

## ROLE OF EDUCATION AND PROFESSIONALISM IN THE DEVELOPING OF FOREST POLICIES

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### SELOSTE:

#### *METSÄOPETUS JA AMMATTIPÄTEVYYS METSÄPOLITIIKKA 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

necessary, therefore, to link the goals of the forest policy with the goals of the national economy.

- Economic growth can be attained by increasing productivity, for instance by
- developing working methods and professional skills,
  - increasing the capital input and
  - changing the structure of production towards improved end-use products.

In countries with good forest resources it is rewarding to develop forest policy in the direction of favoring foreign trade because of the modest import inputs that the export of wood-based products require. In many countries and industries the import share means no more than one tenth of the export

value of the product. For instance, compared with the metal industry (without own ore mines) the share of the import inputs can be manifold. Thus, intensive forest management is well worth because it does not deal with exhaustable resources but with one of the most important renewable natural resource in the world.

The aim of this paper is to stress the facts on which the efficiency of a nation's forest policy depend. It asks further what is the role of the forestry personnel that, owing to its special education, must be responsible for the planning of the forest policy and also responsible for the fulfilment of the plans in practice.

### STRUCTURE OF FOREST POLICY

#### Forest resources and the measures of the forest policy

The forest education should be adjusted to the general forest and land use plans.

Table 1.

COUNTRY'S FOREST RESOURCES	KEY OBJECTS OF FOREST AND LAND USE POLICY	MAIN CONSIDERATION	URGENCY OF FOREST POLICY MEASURES
A. POOR	AFFORESTATION	LAND AVAILABILITY a) marginal only b) rich	secondary PRIMARY
B. SIGNIFICANT	REFORESTATION	STAGE OF ACTIVITY a) insufficient b) well in order	PRIMARY secondary <sup>1)</sup>
C. ABUNDANT	GROWING STOCK	WOOD UTILIZATION a) slight b) heavy	PRIMARY secondary <sup>1)</sup>

<sup>1)</sup> on condition that the activities are followed up and controlled strictly and continuously.

An urgent establishment of a forestry education program, which must be well balanced with the socio-economic needs of the nation, is obviously most important in cases A/b, B/a and C/a. In all cases the

forest policy will require an education program, the more so the closer the living standard of the nation is related to the wood production.

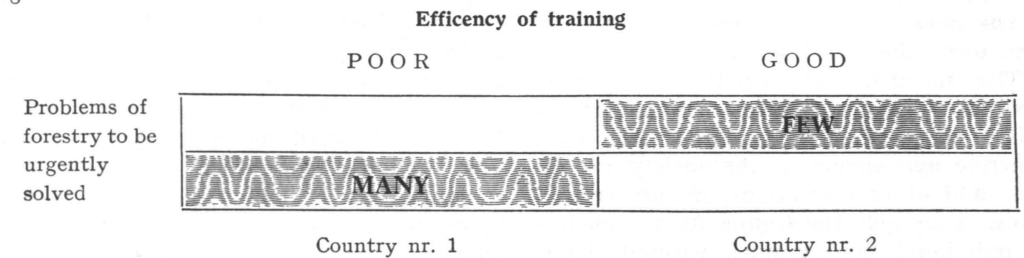
The urgency of forest policy measures is

most pressing in countries with abundant forest resources, which are in slight use only. This case is usual in the developing countries, but an imbalance between the exploitation of forests and the reforestation is quite often met also in industrialised countries. Thus the key objects of the forestry and land use policy together with the educational needs are very similar irrespective of the stage of development of the country.

An adequate forest education will return its costs most generously in countries with

abundant or significant forest resources. The increasing use of these resources should lead to increasing investments also in training. This is being stressed by foresters of these countries, though so far without sufficient understanding at the political level. The following graph (Figure/1). attempts to illustrate the amount of the training problems in two extreme cases, where forest resources are abundant but the efficiency of training varies from poor to good.

Figure 1.



#### Towards professionalism

Forestry training starts usually on the level of higher education and is influenced mainly by natural sciences (in a later phase by technology). The need of an overall forestry training is a consequence of the social development towards urban civilization, where the consumer of wood has neither the possibilities nor skills to use timber in the same manner as in a basically rural community. This means moving towards professionalism which will have - or at least should have - an effect on decision making.

One of the main fields where graduated professionals have to put in practice their special knowledge and experience is the planning of large scale forestry projects, concerning for instance the whole country, provinces or regions, companies, cooperatives or other enterprises etc. The projects can be of productive or exploitative nature or of scientific or educational nature. In all cases the building the frames of a policy is implied to offer forestry services to the public or to a part of it and to take care of the activities in the practice so that the plans will be implemented.

The profession cannot operate without the acceptance by the public, especially as the professional education is paid by the national budget. The application of professional knowledge must in principle be the same on the level of administration as on the level of field operations including all forest work.

Consequently, the management of forestry must be turned into a profession. It will be accepted by the public if it fulfils the prerequisites that are marked by this profession and that could be classified as follows:

- (a) Members of the forestry profession responsible for forest management subordinate their private interest to the public interest of the forestry.
- (b) The forestry profession is based on a systematic body of knowledge that is common and lends itself to application.
- (c) Membership of forestry profession should depend on the observance of certain rules of conduct accepted by the national or international organization of the profession.

## CHALLENGES OF GENERAL PLANNING IN FORESTRY

The main needs of man — physical, environmental and cultural — have their links with forests. The planning of forestry with its entire coverage of biological, technical, socio-economic etc. questions requires, therefore, a special concern in the general planning of the nation. The fundamental question that the general planning has to answer is this:

— to what degree does society need the forest land for wood production and to what degree to other purposes?

The question is the same irrespective of who owns the forest land.

The members of society — private persons — may not have the same preferences concerning the goals. The only concrete agreements of the society are its laws and other regulations, mainly restrictions. They give the frames for the choices of individuals and groups, without determining a definitive choice.

The majority of the members of a society would probably agree on the primary goals in the utilization of forests as being some of the following:

- exploitation of forest resources at a given time,
- improving wood production,
- conserving landscape,
- creation of recreational areas,
- financing of investments of other primary production like agriculture,
- satisfaction of needs of wood working industry,
- taking care of employment.

The interests of forest policy are obviously in closest contact with the industrial policy of the country. The prognoses of FAO up to year 2000 indicate that the total demand of industrial forest products for example in Europe will exceed the supply by 35 per cent. The prognoses for other continents may consist of other kind of challenges thrown upon forestry planning and especially on foresters trying to satisfy the demands of the nation. It includes the demand of all kind of services that will need a skillful and sufficient personnel.

## ROLE OF FORESTRY EDUCATION

The main questions of forestry education could be described according to William Duerr, who puts forward these questions:

- (1) Does the forestry profession have a program for discovering what the people regard as appropriate professional conduct, and for amending its teaching and action programs and public image accordingly?
- (2) Are the forestry schools responding to the needs of the forestry profession in a world, where doubts are rampant? Are the schools giving their graduates an education for the new future, not simply a customary course of training? How can the flexibility to cope with change be introduced into forestry, with its inheritant demand for long-term investment?
- (3) Are the forestry schools threatening to graduate too many officers and not

enough troops? Are we turning out more professionals than will be needed in a world constrained by resource scarcities — and putting too little emphasis on the education of technicians at subprofessional schools?

Who ever discusses these questions must admit that there are only few countries if any, where the education of the forestry profession has been well-adjusted to the training program of the nation. In future the adjustment will become even more important, including the necessity to engage professionals in the planning of these programs. An intensive cooperation between the practitioners, teachers and research specialists can guarantee the best result.

The training programs will need various experts according to the main classification of the forestry personnel:

- (a) the professionals graduated from forestry schools or qualified at the technical institutes,
- (b) skilled forest workers trained into the forest operations by schooling and practice and
- (c) temporary forest workers capable to various field operations trained in short courses or by experience.

Because of the broad scale of personnel needed by different employers in various circumstances in the world, the duties, responsibilities, motivation etc. of personnel must vary accordingly. However, the definition of these matters is essential in the training programs.

Further, the management of natural resources asks for a good cooperation with the agronomists, limnologists, landscape architects etc. This will give a solid basis for the quality of the educational planning.

## NEED OF PROFESSIONAL VOICE IN DECISION MAKING

### Significance of working groups

The training programs must be based on calculations, which will indicate the quantitative and qualitative needs and resources of the entire forest process, from the establishment of growing stands until the final use of wood products, not forgetting forest land use in general. Thus the needs of environmental policy will have their share in the training. The multiplicity of questions requires that the whole planning will be carried out by working groups consisting of specialists and especially professionals experienced in field work.

For instance knowledge of the following questions will be essential:

- how many forest workers and how much other personnel will be needed in wood production, timber exploitation and transport, in research and experimental work, in other uses of forest etc. (These kinds of facts should be part of the national plan of the forestry),
- what would be an optimal relation between manpower and machines in forestry,

The training programs for forestry must not ignore the international perspectives of the subject. There is a general trend towards longer curricula, because of the felt need for a more extensive general education in addition to an improved specialization in the profession.

Is the balance, then, between the forest officers and the troops questionable? The increasing lack of skilled manpower in the forests indicates that the training of forest workers is not enough and too late, even in cases where higher education might be sufficient and the content of training normally well-planned. The hitherto surplus of manpower in the countryside is a poor excuse to this development. The more important the wood-based industry and the other services of the forestry are for the nation, the more necessary it is to find the balance between the categories of the forest personnel and to do it as soon as possible.

- what are the seasonal variations and their influence in the demand for workers,
- how the total need of manpower will divide into skilled forest workers and workers changing between forestry and other rural employment like agriculture,
- what must be the content of the training on the various levels and in various forms of the education,
- what kind of motivation is needed by various levels.

The list of questions would be continued, but this example indicates already that all possible knowledge of forestry practice as well as the close cooperation between the education experts and the professional foresters is needed in the planning phase.

### Personnel policy in forestry organisation

#### Motivation

It is recommended that the members of the forestry profession on the level of national management subordinate their selfinterest to the public interest (see page

259). This kind of motivation might be unrealistic on the other levels of the personnel.

The aspirants planning to enter a forestry profession find their motivation usually from the common knowledge of the profession or from their experiences in practice, but less frequently from the training programs. The main motivation might be the salary, the possibilities of promotion, security and other factors of the profession depending more or less on the working environment. The more the profession is understood as a link of unbroken chain from woodlands to the forest management and decision making on the national level, the more important it will be to motivate every link of the chain with its special and general images. This must have its share in the training programs.

#### Information

The knowledge what the professionals are doing is of decisive importance for the public acceptance of the actions in the forestry practice. The reasons for their actions must be known and influenced by the employees of forestry organizations as well as by the customers of the organizations, i.e. the public. Thus the inside and outside information of forestry must be organized to cover the whole economic life. Further, the efforts to develop the forestry professions must be understood as an essential part of the theme «forest for people».

#### Working environment

Vocational guidance sometimes points out the healthy and free environment of forests as one of the best motivations for the profession. Compared to some urban professions this is quite right, it was so especially before the excessive bureaucratic development in forest management took place.

Modern personnel policy of forest organizations must seriously take into consideration environmental questions both in field conditions and in all other working situations and sites. It must cover not only the safety requirements and hygienic demands but also the psychologically significant factors in the work environment.

#### Career progress

The personnel policy must naturally take care of the recruitment of the workers, but also of the continuous training of the employees, preparing possibilities for them to proceed according to their individual qualities. The additional training in forestry has mostly been taken care of by the employers' organizations, which have been thought to be able to give the best expertise needed by the special branches of the forestry and especially forest industry.

Possibilities to get additional training are essential in the plans of the entire forestry training program and must be taken into consideration for instance where the expert training is not open for aspirants outside the employers' organizations.

#### Forestry budgets

Presuming that a national plan of the forestry has been considered essential for a country where forests exist, the central part of the plan will be obviously the monetary calculations of input and output in the forestry. It will be the focus of the decision making.

The figures must be prepared by the best experts who have a complete control of the country's natural resources and who are experienced in the practice. Besides of all other questions of forestry emphasis must be put on the employment trends.

Annual budgets are based on the current situation in every sense bearing in mind trends hitherto, which will have special importance in the long term prognoses. Budgeting procedure needs in any case an adequate follow up of changing facts concerning not only the home country but the global situation.

#### Colloquiums between politicians and professionals

The major conclusion of the ideas presented in this paper is that the forest policy of a country must be a synthesis of facts which will have an influence of greatest weight to the needs of the nation.

During the preparatory stage of the national plan for forestry and especially when it is ready for the political decision, it is obvious that there must be thorough discussions between the politicians and the representants of professionals, i.e. the planning and implementing experts of forestry.

The readiness to listen to facts that eventually will diverge from ideas or wishful thinking of the politicians is not always very good. The discussions must, therefore, take place in a phase as early as possible.

It is also essential that the opinions of the professionals are presented and documented in a clear and uncomplicated manner. Thus scientific language used in the arguments, calculations etc. may have to be reduced and «translated» to terms of practice, to expressions that are understood by the public.

The ability to make realistic plans and to give reasons for them is also a result of a thorough training and practice, for which the administrative systems of the country must give a special concern, irrespective of the ideology of the governing system.

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#### SELOSTE:

#### METSÄOPETUS<sup>1</sup> JA AMMATTIPÄTEVYYS METSÄPOLITIikkaa KEHITETTÄESSÄ

Kirjoituksessa tarkastellaan metsätaloudessa työskentelevien edellytyksiä täyttää ne odotukset, joita kansakunta asettaa metsätalouden tarjoamille palveluksille. Missä määrin nuo odotukset voivat täyttyä, se ei riipu yksitään metsävarojen runsaudesta tai kansakunnan kehittyneisyydestä, joka ilmenee mm. luonnonvarojen käytössä. Asiaan vaikuttaa ratkaisevasti tiedon määrä, laatu ja soveltuvuus käytäntöön. Miten metsistä saatavissa oleva tieto hankitaan ja jäsennellään kansakunnan tarpeita silmällä pitäen niin, että se mahdollisimman pätevänä ja riittävänä on käytettävissä jokaisessa näitä luonnonvaroja koskevassa päätöksentekotilanteessa, se juuri on metsäalan opetus-toimen vastuulla.

Näin opetusohjelmat ja niiden tarve niveltyy kansakunnan metsäpolitiikan kehitykseen. Tätä tietä metsäopetuksen keskeinen osa vahvistuu ja ulottuu koko talous- ja kulttuuripolitiikkaan. Osana kansakunnan tasapainoista ja aikaansa seuraavaa kehitystä opetus-toimen nimenomainen tehtävä on luoda kasvateilleen valmius antaa kaikkia niitä metsäsyntyisiä palveluksia, joita kansakunta

tarvitsee. Opetusohjelmat on rakennettava tältä pohjalta ja niitä toteutettaessa on pyrittävä tuottamaan riittävä määrä ammatillisesti mahdollisimman pätevää työvoimaa työmarkkinoiden kaikille tasoille, alkaen koulutetuista metsätyöntekijöistä ja metsätalouden muista ammatinharjoittajista aina opisto- ja korkeakoulutasoihin suunniteltu-, johto- ja tutkimustehtäviin saakka. Työvoiman koulutus ei tähtää vain koulutettavien hyödyn ja toimeentulon parantamiseen, vaan kyseessä on myös tieto- ja kokemusaineiston tuottaminen kansakunnan hyvinvointia edistävälle toimenpiteille, metsätalouden kyseessä ollessa palautteeksi metsäpolitiikan kehittäjille ja toteuttajille.

Metsätaloudesta, sen harjoittamisesta ja johta-

<sup>1</sup>) Sana «professionalismi» on ymmärrettävä laaja-alaisesti tarkoittamaan myös ammatin henkeä ja leimaa eikä vain ammattimaisuutta tavanomaisessa mielessä. Nämä vivahteet mahtuvat sanaan «ammattipätevyys».

misesta, on saatava syntymään ammatti sinänsä, ammatti jolla on pysyvä sijansa taloussuunnittelussa valtakunnallisella tasolla. Maan hallintorakenteista riippuu mitä tietä ammattimiehen sana — the professional voice — tulee vastuussa olevien poliitikkojen tietoon ja tajuntaan. Talousjärjestelmästä riippumatta on oleellista se, että poliitikkojen ja ammattimiesten kesken käydään läheistä ja jatkuvaa keskustelua sekä tehdään yhteistyötä päätöksenteon valmistelusta sen lo-

pullisiin vaiheisiin saakka. Metsäammattimiehen, niin tiedemiehen kuin käytännön asiantuntijankin, on kyettävä antamaan informaatiossa selkeänä ja yksiselitteisenä sekä muodossa, joka tavoittaa myös yleisön. Metsätalouden menestyminen edellyttää että ammatinharjoittamiseen liittyvät tarkoitukset, tavoitteet ja velvollisuudet hyväksytään myös metsäammatin ulkopuolella ja nimenomaan poliittisessa päätöksenteossa.