show that both fall dramatically in the case of a forest worker between 50 and 55 years when the strain of work becomes overwhelming. This drawback in the income structure may be somewhat alleviated by means of the system for the adjustment of earnings which has recently been incorporated in the labour contracts.

**HEALTH**

Health studies have revealed that the forest workers' state of health is alarmingly poor. Cardiovascular diseases are common.

High blood cholesterol and smoking are associated therewith. Bronchitis, dilation of lungs and pulmonary functional defect
are diseases caused by the working conditions, in the boreal, cold climate. The unbalanced nutrition and the exceptionality of eating habits give rise to gastric disorders and those of the large intestine. Back and extremity symptoms, especially those of the lumbosacral back, are common in older forest workers. Thirty per cent of forest workers have digital symptoms typical of vibration disease, as well as impaired hearing due to noise. The accident susceptibility in forest work is a particularly serious problem.

The State has ample ways in which it may attend to the forest workers’ occupational health and safety. The work safety legislation concerning the working and working implements may be applied to impose on the worker as well as the employer various tasks serving accident prevention and to provide equipment, training and information. Initial examinations by a doctor and periodical examinations may be prescribed by law to be compulsory in exceptionally strenuous occupations, one of which forest work is without doubt. The marketing of excessively vibrating and noisy motor saws may be prohibited and the trouble from exhaust gases reduced. Rehabilitation centres subsidized by the government may restore the lowered working capacity or they may help the forest worker to retrain for another occupation.

HOUSING

Because of the long distances involved there have been two parts to the problem of forest workers’ housing: the worker’s quarters on the site, and the actual place where his family lives. The quarters on the site have been improved by legislation and by the employers’ voluntary action to such extent that the highest class quarters on the site may give a man better accommodation and services than those which his family enjoys at home. The families of forest workers are traditionally known for their great number of children, a fact which has contributed to their cramped living. The international recommendations of the housing policy followed by official authority (one person per room not counting the kitchen) should be made the long range objective for size of forest workers’ family dwellings as well.

The municipalities, employers, retirement funds and the state may be considered as those who should finance the housing of forest workers. The housing units should be placed in viable centres of habitation so that the forest worker might have opportunity to participate, like other workers, in all activities of normal society even cultural interests included. School facilities for the children, shops, healthcare services and acceptable traffic facilities are important factors of the present standard of living in the forest worker’s case, too.

WORKING CONDITIONS

An inquiry made in Finland in 1960 revealed that the following were the worst drawbacks of the forest workers’ work in their own opinion:

1) The work brings low wages
2) The work is heavy
3) The work is harmful to the health
4) The work is irregular.

The level of income was already discussed in the chapter «Income Level in Forest Works». The heavy character of forest work is obvious, this being one of the very few professions in which a man’s energy consumption may be constantly in excess of 20,000 kJ (4800 kcal) per day. The strenuousness of forest work can best be alleviated by mechanizing the heaviest work steps and, in particular, by reducing the need of carrying or otherwise transporting timber manually. The state authority may best bring its influence to bear upon this by subsidizing the research and educational activities associated with the developing of forest working procedures and the safety of work.

The irregularity of the work and the risk of unemployment should be reduced by promoting the systematic approach in the long range planning of all silvicultural actions, by planning all jobs for implementation within the framework of mutually linked projects, and by making the highest possible proportion of the forest labour permanent employees ensured of round-the-year work, to a vocationally trained cadre of workers. It is greatly in the interest of continuing work relationships if one includes in the annual work cycle of any given workers, not only timber felling and transporting jobs but also forest planting and forest service, nursery work, service appointment in national parks, agricultural work, gathering of mushrooms, wild berries and fruits, and other equivalent types of work within the manifold utilization of forests. In this respect good results have been gained by regional cooperation between different employers. It is perhaps already true that the very heaviest mechanization involving high capital investment should be restricted in forestry so that work openings could be guaranteed to the population according to the basic needs strategy adopted by the ILO World Employment Conference 1976.

A change from job-based wages to salaries by the month or according to another time-based system would improve the forest workers’ working conditions in many respects. Such could be stipulated by law as has been done regarding the maximum daily and annual working hours. By developing intermediate or improved labour-intensive methods and implements, the forest service and the research institutes may increase both the efficiency of work and the earning capacity while at the same time the safety of work in forest working improves.

The degree of independence associated with forest work and the opportunity to work in the unfamiliar nature spells to forest workers, as does the chance to engage in hunting and fishing in the forest regions.

SECURITY

Security is a partial factor of the standard of living which is hard to define and difficult to measure. It is on the other hand closely connected with certain other partial factors. In the rural community of old, the family was the most important unit endowing social security. Nowadays, society strives for increased economic security of its workers, for instance by creating its retirement pension and sickness insurance systems. Forest workers experience the unemployment insurance system as particularly important, owing to the seasonal character of this branch and to the constantly impending risk of unemployment.

The retirement pension system ordained by law enables old age pensions, disability pensions, family pensions as well as unemployment pensions to be paid to forest workers. A reduction of the age entitlement to old age pension to be 55 years should be achieved.

Accident prevention and occupational hygiene carry exceptionally high significance to a forest worker because his work is heavy manual labour performed in severe conditions. The foremost tool of accident prevention is training. When correct working methods are learned and adopted, the result is also improvement of work productivity and of the workers’ earnings. Society-subsidized research institutes may study and develop work implements and protective means. Examples of important advances are: the kickback guard, safety chain and vibration damping of motor saws. Recurrent health examinations should occupy a salient position in the occupational health protection.
HUMAN RIGHTS

The declaration of human rights of the United Nations comprises the following human basic rights, which should be guaranteed to every person in all countries: personal freedom, spiritual freedom, political freedoms, legal protection of property, cultural rights, social rights, and the right to lawful legal proceedings.

Heikinheimo et al. observe in their study that one third of the Finnish forest workers believe that they get an unfair deal from society. They consider that they are suffering injustice through high taxation, low wages and the constant impending threat of unemployment, for instance.

Regarding the valuation of forest workers they think themselves that it is rather low as a rule. Improvement of remuneration, developing of housing conditions and boosting of education should be employed to make of forest work an occupational alternative which is attractive enough to enable the recruitment of good, young labour to this branch in the future as well.

EDUCATION

There are three aspects to education as a partial factor in the standard of living. Education is an important fundamental factor for economic growth. For the individual, education is the avenue to professions with higher remuneration. Furthermore, occupational training may help to achieve higher earnings within the forest worker's profession, for instance.

However, Heikinheimo et al. report that Finnish forest workers did not themselves feel that education was so important in their own profession. Mostly they thought of education as an important road by which to gain access to better professions, to escape from that of the forest worker.

There are many reasons why, all the same, education may be considered one of the most powerful tools in the hands of the government by which the forest workers' social conditions can be promoted in the long range. The occupational education of forest workers should therefore be arranged on the same principles as the education of skilled workers in other branches.

LEISURE TIME AND RECREATION

Leisure time and recreation activities are indispensable requirements for preservation of mental and physical health and ability to work, in the case of forest workers as well. Because of the great strain involved in forest work, one third of the forest workers examined had no hobbies or interests. They used their leisure time for resting and sleeping exclusively. Hobbies usually preferred by forest workers are: fishing, hunting, sport and physical exercise, reading.

The forest work should be made lighter to achieve that the forest workers would not need to spend an unreasonably large part of their leisure time to purposes of rest only. If their wages were improved they would gain an opportunity to a more versatile recreational activity. By placing

CLOTHING

It has been exceedingly difficult to create such work clothing which would satisfy factorily, in a cold climate, meet all the requirements imposed by forest work. For various climates such forest worker's clothing should be developed which has suitable characteristics as regards warmth, ventilation, resistance to hard wear and water repelling. It would greatly accelerate the introduction of work clothing which is expedient in view of work safety, health and working efficiency, as well as of such protective equipment, if the state were to finance the work needed to develop this work clothing and the employers would participate in the costs involved in acquiring the clothing and distributing it to the workers.

NUTRITION

A varied, versatile and adequate nutrition is a basic prerequisite of health in the case of a forest worker performing heavy physical labour. The forest worker's food should also be more varied than it is (mostly coffee and sandwiches); the contributions of meat, vegetables and fruits should be increased, for instance. A warm meal, for instance kept in a thermos, for ingestion in the middle of the day would be highly necessary. The forest worker should also have opportunity to eat and to dry his clothing on the site in a transportable resting shelter, where the working implements may also be cared for. Education is the easiest way to influence eating habits. The working-site canteens could be provided with recommendations drawn up by a nutrition expert and with a cook book, to aid the kitchen personnel.

RESPONSIBILITY OF STATE AUTHORITIES

The responsibility for promoting the forest workers' social conditions, standard of living and working conditions may be divided between many parties. The workers and their trade unions, the employers and their organisations, the forest service, the Ministry of Agriculture, the Ministry of Social Welfare and Health, the work protection authorities, the Ministry of Labour, the education and professional guidance authorities and naturally the political decision-makers as well — all their efforts are required. However, the principal moral and social responsibility for the forest worker's position and conditions rests on the country's forest authorities and the forest profession groups who have received a higher education: forest officers with a university degree, engineers and forest technicians, who should in their worker see a colleague and a human being who is in need of many kinds of support and understanding, a worthy member of our society.

SELOSTE:

METSÄTYÖNTEKIJÄJÄN YHTEISKUNNALLISEN ASEMAN KEHITTÄMINEN — VALTIOVALLAN OSUUS

Metsätyöntekijän yhteiskunnallisia oloja voil daan tarkastella ansiotason tai elintason näkökulkusta. YK:n asettama asiantuntijakomitea ei katsonut tulojen tai kulutuksen olevan varsinaisia elintason oikeudelle, vaan määrittelee (1961) elintason yhdeksän varsinaista osaketkijää seuraavaksi: ter-
ROLE OF EDUCATION AND PROFESSIONALISM IN THE DEVELOPING OF FOREST POLICIES

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SELOSTE:
METSÄOPETUS JA AMMATTIPÄTEVYYS METSÄPOLIITIIKKAAN KEHITETTÄESSÄ

To what extent can the services of forestry fulfill the needs of a nation? The answer depends not only on the natural resources or the stage of development of a country and its forestry, but also on its base of knowledge and know-how. The question is how to maximize the knowledge of forests and its role in human life, how to analyse this knowledge and in due course forward the result to the decision makers.

As an organic part of economy and culture, forest policy must incorporate a balanced and up-to-date program of education which will cover the needs of all forest-based services to the public. This program ought to guarantee a sufficient number of qualified professionals, technicians and workers who for their part should share their knowledge and especially field experiences for the development of the nation’s forest policy.

The forest management must be turned into a profession that will have its permanent role in the general planning of the nation’s economy and welfare. Depending on the structure of the country’s administration, there are different ways to make the professional voice heard by the responsible politicians. In any case a close and continual discussion and cooperation between politicians and professionals will be essential. Discussions must take place in the early phases of the planning in order to minimize erroneous planning caused by eventual lack of factual knowledge among the politicians. Information must be given in clear and uncomplicated terms, understood also by the public which must be well informed about the aims and duties of the professionals as well.

INTRODUCTION

One of the principal goals of the nations today is the achievement of a strong and steady economic growth. In countries where the forest resources are significant and the level of education is high, wood and wood-based products have an important role in the economy of the nation both in internal and international respect. It is