

FORMULATION AND IMPLEMENTATION OF NATIONAL FOREST PROGRAMMES

Vol II: State of the Art in Europe

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Edited by Peter Glück, Gerhard Oesten,
Heiner Schanz and Karl-Reinhard Volz

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Editorial Office: European Forest Institute
Torikatu 34
FIN-80100 Joensuu, Finland
Phone: +358 13 252 020
Fax: +358 13 124 393
Email: publications@efi.fi
WWW: <http://www.efi.fi/>

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NATIONAL FOREST PROGRAMMES IN EUROPE – DEPICTING AMBIGUITY AND COMPARING DIVERSITY

Heiner Schanz

Institute of Forestry Economics
Albert Ludwigs University Freiburg
Germany

ABSTRACT

This introduction aims at providing a clear understanding of the structure and contents of the reports on the state of formulation and implementation of national forest programmes (NFPs) in various European countries, as presented in this volume. After a short introduction on their formation, the given terms of reference for the preparation of the country reports are described in detail. Subsequently, a seemingly suitable framework for a comparison of the different states of formulation and implementation of NFPs in Europe is introduced.

1. INTRODUCTION

The call for national forest programmes (NFPs) has been a recurring theme in international negotiations on the sustainable management, conservation, and sustainable development of all types of forests. Since the adoption of Agenda 21 from the 1992 UNCED Summit, the characteristics of NFPs have been elaborated within the framework of the Intergovernmental Panel on Forests (IPF)- / Intergovernmental Forum on Forests (IFF)-process, and subsequently a stronger set of principles and elements has evolved in the political arena over time (e.g. Forestry Advisers Group 1995; UN-FAO 1996; CSD-IPF 1997). From this point of view, NFPs appear to be an aid in overcoming prevailing difficulties and unresolved problems in activities relating to forests and forestry.

According to the Intergovernmental Panel on Forests, the term NFP is to be understood as “...the process used by a country to deal with forest issues, including the planning and implementation of forest and forest-related activities” (CSD-IPF 1996, para. 26). Forest planning and programming in the context of NFPs is therefore not to be understood as forest-management planning aimed at identifying and selecting among alternative production and use combinations at the forest management unit level, but a

continuous programming and planning alternative way of conserving and using forests at the national and sub-national level in the mid- and long-term.

Experience with the various aspects and elements of NFPs and their core element, that of national policy planning, has developed mainly in the countries of the South, i.e. within the frame of the Tropical Forest Action Programme (TFAP) and other related programmes (cf. Liss 1999). The current situation and the development of NFPs in industrialised countries, e.g. in Europe, has seldom been the subject of in-depth analysis until now. It is therefore not surprising that the impetus in the international deliberations on NFPs is predominantly based on the experience in countries of the South. As adequate measures for the implementation of international agreements must be available for all type of forests, a first step in analysing strengths, weaknesses, and deficiencies of existing approaches is to provide an overview on the state of formulation and implementation of NFPs in Europe according to social, political, and natural area dependencies.

As the characteristics of NFPs are still the subject of on-going deliberations, viewpoints of involved or potentially affected actors on these issues are apt to be highly political. In addition to initiatives such as the “Six-Country Initiative”, which implicitly and explicitly aims at putting the IPF proposals for action into practice (cf. Davenport and Ivers 1998), an important purpose of such an overview must be to provide a basis for a critical assessment of the limits and possibilities of NFPs as an conceptual approach to ensure the sustainable development of forests in developed regions such as Europe. For this reason scientists in the field of forest policy and forest economics from all over Europe were asked to prepare a report on the state of formulation and implementation of NFPs in their respective countries before the start of the international seminar in Freiburg/Germany from the 18th to 20th of May, 1998. In selecting the countries, a broad representation of all different regions, as well as various institutional and societal structures in Europe was sought. Accordingly, country reports representing Scandinavia (Denmark, Finland, Norway, Sweden,), Western Europe (France, Great Britain, The Netherlands), Central Europe (Austria, Germany, Switzerland), Eastern Europe (Czech Republic, Hungary, Poland, Slovenia) and Southern Europe (Italy, Portugal) was the result.

Not only these country reports, documented in the following section of this volume, provide an overview on the state of formulation and implementation of NFPs in Europe; due to their frank and direct manner, they allow a unique general insight into forest policy formation in the various European countries.

2. DEPICTING AMBIGUITY

The main difficulty in providing an overview on the state of formulation and implementation of NFPs in Europe is to grasp all features relevant for a meaningful analysis and comparison of the different countries. A first problem is that, despite the seemingly unequivocal support of NFPs in international deliberations, they are rather ambiguously understood “...to be a generic expression for a wide range of approaches to the process of planning, programming and implementing forest activities in

countries” (CSD-IPF 1996, para. 25). Their rather vague nature is also reflected in the adjunct that “in many countries, the words ‘programme’ and ‘plan’ are used interchangeably, and ‘strategy’, ‘forest strategy’ or ‘national strategy’ may be used to designate a process similar to that of national forest programmes” (CSD-IPF 1996, para. 26). The question is therefore how to depict the state of formulation and implementation of NFPs before the background of the ambiguity of the concept.

A first hint of suitable descriptive features can be taken from the set of 12 basic principles of NFPs as published by the Food and Agricultural Organization of the United Nations (UN-FAO 1996). These are – not in their formulation but intentionally – also reflected in the principles and elements contained in the report of the IPF to the Commission on Sustainable Development (CSD) of its fourth final session (cf. Egestad 1999). Nevertheless, a closer look clearly indicates that these principles and elements are still too vague and political in nature, thus not clearly operational for an comparative overview.

A more promising approach seems to focus on the characteristics of the core element of NFPs, that of policy planning and coordination, and to rely on already existing experience and approaches for their description. A comprehensive compilation of features for the comparison of policy planning in various countries can be found, for example, in Jänicke and Jörgens (1999) in relation to National Environmental Policy Plans. Moreover, helpful borrowings in developing an analytic and comparative frame for NFPs in Europe can be taken from the “Guidelines for Contents for a National Biodiversity Action Plan (Convention on Biological Diversity)” (Council of Europe et al. 1996: 34), which are based on the UNEP guidelines for the preparation of national biodiversity strategies and action plans. By taking general features found relevant for policy planning in these sources and combining them with the specific elements and principles of NFPs as stated in the IPF-process, the following terms of reference for the preparation of the European country reports on formulation and implementation of NFPs was developed:

- Aims and strategies

State the vision for forests and forest-related activities and how they are expressed in society and by the major forest-related actors. Characterize them as to whether they are more qualitative or quantitative, strategic or operational. Fill the gaps between the current situation in the country and the stated vision, goals and objectives. Describe the strategies and forest policy tools (mandatory, voluntary, and complementary) that have been recommended/selected in your country to close the gaps. Identify the general restrictions concerning planning, programming and implementation of forest-related activities in your country.

- Stakeholders and partners

Describe the roles and mandates of the major forest-related actors, including public and private entities, communities and industries. Describe the breadth of the political and societal basis for forest policy goal-setting in your country, focusing on the degree and matter of participation of various stakeholders and the mobilisation of decentralised societal capacities. Provide an overview on coordination mechanisms, network structures and alliances between major forest-

related actors. Introduce the leading authority/authorities and explore their motivations for governing.

- **Intersectoral coordination**

Provide an overview on intersectoral coordination and integration of policy objectives into/from other policy areas. Describe the interpolicy coordination by evaluating amplitude and solidity of consultation and cooperation. Give a short overview on land-use planning at the national and sub-national level in relation to forests and forestry. Describe how and to what extent national macroeconomic planning influences the planning and/or programming of forest and forest-related activities in your country.

- **Special institutionalisation**

State whether special planning frameworks and planning institutions for forests and forest-related activities were developed in your country and when. Were they successful? Describe activities in your country relating to on-going international and global initiatives such as the Helsinki Resolutions or the IPF process as a follow-up of UNCED.

Outline the measures and indicators to be used for monitoring changes in the forestry sector and its relation to the economy and society. State whether planning cycles or other measures allowing an iterative dialogue on forests and forest-related issues exist.

In order to provide a referential basis for general explanation patterns concerning differences and similarities of NFPs among countries regarding aims, structures and means, authors were asked to begin their report with a short description of the main variables which form the background and basic conditions of forests and forest issues in their respective countries:

- **Introduction**

Give a short introduction and include the following topics: Who owns the forests, how are they used and to what extent? Describe the relative strength of the forestry sector within the economy of the country, its ability to draw the attention of politicians and decision-makers and to gain resources in comparison with other sectors.

- **Background**

Describe the legal and policy framework for forests and forest-related activities in your country. Provide a short summary of the nation's capacity (human resources, institutions, facilities, and funding), and on-going programmes concerning planning, programming and implementing of forest activities. Explain the institutional arrangements and responsibilities, e.g., the involvement of sub-national and local-level authorities/institutions in the decision-making and implementation process.

Finally authors were asked to conclude with further developments in formulation and implementation of NFPs in their country from their personal point of view:

- Conclusion and Outlook

Briefly summarize your expectations of the further developments of the forestry sector in your country and of the constraints and opportunities of NFPs in this context.

Looking at the results, the country reports reveal a seemingly infinite variety of situations and circumstances regarding the formulation and implementation of NFPs in the various countries, which at first seem to make generalised predictions of the situation in Europe impossible. However, this variety is not particularly surprising: different traditions in policy planning (not only found in the former socialist countries with central government planning authorities), the great variety and complexity of national settings in Europe, and of course, the ambiguity and highly political character of the NFP concept itself, leaving much room for interpretations, are only a few of the reasons for this variety.

The collection of country reports, however, not only provides a deeper and realistic description of the activity of the various countries in the context of formulation and implementation of NFPs. A further and perhaps more informative meaning it possesses aside from providing an overview is serving as a basis for a comparative policy analysis. Comparing the different approaches, structures, and means could possibly lead to a better understanding of the scope of social, economic, cultural, institutional, and natural variables that account for any variation in forest policy planning and coordination in Europe. Or as Bennett puts it: “By asking the ‘why here, not there’ or the ‘why like that here, and like that there’ questions, we may gain theoretical insights about the wider capabilities and features of different political systems” (Bennett 1996: 300). The question still at stake is how to compare the diverse situations in Europe which came to light in the country reports.

3. COMPARING DIVERSITY

The following introduces the comparative framework which served as basis for analysis and discussions at the international seminar in Freiburg. Not only the diversity of approaches, structures, and, means to forest policy planning and coordination revealed in the country reports clearly indicates that this framework is only one of the many other thinkable. It should be kept in mind that any comparative framework is the result of a subjective trade-off between the comparative scope found adequate and the textured focus thought necessary for the respective comparative analysis – there is no right or wrong, simply more or less suitable.

Independent of the present comparative analysis, however, any comparative framework must reveal and be structured by three aspects: the outcome of a process or procedure, the dependant and the independent variables determining the outcome.

The starting point for any comparative analysis is the *outcome* of the process or procedure. As the formulation and implementation of NFPs is still very ambiguous and is, as a concept, subject to very distinct interpretations in the various countries, its outcome is difficult to predict. Nevertheless, there is general agreement that the main

goal of NFPs is to achieve sustainable forest management to ensure the conservation and the sustainable development of forests (cf. Glück 1999). Therefore, national initiatives towards sustainable forest management and their degree of institutionalisation can be interpreted as the outcome of national policy planning and coordination in the context of NFPs.

Independent and dependent variables in the context of formulation and implementation of NFPs encompass above all the structure of the respective national forest sector and its basic conditions, including ownership structure, its economic importance, and its political awareness. In addition, the legal and constitutional situation, as well as the activity concerning style and styles of the political system can provide an explanatory background for the state of forest policy planning and coordination. In addition to the national context of the forest sector, variables related to the process and issues of forest policy formation and formulation may represent a further important source of explanation. Factors which seem to be most relevant are, in particular, the leading forest authority, network structures and existing alliances between major actors, the degree of participation, and lastly the style and tradition of coordination and conflict resolution, as well as the strength of interpolicy coordination between the forest sector and other societal and economic sectors.

Based on these deliberations, the following frame for comparing the – seemingly uncomparable – diversity was developed:¹

- I. The Forest Sector In It's National Context
 - I.1 Ownership structure
 - I.2 Economic importance
 - I.3 Political awareness / importance
 - I.4 Dominating regulations in forestry
 - I.5 Main forest policy tools
- II. Sustainability Of Forestry And Forest Development
 - II.1 Country initiatives to ensure sustainable forest management
 - II.2 Formulation of country initiatives
 - II.3 Degree of initiative operationality
- III. Forest Policy Formulation
 - III.1 Leading authority
 - III.2 Network structures/alliances
 - III.3 Participation
 - III.4 Methods of coordination and conflict resolution
 - III.5 Interpolicy coordination
- IV. Degree Of Institutionalisation
 - IV.1 Special planning institutions
 - IV.2 Evaluation / reports
 - IV.3 Degree of consistency with international initiatives

¹ A short tabular compilation of country reports submitted following this structure can be found in the annex of this volume. It was provided to the seminar participants as a basis for a comparative analysis for the workshop sessions. As the tabular compilation is already an interpretation of the original country reports it can therefore not be read in isolation of the original country reports without misinterpretations and inaccuracies.

Despite an apparent incomparableness, a comparative analysis established during the seminar based on this outline clearly indicates starting points for general explanation patterns: Considering a differentiation in the approaches, structures, and procedures concerning the formulation and implementation of NFPs in various European countries, ‘constitutional structure’, ‘state-society-relations’, ‘institutional responsibilities’, and ‘in-/exclusiveness of the forestry sector definition’ represent solely a few factors forming the basis for general explanation patterns (cf. the documentation of workshop sessions in Part I).

Even in the case that this comparative framework solely reveals very general patterns and few main variables accounting for variances in formulation and implementation of NFPs in the represented countries during the seminar, these first rough theoretical insights into the structure and coherence of national forest policy planning and coordination accentuate the impressive potential the country reports possesses in the next chapter and in their comparative analysis.

4. CONCLUSION

It is not an easy task to compare the state of formulation and implementation of NFPs in Europe, especially considering the diversity of the contexts of the respective forest sectors. The concept of NFPs is still very ambiguous and, thus, subject to varying interpretation in the different countries. Nevertheless, the diversity expressed in the country reports is nothing else but what constitutes Europe, and it is this very diversity that makes it so difficult to conceptualize NFPs as an approach to ensuring the sustainable management, conservation, and sustainable development of forests in Europe. At the same time, it is this diversity that provides deeper insights by means of comparative analysis in the core elements of NFPs.

Even a superficial analysis of the subsequent country reports reveal their potential for deeper studies, not only in relation to the formulation and implementation of NFPs, but to the formation and design of forest policies in general. This holds especially true for their theoretical and evaluative potential.

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Michael Pregernig

Institute of Forest Sector Policy and Economics
Agricultural University of Vienna
Austria

ABSTRACT

Austria's political culture is characterised by the institutionalisation of consensus and co-operation. With a high share of forests in private hands, forest policy is determined by the goals and interests of private forest owners. Through the corporatist structure of the Austrian "social partnership", forest interest groups are granted institutionalised influence on policy formulation and implementation.

At present, Austrian forest policy is far from pursuing a broad inter-sectoral, iterative and holistic approach in order to achieve the target of sustainable forest management. Within the current political setting, the chances of having a National Forest Programme formulated and implemented seem to be rather modest: Powerful stakeholders with strong political and societal backing will not be prepared to share their sphere of influence with other players representing opposing interests. With changes in the political framework, such as pressure from outside or new financial incentives, an NFP's chances of success could increase.

Keywords: Austria; Forest Policy, Policy Instruments; Political Culture; Policy Network.

1. INTRODUCTION

This paper is intended to give a general overview of the current state of the discussion, formulation and implementation of a National Forest Programme (NFP) in Austria. For Austria, as for most other European countries, an NFP is a new policy tool. Compared to conventional policy tools, NFPs, as discussed in the follow-up process of the United Nations Conference on Environment and Development (UNCED), show two new elements (Glück 1999): First, NFPs have a different *objective*, namely sustainable forest management (SFM). Second, NFPs differ in a *procedural* aspect: In the working

process of the United Nations Ad Hoc Intergovernmental Panel on Forests (IPF), NFPs have been defined as comprehensive policy frameworks mainly based on holistic, flexible, adaptive and integrated planning processes (Egestad 1999).

At present, Austrian forest politics are far from pursuing a broad inter-sectoral, iterative and holistic approach in order to achieve the target of sustainable forest management. The future development of an NFP in Austria would thus require a fundamental policy change (Glück 1999). With the present state of knowledge, it is hard to predict if and how this policy change will take place in the foreseeable future.

There are two possible lines of action to settle this question: First, a comparison with countries which have already implemented an NFP or an NFP-like instrument could supply clues as to which characteristics of a socio-political system promote the implementation of an NFP and which elements tend to hinder it. The method of comparative politics can be applied only when sufficient data on an adequate number of different countries is available. The country reports presented at the international seminar "Formulation and Implementation of National Forest Programmes" can be seen as a first step towards this goal, but there is a lot more research to be done. Besides the comparative study of SFM policies, a second possibility would be to investigate to what extent the current Austrian socio-political setting corresponds (or not) to the basic factual and procedural principles the concept of NFPs requires.

In this paper, the second approach will be applied. The main part of this report is therefore devoted to the *descriptive* representation of the circumstances under which forest-related questions are currently dealt with in the Austrian political system. For that purpose, the following subjects will be outlined briefly:

- economic and political importance of the Austrian forestry sector (chapter 2)
- legal and policy framework for forest and forest-related activities (chapter 3)
- current policy implementation (chapter 4)
- main interest groups and policy networks (chapter 5)
- political culture and styles of interaction (chapter 6)
- targets and strategies for forests and forest-related activities (chapter 7)

The following remarks will, however, not only remain on a descriptive level. On the contrary, it will be attempted to assess cautiously if the situational variables described have a positive or negative impact on the development of an NFP in Austria. These ad hoc assessments of the chances of success will be placed right behind the respective descriptive representations and will be set off against the rest of the text by using italics.

Since the concept of NFPs is still rather vague, an *analytical grid of evaluation criteria* is needed in order to assess the chances of success an NFP has in a certain political setting. In the following, the 12 »*Basic Principles*« (BP) published by the FAO (1996) will be used as a reference:

1. sustainability of forest development
2. national sovereignty and country leadership
3. partnership
4. participation
5. holistic and inter-sectoral approach

6. long-term iterative process
7. capacity building
8. policy and institutional reforms
9. consistency with the national policy framework and global initiatives
10. raising awareness
11. national policy commitment
12. international commitment

By assessing in detail to what extent certain situational variables of the Austrian political system correspond (or not) to some or all of these basic NFP principles, it should finally be possible to carry out a comprehensive evaluation of an NFP's chances of success. Due to the lack of empirical data, many of these assessments are rather speculative. By analogy with past and present plans, legislation, policies, policy instruments and practices, some judgements should still be possible. As NFPs are novelty policy instruments, a reliable ex-ante evaluation of its conditions of application seems to be difficult.

2. AUSTRIAN FORESTRY SECTOR

2.1 Use of Austrian forests

Forests, covering about 47% of Austria's territory, are an important element of the country's landscape, economy and culture. In the mountainous regions of Austria, forests have a protective function against geological hazards. Over the past years, the amount of area covered by forests has increased by approximately 2,000 hectares per year, on an average. A total of 972 mill. m³ of wood are found in the Austrian forests, the annual increment amounts to 31.4 mill. m³. Only 19.8 mill. m³ are felled each year. 86% of Austria's forests can be classified as commercial forests (with 76% high forest, 2.5% coppice forest, and 7.5% protective forest with yield), 14% are forests without yield (BMLF 1995a and 1997a).

The Austrian forestry sector is characterised by a very high fragmentation of forest property: 3.88 million hectares of forest land are managed by about 214,000 forest owners. 99% of the silviculturists manage enterprises of less than 200 hectares, 65% of the forest enterprises have a size of less than 5 hectares. About one third of the entire forest area is cared for by major forest enterprises. The great number of small forest holders interfere with professional work in private forests and with the optimum utilisation of wood and site potential. Due to a lack of formal education, in many cases small land owners are not really interested in the development of high quality forests. To safeguard the orderly tending of forests, supervision and extension programmes have to be provided on a comprehensive basis. This is one reason why the forest authority and other institutions offering extension service are well developed in Austria.

Approximately 80% of Austria's forests are privately owned (with 10% in the hands of local forest co-operatives). One fifth of the forests are owned by public authorities: 16% are national forests in the hands of the Federal Austrian Forests (*Österreichische Bundes-*

forste AG), 4% are other national, provincial or municipal forests. In comparison with other countries, Austria has an exceptionally high share of forests in private hands; within the ECE region only Norway and Portugal have a higher portion of private forests.

It goes without saying that the level of private ownership of forest land has repercussions in the national forest policy and politics: More than half of the forest owners expect financial returns from their property which primarily come from timber sales (and to a modest extent from hunting leases). No wonder timber production plays a predominant role in the value system of forest owners and foresters (Glück 1995a). The primacy of timber production, which strongly influences many aspects of Austrian forest policy, is ideologically justified with the so-called »*wake theory*« (*Kielwassertheorie*), which assumes that the non-timber products and services of forests are provided in the wake of regular forestry for timber production (Glück 1982).

Forest policy in Austria is determined by the goals and interests of private forest owners. Professional thinking is dominated by a market-oriented model which implies harsh criticism of any restrictions to the forest land owner's freedom of choice. At the same time, this concept of liberalism does not prevent foresters and forest land owners from emphatically demanding public support in the form of tax relieves and subsidies. So, liberalism in forestry is a kind of *pseudo-liberalism* (Pleschberger 1989: 514f.).

The wake theory assumes that timber production in no way impedes the provision of non-timber products and services of forests; these goods and services are only seen as by-products. The NFP principle of sustainability (BP 1; FAO 1996: 15) puts emphasis just on these by-products of forests. Wake theory blinds to these by-products. Sustainable forest management is not put into action as long as the insight into the consequences of traditional forms of forest management is missing.

In accordance with the liberalist model, any type of planning is seen with a certain degree of scepticism. Private forest land owners want questions of forest management not to be affected by interventions of outside planning agencies. The special property structure of the Austrian forestry sector, with its large share of forests in private hands, thus constitutes an important obstacle for the implementation of an NFP. But private economic interests might be ready to support an NFP, as soon as they can expect some financial advantage from it. AN NFP, among other things, aiming at raising the visibility of the forestry sector and its priority in national agendas (BP 10; FAO 1996: 23), could possibly bring about some economic incentives for forest enterprises: On the one hand, forest enterprises could profit from improved possibilities for the marketing of non-wood goods and services of the forest, while, on the other hand, an NFP could at least serve to justify more subsidies for the forestry sector. Possible economic benefits might persuade forest owners to support an NFP.

2.2 Relative strength of the forestry sector within the Austrian economy and the Austrian political system

Although Austria is rather rich in forests, the forestry sector plays only a minor role within the economy of the country. In 1996, the share of the forest industry sector amounted to 3.8% of Austria's gross domestic product (GDP) with only 0.2% attributable to forestry and 3.6% to the processing of timber. Over the last years, the

relative importance of the forest industry sector, as expressed in relation to the Austrian economy as a whole, has continuously decreased.

The picture changes a little bit when you look at the forest industry sector from a macro-level perspective. The *forest and forest industry cluster*, which includes not only the production of coniferous saw wood, paper and paper board, particle board and carpentry and joinery products but also further processing industries such as paper processing, furniture manufacture, as well as parts of the Austrian machinery industry specialising in pulp and paper machinery, is one of the most important clusters of the Austrian national economy (Glück 1995a).

In *foreign trade* as well, the forest industry sector is of considerable importance. It is the second most important positive contributor to the Austrian balance of trade, following tourism. The forest industry sector amounts to 5% of total imports and 10% of total exports (Schwarzbauer 1994).

About 130,000 people are employed in the Austrian forest industry sector (3.9% of the total work force). Only about 15,000 people, or 0.5% of the total work force, are working in the forestry sector in a narrower sense (if forest owners managing enterprises of less than 50 hectares are not included).

Parallel to its peripheral role within the Austrian economy, the forestry sector assumes a rather negligible position within the Austrian political system as well. Its ability to capture *resources* is rather modest. Forestry receives about 260 million ATS of federal subsidies; this corresponds to 2.3% of federal subsidies transferred to the whole agrarian sector: In 1996, the Austrian federal budget totalled approximately 885 billion ATS. The share of the *agrarian* sector, including both agriculture and forestry, amounted to 29 billion ATS, or 3.3%. In addition to that, the agrarian sector received about 24 billion ATS in subsidies (with 14 billion ATS co-funded by the EU).

Even within the responsible Federal Ministry, forestry plays a minor role. As to its professional priorities, the Ministry of Agriculture and Forestry especially emphasises agricultural questions, whereas forestry is seen as relatively less important. The Ministry consists of six divisions; the three largest divisions deal with agricultural matters. One division, or only 8% of the employees in the headquarters of the Ministry, are working on forest-related questions.

The forest sector's poor capacity to capture resources also indicates a poor capacity to draw the *attention of politicians and decision-makers*. Although the forestry sector *per se* forms a close network of personal and political loyalties, in the corporatist structure of the Austrian »*social partnership*« (*Sozialpartnerschaft*) forest interest groups are strikingly underrepresented. For most farmers, the forest is of secondary importance. Owners of larger forest enterprises rarely show political commitment. Functionaries of the Federation of Peasants (*Bauernbund*), which is part of the conservative Austrian People's Party (*ÖVP*), prefer to stand up for agricultural concerns because they can thereby mobilise a greater number of voters. Only a few members of the federal parliament get involved in forestry matters.

As can be expected under these circumstances, forest-related interests have poor chances of standing up against lobbies backed by powerful economic interest groups. The persistent vetoing of the revision of an ordinance regulating air pollution with detrimental effects on forests on the part of the Ministry of Economic Affairs is a good case in point.

Given the insignificant position forestry and forest-related players hold within the Austrian economy and Austria's political system, it is rather unlikely that an NFP is going to be backed with strong political commitment at the highest level, as would be necessary for its efficient implementation (BP 11; FAO 1996: 21).

3. LEGAL AND POLICY FRAMEWORK FOR FOREST AND FOREST-RELATED ACTIVITIES IN AUSTRIA

Austria is a federal state which consists of nine provinces (*Länder*). The Austrian federal constitution provides three main characteristics, namely the delegation of authorities between the federal government and the provincial governments, indirect federal administration by the *Länder*, and finally the upper house of parliament, the *Bundesrat*, which is of minor importance in this context (Müller 1992).

3.1 Delegation of authorities between the federal state and the *Länder*

According to the Austrian constitution (Article 10), forestry (*Forstwesen*), which in this context is meant to comprise all activities in connection with the tending, maintenance and protection of forest stands including the importing and exporting of roundwood, forestry education as well as torrent and avalanche control, is a matter of federal legislation and administration. At the same time, a number of areas directly or indirectly relating to forests or forestry are under the responsibility of the *Länder*. The most important issues are regional planning, agriculture, nature conservation, and hunting. The coexistence of national law and provincial law and particularly their application to the same object – in this case the same piece of land – inevitably leads to problems of co-ordination and conflict. Hunting is a good case in point: different agencies pursuing different policy goals and a lack of co-ordination frequently lead to situations in which the forest authority detects game damages but does not have effective regulatory instruments to tackle the problem because game-related questions come under the jurisdiction of the hunting authority (Weiss 1998).

3.2 Indirect federal administration by the *Länder*

The second main characteristic of the Austrian constitution is the instrument of indirect federal administration by the *Länder* (*mittelbare Bundesverwaltung*). Indirect federal administration means that legislation remains within the competence of the central state, while the execution of these regulations is a matter of the provincial authorities. The governor (*Landeshauptmann*) has a double function in this system. On the one hand he is the chairman of the provincial government, on the other hand he is the top representative of the national government at provincial level.

Forest legislation is enacted in the form of indirect federal administration. There are three levels of forest administration in Austria. The competent authority at the level of

the central state is the Federal Ministry of Agriculture and Forestry (*Bundesministerium für Land- und Forstwirtschaft, BMLF*). Since no corresponding federal administrative bodies exist at regional and local levels, jurisdiction is performed by the provincial and local authorities.

Basically, the fact that forestry is a matter of federal legislation and administration might increase the chances of initiating an NFP. If the responsibilities for forests belonged to the provinces, as for example in the Federal Republic of Germany, forest agencies at the provincial level could be afraid to hand over their responsibilities to the federal government, because they could be forced to co-ordinate and integrate their provincial plans into a federal forest programme (Glück 1997). However, this is not the case with Austria. On the contrary, with one uniform federal forest law instead of nine different provincial laws, co-ordination – one of the master principles of NFPs – becomes much easier. Additionally, due to the well-tried system of indirect federal administration, co-operation and co-ordination between the federal state and Länder are functioning well. In such an institutional setting, the NFP principle of »partnership« (BP 3; FAO 1996: 16) should fall on fertile ground.

4. POLICY IMPLEMENTATION: INSTRUMENTS OF AUSTRIAN FOREST POLICY

This chapter gives a general overview of the implementation of Austrian forest policy. The most important »standard« policy instruments are described giving a special focus to responsible authorities and institutions and how these instruments work. The comments below are confined to regulatory, financial and informational instruments. Other policy instruments, such as the provision of infrastructure by the state, the purchase of goods and services by the state, contracts between private and public contractors or financial disincentives (e.g. “green taxes”), are, in this respect, of minor importance. The instrument of forest land-use planning is described in chapter 7.3.1.

4.1 Regulatory instruments

The most important regulatory instrument of Austrian forest policy is the Forest Act of 1975, amended in 1987. The Forest Act, *inter alia*, regulates the definition of forest land, forest land-use planning, preservation of the forests and sustenance of its effects (“*forest functions*”), forest protection, logging and timber hauling, the qualification of forest personnel, forest research, and subsidies.

The Forest Act applies to private and public forests alike. Implementation of the law is in the hands of the forest authority. Basically, the Austrian Forest Act aims at the surveillance of forest management (“*forest police*”) and the provision of non-timber products and services of forests which are in the public interest. Actually, however, the predominance of timber production and hence the compliant attitude towards forest land owners is also noticeably reflected in the Forest Act (Pleschberger 1989).

Since the Austrian Forest Act grants clear priority to the production of timber, it is rather a Forestry Act than a Forest Act. In the case of implementing an NFP, the Forest

Act would have to be extended and altered thoroughly. Forest interest groups are fighting passionately against this »opening up« of the existing legal framework. Forest owners and their representatives fear, that in the case of a fundamental reform, conservationist claims could not be rejected any more and that further regulations restricting the forest land owners' right of free disposal of their property could find its way into the forest law. Thus, forest land owner organisations rank among the harshest critics of an NFP in Austria.

4.2 Financial instruments

The four functions, as defined in the Forest Act, are timber production, protection against natural forces, welfare in terms of favourable impacts on the environment, and recreation. According to the Forest Act, financial incentives should aim at preserving and developing the protection, welfare and recreation functions of forests, as well as at improving the timber production function. The guidelines for subsidies stipulate that projects aiming at preserving and promoting a healthy environment or projects aiming at promoting a whole region are preferable (BMLF 1995b).

The task of allocating public funds is divided between two administrative bodies: the forest authority on the one hand and the Chambers of Agriculture on the other hand. When distributing public funds, both groups have to observe the formal objectives presented above. But, at the same time, they try to pursue informal interests as well. By means of subsidies, the forestry authority can influence forest management, it can cultivate friendly relations with its clientele, and it can expand its budget (Downs 1967). The Chambers of Agriculture can easily legitimise their existence (including receiving membership dues) by granting financial assistance to forest land owners. By taking on tasks of the state, the chambers can also increase their influence vis-à-vis the forest authority. The forest authority limits itself to control the administration of forest subsidies. In return, it expects the chambers to mitigate their political demands (Krott 1986; Glück 1992).

Political settings of this kind show a high degree of stability since this corporatist arrangement eliminates criticism both from the administration and private interest groups. The political outcome of such a system is highly selective; some individual interests are favoured more than others. Irrespective of any forest-political objectives, the state fails to fend off demands expressed by powerful interest groups, whereas groups with inadequate social backing can be easily ignored. Therefore, three quarters of the available public funds are used in accordance with the economic interests of private forest land owners. Only one quarter is assigned to infrastructure projects that are genuinely in the public interest (Krott 1986).

Attempting to harmonise the system of financial incentives with the aims of SFM, just as one of the basic NFP principles (BP 1; FAO 1996: 15) calls for, would inevitably meet with harsh opposition from forest land owners, forest interest groups (especially the Chambers of Agriculture) as well as the forest authority. Forest land owners would have to reorganise their production methods or would otherwise lose additional earnings and the forest authority and the Chambers of Agriculture would find it more difficult to »serve« their clientele. Under an NFP regime, subsidies would still be granted, but

uncertainty on the organisation of the new system of financial incentives prompts the persons and institutions concerned to defend the old system.

4.3 Informational instruments

4.3.1 Forest statistics

Statistics play an important role in Austrian forest policy and thus knowledge of Austrian forests and forestry is excellent: since 1961, the Austrian Forest Inventory (*Österreichische Waldinventur*) has furnished data on the structure and development of the Austrian forests. At first, the inventory provided only data on timber production. For some years, additional information on natural regeneration, unproductive protection forests, landscaping aspects of forest roads and the like has been included in the inventory. With the emergence of forest dieback (*Waldsterben*) in the mid-1980s, surveys on the state of health of Austrian forests have been installed. Apart from the physical state of the forest, the economic situation of forest owners is also statistically surveyed.

So, statistics undoubtedly help to make political decisions on a more rational basis. However, at the same time, statistics serve also strategic purposes. Statistics provide “hard facts”, which cannot be denied by the political opponent in the course of negotiations or a political controversy (Glück 1988). Therefore, for example, the “ecological reorientation” of Austrian forest statistics highlights the rivalry between the public interest in ecologically valuable forests and the private forest land owner’s interest in the free disposal of their property. Whereas in official presentations the public interest prevails, the tight co-operation between forest administrators and forest owners’ associations ensures, that statistical data is not used to the disadvantage of the forest owners (Glück 1992).

By calling for a free information flow between all the partners involved and maximum transparency of the whole process, the NFP principle of »participation« (BP 4; FAO 1996: 18) hinders the forestry sector’s desire for autonomy in the interpretation of statistical data. Therefore, any attempt to translate this idea into public policy will meet with opposition.

4.3.2 Education

In Austria, forestry is taught at two levels: at high school level and university level. At both levels the curriculum is dominated by the principle of timber primacy: *“The graduates of both schools are forest engineers who have learnt to manage the forest primarily for timber production and to take into consideration that there are also other uses. Though both schools offer a fairly comprehensive programme in ecology and socio-economics the graduates are regarded as “timber jacks” due to their forest ideology.”* Glück (1995a: 121)

Until recently, almost all jobs in the forestry and forest-related sectors were filled with individuals with a forest-professional education and training. This can be seen as

a consequence of the “doctrine of absolute standards” (Glück 1987) according to which the forester knows the forest’s carrying capacity best and becomes the mediator between the forest, the forest owner and society. A few years ago, also non-foresters (biologists, landscape architects) started to enter the sector. But, due to legal restrictions, some jobs can still only be held by professionally trained foresters.

Ideological values and attitudes imparted in the course of secondary socialisation and a strong bias in filling forest-related jobs undoubtedly result in a kind of introversion and exclusiveness in the Austrian forestry sector. In contrast to this, the NFP approach calls for comprehensiveness and holism (BP 5; FAO 1996: 18).

4.3.3 Extension service

Extension service is a rather popular and well-elaborated instrument in Austrian forest politics. Institutions offering extension services usually gain considerable influence. Administrative bodies highly appreciate this instrument since it allows the authorities more room for manoeuvring and to extend their budget. Interest groups have direct access to their clientele, thus giving the change agent informational advantages as well as a kind of monopoly in representation (Teuscher 1993: 116ff.).

In Austria, two types of institutions provide extension services: voluntary and obligatory interest groups on the one hand, and the forest authority on the other hand. The interest groups (especially the Chambers of Agriculture) put their emphasis on the economic interests of forest owners by focusing their consultation services on silvicultural techniques, rationalisation of timber harvesting, timber sale and taxation issues. By way of contrast, the forest authority usually offers extension service in connection with the implementation of the forest law. The impact of extension services can be increased considerably if they are combined with financial incentives (Glück 1995a).

As opposed to other countries, the Austrian University of Agricultural Sciences (*BOKU*) does not have an extension programme. Due to this isolation, *BOKU*’s latest scientific findings cannot be disseminated within the forestry sector. So far, the university has been denied access to the experts in the fields, since the institutions presently offering extension services do not want to give up this highly attractive task which enables them to prove their achievements towards their clientele.

Comprehensive and high-quality extension services should enhance the efficiency and effectiveness of NFPs. Consultation geared towards the interests of private forest owners and the ideological narrowness of the Austrian consultation network are in apparent contradiction to the NFP principles of openness and multidisciplinary (BP 5; FAO 1996: 18).

5. POLICY NETWORK: MAIN INTEREST GROUPS

This chapter will focus on the social relevance of the major forest-related actors. It will examine the formal role which the constitution and ordinary laws provide for them, as

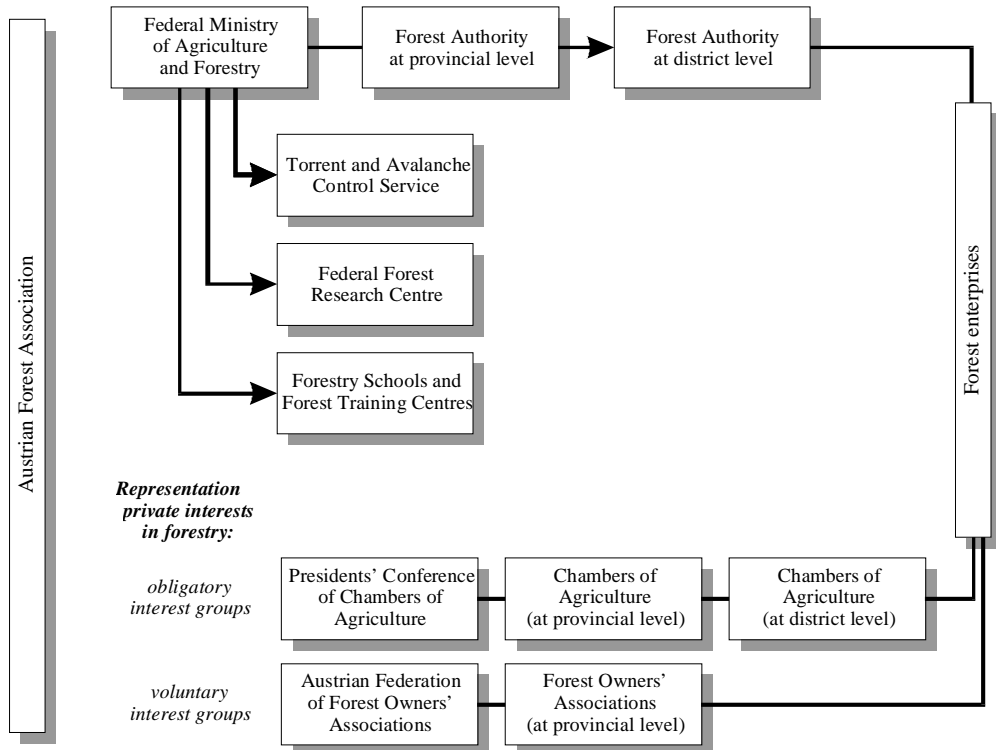


Figure 1. Forestry organisation in Austria. Source: BMLF 1995a, p. 17 (modified and translated).

well as their actual role in the political process. In this context, only the most important social actors can be dealt with. The “core” network of Austrian forest politics is depicted in Figure 1.

5.1 Forest authority

There are three levels of forest administration in Austria. At *state* level, the Ministry of Agriculture and Forestry has jurisdiction over forest-related matters. The ministry is headed by the Federal Minister, who can fall back on an extensive bureaucratic apparatus. Within the ministry’s framework of activities, forestry is only of minor importance. In the *provinces*, the governor (*Landeshauptmann*) is the competent forest authority. The governor acts as general authority deciding not only on forest matters but also on other subjects like hunting, nature protection or trade and industry. A separate forestry department (*Landesforstdirektion*) assists the provincial governor in forest-professional questions. Formally this department has only consulting functions. The same applies at the local level: the official in charge is the district commissioner

(*Bezirkshauptmann*) who is assisted by a forestry department (*Bezirksforstinspektion*). The official formally in charge, the governor or the district commissioner, follows a concept of “political rationality” which means that he has to represent social interests according to their political weight. Therefore, this two-tier system, with its separation between political decision-maker and professional department, often leads to disadvantaged forestry interests that cannot make themselves heard when competing with other more powerful social actors.

One of the major duties of the forest authority is the implementation of the Forest Act. By performing its statutory tasks (supervision of the forest, elaboration of expert’s opinions; extension service; assistance in the allocation of subsidies; survey of annual feelings; § 171 Forest Act), the forest authority gets in touch with its clientele, namely foresters and forest land owners. Due to this close relationship, the self-image of the civil servants changes from objective supervisor of forest management to intercessor and advocate of their clientele. Instead of trying to secure legal compliance on the part of the forest enterprises by exerting pressure on them, the forest authority tries to motivate the target group to act voluntarily in a lawful manner. Civil servants are on common ground with foresters and forest owners with a system of shared values and attitudes serving to harmonise conflicting interests.

In addition to its duty to implement forest regulations, the forest authority, mainly the Federal Ministry, exerts strong influence on the *making* of forest-related laws. The Austrian Constitution (Article 18) obliges the administration to be perfectly neutral, in the sense that it should implement the political directives of parliament. In reality, bureaucracy is much more influential and its role in the making of laws is generally regarded as being very important. Because of their comprehensive expertise, politicians, including the respective minister, depend on the co-operation of the authorities. In case the authorities refuse collaboration, the minister will have little policy impact and may run into political problems (Kneucker 1981; Müller 1992).

From the point of view of organisation sociology, it is to be expected that the employees of the forest authority will support the initiation of an NFP. As described above, between the experts in the forestry departments, at provincial and local level, and the official formally in charge (governor, district commissioner), there is a latent conflict of interest. NFPs tend to give forestry concerns a broader societal backing and thus could lend more political weight to the forestry departments as well. Civil servants could strengthen their position towards the political head of the office. In the reverse case, the political head is not expected to oppose an NFP because forestry affairs are of secondary importance to him.

Already today, many functions of policy formation are de facto delegated to the higher civil service (Kneucker 1981), and, therefore, it is safe to say that in the development of an NFP the Federal Ministry would be entrusted with additional tasks and duties. The Ministry would take on functions in planning, co-ordinating and implementing the NFP or even could become a kind of »National Lead Institution«, acting as overall supervisory body responsible for the NFP and the co-ordination of all national institutions from forestry and other sectors (FAO 1996: 32). So on a micro-sociological level, the NFP principle of capacity building (BP 7; FAO 1996: 19) serves an important purpose in mobilising support for an NFP.

5.2 Statutory interest groups

In Austria, the representation of group interests is transferred from the state to self-governing bodies called “chambers” (*Kammern*). Chambers are statutory interest organisations, established by public law and with obligatory membership. Obligatory membership is intended to ensure that potential clashes of interest amongst the members are directed inwards and that a united front is projected outwards. By doing so, every chamber tries to secure a part of the public interest as an area of responsibility (Glück 1992). As central pillars of the social partnership, chambers are an omnipresent and powerful political player typical of the Austrian political system.

Agricultural and forestry interests are looked after by the *Chambers of Agriculture* (*Landwirtschaftskammern*). All farm and forest owners are automatically considered a member of the Chambers of Agriculture, and have to pay membership dues. In return, each member may make use of the range of services offered by the Chambers. Since the foundation of agricultural interest organisations is in the jurisdiction of the federal states, Chambers of Agriculture as such exist only at the provincial level (with subordinate departments at district level). Nevertheless, the presidents of the state Chambers of Agriculture are informally organised at the state level. The Presidents’ Conference of Chambers of Agriculture (*Präsidentenkonferenz der Landwirtschaftskammern*) represents agrarian and forestry interests vis-à-vis other social interests within the social partnership (Gerlich 1992). In Austria’s forest politics the Presidents’ Conference is a rather influential institution.

The Chambers of Agriculture are engaged in two different statutory fields: (1) the representation of group interests, and (2) the consulting of foresters and forest land owners and the appropriation of subsidies. With that, the character of the chambers is to some extent ambivalent (Gerlich 1992): On the one hand, they act as powerful and effective lobbyists, and on the other hand, they behave as semi-public institutions which carry out state functions. In the administration of subsidies and in counselling, the Chambers of Agriculture co-operate with the forest authorities, with the forest administration advocating the implementation of the Forest Act in the public interest and the chambers predominantly arguing for the economic interests of the forest owners (Glück 1992).

As constituent part of the social partnership, the Chambers of Agriculture, or rather the Presidents’ Conference, are granted institutionalised influence on policy formulation. Already in the preparatory stage, they are informed on draft legislation and are allowed to comment on it. This applies to laws as well as ordinances. Usually the comments are incorporated into the final draft before the bill is sent to parliament (Gerlich 1992). In addition, chambers often get the opportunity to send »their« experts into parliamentary subcommittees where draft bills are formulated and finally voted on.¹

Both theoretical reflections on the interest positions of corporatist actors and empirical data provided by present-day Austrian forest politics indicate that the

¹ Besides the Chambers of Agriculture, there are other statutory interest groups which are not so important in this context; e. g. the Chamber of Engineers (*Ingenieurkammer*) looking after the interests of professional forestry engineers and the Farm Workers’ Chamber (*Kammern für Arbeiter und Angestellte in der Land- und Forstwirtschaft*) representing employees’ interests.

Chambers of Agriculture or rather the Presidents' Conference will be in opposition to the development of a future NFP in Austria. It goes without saying that individuals and organisations currently in controlling positions are eager to maintain the existing structures. Up to now, the President's Conference, as the single most important advocate of agricultural and forestry interests in Austria, has not been willing to co-operate with the government or the Federal Ministry in formulating national forest policy guidelines. The President's Conference is not willing to risk its privileged position by getting involved in a social process with an uncertain outcome.

5.3 Voluntary interest groups

In addition to statutory interest organisations, there is a network of interest groups based on voluntary membership. The most important voluntary interest groups in the Austrian forestry sector are the Austrian Federation of Forest Owners' Associations (*Hauptverband der Land- und Forstwirtschaftsbetriebe Österreichs*) and the Austrian Forest Association (*Österreichischer Forstverein*).

As a voluntary interest organisation, the Austrian Federation of Forest Owners' Associations looks after the interests of private farm and forest land owners. The Federation has about 800 members representing a total forest area of some 800,000 hectares; thus, approximately 80% of larger estates actually join the association. Due to this high degree of organisation, the Federation is a powerful player in Austrian forest politics (Glück 1976 and 1988). The Federation aims at the support of owners and tenants of agricultural and forestry enterprises. It mainly tries to safeguard the rights of private ownership and to repulse any restrictions on the right of free disposal of private forest property. Many of its achievements result from the Federation's successful intervention in legislation, jurisdiction and administration. Though not officially intended to comment on draft legislation, the Federation actually has an effect on legislative and administrative occurrences because of its close co-operation with the authorities, chambers and other interest organisations (especially the Presidents' Conference of Chambers of Agriculture).

The second most powerful voluntary interest organisation is the Austrian Forest Association. The Association is open to forest land owners as well as forest professionals working in private enterprises, chambers and the bureaucracy. If the approximately 210,000 owners of small farm forests are not taken into consideration, roughly two thirds of the potential members belong to the Association. For most forest professionals, membership is taken for granted; it results from tradition. The Association's statutory mission is rather comprehensive: the promotion of forestry in Austria. Public relations have always been an important task of the Forest Association – inwards, to find the “lowest common denominator” and outwards, to represent the “common position of forestry”. Annual meetings of the Association usually serve both purposes (Glück 1992). By using the instrument of “political language” (*Sprachregelung*) the different groups combined in the Association are oriented towards common forest-professional thinking (Glück and Pleschberger 1982). By commenting on draft bills and draft ordinances and through tight connections with other interest organisations, the Association mainly tries to forward the benefit of forest owners.²

Besides the President's Conference, the Austrian Federation of Forest Owners' Associations is considered to be the second major political actor opposing an NFP in Austria. At present, Austrian forest policy is to a large extent determined by the goals and interests of private forest owners: The Forest Act interferes with forest management only to a minor degree; interest groups representing private forest owners are intensively involved in public policy-making and policy-implementation. Opening up this closely knit network of communications by developing a "new and equitable partnership", as one of the NFP principles prescribes (BP 3; FAO 1996: 16), would inevitably lead to a loss of power for those presently in command. This is probably the main reason for the Austrian Federation of Forest Owners' Associations to denounce participatory forms of decision-making and consensus-building.

The Austrian Forest Association holds a more moderate attitude towards comprehensive policy planning. Withdrawn from day-to-day forest politics to a great extent, the Association has less to lose than powerful forest policy "insiders". In spite of its reserved position, the Association could still be of major importance in the course of the initiation of an NFP. As the main institution of sectoral socialisation, the Association also influences foresters' attitudes towards an NFP. At the moment, the prevailing sector-oriented world view openly contradicts the NFP idea of a holistic and inter-sectoral approach to forests and forestry (BP 5; FAO 1996: 18).

5.4 Political parties

Political parties have little direct influence on Austrian forest politics. Policy formation is delegated to the forest authority and a myriad of special committees within the bureaucracy which elaborate the fundamental framework of sectoral policies (Pleschberger 1989: 522). Nevertheless, political parties are indirectly relevant to the course of forest politics in Austria: The more political parties reserve judgement in programmatic questions, the easier selective clientelism will catch on (Pleschberger 1989: 522f.). As a result, political parties are reduced to the function of compliantly transforming plans negotiated by other social actors into legitimised policies.

There are relations between interest groups and political parties, though on a rather selective basis: Forest owners' associations closely co-operate with the Austrian People's Party (ÖVP) ("parental relationship") (Glück 1992).

The effects of the "apolitical" nature of Austrian forest politics on the chance to successfully initiate an NFP are ambivalent: On the one hand, it is less likely that constructive negotiations are paralysed by party-political controversies; on the other hand, strong political commitment at the highest level is not available (BP 11; FAO 1996: 21).

² In addition to the interest groups mentioned above, there are some other interest organisations based on voluntary membership, such as the Presidents' Conference of Forest Employers' Associations (Obmännerkonferenz der Arbeitgeberverbände der Land- und Forstwirtschaft) and the Austrian Federation of Trade Unions (Österreichischer Gewerkschaftsbund).

6. POLITICAL CULTURE: STYLES AND PATTERNS OF INTERACTION

Austria's political culture is characterised by the institutionalisation of consensus and co-operation. *Corporatism*, in its broadest sense, implies co-operative policy styles in various arenas of the political system. In Austria, consensual politics has been practised both in party politics, especially within the grand coalition government, and in the interaction of interest groups, within the system of »*social partnership*« (*Sozialpartnerschaft*) (Gerlich 1992). The fundamental principles of Austrian corporatism can be differentiated into three categories (Gerlich 1992): (1) organisation of the participating bodies, (2) existence and form of political linkages, and (3) style of interaction.

6.1 Organisational principles

The organisations taking part in the Austrian corporatist policy network are characterised by the principles of *monopoly representation* and *hierarchy*. Most of the groups representing private interests in forestry have a virtual *monopoly of representation*; they represent more or less everybody in their fields (Gerlich 1992). For the chambers this is obvious since membership is obligatory. Voluntary organisations, such as the Austrian Federation of Forest Owners' Associations or the Forest Association, have a *quasi-monopoly* as no competing organisations exist and the degree of organisation is very high. This makes these organisations very powerful and gives them a privileged position in the decision-making process (Szecsi 1981).

Within these organisations, actual power has been concentrated in the hands of a tiny group of high-ranking functionaries. Forest policy in Austria is made within a close circle of powerful lobbyists who negotiate compromises by mutual accommodation. The principle of *hierarchy* guarantees that their mutual arrangements will be respected by all the functionaries and members and that there are no relevant groups outside, which could effectively challenge their decisions (Gerlich 1992). Such a set-up with permanent lines of communication between all decision-making factors strongly facilitates a continual process of bargaining and consensus-building (Szecsi 1981).

The organisational principles of monopoly representation and hierarchy have a strong but rather ambiguous influence on the chances of having an NFP implemented. First of all, interest groups which act as exclusive representatives of their clients are usually not at all interested in extending the circle of negotiating partners. From a procedural point of view, however, monopoly representation of interest groups facilitates bargaining processes because each point of view is represented by only one interest group in the negotiations. Disagreement within one community of interests is thus excluded. Backed up by the principle of hierarchy, the interest groups' main representatives can make their agreements stick. So the formula of success of the »old« social partnership might also be valid in the »new and equitable partnership« of the Agenda 21. This requires however, that pressure from the outside prompts »insiders« to open up their closed network of interest groups.

6.2 Political linkages

An important stabilising principle of Austrian corporatism is political linkage. Leadership positions in the parties, the associations, and the chambers are closely interlocked, top positions usually being held by the same persons, thus forming a close network of *personal and political loyalties* (Szecsi 1981; Gerlich 1992).

Between the forest interest groups there is a kind of *division of labour*, rather than rivalry. The interest groups collaborate according to their competence. Whereas statutory interest groups have the right to review proposed laws and ordinances, voluntary associations do not. So they have to fall back on other expedients, such as personal alliances, collaboration in parliamentary advisory committees or contacts with the authorities in consultative committees. Even in a political field as small as forestry there are innumerable (semi-)government agencies and advisory bodies in which the chambers and major voluntary interest groups are represented. Since neither chambers nor voluntary associations have the right to initiate bills, both groups depend on the *bureaucracy* (or members of parliament). With that, the forest authority is one of the preferred target groups of forestry associations (for examples see: Kahls 1996 and Kudjelka 1996).

Strong political linkages within forest interest groups and between interest groups and the bureaucracy undoubtedly rank among the most important stumbling blocks to an open, transparent and participatory style of policy-making. Why should powerful interest groups with strong political and societal backing be prepared to share their political power with other stakeholders representing opposing interests? (Glück 1997)

6.3 Style of interaction

From a procedural perspective, Austrian corporatism is characterised by the principles of *informality*, *intimacy* and *introversion* (Gerlich 1992). The principle of *informality* relates to the fact that corporatist arrangements are only based on a kind of gentlemen's agreement. *Intimacy* refers to a social setting where only a few high-ranking functionaries attend the meetings in which the compromises are negotiated and where the public gets – if any – only very poor information. The term *introversion* stands for a situation in which the social partners distract their attention from numerous alternatives and concentrate only on those positions which are mutually acceptable, neglecting other alternatives, which would be unpleasant for one of the partners.

Each of these corporatist principles can be found in the Austrian forestry sector as well. A social phenomenon known as “*Green Pillarisation*” (“*Grüne Versäulung*”) can be interpreted as an archetype version of this “old” co-operative, consensus-oriented policy style. Green pillarisation aims at uniting the “pillars” of the forestry sector, that is the forest bureaucracy, private forest owners' associations, and forestry science, into a single bloc with conflicting interests equalised and with all social actors pursuing a common goal. This idea of sectoral self-government of forestry goes far beyond the existent symbiotic co-operation between forest interest groups and the bureaucracy. It strives for the formation of a hegemonic partnership capable of prevailing against competing social actors (Pleschberger 1989: 518f.).

Psychologically, green pillarisation is based on professional thinking characterised by shared values. For regulating forestry issues, common *doctrines* have been developed which are generally accepted by forest owners and foresters. These basic principles are “timber primacy”, “sustained yield”, “the long- term” and “absolute standards”. These doctrines are backed up by legitimising ideological convictions and ethic values (Glück 1987). In a few cases, forestry ideology even found a way into the Austrian Forest Act (e. g. wake theory, mandatory employment of professionally trained forest staff).

This system of common believes is supported and passed on by a close communications network between experts and functionaries in forest enterprises, the forest bureaucracy and interest groups. For the dissemination of forestry ideologies, a PR instrument commonly known as »political language« (*Sprachregelung*) is used. Political language is based on the principle of re-framing conflicting interests in a way that their contrariety is not perceived immediately (Glück and Pleschberger 1982). Important mechanisms of socialisation are the (annual) conferences of the Austrian Forest Association. These conferences offer a perfect platform for informal exchanges of ideas and equally informal understandings (Szecsi 1981).

The corporatist doctrines of informality and intimacy radically contradict basic democratic ideals and therefore hardly correspond with the NFP principles of openness and transparency (BP 4; FAO 1996: 18). The doctrine of introversion, in this case expressed in the concept of “forest ideology”, restricts the capability of a policy field to be open, to learn and to adapt to an ever changing national and international environment (Gerlich 1992). AN NFP, with its call for policy and institutional reform (BP 8; FAO 1996: 19), would inevitably lead to new developments challenging the system from the outside. Intimate groups sharing common forestry values tend to ignore these challenges. They show a tendency to limit their attention only to activities which fall into the framework of their common philosophy – and thus will probably be opposed to a new policy instrument, like an NFP.

7. TARGETS AND STRATEGIES

This chapter will deal with existing policy objectives for forests and forest-related activities in Austria (7.1), it will describe possible gaps between the current situation and the stated goals (7.2), and it will give an overview of selected strategies and forest policy tools recommended to close these gaps (7.3). By descriptively outlining the “destiny” of future-oriented approaches of Austrian forest policy, possible factors influencing the initiation of an NFP in Austria should be identified.

7.1 Forest policy objectives

The Austrian Forest Act of 1975, amended in 1987, implicitly as well as explicitly names a number of forest policy objectives. Although the Forest Act grants clear priority to the production of timber, and thus is rather a Forestry Act than a Forest Act, it already contains the modern concept of “forest functions”, three of which relate to

non-timber services of forests (protection against natural forces, welfare in terms of favourable impacts on the environment, and recreation).

The Forest Act, *inter alia*, aims for the preservation of the forests and the sustenance of its effects (guaranteed by the prohibition to devastate and clear forest land and the obligation to reforest it after harvesting) as well as the sustainable utilisation of forests (secured by the protection of immature stands, the prohibition of clearcuttings and the supervision of feelings by the authority).

The targets mentioned in the Forest Act could be regarded as the “old” set of sustainability goals of Austrian forest policy. In recent years, these “old” targets have been supplemented with a “new” set of targets, which have their roots in international regimes and initiatives, such as the Convention on Biological Diversity, the Ministerial Conferences on the Protection of Forests in Europe (Strasbourg 1990 and Helsinki 1993) and the Alpine Convention. With that, ambitious targets geared towards the conservation and sustainable use of forest resources have been put on the Austrian forest policy agenda. As far as implementation is concerned, Austria, like other signatory states, has only committed itself to provide appropriate instruments.

Apart from these international activities, conservationists’ claims can be seen as a second source of the above-mentioned »new« type of targets. Here the “WWF Conservation Strategy for Austria” serves as an example. Under the slogan “*Von der Forst- zur Waldwirtschaft*”, the WWF demands that, in addition to the production of timber, forestry should aim at the preservation and development of forest ecosystems close to nature. In this strategy paper, WWF, *inter alia*, calls for the protection of existing virgin forest relics, the installation of natural forest reserves with a total area of at least 100,000 hectares, the promotion of close-to-nature forest management practices, and the reduction of activities with negative impacts on the environment (e. g. the construction of forest roads) (Mang 1992: 36). It goes without saying that, just as international initiatives, the objectives formulated by non-governmental organisations are not formally binding either. Expressed by social actors, who know how to make use of the media in a skilful way and backed up by a high environmental awareness of the Austrian population, these demands still obtain considerable political weight.

Supported by the inputs received from international regimes and urged on by emphatic conservationist claims, the Federal Ministry of Agriculture and Forestry has begun to formulate national forest policy guidelines. According to a first draft of these guidelines, the *strategic targets* of Austrian forestry are the *preservation* and *improvement* of forests with the following *partial objectives* (Kudjelka 1994): Amelioration of protective forests; re-afforestation of high-altitude areas; forest management and tending of woods close to nature; creation of natural forest reserves; safeguarding of forest seeds and propagation material suited to the site; appropriation of sufficient forest area to fulfil all functions of the forest in a certain region.

The national forest policy guidelines drawn up by the Federal Ministry never managed to exceed a first draft. Powerful forest interest groups denied their support. Therefore, a broad inter-sectoral and holistic approach for the achievement of sustainable management, conservation, and sustainable development of forests is not yet available for Austrian forest policy. At the same time, there is a host of programmes and initiatives, sometimes even ambitious in their objectives, but altogether still fragmented and without co-ordination.

7.2 Current situation

When comparing the stated goals and objectives with the current situation, correspondences as well as discrepancies can be found.

As shown in Chapter 2, the target of preserving the *forest area*, i. e. the preservation of forests in quantitative terms, could be more than fulfilled: The latest results of the Austrian Forest Inventory show an increase in forest area, growing stock and increment.

With regard to the *naturalness* of forest ecosystems, the present situation can be characterised as quite satisfactory. According to the MAB study “*Hemerobia of Austrian Forest Ecosystems*” which has gathered data on the anthropogenic impact on forest ecosystems determining the geographical distribution and the share of original, manipulated and artificial forest ecosystems, 25% of Austrian forests can be considered as natural or nearly natural. 41% has been moderately changed compared to the optimal state. This means that two-thirds of Austrian forests correspond to the modern concept of an intact ecosystem (BMUJF 1997).

In contrast to this, the target to keep the forests in a *healthy* and *stable* condition, i. e. the preservation of forests in qualitative terms, is fulfilled to a smaller degree. The Austrian Forest Inventory and the Forest Damages Surveying System show some disturbing results (BMLF 1996): More than 40% of all regeneration areas in productive stands is browsed by game; 8% of all stems have bark-peeling damages; abies stands have dramatically decreased; protection forests are in a highly unsatisfactory condition; parts of the Austrian forests show symptoms of defoliation (possibly due to air pollution).

Damages induced by game supply evidence that the coexistence of federal law and state law applied to the same object – in this case the same piece of wooded land – inevitably leads to problems of co-ordination and conflict. Different agencies pursuing different policy goals and a lack of co-ordination frequently leads to a situation where the forest authority detects game damages, but does not have effective regulatory instruments to tackle the problem because game-related questions are in the jurisdiction of the hunting authority (Lotterstätter 1991; Weiss 1998).

The unsatisfactory condition of protection forests is seen as the result of an overuse of fragile forest ecosystems caused by conflicting interests. With decreasing revenues from forest management, private land owners are eager to increase income from grazing or hunting uses. As a result, overpopulation of game and grazing of cattle hinder natural regeneration of mixed stands. The situation is aggravated by historical uses of the forests (e. g. collection of litter) and damages by air-pollution. According to the Forest Act, land owners are obliged to ensure the protective functions of protection forests. Although the forest authority is entitled to issue orders to achieve this goal, they prefer working *with* the forest owners as to working *against* them. As a consequence, orders are issued only in forests which are still regularly managed, and even this happens very rarely (Weiss 1998).

The example of forest damages caused by air pollution shows that in the case of external effects the forest authority’s room for manoeuvring is rather limited – despite apparently quite favourable legal conditions. The Forest Act designates that the forest authority is only responsible for finding out the origin of air pollution. The forest authority is only in special cases entitled to take measures against the pollutant. Beyond

that, the onus of proof is on the forest authority (Lotterstätter 1991). In the case of forest damages caused by air pollution, forestry has to face strong interests from the transport sector as well as from trade and industry. The persistent vetoing of the revision of an ordinance regulating air pollution with detrimental effects on forests on the part of the Federal Ministry of Economic Affairs gives evidence for this.

The above-mentioned comments on the current situation of forests and forestry in Austria give only a fragmented picture to what extent forest policy goals have been achieved so far. An evaluation of the overall performance of Austrian forest politics against the background of the targets stated above is still not available. Due to the vague and noncommittal nature of the targets and to the absence of operational criteria and indicators, such a comprehensive evaluation is simply impossible. It is hard to detect shortcomings where comparisons cannot be made. A harmonised European catalogue of criteria and indicators would make it possible to evaluate the effects of strategies and measures in the spirit of the Strasbourg and Helsinki resolution (Kudjelka 1994). At the moment, such a catalogue does not exist.

The “*WWF European Forest Scorecards*” are a first approach to assess Austrian forest policy in a comprehensive way. The Scorecards review the forest protection performance of 13 European governments highlighting how the individual countries are, or are not, implementing commitments to forest protection, sustainable management and restoration (WWF 1995). Austrian forest policy gets a rating of C+ on a five-stage scale ranging from A (= excellent) to F (= failed). With that, Austria ranks third (on the same footing with Denmark and Switzerland); “outstripped” only by the Netherlands and Sweden.

This result has to be interpreted with utmost vigilance since the scorecards are only partly scientifically based: First, it has to be doubted whether the targets formulated would meet with general social approval. In addition to that, there are some “technical” inadequacies: In some cases, the criteria and indicators do not correspond with the objectives. The number of indicators is inadequate to make valid statements about sustainable forest resource management. Furthermore, some indicators are defined in an insufficient way. For a critical evaluation of the “*WWF European Forest Scorecards*” see Tikkanen et al. (1996) and Rappold (1997).

7.3 Strategies and forest policy tools

In October 1997, the Austrian Minister of Agriculture and Forestry presented a framework of policy strategies aimed at the ecological management of forests (*7-Punkte-Waldökoprogramm*). The programme focuses on the following topics:

1. financial incentives for ecologically-oriented silvicultural measures
2. intensified research on close-to-nature forest management practices
3. strengthening of ecological aspects in training and education
4. extension of the programme for the preservation of genetic resources³ and the natural forest reserves network⁴
5. enhanced consideration of ecological parameters in forest development planning
6. extension of the Forest Inventory with the evaluation of ecological objectives

7. advocacy of the goal of passing a world-wide forest convention; exertion of strong influence on the Ministerial Conference on the Protection of Forests in Europe (BMLF 1997b).

In contrast to NFPs pursuing an inter-sectoral approach and thus calling for the networking of different social groups, the above-mentioned framework of policy strategies is predominantly oriented towards sectoral questions. It largely refers to tasks which are in the direct or indirect jurisdiction of the Federal Ministry. Some of the instruments included in the framework are not that new. They have been applied for a long time and thus were “simply” reoriented towards the new objectives. Some of these programmes will be briefly described in the following in order to draw up a prognosis for a potential success or failure of an NFP in Austria.

7.3.1 Forest land-use planning

Forest land-use planning was entered into the forest law in 1975. The objectives of forest land-use planning, as defined under Chapter II of the Forest Act, are the description and foresighted planning of forests on a national as well as on a local level. The most important tools of forest land-use planning are the “*forest development plan*” (*Waldentwicklungsplan*) and the “*hazard zones plan*” (*Gefahrenzonenplan*).

“Hazard zones plans” are prepared by the Torrent and Avalanche Control Service (TACS). TACS, an agency directly subordinated to the Federal Ministry of Agriculture and Forestry, is responsible for the protection against torrents and avalanches. It grants subsidies and usually carries out technical measures with its own manpower. Hazard zone plans relate to the catchment area of avalanches and torrents, as well as to endangered areas of communities. The plans differentiate zones of different risks. A hazard zones plan is not binding unless the authority responsible for local land-use planning incorporates it into the municipal land-use plan. Therefore, short-term economic interests are often given priority over long-term risk management aspects. In contrast to this, the federal government, spending large amounts of money on natural hazards protection, tries to restrict all activities that may have negative impacts on the watershed or may otherwise cause new demands for protective measures. Therefore, subsidies for preventive measures are only granted if the communities take into consideration the information contained in the hazard zones plan (Weiss 1998).

3 The Ministry of Agriculture and Forestry has initiated a programme for the preservation of the genetic diversity of forest tree species. The long term aim of the programme is to include between 3 and 5 percent of Austria's forest area in all the forest communities existing in Austria. This would call for the appropriation of between 115,000 and 195,000 hectares of forest land. The guidelines for subsidies recently came into force and provide public funds for the protection of genetically high-grade forest stands. Forest land owners who make available suitable forest stands are compensated for appropriate management measures and the economic losses incurred. At the moment, there are 8,500 forest stands approved under this programme and 80 hectares of seed plantations installed (BMLF 1994 and 1997b).

4 In order to comply with the Helsinki Resolution (H2) on “*Conservation of the Biodiversity of European Forests*”, as well as with the Alpine Convention, the Austrian Ministry of Agriculture and Forestry has launched a programme aiming at the development of a network of natural forest reserves. The programme aims at the appropriation of suitable areas on a contractual basis. The long-term objective is to cover all 125 forest communities existing in Austria; for that purpose, the establishment of about 430 natural forest reservations with a total area of 10,000 hectares is a goal. At present, roughly 1,000 hectares are under contract and another 2,200 hectares are under negotiation (BMLF 1995a and 1997b).

The “forest development plan” covers forest areas and areas to be afforested with regard to the four “forest functions” mentioned in the Forest Act. Based on stipulated rules, a key function (*Leitfunktion*) is determined which is given priority with regard to the proposed measures. In accordance with the wake theory, timber production is given priority unless another function is assigned outstanding importance. The plan is merely an informational tool and therefore not binding on the part of the forest owners.

The forest development plan is drawn up by the forest authority. By means of this instrument, the forest authority has successfully maintained its influence on forests in land-use planning and has kept this sphere of dominance free from intervention from outside planning agencies – thereby being perfectly in accordance with an agency’s informal objective of territoriality and autonomy (Downs 1967). In this effort, the forest authority has been supported by the forest interest groups, which hope to gain influence on the authority’s planning in accordance with their interests (Krott 1989: 194).

On an informal level, both the forest authority and the forest interest groups have tried to avoid a commitment to public plans and binding planning measures; they prefer to react informally and flexibly in any situation. Compared to the ideal of rational objective-means-planning, considerable flaws are too obvious. Despite a lack of straightforward objectives, the forest authority has managed to transform the instrument into an aid for traditional routine administration (Krott 1989: 136 and 194; Krott and Glück 1990). Due to this fact, forest land-use planning has remained a mere symbolic endeavour. Krott and Glück (1990: 166) summarised as follows: “*The presentation of voluminous and colourful pieces of planning symbolically conveys the impression of competence to regulate conflicts of land use interests. The symbolic evidence of success is not associated with substantial planning quality.*”

The targets forest land-use planning has been striving for are in many respects very similar to those of an NFP. So forest land-use policy and, in particular, the elaboration of forest development plans might provide valuable clues concerning the »destiny« of an NFP in Austria. Similar to the procedure of the drawing up of forest development plans, which has enabled influential interest groups to control the planning process and to promote their own interests, NFPs might as well be reduced to simple tokens of symbolic success.

The critical comments on forest land-use planning must not necessarily apply to NFPs: Commissioning the forest authority with the task of forest land-use planning automatically meant that the officials in charge would instrumentalise the forest development plan for their own purposes. By way of contrast, a planning procedure based on the principles of partnership, participation and inter-sectoral networking would, by definition, avoid being exposed to the danger of monopolisation by a single interest group.

7.3.2 Protection forest restoration frameworks

In Austria, as a mountainous country, protection against natural disasters is a political objective of high priority. Nonetheless, the Austrian Forest Inventory indicates that protection forests are in a highly unsatisfactory condition (BMLF 1996). Possible causes for this are the absence of orderly forest management due to insufficient revenues from timber production, overpopulation of game, grazing damages, and

damages by air pollution (BMUJF 1997). On the whole, the situation can be characterised as an overuse of fragile forest ecosystems because of rivaling social interests (Weiss 1998).

In December 1990, the Austrian government decided to give the amelioration of protection forests highest priority (BMLF 1993). In the wake of this programmatic decision, provincial *protection forest plans* (*Länderschutzwaldkonzepte*) were prepared by the forest authority together with the TACS. These plans indicate top priority areas where restoration projects have to be carried out immediately. The preparation of these plans led to heavy conflicts between the two institutions mentioned. Both institutions considered these plans as an evidence for their need for a higher budget for the treatment of protection forests (forest authority) or measures in the catchment areas of torrents and avalanches (TACS). The planning procedure attained by way of negotiation was problematic in many respects. The logic of rational planning was actually reversed. Criticism by the Central Auditing Office (Rechnungshof) put pressure on the responsible authorities to establish priority and financial planning as well as controlling instruments (Weiss 1998). Altogether, the priority plans signify considerable progress as to the rational planning of public action. There are, however, neither objective indicators for the nation-wide ranking of projects nor effective tools to prevent unsatisfactory forest conditions – these have not been worked out yet. Weiss (1998) critically comments that the main purposes of the plans are fund-raising and the political legitimisation of subsidies.

To sum it all up, policies dealing with the preservation and restoration of protection forests strongly depend on the appropriation of large amounts of public funds. The Austrian Forest Act also contains regulatory instruments, such as the forest ban or legal restrictions to the management of protection forests. However, these instruments cannot be implemented because powerful social interests stand in their way (Weiss 1998).

The example of mountain forest management policy gives evidence that in a political setting determined by the goals and interests of private forest owners a new policy instrument, like NFPs, would have to fight against the problem that political conflicts can only be settled with resources from the outside. At the same time, a forest policy framework exclusively based on financial incentives could hardly be funded.

7.4 General restrictions

Having depicted goals and objectives of Austrian forest policy (Chapter 7.1), the extent to which these objectives have been achieved (Ch. 7.2) and strategies and forest policy tools have been applied to fill possible gaps (Ch. 7.3), a summarising evaluation of future-oriented approaches of Austrian forest policy will be carried out.

The most striking characteristic of Austrian forest policy is the *lack of binding targets* and the *absence of comprehensive programmes*. Target-oriented statements, if ventured at all, usually remain on an entirely qualitative level. With quantitative benchmarks missing, goals are kept unspecified and vague. The basic logic behind this »noncommittal« type of forest policy rests upon the very self-interest of powerful political actors. Individuals and organisations which are currently in controlling

positions will obviously not be interested in changing the existing structures. Hence, up to now, the Presidents' Conference of Chambers of Agriculture, one of the most influential interest groups in Austrian forest politics, has refused to co-operate with the government or the Federal Ministry in formulating national forest policy guidelines. The President's Conference is not willing to have its political freedom restricted by binding decisions and declarations at the administrative level (Glück 1976: 138; Kudjelka 1994). Avoiding conflicts with a powerful ally in many forest-related questions, the Minister of Agriculture and Forestry, and with him the whole Austrian government, refuse formulating ambitious and far-reaching forest policy goals.

With efforts to establish an international forest regime, new, more comprehensive and ecology-oriented forest policy objectives have been put on the agenda. In Austria, this international process has not yet shown major repercussions. After ratifying the Convention on Biological Diversity and the Helsinki resolutions, few measures have been taken to convert the targets formulated in these international documents into specific national programmes, whereas other European countries have established a whole arsenal of informational, financial and regulatory instruments aimed at the protection and sustainable management of forests (Glück 1995b).

It cannot be expected that this situation will change in the foreseeable future. All major actors agree that the Austrian Forest Act should not be »opened up«. They are afraid that in the course of a fundamental reform, pretensions on the part of conservationists could not be rejected any more and that further regulations restricting the land owners' right to free disposal of their property could find its way into the forest law. Future modifications of the guidelines for subsidies issued by the Federal Ministry are not expected to go beyond minor adjustments either.

8. CONCLUSION AND PERSPECTIVES

After having described the relative strength of the forestry sector within the Austrian economy and the Austrian political system (Ch. 2), the legal and policy framework for forest and forest-related activities (Ch. 3), the policy instruments currently employed (Ch. 4), the main interest groups influencing forest policy (Ch. 5), styles and patterns of interaction (Ch. 6), as well as targets and strategies for forests and forest-related activities (Ch. 7), a final assessment of the main constraints and opportunities of NFPs in Austria will be carried out.

The above description of the circumstances under which forest-related questions are currently dealt with in the Austrian political system, found both parameters which agree and disagree with the basic principles of the concept which NFPs call for. Suppose the Austrian government decided to draw up and implement an NFP, the chances of a sweeping success would be rather modest. There is one main factor impeding the successful initiation of a comprehensive reformulation of Austrian forest policy: Powerful stakeholders with strong political and societal backing will not be prepared to share their sphere of influence with other players that represent opposing interests (Glück 1997). The Austrian style of forest policy making, the negotiation of

compromises within a close circle of powerful lobbyists, would be put at risk if the idea of a “new and equitable partnership” (FAO 1996: 16) was translated into public policy.

The “destiny” of the Austrian National Environmental Plan (NUP), an instrument quite similar to NFPs, can give valuable insights into the chances of success an NFP has in the current political setting: The foundation stone for an NUP was laid in 1992 and the plan was completed in 1995. A great number of organisations and institutions, including all ministries, labour and industry associations (neo-corporatist actors) as well as environmental groups, participated in its drafting (Jänicke and Jörgens 1996). With that, the claim of inter-policy co-ordination was taken quite seriously. With regard to its contents, the NUP falls short of expectations: The core elements of the plan are mainly qualitative, long-term environmental goals. The NUP lacks quantitative targets, accurate timetables and a detailed description of the measures to be taken (Jänicke and Jörgens 1996). Furthermore, its possible policy impacts are restricted by a lack of formal policy commitment because the NUP has no legal basis so far. A parliamentary resolution urging the Austrian government to orient any plans and measures according to the targets stipulated is intended to boost the plan. The Austrian National Environmental Plan can be taken as an impressive example on how the interference of powerful social players has reduced an ambitious planning approach to a political symbol without actual social impacts. It cannot be ruled out that something similar could happen to an NFP.

Policy change in most cases cannot be planned in advance. Therefore, the chances of implementing an NFP in Austria could increase unexpectedly, as soon as there are momentous changes in the Austrian political landscape. *External pressure* and *new financial incentives* are two examples of possible changes in the political framework which could make up for the impeding factors mentioned above (Glück 1998).

The smallness of the forestry sector, especially when seen in relation to the Austrian economy as a whole, entailed that, so far, forest policy has been made *by* the forestry sector *for* the forestry sector. With new claims expressed by other sectors or society as a whole, such a closed policy system is no longer viable.

The Austrian population shows a rather high *environmental awareness*. As to the importance of different interests of society in relation to forests or their management, protection aspects, namely the protection of the population from negative natural effects like erosion, floods or landslides and the preservation of the diversity of animal and plant species, are clearly favoured over the utilisation of the resource (Rametsteiner 1998). Subsequently, social demands on the forests and forestry are steadily increasing. In addition to that, *international initiatives and conventions* such as the Convention on Biological Diversity, the Ministerial Conferences on the Protection of Forests in Europe (Strasbourg 1990 and Helsinki 1993) and the Alpine Convention put further pressure on forestry.

Increased external pressure could raise policy commitment at the highest level. The success of an NFP decisively depends on the extent to which key public and private stakeholders commit themselves to implement the measures mutually agreed upon during the planning phase (FAO 1996: 21). At the moment, this national policy commitment is still not available. Changing values and attitudes as well as policy commitments on an international level are about to alter this situation.

Some supplementary positive aspects are coming into sight, as Austrian politics in general are touched by noticeable “*winds of change*”. Long-established functioning principles of Austrian corporatism, and in particular the very style of its co-operative interactions, are becoming controversial. The “old” introverted policy style is increasingly becoming inconsistent with new patterns of politics geared towards conflicting interest articulation, open decision-making and clear responsibilities for the implementation of decisions (Gerlich 1992). Even the Austrian forestry sector will not manage to be shut off completely from this trend towards a more “open” policy style. As NFPs require just this kind of policy environment, it is safe to assume that, sooner or later, this policy instrument will also gain a foothold in Austria.

Besides external pressure, the provision of *new financial incentives* constitutes a second possibility of promoting the implementation of an NFP in Austria. Today, in most cases financial incentives can be legitimised only if the political targets to be attained are founded on a broad societal basis, the criteria to be applied are stipulated in an operational and unequivocal way, and the extent to which the prearranged objectives are reached are evaluated regularly. For a supra-national body granting financial incentives, like the European Union, it is rather difficult to find out whether these conditions have been observed by the individual member states. For such a supra-national body a comprehensive planning tool, like an NFP, could be a possible way to secure these aims. It is quite possible that in future EU programmes the awarding of subsidies will be made conditional; whether national governments have developed or initiated an NFP.

With that, national actors which, up to now, have been in opposition to the development of an NFP could possibly be persuaded to take part in the elaboration and support of the implementation of such an instrument. In Austria, this argument mainly applies to forest owners and their representatives, namely the Presidents’ Conference of Chambers of Agriculture and the Austrian Federation of Forest Owners’ Associations. Rather than doing completely without funds appropriated by the EU, these political actors will be prepared to contribute to the development of an NFP. At the same time, they will try to gain as much influence as possible on the formulation of the targets and measures laid down in the NFP. With influential political actors pacified by means of financial incentives, an NFP’s chances of success would be increased considerably.

To sum it up, it can be said that, at present, that the Austrian (forest-)political system by no means favours the development of an NFP. With changes in the political framework, however, this situation could change immediately.

The Table 1 summarizes an NFP’s chances of success in the present Austrian socio-political setting with the 12 “Basic Principles” of the FAO (1996) used as analytical evaluation criteria. The central column of the table (PROs) indicates to what extent Austria’s forest political system corresponds to the basic factual and procedural NFP principles; the right-hand column (CONs) lists parameters which do not correspond with these principles. The numbers given in parentheses refer to the chapters where the respective topics are dealt with.

Table 1. Summary of an NFP's chances of success in the present Austrian socio-political setting with the 12 "Basic Principles" of the FAO (1996) used as analytical evaluation criteria. Pros indicate to what extent Austria's forest political system corresponds to the basic factual and procedural NFP principles; and the cons list those parameters which do not correspond with these principles. The numbers given in parentheses refer to the chapters where the respective topics are dealt with.

NFP Principles	PROs	CONS
1. Sustainability of forest development	<ul style="list-style-type: none"> • concept of (quantitative) sustainability for centuries anchored both in the thinking and acting of forest professionals and in the forest laws (7.1) • concept of sustainability only (4.1) 	<ul style="list-style-type: none"> • primacy of timber production due to a high share of forests in private hands (2.1) • Forest Act geared to a quantitative, production oriented • public funds predominantly used in accordance with the economic interests of private forest land owners (4.2)
2. National sovereignty and country leadership	<ul style="list-style-type: none"> • marked scepticism towards any interference from the outside (see European Forest Strategy) 	
3. Partnership	<ul style="list-style-type: none"> • well- tried co-operation between the federal state and the provinces due to the system of »indirect federal administration« (3.2) 	<ul style="list-style-type: none"> • powerful social actors fearing for their privileged position in the forest policy arena (5.2; 5.3) • corporatist style of forest policy making: negotiation of compromises within a close circle of powerful lobbyists (6.1)
4. Participation	<ul style="list-style-type: none"> • bargaining processes facilitated by the monopoly representation of interest groups (6.1) 	<ul style="list-style-type: none"> • forestry sector's desire for autonomy in the interpretation of statistical data (4.3.1) • introverted »forest ideology« restricting the capability to learn and to adapt to a changing environment (6.3)
5. Holistic and inter-sectoral approach		<ul style="list-style-type: none"> • orientation towards common forest-professional thinking via secondary socialisation (4.3.2), extension services (4.3.3) and »political language« (5.3)
6. Long-term iterative process	<ul style="list-style-type: none"> • corporatist principle of negotiating compromises by mutual accommodation (5.2) 	<ul style="list-style-type: none"> • scepticism towards planning: rejection of any restrictions to the forest land owner's freedom of choice (2.1)

Table 1 continued.

NFP Principles	PROs	CONS
7. Capacity building	<ul style="list-style-type: none"> • well-developed system of extension services (4.3.3) • Federal Ministry as »National Lead Institution« (5.1) • upgrading of forestry departments at provincial and district level (especially vis-à-vis the political head of the office) (5.1) 	
8. Policy and institutional reforms		<ul style="list-style-type: none"> • powerful forest interest groups opposing to »open up« the present legal framework (Forest Act, guidelines for subsidies) (4.1; 4.2)
9. Consistency with national policy framework and global initiatives	<ul style="list-style-type: none"> • facilitated co-ordination through ... • uniform federal forest law instead of nine provincial laws (3.1) • noncommittal nature of national environmental programmes and land-use planning (7.3.1; 8) 	<ul style="list-style-type: none"> • problems of co-ordination due to the coexistence of national law and provincial law and their application to the same object (e. g. forestry – hunting) (3.1)
10. Raising awareness	<ul style="list-style-type: none"> • possible economic benefits for forest owners due to higher priority of forests in the national agenda (2.1) 	
11. National policy commitment	<ul style="list-style-type: none"> • high environmental awareness of the Austrian population (8) • »political« nature of Austrian forest politics (5.4) 	<ul style="list-style-type: none"> • low importance of forestry within the economy and the political system (2.2)
12. International commitment	<ul style="list-style-type: none"> • external pressure leading to policy change (8) 	<ul style="list-style-type: none"> • international conventions and resolutions to a large extent not yet transformed into national programmes (7.1)

List of abbreviations

ATS	Austrian Schilling
BMLF	Bundestministerium für Land- und Forstwirtschaft [Federal Ministry of Agriculture and Forestry]
BMUJF	Bundesministerium für Umwelt, Jugend und Familie [Federal Ministry of Environment, Youth and Family Affairs]
BP	Basic Principles (as formulated by FAO 1996)
ECE	United Nations Economic Commission for Europe
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
IPF	United Nations Ad Hoc Intergovernmental Panel on Forests
MAB	Man and Biosphere
NFP	National Forest Programme
NUP	Nationaler Umweltplan [National Environmental Plan]
SFM	Sustainable Forest Management
TACS	Torrent and Avalanche Control Service
UNCED	United Nations Conference on Environment and Development
WWF	World Wide Fund for Nature

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NATIONAL FOREST PROGRAMME FOR THE CZECH REPUBLIC

Ivo Kupka

Forestry Faculty
Czech University of Agriculture
Prague, Czech Republic

SUMMARY

An application of the principles of sustainable forest management adopted by the Parliament of the Czech Republic was a strategic goal of the state forest policy. The Forest Law No. 289 Coll., adopted in 1995, is a starting point for the new forest policy including National Forest Programmes. Private ownership is of very fragmented structure. The forest ownership has changed greatly during the twentieth century: from low state ownership (in 1920 it was only 3.6%) to very high (1990 – 95.8%) to the present (1996 – 66.6%). These changes had impact on forest management and forest policy as well.

Despite the fact that the forest sector is of minor importance in terms of the national economy, its non-wood services became of much greater importance. The state mainly subsidises private and communal forests for these services (323 millions CZK in 1996). Whereas forest area and growing stock is still increasing in the Czech Republic, the health and stability of forest ecosystems are not very satisfactory.

There are many stakeholders which play the key roles in the forest sector: the Ministry of Agriculture, the Ministry of the Environment, many associations (e.g. forest owners, professionals in forestry, the Forest National Committee etc.) as well as NGO's. Intersectoral planning is institutionalized into the system of Land use Plans, including Plans for the Future Development of Forests for a period of 20 years.

Keywords: National Forest Programme; Czech Republic; Changes in Forest Ownership; Low Forest Ecosystem Stability; Strategic Goals Adopted by the Parliament; Land Use Plans.

1. INTRODUCTION

The government of the Czech Republic is aware of the significance of forest for this area, and in 1994 adopted a decision in which it declared fundamental principles of the state forest policy. The strategic goals of the state forest policy are the application of principles of sustainable forest management. In 1995, the Parliament of the Czech Republic adopted the Forest Act, the purpose of which is the setting of prerequisites for forest preservation, tending and regeneration a national wealth, creating an irreplaceable part of the environment for the fulfilment of all its functions and promotion of sustainable forest management. The new Forest Act enables the state to support forest owners in appropriate forest management. In particular, these subsidies are directed to the planting and treatment of young stands.

2. FOREST OWNERSHIP

This century brought great changes in forest ownership structure. The main break points are given in Table 1. Restitution, i.e. giving property back to the original owners, began in 1992. Today, restitution process is drawing to an end. By the end of 1996, approximately 142000 claims, or 86.27% of the total number of claims, were authorised. With respect to the Decree of the Supreme Court No. 29/1996 Col., 2 870 new restitution claims were applied by December 31, 1996. The most legislatively complicated cases are processed by the courts.

The data on the restitution process as it was at the end of 1996 show the enormous effort given to the procedure. There were 164 280 claims which represented 813 110 ha of forests at the very beginning of the process. Unfortunately, the result of the restitution process for individuals created an unfavourable structure of private ownership (Table 2).

The ownership structure of communal forest is somewhat better. The percentage of property constituting less than 10 ha is only 56.4%, whereas the share of property size more than 50 ha is 18%.

Table 1. Forest ownership changes in % on the territory of the Czech Republic.

ownership	1920	1930	1945	1950	1990	1996
state	3.6	12.4	18.3	70.1	95.8	66.6
private	75.8	66.2	58.1	10.1	0.1	18.8
communal and other	20.6	21.4	23.6	19.8	4.1	14.6

Table 2. Forest ownership structure of individuals in 1996 (in %).

size in ha	-1	1-2	2-5	5-10	10-50	50+
%	69.0	14.3	11.7	3.3	1.3	0.4

3. THE FORESTRY SECTOR WITHIN THE NATIONAL ECONOMY

The forestry sector produces 0.6% of GDP in the Czech Republic. This percentage does not reflect the real importance of forestry for the society, as the benefits of non-wood functions are not included. Forestry employs 0.8% of the total national work force while investments in the forestry sector (excluding the forest industry) are 0.3 % of their total volume in the Czech Republic. The disadvantage of the sector in the national economy is also reflected in the level of salary in forest sector. Average wages in forestry are of 80% of those in national economy.

3.1 Economic situation in the forestry sector

The forestry sector is in a complicated economic situation. While logging costs and felling are stagnating, the direct costs for management of forests increases significantly. With respect to a decrease in timber prices, revenues from timber sales stagnated as well. Both factors resulted in a fall of profit.

Average revenues in forestry significantly decreased in 1996 if compared with preceding years. Profit from woodlands dropped by 69% (by 202 CZK/ha). Profitability of the particular types of the ownership was influenced significantly by subsidies granted by the Ministry of Agriculture. Communal forests whose revenues increased in comparison with previous years would have had a loss of 196 CZK/ha if no subsidies had been granted. Private forests would have suffered a loss of 64 CZK/ha without grants. Forests in state ownership not receiving grants, produce a profit of 77 CZK/ha.

3.2 Subsidies and grants

The state subsidised forest management totalled 323 million CZK in 1996. Most of the state funds were aimed at forest regeneration and protection of young stands. The additional state contribution for non-wood functions of forests was 273 million CZK. The subsidies and grants given to the owners expressed in crowns per hectare is described in Table 3.

Table 3. Grants per ha of forestland in CZK.

ownership	1994	1995	1996
private	307	437	469
communal	237	308	419
state	153	88	0

4. FOREST CONDITION

4.1 Growing stock and felling

The total increment exceeds felling by approximately 30%. In 1996, average felling was 4.78 m³/ha, while increment was 6.84 m³/ha. A continuous growing stock volume results from the increment permanently exceeding felling, the enlargement of forest area, the prolongation of the rotation age, a decrease in unstocked area etc.

One can conclude from the above data that the development of growing stock volumes in the Czech Republic (million of m³ u.b.) was favourable.

4.2. Forest area

The area of forests in the Czech Republic has increased by 656 000 ha since 1790, when the first data was available. The silvicultural system has changed as well. During the last 90 years, the proportion of high forest (stands created by trees from seed) has increased by 10% to 99.8%. Changes in forest land area do not include only the area of afforestation of non-forest land but also deforestation of land used for construction and mineral exploitation. However, the total forest area is still growing (see Table 6).

As a result of goal-seeking management and effective legislation, forest area has increased since the end of the last century. In 1996, timberland was 98.2% of the total forest area. It proves a high percentage in the use of forest land for the fulfilment of forest functions.

Table 4. Increment and felling in the Czech forests (in million of m³ u.b.).

	1970	1980	1990	1996
Increment	14.8	17.1	17.0	18.0
Felling	10.1	13.6	13.4	12.6

Table 5. Development of growing stock in the Czech Republic (million of m³ u.b.).

year	1950	1960	1970	1980	1990	1996
growing stock	322	348	445	536	564	600

Table 6. Forest land area in the Czech Republic (thousand of ha).

year	1920	1930	1945	1950	1960	1970	1980	1990	1995
area	2369	2354	2420	2479	2574	2606	2623	2629	2630

As previously mentioned, the Ministry of Agriculture no longer allows the conversion of needed agricultural land to forests. The aim of grants for afforestation of agricultural lands is to promote the restructuring of the agricultural sector, as well as the effective and long-term ecological use of lands.

4.3 Forest ecosystem stability

As a result of anthropogenous impacts (mainly air pollution) and several extraordinarily dry and hot years, forest health conditions developed unfavourably during the years 1984-1995. A turning point seemed to come in 1995 when namely larger precipitation and emission reduction had positive impacts.

In the winter of 1995-96, however, the high concentration of harmful agents in the atmosphere significantly impaired the health conditions of 20 000 ha of forests in the Ore Mountains, and a dieback of 2 590 ha was reported. Damage to forests is expected to be approximately 1 billion of CZK. It has shown that despite of a drop in the average level of air pollution, the seasonal occurrence of pollution can threat the very existence of forests in the Ore Mountain, whereas an inverse climatic situation can often occur in winter.

The high level of salvage cuttings indicates that forest ecosystems are not stable enough to keep dynamic balance against harmful abiotic (snow, rime, wind etc.) and biotic (fungi, insects etc.) factors.

Although a share of salvage felling decreased in comparison with 1995, it is still approximately one third of total felling. The greatest share of salvage felling was due to abiotic factors (4.2 million m³), above all by rime (1.9 million m³).

5. THE LEGAL FRAMEWORK FOR FOREST POLICY

The new Act 1995, chapter 289 Coll. on Forest took effect on January 1, 1996. Forests are considered a national heritage and an irreplaceable part of the environment. The

Table 7. Afforestation of agricultural land.

	1994	1995	1996
afforested area in ha	299	567	650
grants for afforestation (in million CZK)	13.4	24.6	27.3

Table 8. The level of salvage cuttings in the Czech Republic (data in millions of m³ u.b.).

Year	1970	1975	1980	1985	1990	1996
million m ³	2.8	3.4	6.8	11.1	9.5	4.2

provisions of this Act should, according to the aims of the legislator, constitute conditions for the preservation, tending and regeneration of forest, for its permanently sustainable management and for the fulfilment of all of its functions.

The Act states basic principles that must be respected when withdrawing plots of land designated to fulfil forest functions, limiting the use of land, carrying out administrative procedures and paying appropriate fees. According to their prevailing functions, forests are divided into three classes:

- protection forests,
- special purpose forests,
- commercial forests.

The first two classes are only managed for non-wood functions while the commercial forests are managed for both wood production and non-wood services.

5.1 Targets and strategies

The government of the Czech Republic adopted the fundamental strategic objective of the state forest policy in the Czech Republic by Decree No. 249 of May 11, 1994. The main goals are as follow:

- preferential restoration of ecological stability of biodiversity, regeneration capacity and vitality of forest ecosystems,
- increase tree species diversity and approximation toward the natural forest composition,
- substantial decrease in air pollution adversely affecting forest stands,
- maintenance and revitalisation of forest stands in area damaged by air pollution,
- safeguarding and development of genetic resources of forest tree species,
- maintenance of permanent, balanced, safe and ecologically sound wood production,
- active (planned) development of non-wood producing functions of the forest,
- safeguarding of appropriate management at small-sized forest owners,
- preparation of conditions for grouping of dispersed small forest properties.

These basic items of strategic planning are the basis for operational planning providing the details for its implementation. The increase in the diversity of tree species, for example, an approximation of the natural forest composition in terms of operational planning and an increase in the share of broadleaved species in reforestation by 9%.

The forestry professional association “National Forest Committee”, together with Ministry of Agriculture, has started the initiative to prepare a long-term research programme based on the largest discussion of professional and non professionals possible. The programme should help to identifying the priorities for research in the forestry sector. The main items of the research programme are as follow:

- legislation,
- management of state-owned forests,
- forest research,
- forest management plans and inventory,
- non-wood functions of forests,
- grouping of small dispersed forest properties,
- emissions and forests,
- game and forests,
- wood production of forests,
- education in forestry,
- intersectoral and international co-operation.

After broad discussions at all relevant forums, it is expected that this research programme will serve as a basis for effective research for short- and medium-term periods.

5.2. Stakeholders and partners

5.2.1 Major forest related actors

Governmental bodies

The top governmental body responsible for forestry in effect, is, the Ministry of Agriculture of the Czech Republic. The other Ministries responsible for some forests of serving particular purposes are the Ministry of Environment (forest of national parks) and the Ministry of Defence (forest in military training grounds). The Ministry of Agriculture has three divisions:

- agriculture,
- forestry and
- water management

The Forestry Division directly manages the forestry sector (with the exception of the forestry industry i.e., the wood and pulp industry under the jurisdiction of the Ministry of Trade and Industry) and implements the responsibilities of the central body of state administration in forestry and game management. Under the Director General of the Forestry division there are four departments:

- state administration in forestry and game management,
- forest management development,
- forest policy,
- forest formation.

Management of the state forest

The forest of the Czech Republic (Lesy Ceske Republiky – or FCR) manages the state forests of the republic (66,6% of the total forest area). It was founded during the transformation processes. The Ministry of Agriculture is the founder of the FCR and the state firm was established on January 1, 1992. The main task of this state firm is the management of the state-owned forests and administration of some specific small water streams. The priority is the application of the principle of nature-friendly management of the confided property and a permanent fulfilment of all forest functions.

The first level of FCR organisation structure consists of the directorate and 23 regional inspectorates, which represents remote divisions of the directorate. The regional inspectorates are found throughout the Czech Republic and their task is to provide the inspection of and methodological activities in FCR organisation units.

There are three national parks on the territory of the Czech Republic under the authority of Ministry of Environment. According to Act No. 114/1992 of the Czech National Council on Nature and Landscape Preservation, the national parks belong to the category of particularly protected territories. The concept of management in the national parks is based on the gradual reduction and eventual stoppage of traditional economic activities.

Management of other forests

Military forest and farms of the Czech Republic are managed by special state firm called “Vojenske lesy a statky (Military forest and farms)”. The state enterprise manages approximately 133 000 ha of forest lands and 9 000 ha of agricultural land. In addition, it contributes to the care of state lands and waters, nature conservation and landscape use management in military training grounds with its activities. The founder of the body is the Ministry of Defence of the Czech Republic.

Associations operating in the forestry sector

The Czech Association of Entrepreneurs in Forestry is a body, which promotes its members in actively supporting their common interests. Their objectives are to advocate and defend rightful interest, care for professional growth of its members, participate in formation and realisation of the states’ forest economy politics, woodwork economy and related industry branches. It acts on behalf of members in discussions with state authorities and forestry entrepreneurs.

The Association of Communal Forest Owners was found on April 2, 1992. The founding members were 93 communities and cities from the whole Czech Republic. The impulse for the foundation of the Association was passing of Act No. 172/91 and 229/91, by means of which the communities regained the woodland and forests they had owned as of December 31, 1949. The main target of the Association is the methodological support in forest management, participation in forest policy and legislative norms formation. As of June 1, 1997 the Association had a total of 315 members with 220 996 ha of forests.

The Association of Woodland Owners and Entrepreneurs in Forestry was constituted on the first General Meeting in 1992, when the rules were adopted. The main aim of the Association is to defend the justified interests of private woodlands owners. Since the beginning, the Association has become an official partner of relevant sectors, in

particular the Ministry of Agriculture, the House of Representative of the Czech Parliament and the Agrarian Chamber of the Czech Republic, for all problems related to forestry.

There are three *Forestry Professional Associations* which are voluntary, independent and non-political bodies. One of them, the *National Forest Committee* is a selective non-profits civil association of professionals from all forestry science and related sectors. The preparation of the second ministerial conference on the Protection of Forest in Europe – Helsinki 1993 promoted its establishment. Whereas the Forest Committee has a limited number of members, others associations are open for all interested individuals.

6. INTERSECTORAL COORDINATION

6.1 Landuse planning

According to the Protection of Nature and Landscape Act, forests are a significant factor in landscape use. Forests cover 33.3% of land in the Czech Republic. The special intersectoral co-ordination is coordinated with regional plans (see next chapter).

7. SPECIAL INSTITUTIONALISATION

7.1 Special planning framework

The regional plans of forest developments are part of a large land use planning system offering the appropriate framework for the management of entire regions.

The state forest policy should make use of regional plans of forest development which contain, among other things, the recommended principles of forest management. Preparation of regional plans is commissioned, and the Ministry of Agriculture approves draft regional plans. All expenses connected with regional plans of forest development are carried by the state.

Legal entities entrusted with the management of the state forests and other legal entities and individuals who own more over 50 hectares of forests are obliged to arrange the drawing-up of a forest management plan valid for a period of ten years. Forest management guidelines are prepared for forests covering an area under 50 ha in the ownership of individuals or legal entities if no plans have been drawn up for such forests. The relevant state forest administration body commissions the preparation of guidelines.

All individuals and legal entities involved in planned management activities are obliged to meet two binding provisions: the maximum total volume of felled timber and the minimum share of soil-improving and stabilising species for stand regeneration. With regard to state forests and forests in the ownership of municipalities, the minimum area of tending in stands of fewer than 40 years of age, is also a binding provision.

The expenses for the drawing-up of plans are carried by the forest owner, expenses for the preparation of guidelines are carried by the state. The owner of the forest has the right to claim partial compensation for increased costs in connection with planting the minimal share of soil-improving and stabilising species. Each forest owner receives the guidelines for his forest from the relevant state forest administration body free of charge. The owner does not have to accept these guidelines. If the owner of an area of forest under 3 ha decides to accept the guidelines, the maximum total volume of felled timber, which may not be exceeded, this becomes binding for him.

7.2 Helsinki resolutions

The Czech Republic signed the Helsinki final resolutions and accepted all tasks established from them. One of the obligations is to reduce the level of sulphur dioxide emission. It should be reduced to 15% of the level of 1980. This programme required a capital investment of 65 billion CZK.

A severe problem in some areas (particularly in the Northwest) is the long-term degradation of forest soil and finding a respective and effective solution (biological amelioration, the use of waste crushed basic rock materials, etc.). This became a part of a National Forest Programme (see above).

Thus, one of the most important tasks of sustainable management of forests is to preserve and maintain the spectrum of regional populations to the greatest extent possible. The measures implemented in practice are aimed at providing first-rate seed for the regeneration of forests, which is carried out by evaluating forest stands for seed harvest and establishing seed orchards. At present, 145 000 ha has been evaluated for seed collection, and 336 ha of seed orchards have been established. To avoid any narrowing of the genetic variability of forest tree species compositions, it was decided that the share of seed from seed orchards should not exceed 30% of total consumption. For breeding purposes and for the establishment of seed orchards, 7 595 plus trees of 20 tree species were selected, of which central records were kept.

An important task in putting the finishing touches on the structure of stands is the gradual improvement of their mechanical stability, particularly applicable to pure spruce plantations extremely endangered by abiotic factors (wind and snow). This explains the use of graduated thinning.

Mixed forest stands dominated by broadleaved trees (beech and oak in particular) were predominant on today's territory of the Czech Republic in the second half of the 18th century. The one-track economic viewpoint aimed at increasing forest yields over the last 200 years, lead to the establishment of large pure stands of spruce and pine in particular. The result of these unfavourable changes was high level of salvage cuttings, as previously mentioned.

Resolution H-2 stipulates that at national and regional levels, the signatory states will establish a coherent ecological network of climax, primary and other special forests aimed at maintaining or re-establishing ecosystems that are representative or threatened. The Nature and Landscape Protection Act 114/1992 defined the territorial system whose implementation has begun.

8. CONCLUSIONS AND OUTLOOK

- The Czech Republic has solid and effective legislation on the protection of forest area. The forestland has increased to the share of 33%, one of the highest levels in Central Europe.
- Private forest ownership structure is too fragmented in the Czech Republic. It makes the effective management of these forests difficult. The support for the grouping of dispersed small forest properties is the most important item of strategic planning.
- The economic situation in the forest sector and especially in forestry is deteriorating due to the increase in the cost of forest management. Communal and private forests are suffering
- financial loss, and without state grants and subsidies, the management of their forests is not possible.
- While growing stock in Czech forests is still growing, the forest ecosystem stability is questionable. The restoration of biodiversity and stability, regeneration capacity and vitality is priority number one in the Czech National Forest Programme.
- The intersectoral coordination between “biological Ministries” i.e. Ministry of Agriculture and Ministry of Environment is solid and effective enough. The forest Industry (Ministry of Trade and Industry) only focus on the technical aspects of forestry (safe supply of wood) and it is not very cooperative in solving actual ecological problems in forestry.
- The Associations operating in the forestry sector have been created recently. Their activities focus on the protection of their members’ narrow interests. Their level of cooperation has been limited.
- The Czech National Forest Programme accepted all international obligations. It is based on sound ecological guidelines. Within the adaptation process there is a possibility of incorporating new ideas and requirements. The NFP provides a solid framework for attracting public support for the improvement of the ecological and economic situation in the forestry sector.

List of abbreviations

CZK	Czech crowns,
FCR	Forest of the Czech Republic – state firm, which manages forests owned by the state,
VLS	Military forest and farms – state firm, which manages the military training ground forests.

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Finn Helles and Michael Linddal

Department of Economics and Natural Resources,
The Royal Veterinary and Agricultural University Copenhagen
Denmark

ABSTRACT

NFP has resulted from recent years' development in forest policy in Denmark, although it was never a deliberate policy objective. Public demand and international initiatives have led to highly increased emphasis on non-market benefits. Forestry has good access to the political agenda and there is little conflict potential in forest policy. Among the forest policy targets and strategies, two are stressed in the paper: (i) an aim to double the country's forest area, and (ii) a strategy for sustainable forest management. An inter-ministerial memorandum and the above strategy can together be considered as an action plan comprising Danish NFP. It is a policy objective that Denmark play a leading role concerning the implementation of international forest policy initiatives.

Keywords: Denmark; Strategic Initiatives; Operational Elements; Consensus.

'The marvellous thing about forest policy is that it is possible at the same time to meet many different interests' (The Danish Minister of the Environment and Energy, in Parliament when the 1996 Forest Act was passed, Debates 1995/96: 3083, translated).

1. INTRODUCTION

A *national forest programme* (NFP) in Denmark has gradually evolved from the co-ordination of the different activities and policies related to the national forest sector. The formulation of a NFP has not been a deliberate policy objective but has evolved from recent years' development in forest policy. The point of departure of the NFP is the

physical, economic and institutional aspects of the forest sector. This chapter aims at providing a brief overview.

Denmark is an agricultural country where forests are of little importance. In a European context, the forest cover of 10-11% is at the lower end, and the expansion of the forest area is suppressed by the competitive land-use of the agricultural sector. There are few areas not claimed by agriculture. The predominant forest types are coniferous plantations and intensively managed secondary and planted broadleaved forests, while semi-natural (non-intervention) stands are scarce.

An overview of forests and forestry in Denmark is provided in Box 1. The data on forest cover, production and economic importance reveal that it is a small sector with little demand for a sector policy. Nevertheless, the small size of the sector implies that formulation and implementation of a comprehensive policy meets fewer obstacles

Box 1. Brief overview of forests and forestry in Denmark.

According to the latest national forest inventory 1990 (Forest and Nature Agency and Statistics Denmark 1993) Denmark has a total forest area of 445,400 ha, of which 417,000 ha is under tree cover. The forest area comprises 10.3% of the country's land area. An estimated 85% of the forest area is Forest Reserve under the Forest Act. It is estimated that 10% of the area is protection forest and non-intervention forest, and that 5% is exclusively used for production of Christmas trees and greenery (*Abies* spp.). In addition come urban fringe forests which are less intensively used for production purposes. Since 1990 the forest area has increased by 10,000 - 15,000 ha from afforestation of farm land.

The annual removals are approx. 2 mill. m³, two-thirds of which is softwood. The annual consumption of wood and wood-based products amounts to about 7.5 mill. m³ roundwood equivalents or an average of 1.4 m³ per capita. Forestry's gross production value in 1995/96 was DKK 1.2 billion (Statistics Denmark 1997) with more than one-third originating from Christmas trees and greenery (1 USD = 6.9 DKK). Forty-five per cent of forestry's production value goes to domestic economic sectors, 15% to domestic consumption and 40% is exported (80% of Christmas trees and greenery). The total number of forest estates (> 0.5 ha) is approx. 20,500, of which 96% is < 50 ha and covers 24% of the total forest area. Most forest estates are owned in connection with farm land. The distribution of the forest area to ownership categories is: (i) private forest property 45%, (ii) foundations, associations, etc. 23%, and (iii) public forest 31% (the Forest and Nature Agency managing 26%).

Average annual accounts are published for approx. 25% of the private forest area. In 1996 the surplus (exclusive of debt service) was DKK 834 per ha, of which DKK 312 per ha from forestry *per se*, DKK 542 per ha from secondary activities and DKK 64 per ha was state subsidies (Danish Forestry Society 1997). Annual accounts are also published for the forests managed by the Forest and Nature Agency. The amount corresponding to the DKK 312 per ha for private forests has been estimated at DKK - 489 (based on Ministry of the Environment and Energy 1997). A comparison of the two figures is difficult, as, for instance, the Forest and Nature Agency manages its forests to a greater extent for procurement of non-market benefits. The Agency's total expenditure in 1996 (forest districts and central office) was approx. 600 mill. DKK net of timber sales. State subsidies for private forestry amounted to approx. 86 mill. DKK in 1997 and is increasing. In the first half of the 1990s the labour force in forestry equalled 2,000 full-time jobs and, in addition, 500 contractors and 525 forestry professionals were employed (Ministry of Agriculture 1994).

compared to, e.g. an agricultural sector policy. The conflicts are fewer and a consensus on forest policy is feasible. Furthermore, one-third of the forest area is public land. In general terms the Danish forest sector encompasses few contemporary conflicting topics relevant to forest policy intervention. The following two claims are possible explanations why the context of forest policy formulation in Denmark is smooth: (i) the forests are well managed and comply with *good* forest management and the existing regulation and the public perception of nature corresponds with the managed high forests, or (ii) the forest sector is of no significant macroeconomic importance, the stakes are therefore small in terms of timber production, and the provision of non-timber goods and services in return for public grant schemes could emerge as a supplementary management objective.

A national forest policy cannot be viewed without considering the importance of the primary forest sector relative to that of the wood processing industry and trade in forest products. The primary forest sector contributes approximately 1‰ to the national GDP, while the wood processing industry makes up approximately 1%. Located in a favourable geographical position in terms of trade between Scandinavian forest resources and Central European markets, some of the Danish wood processing industries, *viz.* furniture and flooring, are of significance (Linddal 1997). The strength of the secondary forest industry is based on trade, both in raw materials (semi-processed wood products) and end products. The economic role of forestry in terms of GDP and as a supplier of roundwood for the domestic wood processing industry is not crucial. The remaining part of the paper is limited to the primary forest sector, while the forest industry is not further considered.

The forest sector has demonstrated an ability to draw the attention of the politicians. Furthermore, it is difficult to encounter an opposition to forest and forestry, and the sector has had good options to be on the policy agenda. The restructuring of the institutional arrangement through the transfer of the responsibility from the Ministry of Agriculture (since 1994: Ministry of Food, Agriculture and Fisheries) to the Ministry of the Environment (since 1994: Ministry of the Environment and Energy) is one important outcome. The transfer was partly a response to the emerging environmental awareness in recent decades experienced in all industrialised countries. The international initiatives concerning forests also had an impact on the access to the policy agenda, and consequently the efforts to develop forest policy for endangered tropical forests probably had more impact on temperate forests. Finally, EU regulation, in particular on afforestation, has served as a lever for national forest policy, which also provided a policy option and eased the forest policy initiatives in Denmark.

2. BACKGROUND – LEGAL AND POLICY FRAMEWORK

The development of forest policy should be viewed on a long-term horizon according to the nature of time in forestry. It includes the future impacts of forest policy, but there is also a historic relevance which illuminates the present policy formulation and institutional framework. The message to be derived from this is two-fold. First, forest policy should be viewed in the appropriate institutional, socio-economic and political

context at the time of its origin. Secondly, the context of forest policy has shifted and will be shifting in the future. The criticism of past forest policy is directed at its inability to adjust to a shifting context, and this should be beard in mind when formulating policies according to the present context which may change as soon as the near future. Table 1 provides a rough overview of the development of such forest policy formulation in Denmark which has relevance for other nations as well.

An example of shifting emphasis is public access to private forests which in 1969 was changed from a custom into a legal right. The forest sector has directly and indirectly also been the subject of other legislation, including nature conservation (e.g. protection of natural habitats and archaeological sites), environmental protection (e.g. application of pesticides), and tax legislation (e.g. inheritance tax).

The development of forest legislation, however, primarily outlines the legal and policy framework. Due to the relatively small, yet well co-ordinated sector, the requirements for regulation are not considerable. One reason for this is the fact that one-

Table 1. Problems, responses and objectives in Danish forest policy.

Policy problem	Policy response	Policy objective
(1750-1800)		
Over-exploitation and fear of timber shortage	Forest Reserves	Non-declining forest area
(1 st Forest Act 1805) Forest Reserves	Sustained timber management	Non-declining timber yield
(1930-60s)		
Increasing timber demand	Improved infrastructure and production	Focus on timber yield
(2 nd Forest Act 1935)		
(1970-80s)		
Conflicts over forestry practice	Multiple-use forest management	Focus on forest output
(3 rd Forest Act 1989)		
(1990s)		
Biodiversity, preservation and nature conservation	Ecosystem management	Focus on forest functions
(4 th Forest Act 1996)		
(21st Century) Possible scenarios:		
a) Adapting to international forest policy efforts and responding to symbolic importance of forests	Social forestry	Focus on public participation (aim rather than means)
b) Forests a source of renewable natural capital	Renewable resources for fibre and energy	Focus on natural capital and renewable energy
(5 th Forest Act 20xx)		

third of the forests are public, and that the enforcement of forest legislation served as a regulation by means of practice by the private forest sector.

The ongoing programmes concerning planning and implementation of forest activities reflect how small the forest sector is. The regulation is close to encompassed in the Forest Act following the recent revision in 1996, and the Forest and Nature Agency has been exclusively in charge of the implementation of forest policy since 1994. The planning and management of state forests is centralised at a national level, however, management is divided into state forest districts. The state forest districts at the regional level enforce the Forest Act in non-state forests and administer the applications for grants. On nature management, i.e. non-forestry topics, the state forest

Box 2. Development of Danish Forest Acts.

The first Danish Forest Act 1805 introduced the concept of Forest Reserves, which put an end to forest destruction by excluding grazing. Forest Reserves could, in principle, no longer be converted into other land uses and management should follow sound forestry practices, primarily aiming at wood production. The Forest Act 1935 further developed the 1805 Act and the basic aims. The 1935 Act aimed at wood production and, to a lesser extent, environmental values. The need for a revision of the forest policy emerged in the late 1960s, but with few exceptions (e.g. Hermansen 1970) it was not a concern raised by the forest sector. The concern was raised by interest groups outside the sector and notably within the nature conservation movement. Since the 1970s, debates have raged in the media on the declining area of beech, and in the early 1980s, forest decline added fuel to the fire. In 1989 a Green Bundle of Acts was passed, including a revised Forest Act, an Act on Nature Resource Management, and amendments to the Act on Land Zoning (cf. Ch. 5).

The 1989 Forest Act maintained production objectives similar to those of its predecessor. More importantly, however, its objectives were extended to include multiple-use forestry. Emphasis was also put on monitoring forest health, and a grant scheme for the establishment of broadleaved stands was introduced. Forest policy has developed substantially since 1989, leading inter alia to a revised Forest Act in 1996. The 1996 Act retains the objectives of the 1989 Act, but increased emphasis is put on the non-timber values of forests. The fundamental principle of good and multiple-use forestry is a requirement with due regard to nature conditions, wood production, biodiversity, and the surrounding environment. The Act leaves room for interpretation and development of this management principle, i.e. its administration is to a large extent based on practice.

With the exception of public afforestation, all state grant schemes on forestry have been incorporated in the Forest Act since 1996 (annual budget in brackets):

- a) Furthering of good and multiple-use forestry: establishment of broadleaved stands, management planning, regeneration, specific management practices, and recreation (DKK 31 mill.)
 - b) Permanent conversion of stands into non-intervention forest stands (DKK 14 mill.)
 - c) Private afforestation of farm land (DKK 41 mill.)
 - d) Development of forest products, e.g. aiming at more economic or environmentally friendly production (DKK 26 mill.)
 - e) Education and guidance of forest owners, inclusive of subsidies to professional assistance to small woodland owner associations.
-

districts are, to a certain extent, acting parallel to the counties. One example is the accompanying measures to the EU common agricultural policy, in which the state forest districts manage the afforestation (EU Reg. 2080/92) and the counties the agri-environmental measures (EU Reg. 2078/92). One overlap is the provision of a 20 year income compensation in environmentally sensitive areas (ESA) administered by the counties. This can be combined with the flat-rate reimbursement of afforestation costs administered by the Forest and Nature Agency. The counties were involved in the designation of afforestation areas (cf. Sec. 3.1), however, they no longer play any important authority role in respect to forests.

With regard to education and guidance of forest owners, the Forest and Nature Agency collaborates with the private associations: Danish Forestry Society (cf. Ch. 4), Danish Land Development Service (a private organization which manages heath land plantations on a contractor basis as well as its own plantations) and Danish Forestry Extension (small woodland owners' associations). Higher forestry education (annual acceptance of 60 forestry students) and basic research take place at The Royal Veterinary and Agricultural University, applied research at the Danish Forest and Landscape Research Institute, and education of forest technicians and vocational training is at the Danish Forest College (incorporated into the Forest and Nature Agency). Meeting the requirements for managing the national forest resource appears not to have any educational or guidance deficit.

3. AIMS AND STRATEGIES

The level of aims, strategies and plans of action, reflects the size and importance of the forest sector.

Table 2. Strategies.

Strategy	Aim and description
'Afforestation' (1989)	The aim is to increase the forest area by 100 % over a period of 80-100 years, with an annual public and private afforestation of 5,000 ha (cf. Sec. 3.1)
'Sustainable forest management' (1994)	A national strategy as a follow-up to the Rio summit and the Helsinki conference (cf. Sec. 3.2)
'Natural Forests and Other Forest Types of High Conservation Value' (1992)	The main objective is to preserve the biological diversity of forests, including their gene resource. Before the year 2000, at least 5,000 ha should become non-intervention forest and 4,000 ha managed with original practice, e.g. coppice with standards. Before 2040, no less than 40,000 ha must be designated.
'Conservation of genetic resources of trees and bushes' (1992)	The main objective is the conservation of genetic variation of trees and bushes, with 1,800 ha nominated by year 2004.

Based on: Holten-Andersen et al. (1998), Ministry of the Environment (1992)

In addition, the State Forestry has management strategies, e.g. reducing the application of fertiliser and pesticides, and a pilot study on environmental accounts of forest management has been carried out. These and other efforts related more specifically to forest management are acknowledged but not dealt with further. Among the forest policy targets and strategies, two are considered below: (i) the aim to double the forest area, and (ii) the Strategy for Sustainable Forest Management.

3.1 The aim to double the Danish forest area

The strategy to double the Danish forest area is an operational strategy. This aim was first presented in 1989 by the Minister of the Environment, in comments on the Act on Natural Resource Management (the Nature Conservation Act since 1992) which forms the legal basis for funding of state afforestation. Afforestation of farm land became an issue in the early 1990s mainly as a result of EU regulation. The Forest Act has been the legal basis for private afforestation since 1996, and the first possibility for private landowners to obtain subsidies for afforestation was introduced in 1991. It took almost five years for the Ministry of Agriculture to implement the national legislation for EU Reg. 797/85 on afforestation of farm land. The grant scheme was revised in 1994 to include the revisions in EU Reg. 2080/92, and a second revision followed in 1996 after the transfer from the Ministry of Agriculture to the Ministry of the Environment. Despite a considerable public interest, there were only few applications from 1991 to 1996. This has, however, changed with the recent revision which includes a 20-year income compensation in designated afforestation areas and environmental sensitive areas (ESA). Since 1997, the budget has, unlike previous years, not been able to meet the demand, but even with the present increased grants, the budget is insufficient to meet the area aimed at private afforestation. This has led to claims that the budget is insufficient, yet few have claimed that the grants could also be excessive. The easing of legal constraints, e.g. the requirement of residence according to the Agricultural Act can be lifted after 8 years. On Forest Reserves above 35 ha is one option probably as efficient as increasing the afforestation budget.

In the Land Zoning Act, the county authorities became committed to designating afforestation areas. Much of the debate on afforestation was triggered by the national designation of afforestation areas from 1990 to 1992. The designation of afforestation areas was the stated aim, but an important result was the designation of non-afforestation (*minus*) areas where afforestation would not even be allowed in cases where there was no available grant. In some counties, the designation gave rise to objections: (i) farmers thought that designation of afforestation area implied that their land had to be handed over for compulsory state afforestation, (ii) the state afforestation programme was assumed to pump up land prices and consequently increase real property taxes with a negative impact on regional/local structure of agriculture, and (iii) the restriction on land use imposed by the designation of *minus areas* caused minor objections, mainly from private and state forest districts.

Afforestation is one of the key areas in the forest sector where planning and intersectoral co-ordination is required. On the outset of the early 1990s, the Ministry of Agriculture seemed reluctant to promote private afforestation. It was probably the

concern of the Ministry and the influential agricultural organisations that financial support for public afforestation convert fertile farm land into forest plantations. The Ministry of Agriculture had a report made (Hansen and Kjeldahl 1991) on the economics of state afforestation by the Ministry of the Environment, as a substantial state afforestation of farm land was feared. The report concluded that from a financial assessment, afforestation was not a viable alternative to agriculture except on very poor soils. The report did not consider, for example, the recreational or other non-timber functions.

There is a gap between the policy objective of afforestation and what has been achieved, mainly due to the high opportunity cost of farm land (due to a decline in interest rates, agricultural subsidies and environmental regulation in agriculture, e.g. requirements of harmonisation in the EU Nitrate directive 91/676) which is solved temporarily by inflating the afforestation grants. A financially more appropriate solution is required in the long run, e.g. a tender procedure, in order to achieve the policy objective.

3.2 Strategy for Sustainable Forest Management

As a follow-up to UNCED, the Minister of the Environment in 1993 appointed an inter-ministerial committee to prepare a national report on how Denmark could contribute to the implementation of the Forest Declaration's principles on the management, conservation and sustainable development of all types of forests. The forest policy

Table 3. Criteria in the National Strategy for Sustainable Forest Management.

Utilisation of forests	<ol style="list-style-type: none"> 1. Forest area and ownership 2. Sustainable use of multiple-use forest products 3. Importance of forests to the economy and to employment 4. Recreational functions of forests 5. Landscape functions of forests 6. Cultural values of forests
Protection of forests	<ol style="list-style-type: none"> 7. Forest soils and the ecological cycle of forests 8. Protection of biological diversity in forest ecosystems 9. Influences of forests on ground water, streams and lakes 10. Health and vitality of the forests 11. Contribution of forests to ecological systems
Development of the forestry sector	<ol style="list-style-type: none"> 12. Planning for forests 13. Processing of forest products
Institutional framework and capacity	<ol style="list-style-type: none"> 14. Coherent policies, institutional frameworks and public participation 15. Information and statistics 16. Education and research
International co-operation	<ol style="list-style-type: none"> 17. Participation in international co-operation regarding forests 18. Trade in forest products

impacts of the Conventions on Biodiversity and Climate should be considered, as well as resolutions from the Helsinki Conference. The Committee presented the result of its work as a Strategy for Sustainable Forest Management (Ministry of the Environment 1994a; 1994b). The Strategy, one of the first of its kind, is not only a national follow-up to the international conferences. The objective was also to demonstrate the implementation of a strategy on sustainable forestry to the inspiration of other nations. The Strategy served, thus, both an international and a national policy purpose. The concept of sustainable forest management is divided into 18 criteria, all of which are based on international agreements and recommendations. *'Such criteria are bound to be of a very general character as local conditions vary significantly – even within individual countries'* (Ministry of the Environment 1994b: 39). For each criterion there is a summary of how the international agreements are interpreted by the Committee in relation to that criterion. Furthermore, Denmark's present objectives, status, instruments, and future efforts concerning each criterion are elaborated (Ministry of the Environment 1994a). The inter-ministerial committee concluded:

'The strategy shows that Denmark has already implemented a large number of initiatives, just as further initiatives which will contribute to the implementation of the principles of the Forest Declaration will be carried out during 1994 [cf. Ch. 2]. The...committee believes that with the selected objectives and measures, Denmark fulfils the criteria. With this strategy, Denmark fulfils the international forest agreements. There is, however, a need for continued and specific active contributions in order to fulfil the intentions of the Forest Declaration. Hence, Denmark will fulfil the objective of sustainable forest management before the year 2000...(Ministry of the Environment 1994b: 30).

Danish forestry is generally characterised by multiple-use management. This does not necessarily imply, however, that management of the forests is sustainable. Nevertheless, the Committee found that when considering objectives and measures, including planned initiatives, Denmark complied with all 18 criteria. Only with regard to criterion 10 was there reservation:

'Many forest stands [Mainly plantations of Norway and Sitka spruce on former heath lands. This is a result of past afforestation which according to present standards does not meet the criterion of sustainable forestry. F.H. and M.L.] ...do not meet the demands of natural management methods, and they often have problems of health and stability. These stands will, however, remain part of Danish forestry for many years. It is nevertheless essential to provide for a conversion of some of these stands into more varied and stable stands.' (Ministry of the Environment 1994b: 29).

The immediate Government follow-up to the Strategy was a memorandum to the Parliament in 1994 on forest policy, leading *inter alia* to relevant institutional change (cf. Ch. 6) and a subsequent revision of the Forest Act (cf. Ch. 2). The efforts of the Government to establish the Strategy for Sustainable Forest Management in order to meet both national and international requirements are admirable. The Strategy was used

to pave the way for an institutional change which now has streamlined and centralised forest policy in Denmark. The Strategy also has limitations. In the Strategy, the Forest and Nature Agency set the criteria to review the state of, for the most part, the Agency's own efforts on forest policy. The positive outcome was, therefore, neither surprising nor particularly operational, nor was it strong in visions, problem identification and action topics. The Strategy was a *state-of-the-art* review and an important step in the process of preparing a NFP. According to the Strategy for Sustainable Forest Management, there are no important gaps between the current situation and the objectives delineated by the criteria. A conclusion for the Strategy was that the existing policy instruments will support a sustainable *development* of the forest sector. The Forest and Nature Agency had a green NGO write a report on how the concept of sustainable forest management might be implemented in practice (Nepenthes Consult 1996).

4. STAKEHOLDERS AND PARTNERS

The stakeholders in Danish forest policy are few and the co-ordination is in general well-functioning. This chapter is a brief overview of key stakeholders in the forest sector.

The *Danish Forestry Society* is the main organisation for non-state forestry. Among the members of the Board are representatives for big forest estates, Danish Land Development Service, Danish Forest Extension and Forest and Nature Agency. The State Forestry (The Forest and Nature Agency) is an associate member, and the Society's claim to be *the* Danish forest organisation is therefore justified. The Society has considerable influence on forest policy, being a member of all major *ad hoc* forest policy committees and of the Forestry Council (cf. below). It carries out lobbying and public relations.

The *Forest and Nature Agency* under the Ministry of the Environment and Energy is the major forest policy actor. Since 1994, when the private forest grant schemes were transferred from the Ministry of Agriculture, the Agency has become a focal point of forest policy and in reality an initiator of new forest policy. The Agency's influence is also strong due to its authority over not only forestry, but the natural environment outside forests. The Agency plays a double role by being the Government administration department, formulating and enforcing national forest policy, as well as the managing agency of the state forests. Since the 1989 Forest Act, the Agency's role regarding forestry practice has changed from a supervisory role, now putting much more emphasis on consultation and incentives. The Agency no longer carries the weight of its own decisions, and complaints can now be lodged with a *Nature Appeal Board*.

Under the Forest Act, a *Forestry Council* has been established to advise the Minister of the Environment on forestry issues. Among the members of this Council are representatives of the forestry organisations, as well as those of the major nature organisations: (i) *Denmark's Nature Conservation Society*, a NGO with some influence on forest policy as it has approx. 250,000 members, (ii) *Outdoor Life Council*, an umbrella organisation for NGOs, and (iii) *Nature Conservation Council*, an advisory council established under the Nature Conservation Act. The following are a few

examples to illustrate stakeholders' involvement in forest policy-making and the political environment:

- In the 1970s, Denmark's Nature Conservation Society started a campaign against the dwindling area of deciduous forest, in particular beech, the national tree species. The statistics were ambiguous but did indicate a trend towards halving the beech area on the Islands on one rotation (Helles *et al.* 1984). By joint lobbying, the Danish Forestry Society and Denmark's Nature Conservation Society had resolutions on securing beech and other broadleaved species forest introduced in Parliament 1981-1983, leading the Minister of the Environment to make a statement of the future of beech.
- In 1986, the Minister of the Environment promised to introduce a Bill on a new Forest Act with the main aim of balancing the productive and recreational roles of forestry. An *ad hoc* committee was appointed to prepare the Bill, with representatives of the main organisations within forestry, wood processing industry, agriculture, nature conservation, outdoor-life, and ministries involved. Opinions on the Bill were invited from a broad range of affected organisations. This thorough preliminary work resulted in the Bill being generally supported.
- When a Bill on a revision of the Forest Act was introduced in 1996 based on the many forest policy initiatives since 1989 (cf. Ch. 2 and Ch. 3), the interested organisations had the opportunity to make comments to a standing Committee on the Environment and Planning. A major concern of private forestry was that state subsidies be paid only to undertakings with regard to nature and environment over and above those required by the Act (Jespersen and Swainson 1997).
- In continuation with the Strategy for Sustainable Forest Management, regional User Councils have been established in the state forest districts. Among the members are representatives of the Outdoor Life Council, Denmark's Nature Conservation Society, Denmark's Athletic Union and counties and municipalities. These Councils discuss management issues with the regional forest administration. Some private forest districts, mainly districts already collaborating with local organisations representing user interests, consider establishing similar boards.

The problem areas are few, but emerging topics could lead to conflicts, e.g. a demand for increased public access to private forests, or concern for the fate of remaining semi-natural stands in private forests. Other topics such as certification have been the subject of extended discussion, but these are individual and voluntarily arrangements not directly incorporated in NFPs.

5. INTERSECTORAL COORDINATION

Particular objectives of a NFP should be a framework for including other sector policies in forest policy and to establish a role for the forest sector in other sector policies where appropriate, e.g. the agricultural sector with regard to afforestation. Furthermore, some policy co-ordination is relevant on environmental issues. The significance of

macroeconomic planning reveals the importance and requirement for coordination of forest production in an economic context.

Forestry was traditionally under the jurisdiction of the Ministry of Agriculture, however, during the last decade it has gradually been transferred to the Ministry of the Environment. Although the Ministry of Agriculture in 1986 attempted to take the lead with a report on a future forest policy (Ministry of Agriculture 1986), the forest sector was not a priority area, as it has become with the Ministry of the Environment. A long standing divergence in the governmental offices between the State Forestry under the jurisdiction of the Ministry of Agriculture and the Nature Conservation Agency under the jurisdiction of the Ministry of the Environment was brought to an end when the two institutions were merged in 1987 to form the Forest and Nature Agency. In the late 1980s, the situation had all the prospects of a substantial conflict on forest policy, but this was boldly avoided with the merger (Helles et al. 1997). In 1994 followed the transfer of the private forest sector and grant schemes. Since all forest policy issues came under the jurisdiction of Ministry of the Environment, the role of the Ministry of Agriculture in forest policy formulation has dwindled. The change was partly motivated by improved possibilities for making the incentives in the Forest Act 1996 more coordinated and purposeful – a direct outcome of the Strategy for Sustainable Forest Management. The Ministry of Agriculture and the agricultural organisations had the opportunity to comment on the Forest Bill, as they had on the Strategy, but the forest policy initiative is exclusively with the Forest and Nature Agency.

Afforestation requires farm land which makes intersectoral coordination relevant, yet not always feasible. One problem is that the grants for afforestation are merely buying out agricultural subsidies. Afforestation is also considered as an alternative when agriculture constitutes an environmental problem, e.g. the recently revised Water Action Plan includes afforestation as a measure to reduce nitrogen leaching. Although it is the termination of agriculture rather than a tree cover that stops the nitrogen leaching, the Government has doubled the annual grant for public and private afforestation from 60 to 120 mill. DKK, without an increase in the annual afforestation aim – it has remained at 5,000 ha. This may ease the budget constraints of the afforestation strategy.

NFP is not a closed exercise for the forest sector but an interface to other relevant legislation. In the National Report to the third Ministerial Conference on the protection of forests in Europe (Forest and Nature Agency 1998) three other Acts are mentioned: (i) the 1992 Nature Conservation Act, (ii) the 1991 (with amendments in 1997) Planning Act, and (iii) the 1993 Act on Shelterbelts and Supplementary Deciduous Plantations. The NFP can be regarded in the context of another coordinating policy, e.g. the Planning Act, which *inter alia* provided the framework for designating afforestation areas. The Nature Conservation Act provides: (i) protection of natural sites (e.g. lakes, streams, bogs and heaths), (ii) public right of access to forests, (iii) funding of public afforestation, and (iii) protection of historical and archaeological sites. The Nature Conservation Act has, as has the Forest Act, been through a process of concentration and includes a range of non-timber aspects of the forest sector. The concentration process could proceed through an amalgamation of the Forest Act and Nature Conservation Act. The limits to the concentration of policies are also reflected in the name of the state forest agency: Forest and Nature Agency.

In the context of NFP, it is relevant not only to consider how other policies have an impact on forests, but also how other policies include the forest sector as one of the policy measures. The water action plan mentioned above is one example. Another example is a recent report on the protection of drinking water reserves (Ministry of Energy and the Environment 1998), which emphasises afforestation as a measure to protect drinking water, as afforestation is an alternative to agriculture. The report stresses the need to cut the minimum area requirement for public grants for afforestation. It could also be justified, however, to have a minimum of 5 ha, since there is only public right of access on roads and paths in private forests > 5 ha according to the Nature Conservation Act.

A macroeconomic analysis of the forest sector has been made (Helles et al. 1984) including marketed benefits. The Ministry of the Environment had made comprehensive analyses in 1986 on the consequences of afforestation of dry marginal farm land (summarised in Stryg 1987), and the Ministry has also later caused economic analyses of afforestation, e.g. Linddal (1995a). Nevertheless, Danish forest policy does not rely on national macroeconomic planning because of the relatively weak link between forestry and forest industry in terms of supply of raw materials, coordination is presently of little significance.

6. SPECIAL INSTITUTIONALISATION

The Forest and Nature Agency has received a stronger forest policy mandate as it became responsible for the entire forest policy formulation and implementation following the recent revision of the Forest Act and the transfer from the Ministry of Agriculture. According to a memorandum to the Parliament 1992:

'[the Government] intends to make a comprehensive statement as to how Denmark can contribute to the implementation of the principles of the Forest Declaration concerning management, conservation and sustainable development of the forests - nationally as well as internationally.' (Ministry of the Environment 1994b: 9).

A wide majority of the Parliament adopted a motion urging the Government to work *inter alia* for the Forest Declaration being expanded to a legally binding agreement. At the Helsinki Conference 1993, Denmark was among the States committing themselves to prepare, without delay, specific national guidelines and incorporate them into forestry plans and programmes for the implementation of Resolution H1 (point F). The Danish Minister of Agriculture specified that 'without delay' meant that Europe should have sustainable forest management as soon as possible, preferably before the year 2000. (Ministry of the Environment 1994b: 10). In 1993 the Minister of the Environment appointed an inter-ministerial committee to formulate an overall forest policy in the light of UNCED and the Helsinki Conference, resulting in the Strategy for Sustainable Forest Management 1994 (cf. Ch. 3.2).

'The strategy serves partly as the Danish follow-up to UNCED and the Helsinki Conference, and partly as a Danish proposal on how to substantiate and bring into operation international efforts on the implementation of sustainable forest management.' (Ministry of the Environment 1994: 11).

In 1994, the Strategy was forwarded by the Government in a memorandum presented to the Parliament, comprising twelve action topics for the continued development of sustainable forest management (Ministries of the Environment, Agriculture, and Foreign Affairs 1994). The inter-ministerial memorandum compiled the existing policy efforts related to forests and forestry and combined these into one comprehensive strategy paper. The memorandum and the Strategy combined can be considered as an action plan comprising a Danish NFP.

A specification has been made of the present monitoring of indicators for sustainable forest management (Forest and Nature Agency 1997a). Some examples: (i) an annual assessment of forest health is made according to EU legislation, (ii) annual counting of breeding birds and monitoring of orchids, (iii) National Forest Inventory every ten years, and (iv) annual accounts of removals and production of Christmas trees and greenery. It is evident that the present monitoring is inadequate, and a programme for future monitoring has been outlined (Forest and Nature Agency 1997b). The programme is almost exclusively aiming at ecological aspects of sustainable forestry.

Denmark plays an active role in the international forest policy initiatives following UNCED, the 1992 Forest Declaration, the Helsinki process on sustainable development, and the international panel of forests (IPF): (i) by supporting the IPF process, *inter alia* by co-financing workshops on financing (in South Africa) and indigenous peoples (in Bolivia) and the decision to continue the international process in IPF, (ii) by the Minister of the Environment being active in the field of forestry at UNGASS, and (iii) by support of environmental and development projects abroad which promote sustainable forestry and biodiversity.

Table 4. Memorandum on forest policy: action topics.

National priority areas	<ol style="list-style-type: none"> 1. Afforestation 2. Assessment of carbon fixation of afforestation 3. Increased research and development in wood and wood-based products 4. The Biomass Agreement 5. Green forest management in State Forestry 6. Promotion of multiple-use forestry in private forests 7. The Strategy for Natural Forests 8. Forest research 9. Training and information
International priority areas	<ol style="list-style-type: none"> 10. A global forest convention 11. Support for environment and development 12. Co-operation within the EU

7. CONCLUSION AND OUTLOOK

The formulation of a national forest programme is relatively advanced in Denmark. A prime reason is the strong efforts made by the Ministry of the Environment and Energy in this field, in particular since 1994. By taking advantage of the opportunities to bring forest and forestry on the policy agenda, it has been possible to amalgamate forest policy administration under the jurisdiction of the Ministry of the Environment and Energy. This has been one of the results of the Strategy for Sustainable Forest Management. It can be claimed that the main efforts have been in restructuring the institutional and legal framework of forest policy, while until now, there have been only some impact on the forest sector at the field level. Our conclusion is that Danish forest policy is well-functioning, coordinated and comprehensive for two key reasons. Firstly, it has become a policy priority due *inter alia* to the international process on forests and a very qualified civil service. Secondly, it is a small sector from a macroeconomic point of view, i.e. opposite interests, and large sector costs do not prevail.

NFPs being institutionalised or has a different meaning within a small sector such as Danish forestry compared to nations with a large forest sector. NFP as a process has good prospects in the Danish forest sector, as the NFP functions as a coordinating policy framework, streamlining the forest policy initiatives following the concentration of the forest policy within the Forest and Nature Agency and almost entirely within the Forest Act. Concentration, however, implies centralisation and lack of competition. Furthermore, the framework for cooperation is well developed at the national and regional levels, though a possible constraint on an effective forest policy is the double role of the Forest and Nature Agency as both the Government administration department, formulating and enforcing national forest policy and the manager of the state forests. A separation of the two functions might prevent diluted policy objectives and clarify the roles and budgets of different tasks.

It could be added that managed forest results in few conflicts, as the point of reference is not a natural forest but intensively managed farm land. Despite being managed, forests are considered nature, and now, in the late 1990s, the forest sector has adopted an environmental profile almost competitive with interest groups formerly considered to have extreme views. The application in practice has been less evident due to budget constraints in the State Forestry and a strained economic situation for private forestry. Conversely, however, it may be argued that the budget constraints in the State Forestry and strained economic situation in private forestry have been instrumental in fostering the environmental profile in anticipation of additional transfers. (Helles et al. 1997: 135).

Our conclusions are drawn on the existing development of the institutional framework of a NFP. The concentration of the forest policy has provided an efficient forest policy framework, strong in co-ordination both internally in the forest sector and externally with other sectors and policies. In the outlook of NFP and future forest policy, our concern is with the regulation of the forest sector through economic incentives. The forest sector has adopted an environmental profile and is occasionally arguing for a capitalisation of the substantial number of non-marketed benefits from forestry by means of Government subsidies and other means of financial transfer. The justification is that the environmental benefits are available to society free of charge. However,

scrutinising the economic justification may reveal that the benefits are provided in joint production at few or no opportunity costs, e.g. an economic optimally managed forest stand provides non-timber benefits at no costs. Unless an income transfer is the declared political objective, subsidies to forestry ought to be based on an incremental opportunity cost approach rather than merely income transfers. (Helles et al. 1997). Consequences of disregarding this principle have been outlined (Linddal 1995b), but apparently of limited event. The problem of making cost efficient incentives with a distinction between compensation for real incremental costs or income transfer may become a further topic in the wake of future NFPs for industrialised countries.

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NATIONAL FOREST PROGRAMMES IN FINLAND

Pentti Hyttinen and Ilpo Tikkanen

European Forest Institute
Joensuu, Finland

1. INTRODUCTION

1.1 Importance of the forest sector stems from history

The history of forests utilisation explains the economic, industrial and political development of Finland more than any other single factor. Issues related to forests, their ownership and utilisation are also linked with crucial turning points in Finnish history. Advancing settlements were only possible with the support of wood resources. Wood was used for buildings, heating, cooking, tools, and for transportation, particularly for making boats and ships. Mining and shipbuilding became great consumers of wood during the 17th century. Charcoal burning and tar extraction offered work and income until the end of the 19th century. (Hannelius and Kuusela 1995).

Liberal economic policy and the growth in the demand for sawed wood in Europe resulted in an increase in the number of sawmills in the 19th century. Thus, sawing was considered to be a threat to forest resources in the first half of the 19th century. Forest resources attained the value they still have when paper started to be made from wood fibre. Finland discovered its green gold and industrialisation, in the true meaning of the word, began at the beginning of the 20th century.

Despite their intensive utilisation, Finnish forest resources have not decreased during the 20th century. On the contrary: more trees are now growing in Finnish forests than at any other time during the more than 75-year period for which national forest inventory data is available. Three-quarters of Finland's land area – 23 million hectares – is considered to be forest. With a population of five million, this makes more than 4.5 hectares of forest per capita. The productive forest area is approx. 20 million hectares. (Statistical... 1997).

1.2 The forest sector as an income generator

Among the nations of the world, Finland has traditionally been the most dependent on its forests and forest industries. In 1995, the GDP amounted to 481 billion FIM (1 USD ~ 5.5 FIM), of which the combined share of forestry and forest industries was 9.1%. At the beginning of the century, over 85% of Finland's export income was derived from forest industry products. The forest sector and its exports provided a considerable stimulus to the national economy during the post-war reconstruction period in 1950s and 60s. The significance of the forest sector remains high, as approx. 30% of the 1996 gross export earnings for example, came from forest products. As the forest industries are supplied by domestic raw material inputs to a greater extent than other export industries, nearly 40% of the net export earnings still came from wood, paper and related industries. (Statistical... 1997).

The importance of the forest sector for the national economy can also be approached by assessing the role of the so-called forest cluster, which not only includes the forest products industry but also other industries and services that are directly connected to the forest sector. Examples of these are manufacturing of paper machines and harvesting machinery in the field of metal industry and certain branches of chemical industry providing chemicals for the forest product industries. According to Lammi's (1994) study several years ago, the share of the forest cluster of Finland's export income was 41% in 1992; in net terms this was more than 60%.

There is a wide range of non-wood forest products, which are of considerable importance for national and, particularly for the local economy in certain parts of Finland (Hyttinen and Solberg 1996). In terms of their monetary value, the most important of those products are different kinds of berries, mushroom and game. The right of public access gives everyone the right to walk, hike, and pick berries and mushrooms, but a licence for hunting is obligatory.

The income from picking wild berries and edible mushrooms totalled 341 million FIM (Saastamoinen 1995). The value of hunting was estimated at 294 million FIM in the hunting year 1994-1995 (Statistical... 1997). The nature conservation areas in Finland are almost entirely on State-owned land. Their total area amounts to 2.7 mill. ha, most of being situated in the northern part of Finland. Aside from the State-owned nature conservation areas, there are 28,400 hectares of nature conservation areas on private lands. (Statistical... 1997).

1.3 Employment impacts

As far as employment is concerned, the direct impact of the forest sector is not as significant as that on income generation. In 1993, an average of 2.0 million people were employed in the Finnish economy. Of that figure, over 100,000 people were working for the forest sector. Approx. 28,000 people were working in forestry. The labour force in forestry has decreased by approx. 60% since the beginning of the 1980s, when the figure was 63,000 persons. Employment has decreased, particularly in logging and the potential for traditional forest work to provide more jobs and income for the rural

population has been found to be only marginal and largely dependant on the degree of mechanisation in thinnings (Mustonen 1995).

The total employment of the Finnish forest industries fell from 120,000 persons in 1980 to 73,000 in 1996. In recent years, the pulp and paper industry has stabilised its labour force at approx. 45,000 people. In the wood products industry, on the other hand, the employment situation has continued to deteriorate. Similarly, the impact investments in forest industries has had on employment, has decreased (Statistical... 1997). Given this trend of capital intensification and mechanisation, the potential of the forest sector in creating new jobs seems to be limited to small-scale wood processing industries (Mäkinen and Selby 1995).

1.4 Forest ownership

Forest ownership in Finland is dominated by private individuals or families who own 54.2% of the forestry land. The State owns 33.4% of the forest area, administrated by the Finnish Forest and Park Service (FFPS). Forest industry companies own 7.7% and municipalities, parishes, and foundations the remaining 4.7% of the forest land (Statistical... 1997). The economic importance of the private forests is even higher than the share of their land area would indicate. Because of the favourable location in the southern part of the country, they provide 80% of the domestic timber used by the Finnish forest industries.

Forest ownership is rather small-scale and fragmented. The total number of private forest holdings is estimated at 440,000, of which approx. 290,000 are over 5 hectares. The average size of a forest holding is 26 hectares (Statistical... 1995).

In the 1950s, almost the entire non-industrial private forestry was linked with farming, but this traditional combination has weakened. If we look at the number of forest owners, only 32% of wood lots are now owned by active farmers, while pensioners own 36%, wage and salary earners 27% and entrepreneurs 5% (Ripatti 1994). However, if we take the area owned by different groups, active farmers still own 41% of the privately owned forest area. Moreover, despite the decrease of farm forests, 59% of the forest owners still reside in rural areas, while 22% live in rural municipal centres and 19% in urban areas (Ihalainen 1992).

2. BACKGROUND

2.1 General framework of the current forest policy

Finland is one of the pilot examples of the European countries in which forest and related policies and practices have recently been developed towards emphasising the economic, social and ecological features of environmentally sound and sustainable management of forests (Hytinen 1997). The importance of forests to the well-being of the Finns is a key reason for the wide acknowledgement of the multiple roles of forests.

Some of this change was already initiated before the UNCED and the new forest policy is based on the decisions made at the UNCED in 1992 and the Helsinki Conference in 1993.

In June 1994, the *Council of State* made a decision on the implementation of the principles of sustainable forest management, based on which the central aspects of forest legislation are being revised. Since then, Finnish forestry legislation has been systematically revised.

In the new *Forest and Park Service Act*, which already went into effect at the beginning of 1994, the regulations related to the conservation of biological diversity were included in the legislation related to State-owned forests for the first time. The *Act of Environmental Assessment* (EIA) came into force in September of the same year. In the EIA Decree there is a list of project types which require EIA. One of the types include altering the nature of a forest, peatland or wetland within undisturbed areas of 200 hectares or more by final felling, or by regeneration of introduced species.

The *New Environmental Programme for Forestry in Finland* was also developed in 1994, in co-operation with the Ministry of Agriculture and Forestry and the Ministry of the Environment and with other authorities of environmental, nature conservation and forestry issues, and with non- governmental organisations (NGOs). This Programme constitutes the strategy for sustainable forest management in Finland for the near future. The concept of sustainable forest management implies that natural resources are used in such a way that does not cause a decrease in biodiversity of forest ecosystems and local populations of species in forests are not threatened by forestry practices.

The legislation covering the private forestry organisations and practices was renewed very recently. The *Act on Forestry Centres and the Forestry Development Centre* and, consequently, the reorganisation of the forestry administration, went into effect on March 1, 1996. The *Forest Act* and the *Act on the Financing of Sustainable Forestry* then went into effect from the beginning of 1997. A new *Nature Conservation Act* was prepared in connection with reformation of forestry legislation, paying special attention to the compatibility of the forest acts and the Nature Conservation Act. The final step in this process was the reformation of the *Act on Forest Owners' Associations*, which is of central importance for practical forestry activities. It was accepted by the parliament in June 1998, and will go into effect at the beginning of 1999.

2.2 Forest Act

The new *Forest Act* economically, ecologically and socially supports sustainable management of forests in a more versatile manner than the previous Private Forest Act. The new Forest Act is relevant for all commercially exploited forests, also those under the national forest administration. It defines the forest owners' minimal obligations for care and minimal restrictions for use of forests. Various incentives and recommendations are the main means of reaching the goals of the legislation. The new Act defines the general obligation for forest management to maintain the varying biological environments. According to this principle, such working methods are used in forest, which ensure survival for organisms adapted to different biotopes, forest life cycle phases and ecological situations.

To maintain biodiversity in forests, the new Act restricts the management of certain important environments. These environments are areas where either rare or particularly popular organisms live. Examples of such areas are e.g. the neighbourhoods of springs, brooks and small lakes, as well as ravines. All forest management activities in such areas should be conducted in a way that preserves the special features of these environments. Regulations concerning wood production remain largely unchanged. In order to maintain the productivity of forests, too strong thinnings in young stands and regeneration fellings in stands which have not yet reached maturity are not allowed.

2.3 Financial instruments

The new restrictions related to different kinds of operations in forests mainly address small and – from a wood production point of view – often insignificant areas. Thus, the economic implications of the restrictions are not of major significance for the national forestry, they may, however, affect individual forest owners. In these cases, the *new Act on the Financing Sustainable Forestry* will be applied, and the exposed forest owners receive subsidies. Alternatively, the new *Forest Act* contains exception rulings.

The objective of the new *Act on the Financing of Sustainable Forestry*, is to allocate government funding to measures that maintain and promote sustainable management of forests. These measures include guaranteeing sustainable wood production, maintaining biological diversity of forests and forest ecosystem management projects as well as promoting measures to support the latter.

The measures that promote safeguarding sustainable wood production and vitality of forests must be economically appropriate regarding forest ecosystem management, environmental management and conservation of biological diversity of forests and should not cause damage to the environment.

Additional costs and economic losses may be partly or totally financed by government funds in the form of environmental aid whenever the measures related to the forest management and utilisation include the maintenance of biological diversity of forests, the environmental protection or the utilisation of forests for other than wood production purposes in broader terms than what are defined in the legislation as the obligations of the forest owner.

The following indicative figures are presented to provide some understanding of the role of public support in Finland. During the period of 1983-1995, the annual gross stumpage earnings of private forestry were approx. 6.0 billion FIM. In the same period, the costs of silvicultural works and forest improvement were close to 1.0 billion FIM, of which 330 million FIM were covered by State subsidies and 170 million FIM with State loans (Statistical... 1997).

2.4 Forest certification

Development of a forest certification system is the newest and a most essential component of the SFM work. The so-called 'Forest Certification Standard Group' published its proposal for a forest certification system applicable to Finnish small-scale

family forestry in April 1997. A total of 29 organisations participated in the project, representing the most essential forestry-related interest groups.

The proposed system includes the standards to be used in SFM certification and recommends a possible unit of certification. The system is fully compatible with the international forest certification system Forest Stewardship Council (FSC), the environmental management system established under ISO and EU's Eco-Management and Auditing System. It is likely that a group certification system of some kind will be absolutely necessary in Finnish conditions to achieve economies of scale in certification. The certification system has been tested in practice using three regional Forestry Centre areas with varying ecological, economic and social conditions as areas of testing.

3. TARGETS AND STRATEGIES

3.1 Evolution of forest policy goals

The specification of forest policy goals is a prerequisite for outlining a rational-comprehensive approach in planning and implementing policy programmes. Regarding policy formulation, three main aspects are related to the goal specification:

1. are the specified goals (targets) reflecting the social preferences of various stake-holders i.e. do the targets reflect the social utility function(s)?
2. can possible inconsistencies between various goals related to the social, economic and ecological aspects of sustainable forest management be solved theoretically and politically? and
3. do instrument-targets causal chains form the vital contents of the programme theoretically valid, as well as politically feasible?

The goal-setting included in the national forestry programmes since the beginning of the 1960s has been characterised by quantified, research-based fixed targets regarding the allowable exploitation of the forests, as well as the necessary silvicultural investments to secure the sustainability of timber production in the long run. The general aim of the earliest timber production programmes (e.g. the HKLN-programme, 1961, Teho-programme, 1962, Mera III-programme, 1969) was to expand the production potentials of the whole forestry sector. The targets for allowable drain varied in these programmes between 56 and 76 mill. m³ for the year 2000. The maximum programme expressed by the Economic Council in 1969 was 79 mill. m³.

The Forest 2000-programme (1985) formulated under the leadership of the Economic Council and the revised programme (1992) expanded goal-setting from timber production investments to timber supply and also covered multiple use aspects and nature conservation. Apart from the forestry goals, development strategies for forest industries were outlined, including the necessary policy means.

The Ministry of Agriculture and Forestry and the Ministry of Environment determined in 1994 the Environment Programme for Forestry as a middle-term strategy

for sustainable forestry. The Programme specifies, the desired state of affairs related to sustainable forest management in 2005 using 27 qualitative descriptions. These descriptions broadly consider the various aspects of both processes and the aims, means and the policy institutions.

In August 1996, Finland hosted an Intergovernmental Seminar on Criteria and Indicators (CKI) for Sustainable Forest Management, ISCI. Related to the Pan-European processes, Finland has developed a national C and I accordingly to measure and monitor the progress towards the aim of SFM in practise.

Recent developments in the reformulation the forest policy aims are stated in the Forest Act which came into force on January 1, 1997. The aim of the Forest Act is to maintain and promote economically, ecologically and socially sustainable forest management. The overall aims of the Act can be derived from the Forest Principles stated in UNCED in 1992, the Helsinki Resolutions given in 1993, as well as from the Environment Programme for Forestry mentioned above. The new forestry legislation has, hence, given an equal status to timber production and to securing biodiversity.

The Forest Act also contains a new instrument to promote and implement the SFM, i.e. regional target programmes for forestry. These programmes are now under preparation and they will specify the general goals for sustainable forest management and the necessary measures for forestry development. The outcome of these regional target programmes will be employed in the ongoing formulation process of the National Forest Plan and in the specification of the national policy goals.

The starting point for forest policy formulation in Finland can be summarised in short: forests are a vital economic resource in the national economy and, at the same time, a dominating part of our environment. Hence, the trends related to the following factors form the initial situation for the forest strategy:

- economic impacts of the entire forest cluster and its social significance, as well as its contribution to the aims of economic policy;
- trends in demand for and supply of forest industry products, and, respectively, roundwood, especially from Non-Industrial Private Forests (NIPF);
- demands for non-wood goods and services, such as recreation, biodiversity, and nature conservation;
- developments in international forest and environment policies.

The main policy development challenges arising from the evolving trends which forest and forest industry sectors are facing, as compared to overall policy aims, are related to the following policy issues:

- maintaining the competitiveness of the forest sector in global markets with an increasing demand for forest products,
- securing the biodiversity of forests,
- securing the sustainability of timber production and the profitability of private forestry,
- promotion of the supply of roundwood for increasing demand,
- securing the social sustainability related to forest resource management, especially in terms of employment and rural development.

3.2 Visions for the forest sector in the ongoing National Forest Program process

As an outcome of the ongoing process to formulate a National Forest Programme (NFP) for Finland, a preliminary vision about the SFM for the year 2010, as well as the policy goals, options and the action plans derived from the visions have been outlined. The goals are still subject to specification, and therefore here they are to be considered as a starting point.

The overall vision is “Sustainable welfare from the diversity of forests”. The vision itself has been expressed as a desired state of affairs related to sustainable management, conservation and development of forests as follows:

- Forests secure sustainable development. Forests are a renewable natural resource and a vital basis for sustainable development. Forests and wooden products are also as significant as carbon sinks.
- Forests are healthy, vigorous and biologically diverse. Forests are managed so that they will remain vigorous and diverse and will sustainably secure the benefits related to both timber production and other goods and services. A sufficient network of nature conservation areas has been established to secure the biodiversity of forests.
- The market-based, profitable forestry and forest industries contribute to employment and livelihood. Competitive forest industries, particularly mechanical wood-working industries, as well as the use of wood for energy production will be enhanced. The forestry sector operates on free markets and small-scale family-forestry is profitable and maintains, along with other enterprises, rural settlement and development. The quantity and quality of timber production is high.
- Forests provide mental and cultural recreation. Forestry is a stewardship of scenic and cultural values, as well as other functions, such as hunting, reindeer husbandry and tourism. All rights are respected, and they provide all with the possibility of enjoying forests by means of outdoors recreation, hiking and picking berries and mushrooms.
- Top-level know-how in forestry and the forest industry sector. Forest-based products are increasingly knowledge-intensive. Forestry education and research are networking with enterprises, which are producing new, knowledge-intensive and competitive products and services. High-level know-how on sustainable forest management is an export product as well.
- Finland is active in international cooperation. Finland is actively involved in the development processes of sustainable forest management at international, European and regional levels. The coordination of forestry issues within the EU has been improved, the emphasis on the overall forestry strategy has been laid on the development of the European forestry cluster, following the subsidiarity principle and refraining from new financial subsidies.

3.3 Elements of the National Forest Programme

Derived from the above visions, the policy goals and a set of means (policy mix) and programmes will be specified during the preparation process of the NFP of Finland. The major elements of the NFP, as outlined as of yet (June 1998), are as follows:

1. The goals of the National Forest Programme until the year 2010:
 - goals for forest management;
 - goals for nature conservation;
 - goals for roundwood markets;
 - innovation goals;
 - goals for international forest policy.

Specific action programmes consisting of a set of various policy instruments to be coordinated within the frame of the NFP will be designed and aimed at these five objective areas. These programmes are:

2. The development of operation conditions for forest industries
 - a coordinated policy programme (energy, transport etc.) to contribute to the competitive investment conditions;
3. Strengthening the institutions of roundwood markets
 - measures to promote the steady supply of roundwood from non-industrial, small-scale forests;
4. Forest management programme
 - alternative action programmes for silvicultural and forest improvement measures and related extension and financial measures, as well as the development of organisations;
5. Environment programme for forestry
 - up-dated environment programme until the year 2010, based on the follow-up of the environment programme (1994);
6. Innovation programme for forestry
 - private and public resources and the organisation of forestry education, research and development activities;
7. Financing of the National Forest Programme
 - private and public financing of the forest management, environment and innovation programmes until the year 2010;
8. National Forest Programme as part of international forest policy of Finland
 - Finland's goals in international forest policy processes and in Europe. National Forest Programme as a tool of international forest policy.

3.4 Summary of targets and strategies

In short, major policy challenges are linked to the trends where the demand for roundwood is increasing with increasing demand for non-wood goods and services. At the same time, the policy focus has shifted from the promotion of timber growing investments and roundwood supply towards nature conservation and biodiversity aspects.

Strategies and forest policy programmes have undergone significant changes since the 1960s and the following main lines in the policy development can be distinguished:

- extensive forest policies to enhance the production possibilities of forest and the forest industry sectors in the 1960s and 70s by applying a policy mix consisting of financial, regulatory and informational means;
- diversifying policy aims and means in the 1970s and 80s towards multiple-use aspects; rational-comprehensive programming approach through the process of Forest 2000-Programme;

Strategies followed throughout the 1990s may be summarised as follows:

- policy aims to balance ecological and socio-economic aspects of SFM;
- comprehensive reformulation of forestry legislation to meet international policy commitments;
- introducing the participatory principle into policy formulation processes;
- active interaction between national and international forest and environment policies;
- initiating the process to redesign the National Forest Plan to address the emerging policy issues.

Restrictions identified in planning, programming and implementing of forest related activities can largely be linked to the major trends and challenges described above. Implementation of all the dimensions of the SFM, given the underlying conflicting interests, contains various restrictions as such.

4. STAKEHOLDERS AND INTERSECTORAL COORDINATION

In the policy formulation processes during the 1960s, the 70s and even in the 80s, the “Tripartite Neocorporatism” between the State, the forest industries and forest owners was dominating. (Metz 1986: 287; see also Pleschberger 1985). Due to the significant national economic impacts of the forestry and the forest industry sector such as a contribution to the balance of payments, economic growth, employment and rural development, the major actors in the public sector were the Ministry of Agriculture (later: Ministry of Agriculture and Forestry), the Bank of Finland and the Ministry of

Finance. The central role of the forest industries and forest owners as interest organisations is based on two major facts: the forest industry has been the leading export sector, and 80% of commercial roundwood comes from small, privately-owned family forests.

The Forest 2000-programme and the preceding process to design the programme in 1983-85 reflected the social changes influencing the goals and means of forest policies, as well as the involvement of an increasing number of stakeholders. Apart from the forest industries, forest owners and labour unions, nature conservation were integrated into the process more than before. It is also noteworthy that the contribution of forest researchers has been utilised in all the main forestry programmes, particularly in the context of Forest 2000.

The coordination mechanisms between the major actors in forest policy have previously taken two main forms:

1. An ad hoc approach in the committee-type of policy reformulation and
2. the advisory board of forest policy, in association with the Ministry of Agriculture and Forestry.

Both institutions are still functioning. As a new tool to balance socio-economic and ecological demands for forest-related benefits, the regional target programmes for forestry have been outlined as described in Chapter 5.

Intersectoral, or interpolicy coordination has changed substantially since the 1960s. Due to the significant national economic impacts, forest policy programming has had close links to general economic policies and economic policy-makers as referred to above. An Economic Council consisting of the ministers responsible for economic policy coordination and the major interest organisations related to economy has also played a significant role in forest policy formulation. The Forest 2000-programme was designed under the auspices of the Economic Council.

The evolution of national, as well as international forest policies in the 1990s towards the aim of SFM has brought about new approaches and created new institutions to integrate major stakeholders into policy formulation, as well as to improve interpolicy coordination. The interpolicy coordination between forest and other sectoral policies has shifted its main focus from domestic economic policy to environmental and international policies. As examples of the outcome of recent developments, three institutions may be emphasised. Firstly, in 1994, the Ministry of Agriculture and Forestry and the Ministry of Environment agreed on and initiated together the Environment Programme for Forestry, which is monitored regularly. Secondly, consisting of the main ministries dealing with forestry issues, i.e., the Ministries of Agriculture and Forestry, Environment, Trade and Industries, and Finance, as well as Foreign Affairs and the main stakeholders Advisory Board for international forest policy forms a forum for discussing Finland's stands and the main lines of policies at the international arena. Thirdly, the development of national criteria and indicators to monitor and assess the progress towards the implementation of the SFM serves interpolicy coordination purposes, as well.

5. SPECIAL INSTITUTIONALISATION: THE BOTTOM-UP PRINCIPLE AND TRANSPARENCY OF THE NEW NFP

The "bottom-up principle and transparency" are the key approaches adopted in the formulation process of the new National Forestry Programme. According to these ideas, the public is encouraged to participate in the formulation process in various ways. The WWW pages could be mentioned as an example of the transparency; all the basic guidelines, the minutes of the work group meetings and various statements etc. are accessible to everyone.

According to the new Forest Act, which went into effect at the beginning of 1997, the regional Forestry Centres will draw up a forestry target programme for their region, and these regional programmes are to be used as a basis for the national programmes. The bottom-up approach is in accordance with the principles of participatory planning approved at the Rio Conference in 1992, and the regional forestry target programmes can be seen as direct implementation of the Helsinki 1993 resolutions:

"Forest management should be based on periodically updated plans or programmes at local, regional or national levels, as well as for ownership units, when appropriate and on forest surveys, assessments of ecological impact and on scientific knowledge and practical experience."

The objective of the regional target programmes is to identify the specific ecological, financial and social characteristics of each area. The programme will include the general targets set for promoting sustainable forest management, the targets set for the measures and their financing, as specified in the Act on the Financing of Sustainable Forestry (1094/1996), and the overall targets set for the development of forestry in the area. The current status, goals and development objectives of various forms of forest utilisation are described in the programmes. The significance of forests for employment, and an estimate of the economic and environmental impacts of the adopted goals are emphasised as well.

A key actor in the preparation of a regional target programme, the Forestry Centre, is the organisation responsible for the practical implementation of the forest policy in its region. There are a total of 13 Forestry Centres subordinate to the Ministry of Agriculture and Forestry. The centres are responsible for promoting sustainable forest management and utilisation in their regions, as well as for supervising forest legislation. They also distribute public financial support for forest owners.

In drawing up the programme, the Forestry Centre will cooperate with the parties representing forestry in the area and with other relevant parties. Forest owners, forest industry, forestry entrepreneurs, loggers and other forest employees, public administration, municipalities, nature conservation and civic organisations in each area are included in the planning. Local residents will have the possibility to express their concerns at regional meetings. The Finnish Forest and Park Service, which is the body responsible for the administration of State-owned forests will assist in preparing a programme for the forests of the State and, correspondingly, companies help in creating a programme for the forests owned by companies.

The first round of regional target programmes was completed in April 1998. The law emphasises the task of following up the implementation of the programme. The programme will be revised every five years or at shorter intervals, if necessary.

6. CONCLUSIONS

Finland has a long tradition of national forest policy programmes. They have been reformulated at regular intervals and have evolved from timber production programmes to multi-target policy processes, which attempt to fulfil the principles of transparency, participatory approach and multi-level governance. Therefore, the ongoing process to design the National Forest Programme by the end of this year integrates the international forest policy commitments, national development needs and the regional coordination aspects. The challenge in this context, as well as in international policy processes and the possible European Forest Strategy, is to achieve an effective and efficient programme with a high-level political commitment.

The major economic issue in Finland has recently been the involvement and integration of the country into the rest of Europe. Finland became a member in the European Union at the beginning of 1995. Another matter of particular interest has been the ongoing development in Russia and in the Baltic countries. It is expected that the competition in the markets of forest industry products, as well as those of roundwood will be tightening. As Hyttinen and Solberg (1996) have stated, due to relatively strong competitiveness of the Finnish forest sector, it is likely that in the 'distribution of labour between the nations of the world, the Finland's role will remain important in satisfying the global demand for the forest industry products.

From the viewpoint of the national economy, the major part of the benefits from forests will come through the large-scale forest products industry. In addition to that, as more than half of the forest owners in Finland still live in rural areas, the income from forests also equalises areal differences and, therefore, has a major role in maintaining the country's socio-economic sustainability and rural vitality.

The ongoing and accelerating structural change in forest ownership from farmers to non-farmers, together with the differing values of the public towards forests and their utilisation will increase the importance of multiple forest uses other than timber production. Environmental issues related to forestry are expected to play an important role, but the emphasis of debate has started to move to socio-economic aspects. The most challenging task for the Finnish forest sector is to find a sound balance between the economic, social and environmental functions of forests. This challenge underlines the need for a continuum of NFPs.

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Gérard Buttoud

University of Rural Engineering and Forestry (ENGREF)
Nancy, France

ABSTRACT

Public planning of forestry activities in France is an old process initiated at the beginning of the 19th century. Today, the orientation towards timber production in both public and private estates strongly remains as the most significant objective of the national policy. Some specialized institutions, such as ONF (a public body in charge of the management of the State and communal forests) or FFN and CRPF (for encouraging productive forestry management amongst private owners) have their own plans. A lack of linkage and coherence in both the aims and means (activities, related structures) can be pointed out between this productivist viewpoint and the consideration of environmentalist aspects. This missing link finally contributes to a decrease in the effectiveness of the national forestry public policy and planning.

Keywords: Forestry Policy; Forestry Administration; Strategic Planning; France.

1. INTRODUCTION

In France, the rate of forest cover is nearly 25%. As it is the case for some other countries in Europe, France's forests are presently expanding. The area they cover has doubled in the last 2 centuries. Any attempt to convert forest land into other uses is strictly controlled by the authorities. Existing legislation does, in fact, prevent any such conversion if preservation of the forest can be shown to be in the public interest. Broadleaved species make up 2/3 of French forests.

Private forests, belonging to 3.8 million landowners, extend over 10 million hectares, and constitute 70% of all wooded land; 60% of their surface area is made up of properties of over 10 ha, and 2,400,000 private landowners have less than 1 ha. All private forests account for 72% of national timber production, 20% of this private production being marketed through cooperatives. The private forest in France is

regularly expanding (30,000 ha per year, mainly by natural process). 43% of farms have woodlots and 23% of forest landowners are farmers.

12% of the total forest area belongs to the State; they market almost 20% of the national timber production. 18% of France's forests are owned by 11,000 communes and other local communities, for the most part in mountainous districts. They are often small (1,500 are less than 10 ha), and belong to small cities and villages. These territories are managed by elected representatives with the support of the National Forest Office, and fall within the scope of a forest management system defined by a special law for publicly owned forests. The State meets a percentage of the running costs. Of the national volume of timber produced and commercialized, 17% is grown in these forests. The communes have adopted a policy of buying up large areas of woodland, with State aid, and over the last 25 years have acquired 7,400 hectares annually.

Since the World War II, the volume of timber production, in particular for manufacturing purposes, has increased. Over the last 10 years, the total standing volume of oak trees has increased by 13.5%, and that of the coniferous by 14.5%.

Even if the general concepts of sustainable development and multifunctional aspects of forestry are not formally laid down as principles, they are always used as guidelines and governed by a set of national and local regulations. The silviculture still follows classical methods, but in the last years, an evolution has been perceptible in favour of more mixed uneven aged stands, less clear fellings and less exotic species. Forest management in France is today a very prudent one: out of the 74 million m³ of standing timber produced each year, only 53 million are harvested.

The property rights have a high level of protection, even against more public needs as those addressed by environmentalist groups, and the dominant style of forest management is a patrimonial one. The pressure from environmental lobbies is rather temperate, but it is slowly increasing, and sometimes it is able to discourage landowners focused on merchantable productions. The public opinion is badly aware of the national forestry situation and of the landowners' rights and duties. More generally, the role of forests in the society is not perceived as important, and consequently the incidence of forestry specialists and lobbyists in public decision making is rather small.

A significant part of tourism takes place in rural areas (30% of overnight stays, 10% of total value); this part is presently increasing and has a high potential for growth in the future. At present, only 5% of farmers practise a form of agrotourism; forest visiting is still expanding, but usually provides the landowner with more difficulties than benefits.

2. BACKGROUND

Forest policy in France is a very old process. The formulation of a clear national forest policy was first discussed at the beginning of the 19th century, at the time of the French Revolution. At this time, a general social change was initiated because of the general transformation of the common law. The French Forestry Code was voted as a result of this discussion in 1827, as a compromise between State and private interests in forest management. From that moment on, the French forest policy has periodically been

discussed and amended on many points, by means of a permanent discussion process where planning itself does not have a large role.

The French forest policy can be characterized with 3 successive periods. The first one, which lasted until World War II, was especially devoted to the control of forest uses by the State. The legislation was strictly based on regulatory means and repressive tools in order to limit the access of people, especially rural people, to forest lands and resources. In this period, the organisation of the forest service as a repressive administrative tool took place.

Near the middle of the 20th century, production – especially timber production – became the main objective of the national public policy related to forests. Private estates were the most important in this perspective. Instead of controlling and repressing, the State became more involved in incentive methods, in order to orientate the private owners' activities towards the most interesting productions from the national collective viewpoint. Grants, subsidies, low rate loans, etc. have become some of the most prized measures for encouraging the increase of wood production at the national level. At the same time, private productivist interests have been associated to most of the public decisions in the field of forestry.

With the increasing importance of the environmentalist critics, the need for another type of regulation has appeared within the last 25 years. Until now, due to very weak pressure from the ecologist movement in France, no effective solution has been found to answer this question. Environmentalist lobbies generally do not exert a direct pressure on forestry structures and organisations, but express their claims for a more global and political level. The result of this comes through some local political compromises which are finally imposed on forestry management. The lack of a common field of negotiation hinders the necessary tendency towards a needed contract between the public authority and the citizens concerning the forestry field as a whole. For example, this explains the very timid international position the French have concerning the definition of criteria for sustainable forestry management, as well as for the present debates on ecolabelling and Natura 2000.

These different national policies are not officially and precisely defined. They cannot be characterized by a set of clear objectives related to corresponding policy means. The evolution described is a very progressive and permanent one, based on a current adaptation to every problem to solve, even if these problems, at least at the moment when they are expressed, are partial or marginal ones.

More than global deductive formal policy means adopted by the public authority to achieve identified goals, the decisions in the field of French forestry result from a permanent dialogue between lobbies and State, without formulating global principles, concepts and objectives. Flexibility, more than formalism, is the key element for understanding the French forest policy and programmes.

3. TARGETS AND STRATEGIES

As they can be perceived from a historical and political analysis, the French current policy aims to meet society's expectations are as follows:

- To enhance the forest's potential for economic and social use: it is generally considered that 550,000 jobs, mainly in rural areas, are directly linked to forestry, logging, timber processing and marketing of final products. This productive goal has been providing the essential basis for forest policy and programmes in France for the last 50 years, at least, and it remains the most important today.
- To preserve and improve the forest's ecological wealth and variety of landscape; this aim is still less important than the former, and sometimes is considered by forestry owners and managers as a constraint in achieving production goals.
- To increase efforts to create a balanced rural environment: the success of rural planning is dependent upon the convergence of forestry and agricultural policies. In addition, forestry and timber processing industries play a role in developing rural employment. This aim derives from the significant importance of agriculture in France, and so the position of farmers in the national policy debate. Most of the forestry means are managed or controlled by the Ministry of Agriculture.

In the French national forest policy, these 3 aims are considered as both complementary and mutually beneficial. For centuries in France, man has contributed to the beauty and to the diversity of the forest and the countryside, while, at the same time, exploiting their resources. Even if the economic situations and procedures have changed during this time, maintaining the link between production and conservation is presently considered to be the first priority in France. A basic element in the policy and philosophy of forestry development in France consists in saying that, except in some few restricted areas, the conservation of the forestry ecosystems is impossible without an organised human use.

In public forests, especially in the suburban State-owned ones, but also in communal woodlands where the same recreational pressure exists, one of the priorities is to give the public access for recreational activities. In order to make these forests easier and more enjoyable to visit, the forest service has been working together with local authorities to create the needed facilities.

As for private owned forests, the larger part of the professional activity which has characterized this sector in the last 30 years has been the development of training schemes, information/education programmes and management projects, and the setting-up of regional forestry centers and cooperatives for private landowners. These innovations, as well as some of the investments, have benefited from public subsidies and assistance.

In public forests, especially in the State-owned ones, there are many initiatives at various levels to diversify the products and services provided. Most of them are presently targeted towards urban people for recreational purposes. They are not strictly planned, but generally negotiated with stakeholders and partners.

4. STAKEHOLDERS AND PARTNERS

More than planning itself, the negotiation with stakeholders constitutes the logical basis for public decisions in the forestry field.

As defined in France with the global aim of linking conservation and production everywhere, forest policy needs to take into account the expectations of society as a whole. A partnership between the State, local authority, professional foresters and associations would be necessary in any case. But, in France, where conflicting discussions have an important role in policy decision making, partnership is a new approach which is not attainable since there is not a significant reason for compromising the positions of producers and nature conservationists. The main state bodies involved in forest policy making are the following:

- **Ministry of Agriculture:** this ministry is officially in charge of forestry activities, as a component of rural areas. However, forestry plays a minor role in the ministry, considering the significant importance of interests related to agriculture in France. Most of the national and local structures dealing with forestry are under this ministry. A special division of this ministry is in charge of the countryside and forests as a whole, and supervises the implementation of related regulations and special independent public body, National Forestry Office (ONF). The ministry of Agriculture is also responsible for saw wood industry.
- **Ministry of Industry:** this ministry is responsible for heavy timber and wood industries (pulp and paper, wood-based panels, furniture); it normally gets in touch with the ministry of Agriculture on all issues concerning resource evaluation and the organization of supplies for these industries.
- **Ministry of Environment:** this ministry is responsible for environmental protection and hunting activities. It is also responsible for the prevention of major risks and for all kinds of rules concerning atmospheric pollution (acid rain, greenhouse effect). It relies on independent offices at the regional level, and it represents public and private interests which are sometimes opposed to those of the producers.
- **Ministry of Interior:** this ministry is in charge of fire and rescue services, especially, of course, in the Mediterranean region, together with local authorities. The ministries of Environment and Agriculture are responsible for preventive measures.
- In addition, a special place may be made for the representatives of public forestry offices, which play an important role as lobbyists in France for public decision making. For the last 50 years at least, they have been actively represented by several organizations which all contributed to increase their role and ideas in forest policy making and programme evaluating. In most of the cases, they are implicitly supported by the administration of the Ministry of Agriculture.

Territorial authorities mainly include:

- Local and regional councils responsible for landuse planning, which may give financial assistance to the forestry sector. However, their role is still rather limited.
- Forest community landowners responsible for all decisions made in managing their woodlands. Since the forestry law of 1827, they should respect a whole set of norms, and generally are concretely managed by the ONF. They are represented by an union of national and local forestry communities, which try to direct the

management by the forest service towards the achievement of local economic objectives.

Representatives from private stakeholders are particularly numerous and active for productive goals. They have accompanied the productivist forest policy from the beginning of the 20th century, especially since 1945, and are a main component in forest policy formation. They include:

- The national union of forest landowners, which mainly expresses the interests of the large private owners. After initially criticizing the national forest policy based on a set of assistance and constraints, they presently adopt and support the system entirely, from which they receive many benefits, while trying to increase their autonomy. Some special institutions in charge of assistance to owners of private forests have obtained the right from the State to manage the system by themselves, so they can make related decisions directly. But, in the changing forestry economic and policy context, they may appear as a rather conservative element and, consequently, have a limited role in the present evolution which they generally cannot direct.
- The union of harvesting and sawmill enterprises is also a traditional force in the forestry debate in France. They have played a significant role in the orientation of the National Forestry Fund (FFN), which they initially criticized because they considered themselves as the payers of the whole system. Presently, although they are tending to benefit from this fund in a larger way than previously, they try to limit its importance in funding. They collaborate strongly with private owners in only defending wood against other substitute materials. But, their special weight is diminishing because of a strong competition among its members.
- The union of wood processing producers, as well as the different unions of selected wood merchants, work more as commercial offices than as proper lobbies. The main interest they have is to get market information for a better appraisal of the profession.
- The union of pulp and paper makers is an influent lobby, at national and regional levels as well, because of the strategic position they can have in maintaining jobs.

All these different private stakeholders are forming, together with the forest services in the Ministry of Agriculture and with the foresters' representatives as well, a kind of cooperation, where ideas and philosophies are very similar. They consider that:

- forestry is a special field of competence, where decisions need to be made by specialists of the related topics;
- any kind of forestry good or service provided by forests depends uniquely on the production of wood;
- any kind of decision for improving wood production has to be based on incentives, and not on regulatory constraints.
- any kind of framework condition imposed from the nature conservation viewpoint is to be strictly limited only to the aim of avoiding major conflicts and conditioned to the continuation of wood production.

This French forestry corporation acts as a whole when 2 conditions are met: i) the market of forest products is in danger from economic and policy reasons, so that they have to confront this situation in a coherent way; ii) the critics from the environmentalists are so strong that they can introduce new constraints for wood production at the different levels. But, sometimes, when these conditions do not exist, they confront together through their common activities at the market level. This forestry corporation benefits from a significant coherence, and it generally has a lot weights in special forest policy decisions, at least at the national level.

A last group of stakeholders is constituted by the natural conservation promoters, especially environmentalist and non-governmental organisations. In France, they do not play a major role in the political life, especially in the forestry field (because of the importance of some issues such as nuclear energy and atmospheric pollution problems). The national structures are very few and less combative than in other European countries.

At the regional and local levels, many associations exist for defending interests of local users. Their existence is sometimes limited to the time in which a special problem (for instance the building of a highway into a forest) is solved.

The pression arrival of these different types of environmentalists is directed towards political structures that are very different from those which the productivist corporation addresses. They express their complaints:

- to the Ministry of Environment, considered as a kind of representative from their interests,
- to local politicians who act directly in the Parliament or other deliberative bodies.
- to the European Union structures, because of the international definition of most of environmental problems.

The environmentalists' impressions do not cross frequently or easily with those of the productivist stakeholders, which are only considered at the national level in some selected bodies related to the Ministry fo Agriculture. Subjects and places for demands for changes are completely different.

5. INTERSECTORAL COORDINATION

Due to these conflicting interests between environmental and economic considerations on forest policy, intersectorial coordination can be indeed considered as a missing link in French national forestry planning.

For the last ten years, some initiatives have been taken in order to activate intersectorial coordination. But they all have had very limited manifestations and results.

As an example, the National Council for Forestry and Forest Products (CNFPPF) is an official body which was set up in 1978 for discussing all forest policy topics and present recommendations to the government before public decision making. In the CNFPPF, participants come from different spheres and ministerial bodies, including industry and environment. However, the latest are poorly represented, considering the conservation

role of forests in the society, and most of the decisions are still made by traditional ways. It is chaired by the Ministry of Agriculture, which plays a major role and tries to decrease the environmentalists' positions.

As for the National Forestry Office (ONF), this structure has been placed under the double responsibility of the Ministries of Agriculture and Environment. But, until now, the decision has only been a kind of formal statement, without any change in decision making, planning, and funding. At least the speech has changed the ONF a lot which, after calling itself the first wood producer, considers itself now as the first environmentalist in the country.

At the local level, the local services of the Ministry of Agriculture are in charge of forestry controls and funding decisions, in coordination with the regional structures from the Ministry of Environment. But, generally, most of the policy decisions are made at the national level and separately, because their logics are different. And the field of intersectorial links results as particularly limited.

As another example, the national plan for the implementation of the forestry guidelines, ratified in Rio de Janeiro and Helsinki, has been drawn up by an inter-ministerial task force. However, this was chaired by the Minister of Agriculture as a main responsibility for forest policy implementation.

In all these cases, the Ministry of Agriculture remains as the main element in structures and decisions, with conflicting interests with other public departments, especially the Environment ministry. At a time when a special ministry has existed for forestry, this problem has not found a better solution either.

6. SPECIAL INSTITUTIONALIZATION

One of the main reasons explaining the lack of inter-sectorial links in French forestry policy and programmes, is the importance of special institutions in charge of forestry problems.

The National Forest Office (ONF) was founded in 1966. It is a governmental-owned body dealing with the management of the woodland area owned by local communities as well as by the State, which, in a whole, represents 25% of all French forests. It has independent funding, which allows it to finance the running of the forests by using the income which they generate. More than 10,000 people are employed in the ONF, which constitutes the main public body involved in forestry management, and so concerned with forestry policy and programmes. In the French forestry tradition, which is similar to the German tradition, the strategic planning for forestry is made at the regional level, as a synthesis of the results of all the management technical plans. As for the other forest estates, other institutions exist in France.

Since it was set up in 1946, the National Forestry Fund (FFN), funded by a tax on forest products, has enabled private and communal landowners to plant or improve more than 2 million hectares of woodland. The means used by the FFN for incentives to producers include subsidies, as well as primes and low rate loans. Since the 1970s, FFN activity has been largely diversified, as for funding technical assistance to private

owners or investments for modernizing sawmills. The FFN has become a means of economic development in the whole wood sector. From the beginning of the 1970s until the end of the 1980s, a significant modernization has been undertaken using the FFN by various industrial and artisanal branches of the wood business. With government support, the different professions concerned have launched a special campaign to promote general awareness, in consumers and builders alike, of the quality of the wood material.

The larger and modern estates benefit more than the smaller ones from the FFN donations, because these tend today to be directed towards the most profitable investments. The most part of these afforestations was made in the beginning with coniferous species, more useful for wood production through economic considerations. Afforestation policy developed through the FFN in accordance with private landowners' wishes today lends equal importance to both broadleaved and coniferous varieties. As a consequence, the percentage of deciduous species in reforestation areas is actually increasing on a regular basis.

Because of the strong opposition of the representatives of the harvesting and sawmilling industries, as well as of the European institutions, the role of the FFN in French forest policy has significantly been decreased in the 1990s. Today, the rhythm of afforestation has decreased a lot, because of a lack of financing. In France, the EU programme of afforestation with regard to farmland, to make full use of areas not being employed for agricultural purposes, has had poor results.

As for private forestry, the specialized structures are more numerous, because many of them have been progressively constituted over the last 30 years in order to treat some special additional issues. This multiplicity is an inherent theme of debate in the French forestry sphere, where the traditional way of solving problems is the centralized institutionalization. However, one of these structures seems to play a major role in this area, the Regional Centers for Private Landownership (CRPF). These have been instituted by a famous law on private forestry edicted in 1963, with the responsibility of establishing simple management plans in private estates of more than 25 ha. They have their own regional strategic planning, which is a rather technical document mainly devoted to help landowners in establishing their plans through consideration of some forestry regional specificities. Since the end of the 1970s, they have been responsible for additional tasks such as extension, as well as assistance in regrouping some private management activities.

In addition, the National Forestry Inventory Office (IFN) is a public body which takes a regular inventory of forest resources. To obtain these statistics, aerial photographs are analysed and then the results are checked by sample counts on onground test sites. The precise data on the forest surface area, the volume of timber, and tree growth are published for each administrative local division. However, in this IFN, most strategic information concerning the economics needed for policy decisions are missing.

All these different special bodies have, of course, their own strategic planning. But, each of these specific plans is a very technical exercise, with a general lack of economic and policy perspectives and is defined separately from the others. This way of proceeding gives an appearance of effectiveness in decision making at each level, but, as a result, a global coherence is usually missing.

7. CONCLUSION AND OUTLOOK

The need for conciliating economic and ecological aspects is frequently emphasized and said to be accepted in its principles, but in most of the cases in France, it fails to be effectively implemented in public and private forestry decision making.

Related to this point, many critical questions are currently arising: how to refund forest owners for the ecological and recreational services they provide to the society? How many jobs may be created for these services, and who would pay for them? A preliminary task, which requires huge efforts in social education, information and awareness, is to convince people that positive externalities created from forest management do have a cost.

Until now in France, it is considered that the commercial role of forestry is the only one which is able to support the others. This is the reason why the main direction is still to globally continue to improve the capacity of forests to produce merchantable goods (quite exclusively wood production in the short and medium terms), while trying to negotiate with local stakeholders in case of conflicting pressures.

But, the main policy challenge ahead is to define a new set of rules (national, regional, and may be also European) that are able to make a concrete and effective negotiation possible between social needs and interests, as well as those of the concerned stakeholders. This, in turn, will provide for a concrete compromise between merchant and non-merchant utilizations of the forests.

As usual, adapted tools, such as planning, will have to only follow this policy perspective.

List of abbreviations

CNFPF	(Conseil National de la Forêt et des Produits Forestiers): National Council for Forestry and Forest Products.
CRPF	(Centre Régional de la Propriété Forestière): Regional Office for Private Forestry (in charge of supporting private forestry at the regional level)
DDAF	(Direction Départementale de l'Agriculture et de la Forêt): Local Office of the Ministry of Agriculture (in charge of supervising regulation in forestry field at the local level)
DERF	(Direction de l'Espace Rural et de la Forêt): Countryside and Forestry Department in the ministry of Agriculture (in charge of supervising regulation in forestry field at the national level)
FFN	(Fonds Forestier National): National Forestry Fund (in charge of supporting investment in forestry field)
IFN	(Inventaire Forestier National): National Forestry Inventory Office.
ONF	(Office National des Forêts): National Forestry Office (in charge of the management of public forests)

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APPENDIX 1: MAIN POLICY MEASURES CONCERNING FORESTRY IN FRANCE

- 1789, 90: nationalisation of forests belonging to migrants nobles and to clergy.
1801: national forest service (regional and local offices, under the Ministry of Finances).
- 1802, 03: State control on communal forests and on user rights in State-owned forests.
1827: Forestry Code (definition of public and private ownerships and user rights, prohibitions and related penalties)
1859: deforestation prohibited in some conditions, as for conserving resources for protective and productive uses.
- 1860, 64: special laws organising afforestation in mountainous regions (more authority to the State for plantation and pasture land management on communal lands)
1877: the national forest service under the Ministry of Agriculture.
1882: limits in the State intervention in mountain forestry.
1913: extension of the forest service authority in mountain and private forestry.
1919: nationalisation of communal forest rangers.
1922: special status for protection forests (direct management by the State even in private estates, especially in mountains)
- 1930, 34: tax exemptions for private forest owners.
- 1936-38: special Secretary of State for forestry
1940: forest harvesting activities under the control of the forest service.
1946: creation of the National Forestry Fund (FFN), giving incentives to coniferous afforestation in private and communal lands.
1954: special status for private forest ownership societies.
1958: special regulation for sub-urban forests (classified as to promote a more protective management).
1959: tax exemption for forests in case of inheritance.
1960, 68, 71: regulation of afforestation in rural areas.
- 1963: organisation of private forestry (simple management plans, creation of Regional offices for private forestry)
1964: creation of a National Forestry Office (ONF), in charge of the management of public forests.
1966: special law on Mediterranean forests (particular areas defined to be equipped for fighting against fires).
1969: special tax on deforestation, tax exemption on private forest incomes.
1976: law on nature conservation defining new types of protection forests and reserves, and giving a priority to the State for buying private woodlands, new motives for restricting deforestation (biological climax, social welfare).
1978: National council for forest and forest products.
- 1983-85: special Secretary of State for forestry.
1985: increase of the links between incitements and obligations in private forestry.

A NATIONAL FOREST PROGRAMME FOR GERMANY? PLANNING AND IMPLEMENTATION OF FOREST-RELATED ACTIVITIES IN A HIGHLY INDUSTRIALIZED AND DENSELY POPULATED COUNTRY

Ulrich Schraml and Klaus Böswald

Institute of Forest Policy,
University of Freiburg
Germany

ABSTRACT

Within the international discussion on National Forest Programmes (NFP) the question arises whether some of the elements and principles which characterize a NFP have already been implemented in the forest sector of Germany. The following describes several issues related to NFP. The authors provide an overview of the structure of the German forest sector, including forest cover, ownership structure and timber utilization, as well as legal and policy framework at federal and *Länder* level. The most important forest-related actors are characterized by their targets, strategies and political influence. In addition, the coordination between the forest sector and other sectors is emphasised. Finally, the role of the German government within the international efforts for sustainable development is quoted and the question whether a National Forest Programme could serve to promote sustainable forest management is analysed.

Keywords: Germany; Legal Framework; Forest Policy, International Agreement; Stakeholders.

1. INTRODUCTION

1.1 A national forest programme for Germany?

Agenda 21 calls for national forestry action programmes and/or management plans to ensure sustainable forest management. During the IPF process, some elements and principles were formulated to characterize NFPs. In the following, we try to characterise briefly, yet comprehensively the current situation of forests, forestry and forest politics in Germany, concerning the formulation and implementation of a NFP.

1.2 Germans forests, forestry and timber industry at a glance

In Germany, a highly industrialised and densely populated country, forests cover 10.8 million ha or 30% of the national territory. The wooden stock in German forests amounts to 2.68 billion m³ or 270 VfmD ha⁻¹ (VfmD = standing timber volume over bark) (BMELF 1990, BMELF 1994b). The tree species composition in German forests is mainly determined by conifers (Figure 1).

Private forests account for 46 % of the forest area, 20% are in the ownership of community entities, 34% are owned by the state. Most of the state forests are properties of the *Länder*, only 4% are in the responsibility of the Federal Government (BMELF 1997a). Whereas private forests are mainly situated in the south-east, north and the north-east of Germany, community forests play an important role in the central and south-western parts of the country.

The Agricultural Report for Germany established a number of approx 450,000 agricultural and forestry enterprises (Table 1). According to this survey, the mean size of the forest enterprises is approx. 7.6 ha. However, these figures do not present the current ownership situation, as the Agricultural Report of the Ministry for Agriculture, Food and Forestry does not consider the approx. 1 mill. ha of very small-scale forest ownerships (AID 1994, Nain 1994, BMELF 1997a).

Table 1. Holdings with forest land by size class (AID 1994).

	Number of holdings	Forest area according to different size class of holding (million ha)
1-50 ha	339,204	1.77
50-200 ha	6,592	0.64
200-1,000 ha	3,040	1.32
1,000 and more ha	1,522	5.66

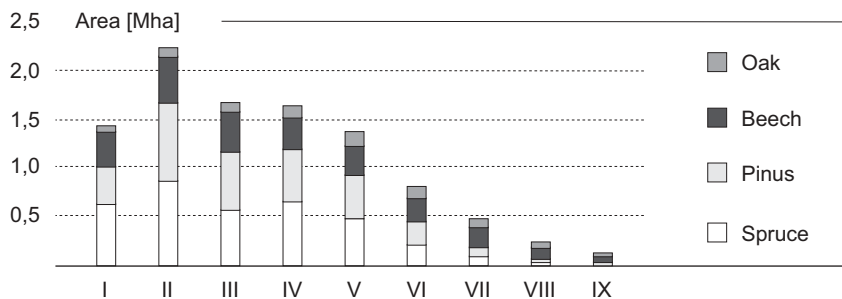


Figure 1. Age class distribution in German forests in the year 1987 (Böswald 1998). The German forest survey distinguishes age classes I-VIII with a class width range of 20 years. Age class IX summarises all stands older than 160 years

Therefore, there are more likely to be 1.3 million different properties (DFWR 1997). Only 1% of all enterprises manage a forest area which is larger than 200 ha (Nain 1994).

Many of the forests are managed in mixed forestry/agricultural enterprises where forestry is an essential contribution to those earning a living. During recent years, the number of mixed forestry/agricultural enterprises was reduced, while the share of forest enterprises increased. This development is due to changes in the agricultural policy, which forces many owners to retreat from agricultural use. However, they maintain to manage their forest areas (Holz-Zbl. 1998).

The predominant part of the forest area serves to increase income for the forest owner and to meet the timber demand and non-wood benefits of society. 4 % of the area is set aside for nature conservation and protection e.g. biodiversity. On 83.000 ha any kind of utilization is forbidden due to nature conservation reasons (BMELF 1997a).

The annual supply of timber and raw material in forestry and the timber industry sector amounts to approx. 45 million m³ of timber cuttings, 25 million m³ logging and wood industry residuals and 17 million m³ paper waste for 1996. The German timber industry competes with international raw wood suppliers to satisfy the national demand for timber products. In 1996, for example, the import of timber products amounted to 38 million m³ (Mellinghof 1998).

Compared with other economic sectors in Germany, forestry is of minor economic importance. Whereas forests are among the most important natural resources of Germany, their contribution to the national income is modest. The contribution of forestry to the gross national product has diminished continuously in recent decades; the added value, which is currently about 0.1% (Kroth and Bartelheimer 1993, see also Lückge and Nain 1997) highly depends on market conditions and varies enormously, as, for example, between 389 million DM in 1993 and 1.36 billion DM in 1996 (BMELF 1997b, 1998). This loss of importance of the forestry production is mainly due to the fact that German forestry is forced to maintain international competitiveness with low prices, at times not even covering costs. Although shares of the market have been lost, the timber industry has maintained its market position as a result of the acquirement of new niches on the market (Ollmann and Thoroe 1995).

The perception of the public sector for forest-related issues highly depends on national and international events. There is a regular exchange of opinions on forest-related subjects in the German Parliament. The discussions deal with the relation of forestry and nature conservation/environmental issues. Further topics are international forest regimes, timber utilization and timber industry. However, only 20 of 672 members of the German Parliament deal regularly with topics related to forests and forestry (Hofmann 1997).

2. POLITICAL AND LEGAL BACKGROUND

Germany has a federal structure. The competence of Federal and *Länder* institutions is determined in Art. 70 of the German Constitution. The basic legal standards for the German forests are set by the Federal Act on Conservation of Forests and Promotion of

Forestry enacted in 1975 (in the following referred to as Federal Forest Act). The Act outlines predominant guidelines specified, elaborated and, if necessary, supplemented by the 16 *Länder*. While the legislation is competitive concerning the promotion of the forest production (Art. 74, Abs. 17), the Federal Government is only allowed to draft a framework for the legislation dealing with nature conservation and landscape management (Klose and Orf 1982; Unser Recht 1991; Wagner 1996).

The important elements for conservation and sustainable management of forests are laid down in the Federal Forest Act. The law strives for 1) proper and sustainable forest management obligations, 2) forest owners to reforestate cut stands. Furthermore, regulations are defined which determine 3) forest management in the *Länder* for precautionary measures in the field of environmental protection, limited clear cut areas, protection of immature stands, duty of tending and forest opening, and adequate forest management planning. 4) If one intends to convert a forest into another form of land-use, the responsible authority has to agree. 5) Subsidies are provided jointly by the Federal Government and the *Länder*. 6) Forestry Framework planning serves the regulation and improvement of forest structures and is geared towards safeguarding the functions met by the forests. 7) To avoid dangers, disadvantages and inconveniences of the people, protective and recreational forests are to be designated, in which management procedures and measures are regulated.

Furthermore, there are several acts, dealing with special issues of forests and forestry: e.g. the Forest Seed and Seedlings Act, the Compensation of Forest Damage Act and the Forestry Sales Fund Act.

In addition to this legal basis, there are a number of regulations in other acts that relate to forests and forest management. Examples are: 1) the Nature Conservation Act (Federal Government and *Länder*), 2) the Federal Emissions Control Act (*Länder*), 3) the Federal Regional Planning Act and Regional and Landscape Planning Act (*Länder*), 4) the Environmental Impact Assessment Act (Federal Government) etc. (BMELF 1997a).

One of the most common and frequently used terms in forest legislation and forest policy in Germany is "ordnungsgemäße Forstwirtschaft" (in the following referred to as "appropriate forest management"). According to the guidelines of the Agriculture ministers of the Federal and *Länder* governments, the features of appropriate forest management are: sustainable timber production with long rotation periods, maintenance of forest health, stable and diverse ecosystems as habitats for flora and fauna, avoidance of large clear-cut areas, planting of site-adapted tree species, use of suitable seedlings, conservation of genetic diversity, considerate stand- and soil management techniques, minimised use of pesticides, ecologically tolerable game density.

The implementation of these guidelines requires professional expertise, which considers economic, and ecological experience, as well as empathy in a specific forest situation. Extraordinary preconditions for well-educated personnel are provided by 4 universities in Germany: Freiburg (Baden-Württemberg), Göttingen (Niedersachsen), München (Bayern), and Tharandt (Sachsen). These universities are involved in national and international research programmes. Specialised technical education can be gained at the so-called "Fachhochschule" (non-university higher education). There are 5 facilities offering education on this level: Weihenstephan (München), Hildesheim/Holzminden (Göttingen), Rottenburg, Schwarzburg and Eberswalde. The federal

government and the state forest administrations maintain forest research institutions, ensuring a close connection between practical experience and research. Moreover, there are several schools for forest workers in Germany.

3. TARGETS AND STRATEGIES

In the following, examples for different forest management approaches in Germany are presented. Firstly, the concept of the Federal Government; secondly, the management long-term ecological forest development concept of the Niedersachsen state forest administration, and thirdly an NGO approach, the management concept of NABU.

As the Federal Government does not desire to relieve forestry enterprises of their entrepreneurial decisions, it provides guidance in the form of reliable framework conditions. Hence, for the coming years, the following priorities are set: strengthening the capacity of forest enterprises, promotion of the competitiveness of wood as a raw material and enhancing the stability of forests (see Table 2).

One of the most progressive management programmes in the state forests is the programme LÖWE (long-term ecological forest development) in Niedersachsen (see Otto 1992). The programme refers to exact guidelines for the management of the state forests, which can be described by the following keynotes: 1) soil protection and reforestation with site-adapted tree species, 2) promotion of deciduous trees and mixed forests, 3) preference of natural regeneration, 4) diverse vertical and horizontal structures, 4) selective cutting, and 5) conservation of old growth trees and species.

This programme is the result of controverse discussions with many groups and associations concerned with forests. Hence, it can be seen as a comprehensive approach

Table 2. Keystones of the Forest Policy Concept of the Minister of Food, Agriculture and Forestry (BMELF 1996).

Goal	Activities
Strengthening forest enterprises capacity	Financial support of forestry, avoidance of negative impacts of taxation on forest enterprises, strengthening of forest associations (Zusammenschlüsse), compensation of financial losses due to legislative restrictions, promoting privatisation of former state forests in the new Länder.
Promotion of the competitiveness of wood	Promotion of wood, timber utilization, cellulosic material, wood as source of energy, labelling of timber.
Increasing the stability of forests	Action programme "Save the Forests", nature-oriented silviculture, site-adapted reforestation, genetic resources, game management, public relations and reliable information.
Cooperation in the European Union	Control air pollution, promote afforestation, installation of a European-wide information- and communication system.
International Forest Policy	Conservation of world's forest resources, cooperation in development policy, pursuance of UNCED agreements.

that integrates different opinions and needs. In addition, it is of particular importance that the programme was supported by the state forest itself (Otto 1995).

In the past decade, the NGOs orientated their activities towards a global point of view. In recent years, they have put even more emphasis on national forest programmes. One outcome of this discussion is the forest management concept of NABU (German Nature Conservation Association). The main purpose the NABU aims for is an orientation of forest management to nature development, a utilization of wood of high-diameter classes, and an intentional use of nature regeneration. This combination of measures not only results in a better ecological, but in a better economic situation of forest enterprises as well.

The NABU forest management concept has been strongly influenced by international agreements. Furthermore, due to personnel connections, the ideas of the Association of Nature Oriented Forest Management (in the following referred to as ANW), had overwhelming influence on the programme development. ANW is a small, yet active group of German foresters, founded in 1950, transporting and promoting the silvicultural ideas of Gayer and Möller (Burschel and Huss 1997).

Helmstädter et al. (1993) investigated the targets pursued by private and community forest owners in Germany. According to the results of the investigation, the forest owners were not able to state clearly which operational targets their management is based on. Priority is given to monetary and long-term security goals. In the goal-system of private and community forest enterprises tradition and game are of medium, protection of employment and timber supply are of minor priority.

4. STAKEHOLDERS AND PARTNERS

In Germany, there is a large number of organisations and councils concerned with forestry including scientific, professional and commercial bodies. Until now, organisations acting in the field of forest policy have often been considered part of the forestry sector when they had the word "forest" in their name (e.g. Zundel and Schwartz 1996). Several years ago, aside from the traditional actors, several "new" organizations started to focus their activities on the forest sector (Volz 1997a). There are only a few empiric results on the role of traditional and new actors in forest policy. Until now, the governmental departments and forest associations have been of high importance for decision-making in the political process. Others are politicians, scientists and the media (Weber 1993).

Within the agricultural policy of the Federal Government forestry issues are of minor importance. This is indicated by, e.g. the organization of the Federal Ministry of Food, Agriculture and Forestry. Only one of eight departments deals in part with forest related issues (BMELF o.J.). The development and the implementation of specific programmes for the sector is mainly done by the Ministry of Food, Agriculture and Forestry. However, other ministries are also concerned in some policy areas, e.g. the Ministries of Economics, Environment and Development Aid (Hofmann 1997).

The *Länder* have their departments of forestry, too. According to tradition, they are often connected with agriculture, and recently increasingly with the Departments of the

Environment (Zundel 1996). The forest departments of the *Länder* are of particular importance for forest policy in the regions. Their high influence results from a combination of different duties. As an authority, they are responsible for the formulation and the implementation of programmes, manage the state forests and are in charge of timber supply and non-wood benefits. Finally, the forest services influence the management in community and private forests through extension, as well as financial and technical support (Krott 1996a). Particularly, community forests are obliged to accept the management criteria set by the state forest administration in most of the *Länder* (Lückge and Becker 1991). For historic reasons, the organisation of the forest administrations is different in each of the *Länder* (see Table 3).

Prior to thereunification in 1990, the estimated number of associations dealing with forestry was approx. 60 (Weinberg 1989). Not all of these are of political importance on a supra-regional level. We distinguish between two types of organisation: organisations with a mainly economic objective (forest owners' interests, employees' interests) and those defending ideal values (education of members and the public, fighting forest decline) (Nembach 1993). Some of the latter associations seem also to have a social-integrative function. They address persons concerned with forest matters, not representing the interest of one specific group (Pleschberger 1989). Table 4 provides an overview on relevant associations in the field of forestry in Germany.

The German Forestry Council ("Deutscher Forstwirtschaftsrat DFWR") tries to integrate the entire forest sector (DFWR 1996). The organisation has a particular position in the development of policy as it provides a discussion forum for representatives of all ownerships including professional associations and scientists. The conclusions of the councils deliberations are usually addressed to the government for implementation. The fact that employers and employees, as well as state and private forest owners, are members of the DFWR increases the legitimacy of the council.

Table 3. Organization and Personnel Resources of the Länder Forest Administration (NABU 1996 modified, Dinkelaker 1996).

<i>Länder</i>	Supra Regional Offices	Regional Offices	Forest Districts	Mean size of Forest Districts [ha]	Forest Workers per 1000 ha
Baden-Württemberg	4	190	1.100	800-1000	7,21
Bayern	6	162	1.075	1.000	4,47
Brandenburg	18	119	707	1.200	4,28
Hessen	3	111	772	1.750	7,18
Mecklenburg-Vorp.	3	72	447	1.100	o.A.
Niedersachsen	4	85	478	920	3,7
Nordrhein-Westfalen	2	45	372	o.A.	1,3
Rheinland-Pfalz	3	106	750	1.055	4,8
Saarland	-	7	70	1.000	5,0
Sachsen	2	61	404	1.100	9,1
Sachsen-Anhalt	3	68	365	1.100	3,5
Schleswig-Holstein	-	12	122	1.000	5,9
Thüringen	1	53	480	1.099	o.A.

However, the joint preparation of statements and, thus, the constant search for compromises partly paralyses the search for solutions in the DFWR.

The most powerful members of the DFWR are 1) the Working Group of German Associations of Forest Owners ("Arbeitsgemeinschaft deutscher Waldbesitzerverbände AGDW") representing the interests of both private and community forest owners and 2) the state forest administrations. The power of these two actors is seen in the number of votes in the DFWR. Whereas the representatives of private and community forest owners are considered as powerful as the state forest administrations, associations that are characterised by ideal goals (e.g. the Protective Association for the German Forest, SDW) are considered less powerful (Mann 1997). The influence of the trade unions (e.g. the Trade Union for Horticulture, Agriculture and Forestry, former GGLF, now IG BAU) and other professional associations (e.g. Association of German Foresters, BDF) is of average extension (Mann 1997).

The forest authorities of the *Länder* are of central importance in the network of forest organisations. Most contacts run via the state authorities, which are considered the main center for the exchange of information and opinion. Direct contacts between non-state forest owners and employee or forest protecting organizations are rarely occur (Mann 1997).

The most common strategy of forest associations to promote their views is public relation, often restricted to publications in the forest sectors print media and lobbying. Furthermore, the associations try to influence decision-making processes by means of close contacts to politicians, stakeholders and the administration (Mantau 1996, Mann 1997). Individuals as well, such as scientists, are able to influence the political process due to important personal contacts to decision-makers (Weber 1993).

The existence of partnerships in the policy process changes, depending on the problems the actors deal with. Some examples are described by Mann (1997): 1) the discussion on forest management concepts and the quality of management leads to alliances between the forest owners (private, community, state) and associations with ideal goals (see above), 2) the call for nature conservation areas without utilisation in the forests and the discussion about the societys' influence on forest property advanced the partnership between forest owner groups, 3) the re-organisation of forest administration strengthens the cooperation of unions and other employee organisations.

There are also alliances based on partnerships between forest and non-forest organisations, e.g. changes in the sector, particularly the rapidly decreasing number of jobs forced the union responsible for the interests of employees in the field of horticulture, agriculture and forestry (GGLF) to merge with the union of the building and construction industry (IG BAU).

Recently, forest policy was characterised by an increasing influence of new actors. All distinguished NGOs have developed their own concepts for forest management (see Chap. 3). As the NGOs count on high credibility in public opinion, it seems that their influence on the opinion-forming and decision-making process in forest matters is growing constantly (Volz 1997a, Weber and Mann 1997). As environmental groups have no access to traditional networks, they try to foster their influence by controlling forest enterprises with informational and marketing instruments or by putting pressure on the clients of the forest industry. Moreover, environmental groups abandon their role as opposition and try to build up alliances with traditional forest actors (Krott 1996b).

Table 4. Relevant Associations in the Field of Forestry in Germany (BMELF 1997a).

	German Forestry Council	Working Group of German Associations of Forest Owners	German Forestry Association	Trade Union for Horticulture, Agriculture and Forestry	Association of German Foresters in the German Association of Civil Servants	Protective Association for the German Forest – Federal Association
Abbreviation	DFWR	AGDW	DFV	IG BAU	BDF	SDW
Year of foundation	1919/1950	1919/1948	1899/1952	1909/1949	1949	1947
Number of Members in 1992	64	14 (ca. 200.000 individual members)	7.160	138.000 (41.778 in forestry)	10.000	26.000
Membership	Representatives of state, community and private forests, forest science and forestry groupings	Associations of the non-state forests in the federal territory	Persons engaged in forestry, representatives of forest owners, forestry organisations	Workers, employees, civil servants, trainees	Trade unions and professional associations of civil servants and employees engaged in forestry	Land Associations of the SDW, Federal Association of the German Forest Youth

5. INTERSECTORAL COORDINATION

There is urgent need for cooperation of forestry with other sectors. However, as forestry has more or less clear boundaries to other sectors of society, the communication in daily practice is often insufficient (Krott 1995). Although cooperation between forestry and other sectors is considered weak, forestry and its counterparts have recognised, that intersectoral communication and cooperation in the following fields is of utmost importance: rural development, environment, industry (Seip 1996).

1. Rural development is mainly influenced by agriculture. Due to the close relation between forestry and agriculture in private entities, the relation of both sectors is often described as symbiotic. Hence, "Agri- and silviculture" (Land- und Forstwirtschaft) is a definite expression. Throughout history, changes in agricultural techniques and structures caused changes in forestry and vice versa. However, forestry has always been the passive partner, e.g. in the EU agriculture policy, where it was only efforts to reduce the agricultural area led to an increase of afforestation in Germany (Philipp 1987, Zundel and Schwartz 1996). Coordination of both sectors should normally be as successful as in the ministries at the federal level, and in most of the *Länder*, forestry and agriculture are related (compare Table 3). Nevertheless, the goals of the sectoral policies and the utilisation of instruments are different (Hachenberg 1985, Thoro 1986) and the programmes usually formulated for each sector do not promote intersectoral coordination (e.g. BMELF 1996).
2. According to their long tradition of sustainability German forest owners and forest authorities claim to care for the environment. Hence, protection of the environment and environmental policy are seen as a substantial part of forest sector policy (Nießlein 1985). To implement environmental policy, there is a clear regulation of state organisation competence. However, as the right of the forest owners to manage their forests is considered more important than environmental issues, interests of authorities and their clients often cause conflicts and hinder cooperation (Wagner 1996). Furthermore, the relation between forestry and environment is usually an area of conflict, above all between forest owners and environmentalists or their associations (Becker 1989). There is a discussion on legitimacy of NGOs efforts to influence forest management and to strengthen pressure on traditional forestry (Volz 1997a). Moreover, there is a competition of forest authorities and other state organisations that are responsible for environmental concerns. Examples are: 1) the mapping of biotopes, 2) the management of protected areas, and 3) the interpretation and implementation of specific laws.
3. The cooperation of forestry and timber industry led to a certain institutional basis. Common councils and organisations were founded, which were financed and guided by both forest owners and timber industry, e.g. "Ausschuß für Entwicklung und Zusammenarbeit der Forst- und Holzwirtschaft beim BMELF", the "Fachagentur Nachwachsende Rohstoffe e.V." and the "Arbeitsgemeinschaft

Holz e.V.” (Mantau 1996). Another example is the campaign to promote the image of wood (Forstabsatzfonds-Imagekampagne). Moreover, an exchange of information between forest owners and the timber industry is guaranteed by a joint newsletter (e.g. the ”Holz-Zentralblatt”) and symposia with representatives from both sectors (e.g. Bartelheimer and Volz 1991).

While there is no intersectoral cooperation between institutions and different interest groups, a certain part of cooperation is realised in the forest planning process. In general, the Federal Forest Act sets the obligation for forestry framework planning to improve the forest structures and to attain the goals of the Federal Forest Act. Hence, forest authorities contribute to forest-related matters in land-use planning processes (Wrede 1993). Currently, the planning includes an analysis of 1) nature conditions, 2) socio-economic and forestry structures, 3) forest functions, and the development of 4) goals and measures. Forestry framework planning is expected to receive part of the management plans of forest enterprises and the overall planning processes in the *Länder* as well. Until now only 4 *Länder* have completed sort kind of planning (BMELF 1994a). This is due to a lack of defined goals and unspecified target groups, a pre-dominance of natural and economic matters in the planning process and inadequate cooperation of forest authorities with other sectors (Nießlein 1985).

6. SPECIAL INSTITUTIONALIZATION

Forestry planning in Germany goes back to the 18th century (e.g. Hartig 1795). The goal of forest management planning has been and continues to be to ensure sustainable forest management. Hence, planning instruments have been developed to control wood utilisation and to guarantee the fulfilment of different positive effects forests provide for society (e.g. Gadow 1996).

Since the 11th century, forest rules have been established to ensure public welfare. Throughout history, the number of regulations increased and influenced forest planning. It was the task of the so called ”forest-police” (Forstpolizei) to enforce state-set rules in all ownership categories, thus giving this institution far-reaching rights. Gradually, the state transformed from a police state via a state under the rule of law to a steering state, controlling the activities of the private forest entities with informational instruments and increasing financial incentives. Hence, the responsibility of the state organisations changed and the forest authorities lost financial and personnel resources (Volz 1989, 1997b).

On the European level, the Federal Government “takes the view that forestry policy has to be primarily a task incumbent on the individual EU member states” (BMELF 1997a). Nevertheless, some cooperation was established concerning measures to control air pollution, to protect forest against fires and to enhance the status of forests within the framework of rural development.

Moreover, the Federal Government is making efforts to counteract the world-wide decline of forests at an international level. The 1992 UN Conference on the “Environment and Development” (UNCED) in Rio de Janeiro adopted the Framework

Convention on Climate Change, the Convention on Biological Diversity as well as the Forest Principles. The Federal Government has the intention of implementing and to developing these agreements (BMELF 1997a). Therefore, the Federal Government supports the Ministerial Conferences on the Protection of Forests in Europe (Strasbourg 1990, Helsinki 1993, Lisbon 1998). Whereas German forestry expects to manage the forests in accordance with the Helsinki-criteria (e.g. DFWR 1997), the Federal Government "endorses the conclusion of a legally binding forest convention applying on a fair and equal basis to global forests" (BMELF 1997a, BMELF 1994a). The measures to reach this goal are not yet described in detail. Observers are disappointed about the implementation of the criteria and guidelines developed on international and pan-european level (see also Schneider 1998). This lack of implementation is partly due to problems in definition and acceptance of these guidelines and criteria. However, at the moment the Federal Ministry and one of the *Länder* (Baden-Württemberg) are currently proving possibilities to implement the outcomes of the IPF-process in Germany. In March 1998 first deliberations began, involving forest ownership associations and environmentalists.

However, the state of the forests has been observed in detail by different inventories and monitoring systems. Examples are the annual crown condition survey, the forest soil survey and the German forest survey. Since 1994, forest damages have been observed by means of a European monitoring programme (BMELF 1997a).

Indications change in a forest environment are forest area, forest soil condition, climate, regeneration, value of biotops, the non-wood benefits of the forests (Schraml and Wierling 1996).

7. CONCLUSIONS AND OUTLOOK

Germany's forestry is characterised by a complex, diverse ownership structure and a patchwork of opinions, targets and interests. This is expressed by a large number of associations and a matching goal system in state forest administrations, as well as in private and communal forest enterprises. The complexity is given due to the federal system of Germany, which leaves forest management the responsibility of the *Länder*.

In recent decades, forest owners, authorities and forestry associations agreed upon common ideologies and management concepts, which helped to avoid conflicts. Examples are the Forest Function Theory of Victor Dietrich (1953) and the term "appropriate forest management" (see Chapter 2). These concepts were important preconditions to foster the cooperation and the coexistence of various forestry actors. Thus, they were integrated in nearly all regulations of German forest law to promote not only the forest owner's interests, but the demands of society.

The term "appropriate forest management" can be used to describe some of the changes in German forestry and, in particular, forest policy. Although, "appropriate forest management" is integrated in most of the management guidelines, no exact definition of the term is to be found in the law. Hence, the interpretation of the expression is highly controversial.

Environmentalists scrutinise the concept, as they expect its undefined, inoperational guidelines to be insufficient in ensuring sustainable forest management. Thus, the NGOs try to participate in decision-making processes, that are concerned with forest-related activities; they present their own views of forest management and they try to influence forest management by means of timber demand.

On the contrary, the "established" forestry in Germany has been and is still convinced, that its activities resulted in forest conditions, which served to meet ecological, social and economic demands. Thus, it is not only comprehensible that the efforts of the NGOs provoke resistance, considering that the discussion is focused on forest property access rights limitations.

There are also difficulties for forest enterprises due to unfavourable economic conditions and the low public sector budget. Consequences can be seen in many areas:

1. Forest enterprises intend to improve their economic situation (German 1989). Hence, forestry intensifies timber cuttings. This may cause conflicts in public demand.
2. Forestry makes an effort to report its non-wood benefits to society and to commercialise the corresponding services.
3. The reduction of employees leads to a decreased number of members in associations and unions and, thus, a loss of influence.
4. Recently, forest authorities have lost funding and personnel resources. This reduction of funding and technical aid lowers the possibilities of consulting and, thus, the state authorities' influence on forest management in private (Krott 1996a) and community forests (Dinkelaker 1998).

Another example to demonstrate the strong changes in German forestry is the relation between different actors. Currently, coalitions developed to harmonise forestry are replaced by new cooperations with partners from outside the sector. The debate on the certification of timber is an unusual example of the fact that under certain conditions, networks of environmental groups, some forest owners and, in particular, forest associations can be established. Employee organisations and socially-integrative associations seem to be more open for such cooperation than the groups that defend the interests of forest owners (Mann 1997). Thus, it is more difficult for "established" forestry in Germany to maintain traditional alliances. As a result of this development, leaders of state forests and the representatives of private or community forest owners are involved in most conflicts that are observed in the field of forest policy (Mann 1997).

Whereas influence and power of traditional actors seem to be decreasing, the demands of society for the achievements of forestry are gaining ground (e.g. water supply, recreation, nature conservation, CO₂-sequestration). These demands are called in mostly by environmental NGOs, which have extraordinary support of the public. NGOs are, thus, expected to strengthen their influence on forest management in the future (Volz 1997a).

This development is surprising if one considers that the public interest guaranteed by detailed regulations in forest acts, authority control, extension and a voluntary restriction of forest owners to satisfy the needs of society. Neglecting these indisputable

contributions to sustainable forestry and land-use in Germany, the call for participation an intensive dialogue between forestry and other parts of society is obvious (Weber and Schnappup 1998). To date, the forms of communication have often been described as one way street, with many societal questions, yet a lack of answers of forestry. Therefore, it should be discussed, whether the expected process shall be initiated without an institutional framework or if a National Forest Programme might help to improve communication between interested parties.

In the past influential, powerful councils (e.g. DFWR, see Chap. 4) were established to focus on opinions and attitudes. However, they restricted their members ability to act (Mann 1997) and might hinder the participation of groups not belonging to the traditional forestry sector in the future. Thus, the intention to manifest the inter-sectoral dialogue in forestry and, hence, the establishment of a National Forestry Programme, may result in two issues: 1) a resistance of "established" forestry, as their confidence in their own achievements is unbroken, and there is a fear of forestry for a loss of independence. 2) Federalism may complicate joint initiatives, due to the differences in forest policy and different political conditions in the 16 *Länder*. This is a particular restriction, as the initiative has been supported by all of the *Länder*. Currently, the *Länder* are reacting very differently to the pressure of NGOs.

In view of the complexity of the issue, it can be stated, that it is currently hard to predict the changes and possibilities of a National Forest Programme in Germany. Therefore, we hope this summary of facts on forests, forestry and forest-related politics was stimulating to the dialogue between the forest-related stakeholders, and that it may contribute to a sustainable development of forests and forestry.

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Hugh G. Miller

Department of Forestry, University of Aberdeen
United Kingdom

ABSTRACT

Britain entered the twentieth century with only 5% forest cover. The first World War emphasised the countries vulnerability to naval blockade so in 1919 Government involvement in, and encouragement of, afforestation started with the establishment of a state forest service. By the 1950s the strategic imperative for forest expansion ceased to apply and forest policy thereafter went through many changes, with consequent changes in the pattern of inducements for private owners. After a period of considerable conflict in the 1980s forest policy, encouraged by events at Rio and Helsinki, has come to embrace multiple-use and although there is still no formal National Forest Programme Britain, now with 11% forest cover, is matching most of the criteria called for in the National Forest Programme protocol.

Keywords: History; Forest policy; Forest planning.

1. INTRODUCTION

1.1 The Geopolitical Situation

In the Dark Ages the islands of Britain and Ireland shared a common Celtic dominated background, although heavily Romanised in the south and east. Into these islands moved Germanic peoples such as the Angles, Saxons and Jutes. Later extensive areas, particularly in the north were to be much influenced by the Vikings, who even established a major kingdom across what is now northern England and into Ireland. In the ninth century England became unified for the first time since the Romans departed. Then in the eleventh century the crown and complete control was seized by Normans from north-western France. The Norman kings soon sought to extend their influence

into the neighbouring, and far from united, areas of Wales, Scotland and Ireland. English influence in Wales ebbed and flowed from the eleventh century until the mid-sixteenth century when Wales became fully united, for purposes of government, with England. Scotland during this period progressively became Normanised but despite various set-backs remained effectively independent until 1603 when the King of Scotland (James VI and I) fell heir to the English throne. The parliaments of the two countries then voted to unite in 1707. The history in Ireland, perhaps inevitably, is more confused. There was a strong Norman influence by the twelfth century but such Normans often offered little allegiance to the English crown. However, the English progressively came to dominate from about the early sixteenth century and there followed various attempts to subjugate or incorporate the native Irish. In 1801 an Act of Union was passed joining Ireland with England, Wales and Scotland. Although initially broadly accepted resistance to this union grew in the latter parts of the nineteenth century leading to a war of independence and culminating in 1922 with the creation by 26 of the Irish counties of the Irish Free State (now the Republic of Ireland). However, a remaining six counties, into which there had been considerable protestant migration, voted to continue in the Union and were to become known as Northern Ireland.

The pattern of unification and subsequent break-up has led to a confusion of names. The political entity that resulted from the union of England (151,000 km²) and Wales (19,000 km²) with Scotland (77,000 km²) in 1707 was to be termed the Kingdom of Great Britain (GB), the Britons apparently being the only original tribe whose territory incorporated parts of all three constituent countries. On the union with Ireland a new term was introduced, The United Kingdom of Great Britain and Ireland (UK), which, following the creation of the Irish Free State was, in 1927, altered to the United Kingdom of Great Britain and Northern Ireland. Matters of foreign policy and defence, and fiscal affairs, are handled at the United Kingdom level. On many other matters Ireland, and subsequently Northern Ireland, exercised devolved powers, these include responsibility for agriculture and forestry (Northern Ireland had its own elected assembly until about two decades ago and this is now due to be re-established). Thus, in Northern Ireland (5,500 km²) there is a separate Forest Service within the Department of Agriculture for Northern Ireland (DANI). For the three countries making up Great Britain, however, there is a single forest service known as the Forestry Commission.

Aspirations for greater devolution, or even independence, have not been limited to Ireland and independence parties are active in both Scotland and Wales. To acknowledge the fact that Scotland has inherited very different institutional structures from the rest of Great Britain, including quite distinct legal and educational systems, a ministry of Scottish affairs, the Scottish Office, has long been in existence and a somewhat less powerful Welsh Office was established more recently. While both are responsible for certain aspects of agriculture and the environment within their countries, neither are directly responsible for forestry. Most recently the Government, following referendums in Scotland and Wales, has set out to establish an elected parliament for Scotland and an elected assembly for Wales. Both will be given charge over forest policy within their country but the proposal, at least at present, is that the implementation of what will presumably be differing forest policies for England, Wales and Scotland, will remain with the GB-wide Forestry Commission.

Whatever the future holds the current position is that the Forestry Commission is responsible for forest policy and its implementation in GB and DANI has these responsibilities in Northern Ireland. Where there are matters of common or over-riding interest, such as European Union matters or international commitments, the Forestry Commission and DANI work together. Forest policy and its implementation in Northern Ireland tends to shadow developments in Britain although there can be important differences (for example, there are no controls over felling in Northern Ireland). Most of the following discussion will refer specifically to GB, although the position in Northern Ireland is not dissimilar.

1.2 History Of Forest Destruction And Recreation

It is believed that Britain, or at least lowland Britain, was about one-third deforested when the Romans arrived in 55BC. From a statistical account drawn up by the newly arrived Normans (for taxation purposes) it can be estimated that forest cover was down to about 15% by 1086. Clearance for settled agriculture, uncontrolled grazing and the use of fire (often to improve grazing) were the dominant reasons for this deforestation, with demands for fuelwood, building material, and later ship construction and industry, also making a contribution.

Deforestation continued over the remaining centuries, with interregnums such as in the fourteenth and seventeenth centuries when the black death and the plague, respectively, reduced populations to the extent that tree cover expanded briefly. There were mutterings of concern over the loss of forest, particularly regarding the impact of deforestation on naval timber, but no remedial steps were taken comparable to those that started in France in the seventeenth century or in the German speaking countries a century later. The lack of concern in Britain was presumably due to the length of its coastline which allowed for easy importation of timber by sea to all significant centres of population. Then, as now, the countries around the Baltic were the most important source of timber with progressively an increasing amount coming from eastern America. Thus, timber supply in Britain and Ireland was very vulnerable to anything that might interrupt trade. There was a flurry of concern, and more planting, provoked by the Seven Years War (1756-1763) and the American War of Independence (1775-1781) and in 1792 the Commissioners of Land Revenue recommended that the Government plant 2800 ha. Then, during the Napoleonic era, Britain was effectively denied access to the Baltic leading to important creation of new plantations by the country's landed aristocracy and, for the first time, the appearance of a cadre of technically trained foresters. Forest expansion, however, largely ceased in the latter part of the nineteenth century. Reasons include the lack of involvement in any war close to home (although plenty at a distance) that might disrupt supply, the growing belief in free trade and Empire preference (although by 1913 less than 10% of the imported timber came from the then Empire), the swing to iron naval ships after the Battle of Hampton Roads (1862) and the appearance, as a result of the industrial revolution, of a new moneyed class who acquired landed estates not for wealth creation but for recreation (in Britain the shooting of deer and game birds is traditionally on open moorland rather than in forests).

The next big shock was the First World War (1914-1918) when the activity of enemy submarines severely disrupted Britain's ability to import food and timber, indeed at one stage timber stocks were down to one week's supply. At this time vast amounts of timber were used in the coal mines and coal was the primary fuel for the war industry. In consequence recommendations were made in 1917 (The Acland Report) that after the war Britain should bring such forests as still existed into full production and expand the forest area from 1.2 to 2.0 million hectares, both by encouraging private owners and by setting up a state forest service with funds and powers to acquire land. As a result, on 1 September 1919 the Forestry Commission was established. However, because of the financial crisis, rehabilitation of private forests and the creation of state forest over the next two decades was slow. Similar problems to those faced in the First World War were encountered in the Second World War (1939-45), although perhaps not quite so severe, there having been by this time some replacement of coal by oil. Again the position was reviewed and the target of 2 million hectares endorsed with the aim that this should be achieved within 60 years after the end of the War (it was reached sometime before this). Because of similar problems with food importation it was a requirement from the outset that new forests should only be created on the poorest of agricultural land.

A survey just prior to the First World War revealed that in 1907 forest cover amounted to 5.3% of the area of England, 3.9% of Wales and 4.6% of Scotland. Ninety

Table 1. Forest area in the countries of GB with distribution by species type and owner (FICBB 1996).

	Total forest area 1000 ha	Percent of total		Total as % of land area
		Under conifers	State (FC) owned	
England	942	39	23	7.6
Wales	247	67	50	12.0
Scotland	1176	83	43	15.2
GB	2405	63	35	10.6

Table 2. Age profile of forests in Britain by decades (FICGB 1996).

Decade starting	area × 1000 ha	Decade starting	area × 1000 ha
pre 1840	30	1910	50
1840	30	1920	105
1850	30	1930	145
1860	45	1940	175
1870	45	1950	345
1880	45	1960	370
1890	40	1970	345
1900	65	1980	240

years later (Table 1) the equivalent figures are 7.6%, 12.0% and 15.2%, respectively. By this time the forest area in Northern Ireland had reached approximately 80,000 ha (14.5% of land area) of which 75% is state owned.

The age structure of Britain's forest estate is summarised in Table 2, while Table 3 traces the rate of increase in Britain's forest area over the past two and a half decades. From 1980 onwards it has been Government policy to encourage all further forestry expansion to be by the private sector (Table 3). Indeed, over this period the Forestry Commission has been required to raise revenue by selling forests, as a result of which the proportion of state forest has fallen from around half the total forest area to the 35% overall shown in Table 1. With the rise in private planting has come, as will be discussed later, additional inducements both to plant better land and to plant broadleaved species. As a result (Table 3) the proportion of new forests comprising broadleaved species has risen from 2% per year to in excess of 50% of what, it should be noted, is a much reduced total rate of planting.

Table 3. New planting of bare ground (rate of forest expansion) in GB, the percentage of this that was by private owners as against the state and the percentage made up of broadleaved species (FICGB 1993 and 1996).

Year	Total Area 1000 ha	% by private owners	% comprising broadleaved spp
1971	42.3	45	2
1972	41.4	48	2
1973	39.4	51	2
1974	37.3	51	2
1975	37.7	49	2
1976	26.8	36	2
1977	22.8	32	2
1978	20.4	31	2
1979	19.7	40	3
1980	24.1	34	3
1981	20.0	42	3
1982	23.4	53	2
1983	21.4	59	3
1984	25.1	66	3
1985	21.1	76	3
1986	23.4	81	4
1987	24.5	78	7
1988	28.8	83	10
1989	29.1	86	10
1990	16.8	76	20
1991	15.4	77	25
1992	13.8	78	27
1993	17.7	87	49
1994	17.3	92	62
1995	19.0	95	53
1996	15.4	97	56

1.3 The Place Of The British Forest Industries

Prior to the First World War it is estimated that Britain and Northern Ireland consumed about 15 million cubic metres of timber of which a little over 1 million (8%) came from home sources (Acland Report, HMSO 1918). By 1995 consumption had risen to over 45 million cubic metres and home production had risen to 8.7 million (19%) (FICGB 1996), imports by then cost £8.5 billion per year. Production is forecast to increase to about 16 million cubic metres by 2025 (Whiteman 1996). Employment is probably not much more than 35,000 people and is projected to grow by about 1000 a year over the next two decades (FICGB 1996). Over the past decade the processing sector has invested in excess of £1.6 billion in new pulp and paper mills, board mills and sawmills (FICGB 1996). Despite this it has been admitted that forestry is a small industry, although its relative importance looms somewhat higher in Wales and Scotland than in England. In contrast to forestry's limited importance as a production industry, its importance in relation to conservation and recreation has been growing dramatically as the young forest estate matures. The value placed by the public on the state forests for non-timber purposes was largely responsible for discouraging the previous government from the privatisation of this resource. The growing importance of forestry in government thinking has also been assisted by international treaty commitments at Rio-de-Janeiro and Helsinki.

2. BACKGROUND

2.1 Legal And Policy Framework

In 1810 the Government set up the Commission of Woods and Forests to manage the few remaining royal hunting forests that had passed into its charge. This had no specific legal backing however. Concern about the lack of a forest policy, and any direct government involvement in forestry led to various House of Commons Select Committee reports and reports from various branches of Government in 1887, 1902, 1908, 1909 and 1912. That of 1908, which referred only to Ireland, was of great importance for it led to the establishment of an embryonic forest service in that country in 1909. As already mentioned, there was no further development in Britain until the vicissitudes resulting from the First World War prompted the Acland Report which was followed, in 1919, by a Forestry Act creating a board of Commissioners to promote and establish forests. There followed an Act in 1923 to clear up various issues, notably the power of the Forestry Commission to award grants, and then in 1947 a new Forest Act was passed. Among other things this was to subtly change the status of the Forestry Commission from an organisation slightly distant from government to what is essentially a Government Department, albeit answerable to ministers through a board of now commissioners. 1947 was the last time in which an act covering forestry in its entirety was considered in the House of Commons. In 1967 the numerous references to forestry in various related and unrelated acts were consolidated and it is this Consolidation Act that still governs forestry in Britain. Developments since that time

have been by way of Ministerial Statements (directives) made within the general framework of the act. Certain additions have been made in subsequent non-forestry acts, including a commitment to ensure conservation and recreation in an amendment (1985) to the Wildlife and Countryside Act.

The legal powers of the Forestry Commission include those necessary for the creation of forests and sale of timber, the provision of grants to private owners and the control of felling through award of licences. Felling licences were introduced as an emergency measure to control timber supplies during the Second World War. There was felt to be a continuing need for such licensing when the 1947 Act was drafted and ultimately the provisions passed into the 1967 Act. Such licences for felling are usually granted with conditions regarding the nature of the felling and, in particular, the regeneration of the stand. At first up to 20 m³ could be felled in any three month period without a licence. However, as the value of this technique in promoting conservation and recreation objectives came to be realised this limit was reduced to 5 m³. The felling licence system is the only coercive power the Forestry Commission is prepared to apply on private owners. They have no legal means of enforcing quality in the planting of new ground. However, because planting without grant aid is extremely rare it is argued that the ability to attach conditions to these grants is sufficient to ensure that private owners comply with the policy aims of the government. There are also powers of compulsory purchase, that have seldom been used, and powers to insist on access to inspect woodlands.

2.2 Institutions – The State Service

The state forest service is the Forestry Commission which acts as the government's forest department (ministry) in matters of policy, provides grants and monitors development in the private sector and manages the state owned forests. For most of its history the "authority" role over private forests and the "enterprise" role in running state forest have both been administered by the same staff in the various forest districts of which in 1988 there were 64 organised into 7 Conservancies (a reduction from 12 twenty years previously). Arguments were advanced that this structure neither provided adequate support to the private sector nor was able to demonstrate that the same standards were being applied to state forests as were required for private forest (although no evidence was ever advanced to support the suggestion of the application of double standards). Perhaps more genuine was the growing realisation that the public demand for transparent controls on forestry, particularly new forest, would require administrative change. Accordingly, in 1992 the organisation of the Forestry Commission below the top management tier was split into three. The department role was strengthened by the creation of a Policy and Resources Group that would, *inter alia*, provide support to Forestry Ministers on Parliamentary matters, would monitor the development and implementation of forestry policy and have responsibility for European and international forestry questions. The new "Forestry Authority" arm would be responsible for policy implementation and regulatory duties whilst "Forest Enterprise" would be responsible for the "multipurpose management of the Forestry Commission's forest estate throughout Great Britain". These two arms have completely

different staffing, except at the highest level (although transfer of staff across the divide in the process of career development is to be encouraged), and occupy different offices. The Enterprise was now to be organised into five enterprise regions below which were 48 Forest Districts (since reduced in number) headed by Forest District Managers. The Authority retained, for legal reasons, the title Conservator. There were to be Chief Conservators for England, Wales and Scotland with, below them eleven regional conservators in England, three in Wales and six in Scotland.

The Forestry Authority, still barely six years old, has proved very successful. By releasing staff from management duties new links and consultative structures have been built up with local government and other interested bodies, including NGOs, and so conflict much reduced, particularly when compared to the problems of the previous decade. Furthermore, the national offices for England, Wales and Scotland have very rapidly established different priorities and approaches in the three countries, even within the constraints of overall GB policy and structural frameworks. Indeed, the development of such country differences was one of the arguments made when suggesting that the Forestry Commission would be able to administer different forest policies in England, Wales and Scotland should the proposed devolution of powers to a Scottish parliament and Welsh assembly lead to such an eventuality.

2.3 Institutions - The Private Sector

Private owners account for 65% of the forest area in Britain (Table 1). There are said to be about 55,000 woodland owners with the 3,000 largest holding about 50% of this land (TGA pers. comm.). There are broadly five categories of private owners, the large estate landowners (including what remains of the landed aristocracy), small landowners including farmers, commercial investors, various conservation and charitable organisations, and the timber processing industry. Although not strictly private the significant area of forest owned by local government could also be included here. Production of coniferous timber from privately owned forest was 44% of the country's total in 1995 and is projected to more than double and account for 52% of the total by 2016 (TGA 1997). Most of the small amount of broadleaved timber produced comes from the private sector.

The large traditional landed estates account for much of the current private sector harvest. These estates are generally integrated agriculture, forestry and sporting enterprises, with forestry usually accounting for a few hundred ha to several thousand, and are often good examples of sensible land use allocation. The recent shift in forestry incentives from tax relief to grants, coupled with the general problems of the agriculture industry in Britain, has stimulated a resurgence of planting on many of these estates. The envisaged expansion of production from the private sector, however, will come largely from the forests created as tax reducing measures by commercial investors particularly over the years 1968-1988. During this period management companies organised the creation of new forests, usually in the uplands, using such investment capital. Thus forests of several thousand ha in extent were established that while usually under single management might consist a number of individually owned areas. Some of these

areas may have changed ownership one or more times since planting. Recent years have seen the purchase, usually of established forests with stands close to felling age, by various sectors of the timber processing industry. The sawmilling sector owns significant areas but the most aggressive has been the pulping sector. The two largest pulp mills, now united under joint management, set up forest management divisions. These sought to secure a portion of their parent company's timber requirements by buying forest (not amounting to any very large area), by entering joint schemes with investment companies, such as insurance companies, to create forests (it is presumed that the investment company provided the initial capital with an agreement that the pulp company then purchase the forest at some later date), and by entering management agreements with larger forest owners whereby the pulp company would acquire first right of purchase of future timber supplies in return for the provision of free management.

This matter of commercial investment in new forest, whether by private individuals driven by tax benefits, or by financial institutions seeing to include some inflation-proofed investment in their portfolio, or by processing companies seeking to secure future supplies, has led to the development of large forest management companies who will provide for such owners services ranging through land purchase, site preparation and planting, management and protection, and eventually timber harvesting and marketing. Originally four such companies evolved, the largest two then merged and the result of this merger has recently been purchased by UPM Kymmene, the owner of Britain's two largest pulp mills. With the decline in planting of recent years (Table 3) these companies have had to diversify into a wide range of land-based services, including arboriculture and landscaping.

Whilst the forests in the ownership categories discussed above are significant producers of timber, the remaining three contribute little to the timber trade but much to conservation, amenity and recreation. During the nineteenth century large numbers of trees were planted in an agricultural landscape that was usually already characterised by hedges, hedgerow trees and scattered small stands of usually broadleaved trees (variously termed copses or spinneys). The changing technology of agriculture has led to the loss of many of these hedges and trees but quite frequently, for reasons of sentiment or sport, many still remain. Usually the only management given is in relation to sport, particularly for pheasant. On some larger farms, or smaller estates, the timber resource is sufficient to justify some management and to meet this demand a cadre of professionally qualified forestry consultants have developed. Despite these encouraging trends, however, all too often farm woodlands are neglected by the owners.

Also important in the landscape are the trees and forest stands, often in or adjacent to towns, that are owned by local government. The management of these varies from the good to the abysmal. Timber, however, is seldom more than a by-product. The same is true of the increasing number of forests owned by various charities of which the most significant are the Woodland Trust, who buy forests mainly for their recreational and amenity value, and the Royal Society for the Protection of Birds, that has acquired considerable areas where there are particular needs to protect birds or other wildlife.

It should be noted that, with a few very small exceptions, there are no community owned woodlands, nor church woodlands, as are found in many continental European countries.

2.4 Involvement Of Local Authorities

Local authorities in Britain, that is the town and county councils, are responsible for planning at both a strategic and very local level. Thus, they draw up plans regarding the location of new houses or industries, the provision of roads, services, schools etc. They also establish quality criteria in relation to developments, particularly buildings, and have very significant control over what can or cannot be done in areas of historical or aesthetic importance. Yet they have little power to control developments in agriculture or forestry except at a strategic level. As will be discussed later, they have the power to object to the Forestry Authority over the award of felling licences or planting grants. In addition in Scotland, but not yet in England and Wales, local authorities have been required by Government to develop Indicative Forest Strategies. Essentially this entails drawing up, through consultation with stakeholders including environmental NGOs and timber industry representatives, maps showing where properly planned forest expansion would bring no environmental or other problems (e.g. in relation to domestic water supply, recreation developments etc.), where there might be one such problem that has to be addressed and where there are two or more such problems. Such maps were supposed to guide potential investors and ensure that the local authority was in a position to knowledgeably give their response to future applications for planting grants. Unfortunately, soon after they were introduced the rate of planting applications declined dramatically for unrelated reasons. Talk is now of redefining the Indicative Forest Strategy process to rather more encourage future forest development (perhaps in association with additional regionally-based grants) as against simply indicating the amount of bureaucratic obstruction that any new proposal might have to face.

Although local authorities seem to have little power over forestry, that which they have has been used to some effect to alter or block developments. Their ability to be proactive in encouraging forest development, however, is much less than their ability to simply be reactive to events.

3. TARGETS AND STRATEGIES

3.1 Policy Development

As has already been indicated the genesis of forest policy in Britain was the desire to create a strategic reserve of timber to ensure survival through another prolonged naval blockade. This was to dictate the type of forest created which all too often were monolithic blocks of conifers with little modification for landscaping, recreation or conservation.

In 1955 Britain announced that in future its defence policy would be based on the nuclear deterrent. The threat of nuclear retaliation would prevent war; it follows that if there was to be a war it would be waged with nuclear weapons and would be of very short duration. The need to plan against a three-year naval blockade was now history so the main support for Britain's forest policy over the previous 36 years had been kicked away. The first official acknowledgement of this came in 1957 in a report (Zuckerman

Report) on the use of poor land. This led to a less than adequate shift in national objectives (Ministerial statement 1958) to import substitution and job creation, particularly in remoter rural areas of Scotland and Wales. However, in 1967 (Scotland) and 1968 (England and Wales) Countryside Acts were passed aimed at improving the beauty and recreational use of the countryside and these legally empowered the Forestry Commission for the first time to devote public money to such purposes. This early development of multiple use forestry was checked in 1972 when the Treasury (finance ministry) published a benefit-cost study that, while confirming the loss of any justification based on strategic reserves, also largely dismissed both import substitution and recreation (Britain's forest estate was still largely young) as adequate reasons for the expenditure of public money on any further expansion of forest area. The solution suggested of low investment, short rotation forestry designed to produce a high financial return was to seriously check developments towards a multiple-use forestry with a high social component. Other forces, however, were to work strongly against this Treasury-driven threat.

Since 1970, and in many respects earlier, the general public were becoming increasingly interested in, and concerned about forest expansion, and hence forest policy. There were perhaps two reasons for this. Firstly, car ownership was increasing rapidly so the public was becoming more mobile and more were therefore enjoying the countryside. Secondly, the conservation movement was becoming of age. Led by inspirational individuals such as Fraser Darling the concept of conservation and of setting aside areas of land to be retained for, even managed for, their conservation value had developed in the years before the Second World War. To a very large extent this had drawn inspiration from the pioneering attempts in Britain, largely centred on the Lake District in North-east England, that had led to the setting up of the National Trust in 1895, and to the work of Muir and others in the United States that had led to the National Parks Service there. Since about 1960, perhaps encouraged by television but also by a range of conservation organisations adept at the use of publicity, the British public became increasingly conservation conscious (as, indeed, was the case in most countries of the developed world). As was too often the case the forestry profession was slow to respond to this development (e.g. Hellström and Reunala 1995). At this time much of the incentive for the establishment of new forests came through the tax system by way of relief of tax burdens. In the late 1960s and through the 1970s tax on high income earners was particularly onerous and the financial advisors of those in this fortunate position often recommended investment in afforestation schemes. To be effective such investment had to be made in the financial year in which the income was earned. In consequence private afforestation was usually concentrated on poor land (tax relief was only of the cost of forest establishment, not on the cost of the land) and had to be achieved at such a rate that good planning and, most importantly, effective consultation were often neglected. In consequence some areas of great conservation importance were afforested before those with knowledge and affection for these areas had a chance to prevent what they saw as nothing less than vandalism.

The latent antagonism was brought to a head with the publication by the Government's conservation organisation, the Nature Conservancy Council (NCC), in 1986 of "Nature Conservation and Afforestation in Britain". Although ostensibly in favour of forestry this was a profoundly anti-forestry expansion document. The

scientific arguments advanced, and those subsequently marshalled to refute them, were somewhat dubious but it did touch an exposed nerve in a public growing increasingly concerned about the rate of change in land use, notably the increase in commercial (as they saw it, perhaps rightly) afforestation. Essentially the NCC called for a shift away from “narrowly timber-oriented” public support for forestry to a much wider multiple-use scenario. Various specifics were outlined, such as increased consultation and public involvement, more socially responsible forestry etc. which, whilst protested against by foresters at the time, have now largely come to pass.

Into the mêlée of debate the Government was now to deposit a report (1986) by the National Audit Office, an organisation charged to ensure the effective use of public money. With regards to forest policy this echoed the earlier (1972) Treasury benefit-cost study in rejecting the military strategic argument and in claiming that there is no reason to attach significant economic value to balance of payment considerations. It did add, however, that “it would appear prudent to maintain an adequate reserve of commercial woodland in order to safeguard the nation’s timber needs against over dependence on foreign supplies”. It introduced a new factor that because of the large increase in urban unemployment it could not be assumed that rural unemployment was the more important and, furthermore, the creation of jobs in forestry was expensive. Again, like the benefit-cost study before, it urged the investment in better quality land.

Responses to this report were hardly focused when rumours started to circulate of a new internal government committee looking at all aspects of land use. This was to lead to the end of an almost 70-year old policy that afforestation should be prevented on all but the very worst agricultural ground. Indeed, henceforth, afforestation of quality agricultural land was to be encouraged by additional financial inducements. Subsidising forestry on such land is cheaper than continuing to subsidise food production. This development, therefore, has more to do with agricultural policy than with forestry policy.

The remaining part of the 1980s and the 1990s were to see considerable developments in forest policy. In 1988 tax relief for afforestation was abolished, although the Government at least nominally compensated with increased grant assistance (with hindsight the grant increases can be shown not to have covered the tax losses). Also at this time there was considerable pressure on Government from Committees of both the lower and upper chambers of Westminster to spell out exactly Government forest policy. In response to this the Forestry Commission published in 1991 the “Forest Policy for Great Britain” in which the two aims for forest policy were stated as:

- The sustainable management of our existing woods and forests.
- A steady expansion of tree cover to increase the many, diverse benefits that forests provide.

They went on to state, “in both we recognise the advantages of basing policy on the realisation of multiple objectives”.

Next followed Britain’s involvement first in the United Nations Conference on Environment and Development (UNCED) at Rio de Janeiro in 1992 and the Conference

on the Sustainable Management of Forests in Europe held in Helsinki in 1993. Following these the Government published in 1994 "*Sustainable Forestry: The UK Programme*". This document firmly committed the UK to a policy of multiple-use forestry in which social aspects and biodiversity (including a presumption in favour of native species and provenances) were given a high profile.

Thus, in the eight years between the publication in 1986 of the NCC document "Nature Conservation and Afforestation in Britain" to the 1994 publication of "Sustainable Forestry: The UK Programme" there had been a paradigm shift from a policy led by industrial imperatives to a policy largely led by social and biodiversity requirements. Over the same period the rate of expansion of forestry dropped from about 25,000 ha to 15,000 ha (Table 3), although this was a response to changing patterns of incentives.

The next great development, as mentioned earlier, will be the devolution of forest policy to the planned new Scottish Parliament and Welsh Assembly. The impact of this can only be conjectured at, but undoubtedly regional differences will evolve, with Scotland and Wales perhaps giving more emphasis to wealth creation and less to recreation that will be the case in England.

Through all these developments there has never been something that could be called a forestry strategy. Rather there has been a fitfully evolving forest policy with mechanisms to deliver this policy following behind. For many years the lack of a well formulated policy has been regarded as a problem and for at least forty years various individuals and organisations have been arguing for a strategy. However, it was not until for the first time an outsider (Robin Cutler, previously of the New Zealand Forest Service) was appointed to head the Forestry Commission (Director General) that definitive steps were taken to develop such a strategy. Submissions were invited from a wide range of organisations and this process was nearing completion when the Government of the day announced its intention (as foreshadowed in its Election Manifesto) to review the delivery of Government forest policy. What had not been anticipated was that this review would include consideration of whether or not the State should continue to own forests. The review, therefore, became popularly, and perhaps unfairly, known as the privatisation review. Privatisation was essentially blocked by the strength of public opinion against such an idea. However, in the process of this review, Treasury let it be known that the Government would not countenance the articulation of anything that might call itself a National Forest Strategy. The process, therefore, was brought to a halt. In response the forest industry and the NGOs set about separately producing their own strategies, a divisive development that was arrested when the Institute of Chartered Foresters (representing professionally qualified foresters) brought the two sides together to produce a joint "Forestry Accord" (the word "strategy" not being acceptable to Government) of which more anon. The importance of this document is illustrated by the fact that it was recently (1998) published as an appendix to the Government's new "UK Forestry Standards" as required under its obligations to UNCED. With the change in Government in May 1997 the idea of a Forestry Strategy has been resurrected and Government has recently announced the preparation of a forest strategy for England, although this is likely to fall short of the comprehensive planning document many are calling for.

3.2 Implementation Of Forest Policy

It has already been pointed out that the UK Government has sought to ensure that owners of the 65% of forest area in private hands respond to national policy by offering financial inducements. At one time such inducements came through both tax relief and grants. Currently (since 1988) forestry is outwith the tax system, that is money earned through sale of timber does not attract tax but consequently there can be no tax relief on money invested in forestry. Essentially an inducement to fell trees rather than plant them. Planting, therefore, is stimulated entirely by grants. Grants have been available since 1923 and of particular significance since 1947 (Pringle 1994). At the latter date an Act was passed that instituted the Dedication Scheme by which owners would be eligible for planting grants and annual maintenance grants in return for dedicating their ground to timber production in perpetuity. In 1973 conditions regarding effective land use planning and provisions for recreation were attached to the grants but timber was to remain the primary objective if financial support was to be given. It was not until 1985 with the introduction of a special "Broadleaved Woodland Grant Scheme" (BWGS) that it was accepted that timber production need no longer be the prime objective of management. Indeed the current grant scheme, which has replaced all previous grant schemes including BWGS, no longer requires that timber production be an objective at all.

This scheme, the third version of the Woodland Grant Scheme (WGS III), provides assistance for establishing forests and, at a lesser rate, for re-establishing existing forests. The scheme pays greater amounts per hectare for broadleaves, and in the highlands of Scotland for native *Pinus sylvestris* L., than for the general run of conifers. Special supplements are also available to encourage the planting of agricultural land, for the planting of recreational forests close to significant areas of population and for the planting in areas particularly designated by the Government as needing trees. A recent introduction has been the idea of "Challenge Funds" by which land owners are invited to bid for the additional amount they believe they need over and above the existing grants if they are to be persuaded to plant trees. Interestingly, for the scheme based in Northeast Scotland (Grampian Challenge Fund) the bids suggested that to convert agricultural land to forestry public subsidy would have to be effectively doubled. Subsidies are also available to exclude livestock for periods of a decade, to manage conservationally or recreationally important woodlands and, as is the case elsewhere in the European Union, to provide annual subsidies to farmers who plant trees on agriculturally productive land.

Grants are only half the powers Government uses to implement its policy. The other half is represented by the Felling Licence regulations. It has already been pointed out owners cannot fell more than 5m³ of timber in any quarter without first obtaining a felling licence, a licence that will come with conditions regarding what must be replanted. This has proved to be a very powerful weapon in conserving landscapes and biodiversity.

4. STAKEHOLDERS AND PARTNERS

4.1 The Forest Industry

For much of this century the forest industry has been inadequately organised to effectively represent itself to Government. Before the last war the groups that negotiated with Government regarding the introduction of the Dedication Schemes were led by the associations of local governments, the Country Landowners Association (CLA) representing the traditional landed classes and the Royal Forestry Societies from both Scotland and England (plus Wales and Northern Ireland) the members of which were anyone interested in forestry including professional and technical foresters and the landowners already represented through the CLA. The difficulty of dealing with a multitude of often non-representational bodies was recognised by Government and following a report by the Watson Committee the Government in 1958 announced that further negotiations over grants would be conditional on the formation of a properly organised body to represent private growers. In the event no agreement could be reached between owners in Scotland and those in England and Wales so for many years there were two organisations until, in 1983, these were merged, not without the loss of blood, to form what is now known as the Timbers Growers Association (TGA). This very effectively represents the growers, having in its own words “approaching two thousand members and over a third of a million hectares of woodland in membership TGA is the voice of the growing sector in Britain’s rapidly expanding forestry industry” (TGA 1997). To which end it seeks to politically lobby at local, national and European levels, to provide information, including marketing statistics, to members, and through its regional structure to ensure that members interests are identified and promoted. Other organisations have developed to represent the processing industry although heavily divided between sectors such as sawmilling (initially divided into Scotland and elsewhere), panels, pulp and paper etc. The trend in recent years has been for progressive merger among processor groups. During the hiatus of tax changes and policy changes in relation to land use in 1988 it became clear that a particular problem within the industry was the splintering of representational bodies. Accordingly, a wide range of groups, including TGA, the Horticultural Trades Association representing nurseries, the many timber processing organisations, the professional foresters organisations etc. agreed to establish an umbrella organisation, the Forestry Industry Council of Great Britain (FICGB), that could talk with one voice to Government. This was financed largely by voluntary levies paid by growers and processors on the volume of timber being processed. Although very successful in many of its aims the FICGB has had a troubled life, not least because certain important processors and management companies chose not to participate. Over the past year, however, financing has been placed on a firmer footing and the future now looks reasonably bright. Recent main concerns of FICGB have been the threat to privatise state forest, the debate on forest certification, the development of Indicative Forest Strategies, the market in established forests, the UK Forestry Accord etc.

4.2 The Forestry Profession

The first forestry society was the Scottish Arboricultural Society, now the Royal Scottish Forestry Society, formed in 1854, an early and enthusiastic member of which was the novelist Sir Walter Scott. Founding of what is now the Royal Forestry Society of England, Wales and Northern Ireland followed in 1882. Membership of these encompass land owners, both technical and professional foresters and anyone else interested in the subject. To provide something with a greater professional focus the Society of Foresters of GB was established in 1925 (this is the body that publishes the journal "Forestry"). By the 1970s it became clear to many that, with the retreat of the State from the dominant role in forestry, there was a need for the profession to start to police its own entrance and ethical and professional standards if the concept of a professional forester was to remain viable, in much the same way as accountants, engineers etc. control their professions. Accordingly the Society of Foresters petitioned the Privy Council (a body of State) for a Charter and in 1982 the Institute of Chartered Foresters (ICF) was formed. Not all members of the old Society, particularly those without professional qualifications, approved of this development and they were to break away to form the Association of Professional Foresters (APF). The APF is perhaps strongest among the self-employed forestry contractors although there is also the recently formed Forestry Contractors Association (FCA) established specifically to represent the interests of this sector of the industry.

4.3 Other Stakeholders

A wide range of conservation and recreation bodies have an interest in the development and implementation of UK forest policy. These come together in umbrella organisations called "Wildlife Links", most specifically in the woodlands committee of the UK Wildlife Link. It may be illustrative of the future that the UK Forestry Accord was negotiated by a committee with equal representation from the Wildlife Link and the Forestry Industry Council of Great Britain, under the Chairmanship of ICF.

5. INTERSECTORAL CO-ORDINATION

The 1967 Act that governs the Forestry Commission sought to ensure consultation in monitoring performance but the very name of the main committee involved, the Home Grown Timber Advisory Committee (HGTAC), is indicative of the sort of consultation envisaged thirty years ago. Since then strenuous efforts have been made to widen the remit and balance the representation on this and similar committees. Indeed the HGTAC now has an Environment Sub-committee on which currently sit employees of WWF, the Royal Society for Protection of Birds and the Ramblers Association, among others. Such developments must be seen as a direct response to bitter arguments over forestry, particularly forest expansion, and the environment, that characterised the late 1970s and early 1980s. At that time links with the environmental organisations were poor to non-existent.

As already pointed out in 1988 the FICGB was formed to ensure links across the growing and processing sectors of the industry. Inevitably FICGB was caught up in the environmental arguments and in response did much to develop the Indicative Forestry Strategies that have now been developed by all but one of the county councils in Scotland. Further coming together of the forestry industry and environmental NGOs was to be accelerated by the Government's 1994 Review of Delivery of Forest Policy in whose remit was included consideration of the desirability or otherwise of privatising the state forests. The prospect of two fifths of the nation's forests being sold, with real or imaginary implications for multiple use, in particular access and conservation, was greeted with astonishingly uniform hostility from organisations as diverse as the Ramblers Association and TGA. In the aftermath of the review both the Wildlife Links and the FICGB started talking about defining their own views on a national forestry strategy. For fear that the two camps might develop strategies that emphasised differences and again polarised the debate the ICF offered to broker an Accord (similar documents have been produced in Canada and New Zealand). It proved remarkably easy to agree to the contents of this Accord and a formal signing took place at a major publicity event in November 1996.

In essence the Accord emphasises agreement over six principles, principles that form a package and so should be pursued jointly. These are in summary.

- Forestry is a uniquely sustainable land use and investment in all types of sustainable forestry should be encouraged.
- Conservation of biodiversity and natural resources should lie at the heart of forest management.
- Forest management should safeguard and enhance landscape and heritage resources.
- Sustainable productive forestry to provide timber benefits should be encouraged.
- Research, education and training should cover all aspects of sustainable forestry.
- The public should be widely involved in and consulted on forestry matters.

The Accord is an on-going process and promises to ensure continued dialogue between all parts of the forestry industry and interested NGOs.

Thus the willingness to consult, and the mechanisms for consultation, have developed dramatically over the past decade. The official consultation procedures within the Forestry Commission and those, such as the Accord, outwith it are being used by the Forestry Commission, as the government forestry department, in the development of new initiatives. Indeed the new "Forestry Standard" published in 1998 reproduces both the UK Forestry Accord as well as the Helsinki Agreement as appendices. When considering the implications for landuse planning, however, the situation is not so clear. In so far as there is landuse planning it is through the balancing of various agricultural and forestry grants. The Forestry Commission always has consulted widely over the structure of the grant system and this has evolved very rapidly since 1988. Thus supplementary grants are now on offer both for the creation of so-called community woodlands (i.e. woodlands with unrestricted access near urban conurbations) and for the planting of agricultural land in order to reduce food subsidies. Indeed, the latter illustrates the extent to which forestry is still largely subservient to

agricultural planning. There is little indication that Government has any plan for the forestry and timber sector other than to respond to opportunities when they arise (most of the new processing plants have received appreciable amounts of public money) and to increasingly emphasise the social benefits of forestry. One recent development, however, has been to give additional public support (either as a flat sum or through a bidding process) to new forest planting or natural regeneration in specific areas. Often this is in relation to recreation (e.g. the National Forest in the English midlands and the Central Scotland forest between Edinburgh and Glasgow), but also conservation through additional money to naturally regenerate the native pinewoods of Deeside and Speyside, and in one case to further stimulate the development of commercial timber forestry in Northeast Scotland (the Grampian Challenge Fund). Further such regionalisation of aid might be expected following devolution.

6. SPECIAL INSTITUTIONALIZATION

6.1 Forest Planning

Control of forestry developments on the ground is exerted through the grant system and the award of felling licences and has been since at least 1947. As described earlier local authorities (county councils) have the opportunity to object to proposals and negotiate change. Ostensibly their ability to plan pro-actively is very limited in the case of forestry but there have been some important developments. Thus the idea of Indicative Forest Strategies was first tried by Highland Regional Council and the concept was largely the development of Strathclyde Regional Council. Now all regions of Scotland bar one have such strategies. The talk in England, and probably also eventually in Scotland, is to convert forestry strategies into means of attracting forestry investment rather than merely controlling it, however, developments seem to be stymied by pressure of other business. Other important initiatives include the Central Scotland Forest, the idea of which was much promoted by the local authorities of the counties it covers and, more interestingly, the Grampian Forest Initiative. This was an idea that was developed by the then Grampian Regional authority (since lost in local government reorganisation) specifically to improve wealth creation in North-eastern Scotland and for which, with the assistance of FICGB, they were able to attract additional government funds.

6.2 UNCED and Helsinki

As recently as 1986 the National Audit Office of the British government was calling into question the value of investing public money in forestry and recommending that investment should concentrate on good land with simplified silvicultural systems. The very existence of UNCED did much to ensure acceptance within government circles of the wider benefits of forestry and ensure that forestry was brought centre stage. Following UNCED and Helsinki the government published "Sustainable Forestry: The

UK Programme” (Forestry Commission 1994) as a companion to similar documents on biodiversity and climate change. The forestry document proposed no remarkable initiatives, perhaps because it was produced at a time when the Government’s review panel on delivery of forest policy was sitting so their conclusions could not be anticipated. However, it is a further and significant commitment by Government to multiple-use forestry and it made specific reference to the Forestry Commission’s published management guidelines.

Award of grants has always been dependent on the submission of plans to demonstrate sound, or best practice, forestry. For a while the definition of this was that in the TGA’s “Forestry and Woodland Code” published in 1985. Soon after this, however, the Forestry Commission started to publish its own guidelines of best practice, starting with the vexed question of water quality. There are now guidelines in relation to conservation, recreation, landscaping in the lowlands, landscaping in the uplands, preservation of archaeological features and, soon to be published, sustainable management of soils. To ensure adherence to the guidelines the Forestry Commission’s own Forest Enterprise is having to submit ‘design plans’ detailing future operations to the Forestry Authority. In addition, rather than simply rely on submissions for grants on an operation by operation basis by private owners those with significant areas of forests are to in future be encouraged to submit management plans detailing proposed operations over a ten year period and giving their aspirations for the longer period. Approval is dependent on demonstrating adherence to the guidelines. Furthermore under the appropriate European Commission Directive environmental impact assessments will also be required where the proposal is of a significant area or on a sensitive site. In fact the detail now required on a regular basis when submitting for a grant is very close to that required for an environmental assessment.

In response to its international commitments, and perhaps to provide some overall link to the existing guidelines, the Government published in 1998 “The UK Forestry Standard: The Governments Approach to Sustainable Forestry”, the foreword to which was signed by the Prime Minister. The essential aspects are outlined in the paragraphs quoted below.

“The purpose of the UK Forestry Standard is to set out the criteria and standards for the sustainable management of all forests and woodlands in the UK. It is the centrepiece of a system to guide and monitor forestry. The Standard is linked to the developing international protocols for sustainable forestry. It can be used in the UK as a basis for the development of forest monitoring and forest certification schemes, and for assessing compliance with management certification standards such as ISO 14000 and EMAS.

“Guidelines agreed at Helsinki in 1993 and the subsequent Pan-European Criteria for sustainable forestry must be interpreted to put them in a UK context. International criteria and guidelines are expressed in broad terms which have limited practical value for managers. In choosing criteria for the UK, full account has been taken of existing guidelines and other publications which advise forest managers on recommended practice. The criteria thus developed for the UK are based on the resources attributable to forests: Soils; Water; Air; Trees; Biological Diversity; Workforce; Communities; Heritage and Landscapes.

“The UK Forestry Standard is supported by a number of instruments. These include: The Woodland Grant Schemes, Forest Plans, Forest Design Plans, Felling Licence regulations and Environmental Assessment Regulations”.

Thus the Standard sets out to interpret criteria for sustainable forest management (SFM) at national and local forest management unit levels by providing the necessary indicators. For example for the criteria “forest soil condition”, the national SFM is “forest soil condition is stable or improving towards a more stable condition” for which the Forest Management Unit indicators requires evidence that the potential impacts of cultivation, drainage, herbicides and fertilizers, have been taken into account, that anti-erosion precautions are planned etc.

The Forestry Authority has undertaken to commission a rolling and *independent* programme of monitoring the adherence to, and success of, the Standard.

It is the hope of many inside and outside the Forestry Commission that these indicators, and the commitment to independent monitoring, will provide a basis for certification of sustainable management to the standards set by the Forestry Stewardship Council (FSC), and hopefully to gain their certificate of approval through some sort of agreed protocol. If this is not to materialise some other non-FSC route may be developed that satisfies the retailers currently demanding FSC labelled products. Matters in this regard are developing very rapidly and resolution is anticipated in a matter of weeks rather than months.

7. CONCLUSIONS AND OUTLOOK

Forestry in Britain is a small business but the production from our forests is increasing rapidly. In addition there is rapidly growing acceptance by Government that Britain’s forests are valuable for recreation and conservation. Following a period of often bitter confrontation with those organisations interested in the non-timber benefits of forestry the British forestry sector now seems to be entering into a period of relative acceptance of the many, often conflicting demands placed upon forest managers. This process has been much assisted by developments on the international scene which have helped gain greater political understanding of forestry as a supplier of multiple benefits. Problems remain, not least about certification, but the signs are encouraging.

Britain arguably has a clearly stated forest policy with the detailed amplification and instruments of policy to at least direct and monitor developments. The UK, however, still does not have a forestry strategy that would ensure the long-term delivery of policy and there appears to be no talk of developing a National Forest Programme. The argument seems to be that the current plethora of policy statements and supporting initiatives, including the new UK Forestry Standard, is tantamount to a National Programme. In many regards this is true but whereas there are policy aspirations and draconian means of controlling development it is hard to find a coherent strategy for ensuring development (often policy talk is still about forestry expansion simply as a means of limiting excessive spend on agriculture). The previous government eschewed any idea of a strategy, the present Government appears to have a more open mind.

Perhaps the international drive for National Forest Programmes will resurrect the development of a strategy. Meanwhile, it should be emphasised that the UK has in place remarkably robust means of ensuring sustainable forest management.

List of abbreviations

APF	Association of Professional Foresters
DANI	Department of Agriculture for Northern Ireland
FA	Forestry Authority (of Forestry Commission)
FC	Forestry Commission
FCA	Forestry Contractors Association
FE	Forest Enterprise (of Forestry Commission)
FICGB	Forestry Industry Council of Great Britain
FSC	Forestry Stewardship Council
GB	Great Britain
ICF	Institute of Chartered Foresters
SFM	Sustainable Forest Management
TGA	Timber Growers Association
UK	United Kingdom
UNCED	United Nations Conference on Environment and Development

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Károly Mészáros

Institute of Forest Property Management,
Department of Forestry Policy and Economics,
University of Sopron
Hungary

ABSTRACT

The role of the Hungarian forests and wood became very important both for the society and economy, and society recognized and reflected by means of legislation. The political changes at the end of the 1980s started basic changes in Hungarian forest management reaching to its basic foundation. During the complicated process of change in political system, a basic change in ownership relations is in progress in our forests, and as a result of this change approx. 730,000 ha forests became privately owned. The state owned forestry had to adapt to the economic situation. In order to extensively and intensively develop Hungarian forests, the resources for the afforestation of approx. 600-700 thousand hectares must be provided for. The main thesis of Hungarian Forest Programs can be found in the Forestry law passed in 1996 by the Parliament and the forestry issues of the National Agrar Programme.

Keywords: Countries in Economic Transition; Forest Resources; Forest Policy; Hungary.

1. BACKGROUND**1.1 The economic and natural conditions of Hungary and its forests**

Geographically Hungary is situated in the middle of the Carpatian Basin, its territory makes up to 93,030 km². The *Északi- és Dunántúli Középhegység* (the Northern- and the Transdanubian Mountains) divide the country along a northwestern and south-eastern line, and the mountain ranges are covered by forests. The highest peak of the country is the *Kékes tető* in the Mátra mountains with a height of 1015 meters above sea level. The two biggest rivers are the *Duna* (Danube) and the *Tisza*, their length within Hungarian territory being 417 km and 598 km respectively. The largest lakes are

Balaton, 598 km², *Velencei-tó*, (Lake Velence) 26 km² and *Fertő tó* (Neusiedler Lake) part of which is in Austria with an overall surface of 322 km², of which 82 km² lies in Hungary.

The climate is influenced by three factors: mostly by continental and to a lesser extent oceanic and mediterranean climatic influence. Most of the country's territory is low, hilly and flat plain land. Due to the favourable climatic, terrain and soil conditions nearly 88% of the Hungarian land is considered arable. 56% of the country's territory are ploughlands, gardens, orchards and vineyards, 13% are grasslands, 19% are covered by forests, and 12% remain for other agricultural uses. The country can be divided into six regions from the aspect of forest management. Their forest stand is variable, mostly consisting of broadleaved forests.

The development of the existing forests started at the end of the last century, and management was done on the basis of forest management plans. Prior to this the forested area decreased with the increase of the population and agricultural land. In 1920, the forest area decreased from 7.4 million ha to 1.2 million ha, and what remained were the least productive lowland and hilly forest areas of the Carpathian Basin. To solve this problem, a forest policy has been adopted which prescribed to increase the forest area, above all on the treeless lowland areas to increase the productivity of existing forests and to save on produced and imported wood.

During the last 50 years, the forest land has increased significantly, and the growing stock and increment has doubled.

1.2 Area data

At present with regard to the area – after ploughland – the second greatest line of cultivation is forest. The area under forest management is 1.861.421 ha (1 January, 1996), the forested area with a forest management plan is 1.727.261 ha. As opposed to

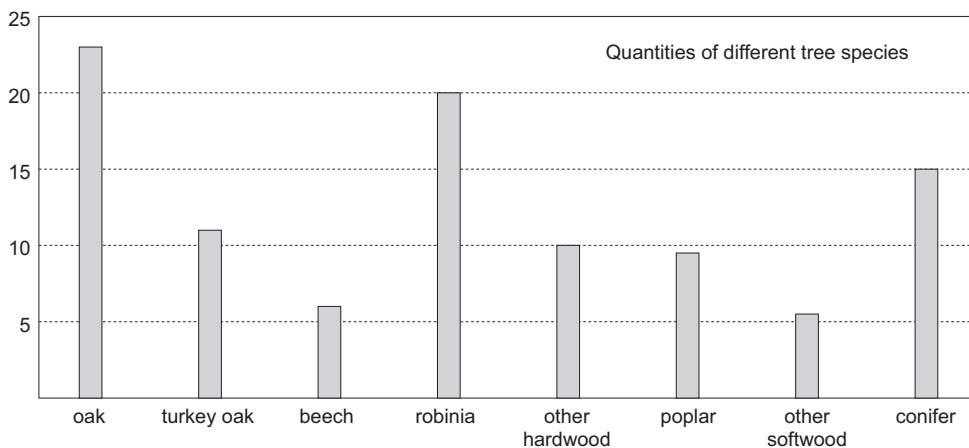


Figure 1. Species distribution of Hungarian forests.

the general European situation 85% of the total forest area in Hungary is covered by deciduous (broadleaved) forests, the area of coniferous forests is only 15%. The most valuable species of the forest stand are beech and oaks, but black locust, poplars and conifers cover a significant area as well.

Close to nature stands cover less than half of the total forested area, despite the fact that their area has not decreased in absolute dimension.

1.3 Growing stock

The growing stock is 314 million m³, its financial value is several thousand million ECU. In recent years, the 150 million m³ of 1945 has more than doubled. The main cause of the increase in growing stock is the large scale afforestation program, and the forest structure transformation implemented as a forest policy principle of great importance, the aim of which was to diminish the broadleaved hardwood stands from sprouting. The growing stock also increased from 1990 to 1998, to which harvesting also contributed, having been left out during the transformation period, aside from afforestation done in this period. 85% of the growing stock (m³) is composed of broadleaved species, where the 26% ratio of oak is significant, and the further order is: conifers 15%, turkey oak 13%, beech and black locust 12-12%, poplar 6%. The great extent of afforestation is the main reason for the great proportion of trees aged 0-20 years (31%) and 20-40 years (29%).

1.4 Health of the forests

As a part the ICP Assessment and Monitoring of Air Pollution Effects on Forests, a monitoring system aimed at measuring the health of the forest, working on a 4 x 4 km sampling grid was established in Hungary in 1987. We can draw conclusions on the health condition of the forests on the basis of measurements taken on 1027 control points. The health of the Hungarian forests has declined considerably in comparison with the first survey of 1988. The draught of the last fifteen years has seriously affected the vital processes of the trees. In the last two or three years there has been more precipitation, however, this has only partly eased the situation. An oversized game population is harmful for the health of the forests, as it makes conditions of forest regeneration even more difficult. The direct effects of air pollution could only be detected in the immediate neighborhood of sources of pollution, which can play a role in the weakening of trees.

1.5 Forest functions

The social functions of the forests have become more and more important for society. The official forest policy acknowledged them, when multi-purpose forestry became general. The first afforestation efforts on the Great Plain in Hungary were also justified by the favourable effects of the forests on public health. Our first forest law of 1879

highlights the protective effects of the forest. The proposal of the Hungarian delegation at the 7th World Forestry Congress of Buenos Aires (Madas, A. 1972) determined the basic functions of forestry, namely wood production, protective and social functions which can appear together, but not to an equal extent. 79% of the area of Hungarian forests is still primarily productive, 18% is protective, 2% is recreational and 1% has other functions.

1.6 Ownership

During the last century ownership and management conditions have changed several times considerably, influencing the productivity and the aims of forestry. Ownership structure changed after World War I. due to the decrease of the Hungarian territory, and after World War II because of nationalization and the establishment of cooperatives and large scale afforestation on agricultural land. The social and economic transition had the last and basic influence on the branch, at the beginning of which two sectors were typical. 69% of forests were state owned (Forest Companies, State Farm Companies, Forest Companies controlled by the Ministry of Defense or by the Water Conservancy), 30% was owned and utilized by agricultural cooperatives. The compensation and privatization processes changed this status, when 730,000 ha of forests (39-40% of the total forest area) were privatised.

State property was privatised in the compensation process. This was implemented in two steps. The first allocations were done on forest areas managed by state owned forest companies until the spring of 1993. As the demands were not satisfied completely by the first allocations, additional allocations were made in 1994-95 after assessing the supplementary demands. By 1995, the first stage of compensation auctions had finished, and since 1995 the additionally allocated forest areas are being privatised.

Table 1. Changes in ownership in Hungary between 1994-1996.

Forest management organizations	1994		1995		1996	
	ha	%	hectare	%	hectare	%
state forest enterprises	949072	55.4	908377	52.8	896355	51.6
Other enterprises	68826	4.0	53509	3.1	55242	3.2
state agricultural enterprises	–	–	25695	1.5	22076	1.3
Water management	–	–	10432	0.6	11004	0.6
Other state forests	–	–	43069	2.5	46936	2.7
Agricultural cooperatives	–	–	190161	11.1	176377	10.2
Private forest	–	–	103581	6.0	153087	8.8
Public forest	–	–	8531	0.5	7958	0.5
in the process of development	–	–	66790	3.9	133165	7.7
Disordered	–	–	309554	18	233734	13.4
Other forest	695036	40.6				
Total	1712934	100.0	1719699	100.0	1735934	100.0

– There is no available information because of the privatization process.

Another procedure of the ownership change was when the ownership rights of the land of the former cooperatives was given to individuals in the compensation process. By the end of the 1980s, approx. 1300 agricultural cooperatives had plots and smaller and greater fragments of forests. By this time, cooperative forest management developed mostly with additional wood processing as well. The individual ownership rights of property owners were assigned by the land delivery committees, which were made up of the owners themselves. The land delivery committees ceased to exist on December 31, 1996, and remaining matters were assigned to the county Agricultural Offices. According to the 1992 Act II, owners could obtain forests (or grazing land) in one piece, undivided. Thus, in case of property proportion ownership there are many owners for one area. In 32.7% of the forest area, which was to be privatised, ownership changes were registered by forest authorities, and an efficient owner circle could start their economic activities. One of the consequences of the forest ownership changes on such an unprecedented scale is that members of the society have become directly interested in matters concerning forest management, as the number of private forest owners numbers approx. 252,000. The ownership changes include a considerable increase in the number of smallholders. In 1996, there were 52,640 smallholders. The specific managed area is 3.14 ha/piece in the case of individual smallholders and 173.37 ha/piece in the case of associated smallholders. One owner acquired property rights at an average of 1.4 places, thus the average parcel size is 1.2 ha, the specific forest area is 1.3 ha/person. This property structure has mainly developed through the compensation process. In case of property proportion ownership of former cooperative forests there is one owner for every 3 ha. The forest area belonging to a smallholder circle unable to operate is significant: 366,899 ha, partly due to the uncleared ownership conditions and partly due to a lack of means for starting the project. It is very dangerous for the forest stand that parts of forest area are temporarily unowned. There is a risk involved in the fact that the new owners do not have appropriate forestry traditions, as the proportion of small private forest properties was even relatively low before World War II, and the descendants of former forest owners formed only a small share of the developing new private owner circle. One of the reasons for this is the privatization of the areas which were afforested within the scope of the large scale state afforestation program.

2. THE HUNGARIAN FORESTRY PRODUCTION

The Hungarian economy turns to a course of growth today. The basic economic structures have already been formed, privatisation has finished, and 75% of the GDP comes from the private sector. The agriculture has survived one of the most serious crises in this century. A crisis is indicated by the GDP share of agriculture, forestry and fishery, and the indexes of the gross agricultural products. The stagnation period prior to the change of the economic structure, the change in the ownership, and the transition of the production structures caused a difficult situation in Hungarian agriculture. The favorable natural conditions (soil, climate), on the other hand, provide a remarkable comparative benefit in the region.

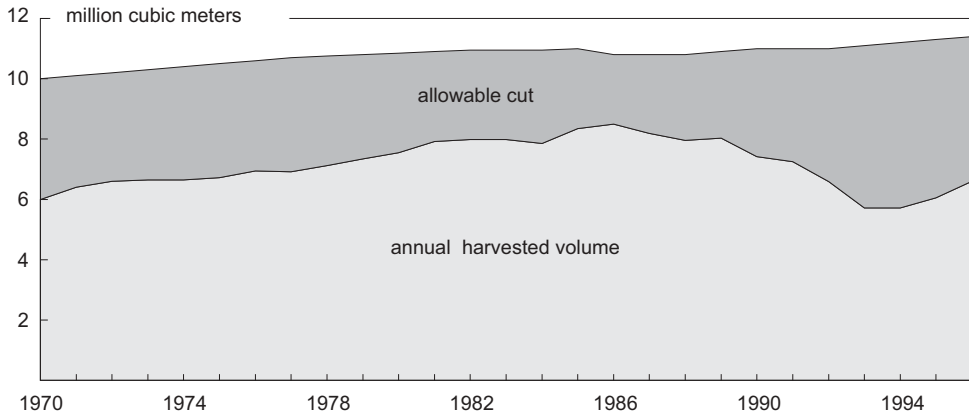


Figure 2. Annual gross harvested wood volume compared to the allowable cut (=100%). Source: Brochure on the forest stand management in 1996. Budapest, 1997.

The share of forestry in the gross agriculture level is not remarkable, the GDP share is almost 1%. In the past few years, forestry production has declined, and only 70-80% of the allowable cut was taken advantage of. The amount of reserves given in allowed cut area and volume has increased. The performance of the state forest management was 88-89% and that of the private forest management was 74-80% in 1995 and 1996. This data shows that the weaker performance of private sector gradually disappeared. The production in private forestry has started, but the unclear ownership relations are still an obstacle to the forest management.

The afforested land area is higher than the area of felling, the amount of the empty land area decreased. The quality of the forests, the area of the forests and the amount of the growing stock increased. The health status of the forest stagnated or the deterioration process slowed down, in some forest types the health status improved.

The most important countries in the Hungarian wood import are, in order of volume, in 1996: The Slovak Republic (7.653 million Ft), Germany (4.023 million Ft), Russia (3.241 million Ft), Austria (2.372 million Ft), Ukraine (1.144 million Ft), and the Czech Republic (1.096 million Ft). The export countries are: Italy (11.915 million Ft), Germany (10.727 million Ft), and Austria (8.826 million Ft). Hungary imports wood and wood products from 108 different countries and exports to 88 countries.

2.1 State forest management

Before the second World War the area of the state-owned forest was minor compared to the total forest area. The share of state-owned forest was 4.6% in 1938. After the second World War, nationalization was carried out gradually, and in 1990, 70% of the total forest area was administered by state forest management. State forest management was determined by the changing regulations, during the political and economical transition,

and as a consequence of this, were the effects of compensation and privatization. During the economic crises, state forest management adjusted to the new situation, as the inevitable internal transition and effects of the surrounding economic situation (market position, fitting to the main movements of the economic transition).

The Act No. LIII of 1992, classifies all state forest enterprises remaining permanent among the entrepreneurial wealth under the control of Állami Vagyonkezelő Részvénytársaság (ÁVRt.), Assets Handling Agency of the Treasury. The state forests belong to the wealth of ÁVRt as well. The Act authorized the board of directors of the ÁVRt to transfer the state forest enterprises over to shareholder companies in 1993 and 94. The transformation was finished in 1994. The forestry shareholder companies were able to improve their financial situation and their management more or less increased the wealth. The recovery of forestry shareholder companies was supported by the organizational changes done during the transformation, and according to the recent wood market trends, the demand is booming.

In 1995, all state forestry shareholders companies remained 100% state-owned and belong to the ÁPVRt (State Holding Company for Handling and Privatizing State Assets) based on the Privatization Act. According to the State Budget Act 109§, the state forests are treasury wealth, the proprietary rights belong to the Financial Minister through the Assets Handling Agency of the Treasury. The modern organization of the state forest management is now taking shape, the modern forms of forest handling, and forest management fitting to public interest came forth.

2.2 Private forest management

There has never been a similar forest ownership structure in the Hungarian history, therefore, the strategy of development is based on the experience of recent years and some foreign experience received, according to detailed evaluation.

The privatization process started 5 years ago and has not yet finished. The privatization on approx. 230 – 250,000 hectares, mostly on cooperative and some state forest has not occurred. These forests are stricken by all the disadvantage of a lack of owners. For this reason, favorable processes have not started yet.

The land property structure in private forest management is fading. The conditions of forest management are worse due to the unfavorable conditions of the private forest stands. In general, the conditions are 30-35% weaker in comparison with the conditions in the state forests. This fact results in a drawback in competition and large amount of extra work in forest maintenance. Forest maintenance is an obligation based on the Act, but mainly serves the public interest, and the support of the forest maintenance is desirable.

The harvested wood material is sold out in domestic and foreign markets. The total annual wood demand in Hungary is less than 5.5 million m³, the composition of which is given in Table 2.

The organizations related to private forest management were established on the one hand under the guidance of the legal regulations, on the other hand, spontaneously due to the deficiency of the legal regulations. The type of the organizations of the private forest management can be: pertinance to the rights of property, silvicultural, purchase-

Table 2. Forest products assortments. Source: National Agricultural Program, Forestry, Budapest, 1997 September. Amounts in thousand cubic meters.

<u>Total cut</u>				
1	saw and veneer log	1194,0		
2	other saw wood	250,0		
3	pitwood	40,0		
4	pulpwood	410,0		
5	other industrial	1130,0		
6	total industrial	3024,0		
7	fuelwood	2297,0		
8	total	5321,0		

<u>Export</u>	total	from EC countries	non EC countries	
1	saw and veneer log	300,0	230,0	70,0
2	other saw wood	4,0	1,5	1,5
3	pitwood	0,0	0,0	0,0
4	pulpwood	300,0	240,0	240,0
5	other industrial	485,0	135,0	135,0
6	total industrial	1089,0	446,5	446,5
7	fuelwood	250,0	50,0	50,0
8	total	1339,0	496,5	496,5

<u>Import</u>	total	from EC countries	non EC countries	
1	saw and veneer log	90,0	15,0	75,0
2	other saw wood	15,0	1,0	14,0
3	pitwood	0,0	0,0	0,0
4	pulpwood	5,0	0,0	5,0
5	other industrial	5,0	1,0	4,0
6	total industrial	115,0	17,0	98,0
7	fuelwood	10,0	2,0	8,0
8	total	125,0	19,0	106,0

<u>Proportion of</u>	domestic use	domestic product.	export %	import %	
1	saw and veneer log	150,0	90,9	25.1	7.5
2	other saw wood	28,0	94,3	1.6	6.0
3	pitwood	0,0	100,0	0.0	0.0
4	pulpwood	10,0	95,7	73.2	1.2
5	other industrial	8,0	99,2	42.9	0.4
6	total industrial	196,0	94,4	36.0	3.8
7	fuelwood	16,0	99,5	10.9	0.4
8	total	212,0	97,0	25.2	2.3

sell, growing-processing, services and representation of interests. These organizations can be non-profit or profit-oriented. Establishing organizations pertaining to the rights of property allowed only to the forest owners. Establishing other types of organizations is not only allowed for the forest owners.

Hungarian private forest management can take advantages of a wide range of organizational and operational possibilities. These possibilities – depending on the circumstance – can be suitable for the execution of the silvicultural tasks adequate to the owners' interest. The interruption in historical experience and organic evolution result in a wide palette that can be advantageous for forming original solutions suitable for the various conditions. In this phase restrictions in selection possibilities would not be recommended, as it would be difficult to forecast the effect of restrictions. Closing different evolutionary directions would be harmful, in particular to the forest.

2.3 Regulatory enactment

The regulation of Hungarian forest management started with forest maintenance. (1426, 1565, 1770, 1838). The regulatory enactment since the last century was a concomitant symptom of the major social and economical changes. Thus, after the Austrian-Hungarian compromise (1867), in 1897, after the end of the first World War (1918), in 1935, after the second World War, the forest Act that fitted to the Communist economical structure born in 1961, and after the last political and economical changes (1990), the new forest Act was born in 1996. We would like to emphasize provisions in effect from the first Hungarian forest Act, Act No. XXXI of 1879: designation of shelter forests, prohibition of grazing; obligatory and systematic use of the management plans in forest management, and establishing the forestry authority of first and second instance. The Forestry and Environmental Protection Act, Act No. IV of 1935, was our first Environmental Protection Act. The paragraphs on state forests management and the association of the forest owners formed the primary conditions of high-level and uncomplicated forest management. Act No. VII from 1961 extended the use of the forest management plans to all forest stands. Act No. LIV from 1996 treats the forest as a complex ecosystem, where the maintenance of forest serves the interest of the entire society. Forests should thus be managed only in harmony with the common interest. The primary condition of the sustainable forestry activities are the detailed regulation of rights and liabilities. A very important part of the Act is the determination of the functions of each forest stand, where the rules of the forestry are in harmony with its functions, to initiate the regional forest planning and keep the obligatory forest management planning. It is an important point of the Act that obligatorily introduces the Domestic Forest Stand Database. Hungary did an internationally pioneer work on the creation of this database. Further paragraphs of the Act deal with environmental protection, hunting and game management. These regulations have important influence on forestry.

2.4 Forest administration

Hungarian forest management works under a specific organizational system established on the basis of the Forest Act, in effect for more than one hundred years. At that time, forest administration was up-to-date on a European level as well.

Forestry is administered under the control of the Földművelésügyi Minisztérium (FM) Ministry of Agriculture. The tasks of the Department of Forestry, an organization of the Ministry of Agriculture, are control and administration. The Állami Erdészeti Szolgálat (ÁESz) State Forestry Service, a publicly financed institution with national competence that is based on the Forest Act, follows the following tasks:

- providing forest management plans district for district;
- carrying out supervisory, financial and account activity related to forest management;
- collecting and evaluating information and statistics on the bases of the ministerial mandate,
- organizing and performing tasks related to the forest protection measurement and observation system;
- keeping records of the forest management units
- if the forest owner, user or the forest manager is not ready to follow the obligations described in the forest Act, his attention is called to the requirements, and secondly, a new forest-user is designated; contributing to the procedure in application for subsidy related to forestry;
- cooperating with the competent local authorities related to landscaping and resettlement.

The State Forestry Service Regional Directorates are specialized agencies which have regional duties. All the changes in forest or forest land, or professional intervention are possible only with the permission of the Forestry Service.

3. AIMS AND STRATEGIES

The system of aims of Hungarian forest management are determined within the framework of a National Agricultural Program. For the realization of the multifunctional agriculture the following goals must be met:

- the improvement of production competitiveness, increasing the productivity, to fulfill the national food demand mainly through national products,
- creation of equal opportunities for the agricultural population regarding work and capital income,
- utilization of natural and economic resources by economical and export oriented production.
- contribution to the population keeping potential of country and improvement of the social condition of the population,
- coordination of the social interest involved in production, and protection of natural environment.
- the development of the human resources of agriculture and support of the agricultural innovation.

Within these aims, forest management accepted a separate part of the program. The aims of national forest management are:

- preservation of the characteristics of Hungarian forest management,
- building on the Strasbourg and Helsinki decisions of ministers, responsible for forests,
- safe and expanding satisfaction of the complex economical and social claim to forest long-term,
- harmony with protection of environment and nature, land utilization and soil protection.

It is necessary to consider afforestation as a national task. The forest area relative to productive land must reach 25-27% in the future. Gradually need to increase. Afforestation must be increased at a rate of 20,000 hectare/year to be reached after the year of 2000.

4. FACTORS INFLUENCING FOREST POLICY AND PARTNER ORGANIZATIONS IN FOREST POLICY

The social basis of the forest policy has substantially changed in the past 8 years with the appearance of private forestry, the interest of society increased in the matters of forestry and by means of ownership relations. Considering the approx. 250,000 owners, nearly 10% of the population came in contact with forestry. Among these owners, there is a distinction between forest owners living in towns and those in rural areas. The members of society became more sensitive to environmental problems, and to the health of the forests. The use of the infrastructural services of the forests became common in the last decades, and the new users and the new owners are in many cases refusing to allow people to visit their forests. The economic crisis was disadvantageous for the protection of the private ownership, and with the decreasing living standard the so-called “social crime”, crimes committed as a livelihood arose, especially in the case of forests.

Aside from the traditional special associations (Association of Hungarian Foresters, Union of Forestry Workers), both the state owners and private owners have their organizations for the protection of their interests. The Union of Forest Companies represents the interests of forest companies in the Forestry Board of Representatives of Interest, where other organizations such as the Agricultural Chamber, the Association of Agricultural companies and the Association of Common Forest Owners and other organizations of private forest owners take part.

The interest of the “professional” environmental protection organizations and the different “green” organizations also turned towards forest management. The nature protection movements heavily criticised forest management, but also the “professional” nature protection.

All these factors improve the public relations activity of forestry. Organizations protecting interests developed a marketing program with the slogan “natural wood” to

promote forest management. The Forestry Office of the Ministry of Agriculture published materials aimed at the young generations. The state-owned forest companies also donated considerable amounts of money to projects popularizing forest management. In 1997 they launched the program “The Week of the Forests” where foresters gave information about forestry to the students mainly in rural elementary schools.

5. CONFLICTS BETWEEN SECTORS AND COORDINATION

5.1 The Agrar sector

Within the connections of forest management, the connections of agriculture and forestry play an important role in terms of land use, where the afforestation of approx. 700,000 ha former agricultural land is anticipated.

5.2 Wildlife management

Due to its advantageous natural conditions Hungary has an excellent wildlife population, which represents a considerable natural value. The high density of game population leads to conflicts both on areas of agriculture and forest management where the density of the population is not fitting to the natural capacity of the habitat.

The number of hunting districts increased with the new law on hunting to 1145, as opposed to 875 in March 1, 1997, and the average district size decreased from 9180 ha to 7020 ha, meaning that with hunting rights assigned to land ownership, more and smaller hunting districts were formed. The number of leased districts increased from 757 to 779, excluding 120 forest company-owned and 366 privately owned districts. In Hungary, there are approx. 50-55000 Hungarian hunters, approx. 20-22,000 foreign hunters and 3,000 “professional” hunters. The interest protection capability of the “hunting society” is very strong. This group has a stressed importance in making forest policy; we observed considerable conflicts of interest in recent years, especially severe damage caused at times by wildlife in forest stands.

5.3 Nature protection in Hungarian forests

Nearly half of the Hungarian forest is under nature protection, and 9,5000 hectares were designated for forest reserves, whereas a total stop of forestry activities was imposed on the central areas. 7.6% of the country’s territory is under protection by law, from which there are 202 protected areas of national importance with a territory of 670,621 ha, 858 of which are of local importance with 32,964 ha, and of these 327,178 areas ha is forest.

A source of conflict is the primary function and the art of regeneration of the protected areas after passing the law on nature protection and the prohibition of clearcuts on some areas. Sources of local conflicts are:

- limitation on the areas of clearcuts (max. 3 ha) and regeneration cuts (max 5ha)
- the avoidance of monocultures on protected areas where possible
- final cuttings only allowed near the biological rotation age (or close to this age).

The definition of biological rotation age allows for a wide range of ages for agreement. As the law on nature protection extends the definition of the protected forests to the areas of National Parks, nature protection areas and landscape protection areas representing nearly half of the forest covered area of the country, forest management in these areas presents a serious task to the Hungarian forest management, and requires considerable financial resources.

5.4 Forestry aspects of the connection to the EU

The EU summit in Madrid in 1995 suggested that agricultural structural programmes, be financed by the ECU. With this suggestion, the Ministry of Agriculture developed a package of measures in accordance with the Agricultural Strategic Plan of the ECU and the Modernization Program of the Hungarian Government. In the above-mentioned document, there is emphasis on new afforestation as a measure for the development of the ownership structure. In the plan for measures elaborated by the Ministry of Agriculture there is a separate chapter dealing with afforestation. This material was passed on to Brussels in 1996.

We consider forest management as an essential part of agriculture, and in this system, forest can play a unique role in rural development, alternative land use and nature protection.

Production of environmentally friendly wood is not under any preference or restriction in the EU, thus, in this area, quality marketing can be accomplished in harmony with the European conventions.

6. CONCLUSIONS

The political changes at the end of the 1980's started basic changes in Hungarian forest management reaching its basic foundation. During the complicated process of change of the political system, a basic change in ownership relations is in progress in our forests, and as a result of this change, approx. 730,000 ha forests became privately owned. The possibilities of the state-owned forestry were determined by their ability to adapt to the new situation, which meant a need for an interim change and the taking of effects of the outside world into consideration. The legislation, reflecting the social changes had to be improved to a level adequate to international standards. The role of the forests and wood became very important both for society and the economy, as society recognized and reflected by means of legislation that:

- keeping up forest ecosystems, nature protection is inevitable for the improvement of the quality of human living standards,

- multiple functions of the forests, their protection, recreational functions, wood and other products are renewable and continuously available to mankind,
- nature protection and economical importance of wildlife and hunting is increasing,
- the environmentally friendly wood will become increasingly important as a raw material in the next century, and makes the human environment more enjoyable.

Nearly one-fifth of Hungary's territory is covered by forests. The 315 million m³ growing stock is increasing by 10 million m³ annually, and the annual cut is approx. 6-7 million m³. The accumulation of growing stock has occurred on for decades. 85% of the forests consist of broadleaved species, and 15% are conifers. More than 50% of the forested area is covered by native species. The proportion of the state owned forests is 60%, the private forest share is 40%. State-owned forests are managed by 22 shareholder companies, the organizational forms of the private forestry are in development and need support. Since January 1st 1997, there is a unified system of forestry management, which is responsible for forest management planning and forest inspection. According to the forestry law passed in 1996 by the Parliament, forestry measures should be carried out in accordance with ten-year forest management plans. Forestry is an integral part of the agrar sector in which the following measures should be stressed in the next century according to the National Agrar Programme and by recommendation of the Forestry Committee of the Hungarian Academy of Sciences:

In order to extensively and intensively develop Hungarian forests the resources for the afforestation of approx. 600-700,000 hectares should be provided, partly from domestic resources and possibly with the help of the European Union. The forest cover of the country should be increased to 25%. The quality of some stands should also be increased by applying close-to-nature technologies.

- the application of differentiated forest management practices by different forest districts should also be encouraged.
- the quantitative development of wildlife by wildlife districts should also be coupled with the development of the quality of wildlife and with the protection of its genetic heritage.
- the quality of forest products and services should be increased with respect to the ecological, work force and market conditions.
- the financing and support system from the side of the state should be developed in order to fulfill the tasks of forestry concerning common interests.

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THE STATE OF NATIONAL FOREST PROGRAMMES IN ITALY

Giorgio Corrado and Maurizio Merlo

Institute TESAF – Section of Economics,
University of Padua
Italy

ABSTRACT

This paper outlines Italy's experience in implementing the 1988 NFP (NFP), a very extensive policy document covering all possible forest issues, though focused on Forest Stewardship. The two main shortcomings of the plan were given by the uncertain institutional relationships between State and Regions coupled with poor financial support. To make the NFPs' position even weaker, financial resources for forestry became available from other sources by means of other channels (Ministry of the Environment, Public Works, Local authorities, the EU). It is therefore argued that a new NFP, or National Forest Guidelines, should be part of a higher system of programming. Compliance with EU policy developments should also be taken into account.

Keywords: National Forest Programmes; Italy

1. INTRODUCTION

1.1 Ownership

The Italian forest area is 8,6 million hectares (ISAFMAF 1988) of which 66% is private and 34% public (State, Regions, Municipalities and Common Properties) (Figure 1). The most productive, better managed forests able to achieve uneconomic value belong to the public sector, whereas private forestry is typified by fragmented plots, often abandoned in mountainous and hilly areas. The National Forest Inventory shows that 60% of forests are *predominantly* managed for production, 34% for protection, and the remaining 6% for recreation. The term production must be seen, however, according to the Italian understanding: *predominantly* means forests *also* managed for timber production. In fact, the 1985 Landscape Act (n. 431/1985) states that all forests play, above all, an environmental role. Cutting is thus allowed as far as

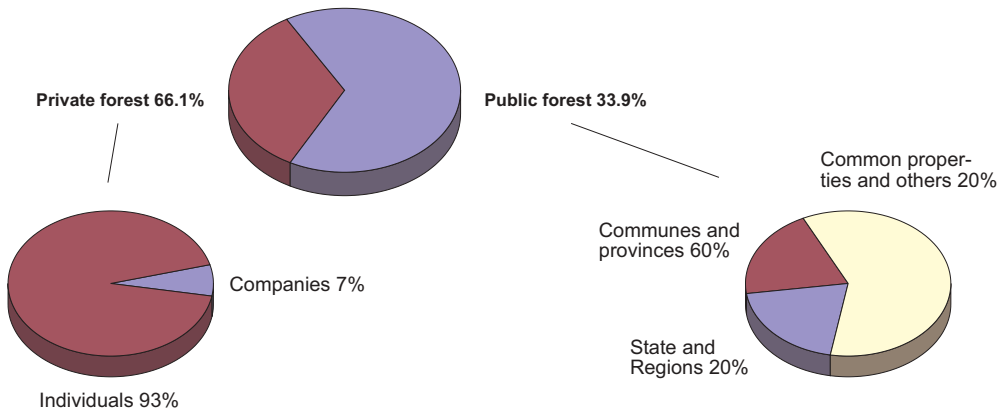


Figure 1. Ownership of Italian Forests, after ISAFA – MAF (1988).

it is useful for the ‘care’ of the forests, with the exception of poplars and other plantations, of course. It is significant that removals (approx. 8 million m³ if poplars are excluded) make up one-third of current growth, some 25 million m³. This makes an average exploitation per hectare of approx. 1 m³/ha. The low level of removals is due to both forest natural capital conservation (growing stock increase) and forest abandonment, particularly private forests. The reason for abandonment is often due to the high costs of exploitation (see existing legal restrictions and imposition of selection cut) and lack of adequate size of forest plots and enterprises.

1.2 Forests and the economy

The weight of forestry in the Italian economy is almost nil in market monetary value – 0.05% of the GDP. Nevertheless, timber-based industries including furniture, timber constructions and pulp/paper represent one of the main sectors of the Italian economy, accounting for approx. 4.5% of GDP, 4.7% of total employment and 13.2% of industrial employment (ISTAT various years). Table 1 shows that the value of forest products

Table 1. Components of timber industries production value. Source: ISTAT 1991.

Timber industries production value	100.00 %
• intermediate timber production	34.18 %
• labour	17.06 %
• forest products	3.40 % in 1985
	7.70 % in 1978
	9.50 % in 1968

amounts to 3.4% of the total value of the timber industry today (ISTAT 1991). The share of forest products in the furniture industry (1.04%) is even less significant. 'Intermediate timber products' (FAO various years) include imported timber – approx. 80% of Italy's consumption. The timber-based industries are more closely dependent on foreign forests, except the poplar-plywood industry and, to a lesser extent, timber for constructions in Northeast Italy. This is, however, a basic feature of the economy of the entire country, which is almost completely based on transformation of imported raw materials ranging from metals to energy. Thus, high import of timber is not special, but the norm compared with other Italian industries.

When welfare and the tourist industry are taken into account, the situation is completely reversed. Forests become very important to the GDP and to the quality of life, and people are well aware of this due to their obvious benefits. Indirect market effects are widely recognised. 'Hedonic pricing' of houses near woods shows this kind of effect. Input-output tables outlined at the local level confirm the role played by 'green chains' based on tourism, particularly where parks and areas of 'outstanding natural beauty' have been designated (Casini 1993). It is interesting to note that forests and timber processing industries can also represent a part of these 'green chains' where solid wood furniture and crafts such as timber sculptures are concerned. Local production in these areas is stimulated by the large number of visitors, as shown by Fodde (1995).

1.3 Forests and society

The basic Forest Law of 1923 (Decree 3267) based on forest conservation for watershed management, and the 1985 Landscape Act, solely aimed at forest conservation, would not have been proposed and passed if politicians, administrators, and the people as a whole, were not fully convinced of their welfare benefits. Forests have certainly been able to draw the attention of people, decision-makers and other stakeholders. It is, however, also argued that this attention is often emotionally linked to certain natural catastrophes such as landslides, floods and forest fires which are fairly common in Italy in the dry summer and winter seasons.

How much the importance of forestry is reflected by budget expenditures is difficult to quantify, given that forests have been able to draw funding from various financial sources. For instance, the State and its Administrations (agriculture-forestry, environment, public works and watershed management, labour and employment, rural development) allocate resources to forests. Since the regional reform of the 1970s, regions have started to play a key role. Here again, different Administrations provide financial resources to forests and forestry. Local authorities and the Authorities of individual Parks/Protected areas also make interventions sometimes far from trivial in financial terms.

In order to quantify interventions, data processed by INEMO (1987) and INEA (1994) are shown in Table 2. Public expenditures budgeted in the early '80s were approx. 60 ECU per ha of forest, reaching the highest value per ha in Sicily (over 300 ECU/ha), a region which is poor of forest cover, with serious rural unemployment. The region with the highest percentage of forests (Trentin-South Tyrol) presented a public

Table 2. Forest public expenditures budgeted¹ by individual Regions during the 1980s and 1990s per hectare of forest² and land (current values in ECU³).

Regions	1981-83		1991-92	
	ha/forest	ha/land	ha/forest	ha/land
Piedmont	18	4	43	11
Val d'Aosta	93	21	60	14
Lombardy	19	4	25	5
Trentin South Tyrol	45	20	39	18
Veneto	116	17	27	4
Friuli Venezia Giulia	21	5	17	4
Liguria	16	8	52	27
Emilia Romagna	82	14	51	9
Tuscany	22	8	27	10
Umbria	25	8	39	12
Marche	119	19	62	10
Latium	9	2	21	5
Abruzzo	81	16	87	18
Molise	65	9	95	15
Campania	102	21	-	-
Apulia	257	17	-	-
Basilicata	100	18	125	4
Calabria	38	11	32	10
Sicily	339	28	614	52
Sardinia	52	8	97	19
Italian average	59	12	61	14

Source: Inemo 1987 and Inea 1994

1 Budgeted expenditures are generally higher than actual expenditures, at times 100%

2 Forest area is referred to as ISTAT: 6.4 and 6.7 million hectares, not to the Forest Inventory 8.6 million hectares (ISTAT certain years and ISAFMA-MAF 1988)

3 1 ECU was rated 1,500 lira from 1981 to 83 and 2,000 lira from 1991 to 92

expenditures per 3 hectare of forests well below the national average. In the 1990s, expenditures seem to have remained around the same value in ECU, whereby inflation should be taken into account. In view of the statistics, it can be deduced that more has been spent per hectare of forest in regions less endowed with forests, a phenomenon fitting usual human behaviour: scarcity enhances demand and willingness to pay.

The expenditures include all public interventions – from forest stand improvement to watershed management – passed by means of the regional administrations, e.g. various EU subsidies. Whereas expenditures made directly by the State, or by the local authorities are excluded. It must be noted that the data refers to investments such as watershed management, conversion of coppices to high forests, and incentives for more rational management/stewardship such as the design of management plans. The overall data on public expenditures can be compared with public benefits of forests measured according to various factors such as travel cost, contingent valuation and Hedonic pricing (Dubgaard et al. 1994). Benefits are often well above public expenditures per hectare of forest.

Forest expenditures have been particularly favoured by politicians/administrators due to their ability to activate local resources immediately, particularly less skilled workers with various handicaps. Public support of employment of drug addicts, drunkards, long standing unemployed in forests is far from an exception. However, the capacity to create a local sustainable economy has yet to be demonstrated. Trigilia (1992), a well known sociologist from the University of Palermo, has shown that development has taken place more soundly in Southern Italy where regional policies have not been operating. It could, therefore, be that regional forest policies aimed at alleviating the social conditions of rural areas have prevented more sound and sustainable rural development. In several cases, however, expenditures on forest stewardship is helping the sustainability of tourism and local wood crafts, together with forestry.

2. BACKGROUND

2.1 Legal and administrative structures: the Forest Law and the 1988 NFP

Forest activities are legally regulated throughout Italy by means of the mentioned Forest Law of 1923 (Decree n. 3267). The Law was primarily aimed at watershed management and soil conservation. 7.6 million hectares of forests i.e. 89% of forests (ISAFMAF 1988), were designated and subject to the so-called 'hydro-geological bond', prohibiting changes in land use and imposing specific management practices: selection felling, uneven-aged and multi-specific stands, natural regeneration (as far as is possible) etc. The result is nature-oriented forest management which has recently applied to all Italian forests by the 1985 Landscape Act, making timber exploitation the exception rather than the rule in forest management.

The 1923 Forest Law also touches upon issues such as afforestation, consortia among forest owners, forest management and exploitation rules, the social role of forestry in the rural economy and forest industries. Law enforcement by means of forest policing was also addressed. There are no doubts that it was a good law, as was unanimously agreed upon by the forestry profession, the administrators and those responsible for its legal implementation (Carrozza 1988; Schmiedhofer 1998). After the regional reform of the 1970s, the main principles of the 1923 Law were incorporated – often without substantial changes – into the different regional forest laws – 8 regions with 'ordinary' autonomy (devolution) of 15 have drawn up their own Forest Law (Corrado 1998). The same has been done for 3 of 5 regions with 'special' autonomy.

Since the 1970s, some circles have demanded a new updated National Forest Law able to integrate emerging environmental/recreational issues. Various propositions have been made, one for instance by the Italian Academy of Forestry (1984). However, the decentralisation process, the primary responsibility given to regions in forests matters, have prevented the formulation of a new National Forest Law. This favoured the inclusion of forests in the Landscape Act of 1985, under the jurisdiction of the Ministry of the Environment, whenever environmental values were at stake. The results was that all forests are completely governed by Act, and its few lines/indications devoted to forests. It is certainly a deterioration compared to the comprehensive nature of the

existing 1923 Forest Law. At times ludicrous, misunderstandings have been widespread, for example, the environmentally oriented selection cuts, have been seen by certain courts as equally applicable to poplars and other short rotation plantations aimed solely at timber production. This has often prevented new forest investment, as clearly shown by applications for EU Regulation 2080, and only part of available funds have been used.

The inability to update the national Forest Law, given the new regional context, led to a NFP (MAF 1988) which should have been the main policy document for forestry and for the coordination of various interventions on forest land, forestry and forest-based industries. It was drawn up by the Ministry of Agriculture and Forestry, approved by the Inter-ministerial Committee for Economic Planning and published in the Official Journal of the Italian Republic – Supplement No. 55 from the 7th of March 1988, 10 years ago. The document is very extensive, and covers all possible forest issues, although focused on ‘forest maintenance’ – better translated by Forest Stewardship philosophy. It was certainly a clear analysis of forest problems, well articulated and up to date. To a large extent, the idea of forest sustainable management was well-incorporated in the plan. The 1988 NFP has also tried to coordinate, and organise all financial means aimed at supporting forests and forestry. The final chapter was in fact devoted to defining public expenditures.

The two main shortcomings of the plan were promoted by the uncertain institutional relationship State-regions coupled with poor funding. The provisions available in the plan were rather limited compared to the country needs – some 100 million ECU available for only the first two years of implementation. The resulting sum assigned to individual Regions was thus very little, and – quite understandably – the regions, given the loose institutional relationship, lost interest in the NFP. As shown in Table 3 presenting the follow-up of the NFP, only 8 Regions produced regional plans according to the national plan directives. Remarkable is that the region which budgeted the largest sum for forestry was Campania, one of the two preparing a forest plan independently from the national one.

To make the position of the NFP even weaker, financial resources for forestry became available from other administrations (Ministries of the Environment, public works, local authorities, etc.) or from the EU in the 1990s, and many regions started a dialogue with these more promising institutions. However, these other sources had their own channels, requirements, and were certainly not obliged to follow the NFP indications. The result was an extreme dispersion of forest interventions, the opposite of the aim of the NFP, defined as the ‘song of the swan’ of Italian Forest Centralised Administration. If one lesson can be learned it is that NFPs cannot function when the relationship between the State and the regions are not clear due to of institutional shortcomings, and financial provisions are not made available. The result is that the NFP drawn up in the 1980s by the State, and the subsequent Regional Plans have been forgotten as seen in Table 3.

Institutional arrangements in the forest sector are such that the State and its Forest Administration still have primary responsibility for forest police, fires (when aircrafts are involved), statistics, and of course the international relations, particularly those related to the EU and International Conventions. General directives on forest policies and coordination should also be the responsibility of the Central Administration, and

Table 3. The follow-up of the 1988 NFP with reference to the 15 regions with 'ordinary' autonomy devolution.

Regions	Regional Plans drawn up according to National Plan	Regional Plans drawn up independently from the National Plan	Financial Provision of the plan (million ECU)	Years of the plan validity
Piedmont	no	no	-	-
Lombardy	yes	no	12	-
Veneto	yes	no	...	5
Emilia Romagna	yes	no	...	-
Liguria	no	no	-	7
Tuscany	yes	yes	...	-
Umbria	yes	no	10	3
Marche	no	no	...	-
Latium	yes	no	...	-
Abruzzo	no	no	-	-
Molise	no	no	-	-
Campania	yes	yes	700	10
Apulia	no	no	-	-
Basilicata	no	no	-	-
Calabria	yes	no	25	4

Source: Corrado 1998

this justified the establishment of the 1988 NFP. The Central Forest Administration acts by means of the *Corpo Forestale dello Stato* (CFS State Forest Corp), a police force (approx. 8000 men and women) under the Ministry of Agriculture and Forestry, now the Ministry of Agricultural/Forest Policies. The debate around CFS has been intense since the regional reform. Its status as a police force has allowed/prevented assignment to regions and justifies its remaining under the National State. The debate is still intense. Now CFS mainly works by means of agreements signed with regions, parks and other local authorities. The situation is rather diversified, to say the least, and certainly far from clear. It seems unavoidable, however, that part of CFS will be passed over to individual regions while the rest will assume a role of Environmental Police Force under a National Ministry, most likely the Ministry for the Environment. A 50/50 'Solomonic' division of the CFS seems most likely the result. A decision is still pending. The CFS, or whatever it will be named, remaining under the central State jurisdiction will, in any case, assume a greater role whenever Court cases need environmental investigations by jurisdictional police.

Relationship with Regions are such that the Ministry is often consulted for Agricultural/Forest Policies and to the Ministry of the Environment. Implementation of policies is, however, fully left to the regions except situations where policing is required. The various short-comings of policy actions which go beyond consultation, was shown in Table 3 by the results of the 1988 NFP implementation. It must be admitted, however, that when very serious problems must be solved, and 'subsidiarity' is needed, solutions are found. Forest fire coordination plans being of crucial interest,

and able to mobilise the media and the people, is a field where coordination State/Regions/Local Authorities is effective. Another field is the application of EU Regulations. For instance the Forest Regulation 2080 has been coordinated by the Ministry and fully implemented/managed by the Regions. In other words coordination State/Regions can work when a real problem arises (fires) or something of great importance (financial resources like those of the EU) has to be invested in.

Certain regions have chosen further devolution to local authorities of lower levels, for instance mountain communities formed by associations of municipalities in mountainous areas. They can be responsible for forest management and, in certain cases, even the administration of forest incentives. Forest police functions have also been delegated to Regions with 'special statutes': Trentin-South Tyrol, Val d'Aosta, Friuli, Sardinia and Sicily, being permitted by the Italian Constitution. The current debate on a possible future Federal State will certainly increase devolution of forest administration to Regions/States, and perhaps to Local Authorities/Communities. Incidentally, there is certain evidence that most successful multi-purpose forestry is achieved by Common Properties, that is, Local Communities – at least in the Alpine Regions.

3. STRATEGIES AND TARGET: POLICY FORMATION

The vision for forests and forest-related activities can be called policy formation. The term 'formation' is much wider than 'formulation', the latter being limited to the preparation of 'systematic statements' of principles in legislatures, administrative agencies and various types of committees, whereas policy formation involves 'things that happen in a society before formulation (Worrel 1970) perhaps while the old policy is still in effect. Various administrative levels (national, regional, local), various sectors of the economy (agriculture, industry and trade), and various social groups/lobbies taking an interest in forestry (conservationists and environmentalists, timber industry, tourist industry, forest owners, farmers, hunters, sport associations, etc.) are concerned with forest policy formation. Qualitative strategic guidelines are often the results of a political debate well reflected in the media. This was the case of the NFP thanks to communication possibilities available at the time at the Ministry of Agriculture and Forestry. In addition, the 1985 Landscape Act certainly reflected public opinion pressure for conservation; unfortunately the forest establishment taken by its own forthcoming plan almost ignored the formation of the Landscape Act. Different was the case of the formation of the Regional Forest Plans (Table 3) almost ignored by the media. Interesting, however, was the analysis of the objectives chosen by the regional plans. The following items were given more importance: growing stock improvement, watershed management, and training (Corrado 1998), the first two objectives indeed representing a continuation of existing policy trends. Training it was something influenced by the unemployment situation, and by funds made available by various sources.

Quantitative operational measures, sometimes called policy formulation, is now restricted to more narrow circles, whereas technical knowledge, financial and economic

interests, if not lobbies, can have a more definite role. In Italy, at least during the last decade, the environmental lobbies have been fully integrated in these closed circles, and have a say in all measures. For instance the timber-based industry, very close to end consumers, cannot afford criticism by the public and by environmental organisations. Indeed, in order to improve public relations and its image, this industry sometimes takes the lead, at least in words, in environmental processes as shown by certain actions towards forest certification, e.g. promotion of meetings and conferences, media information on the role of timber and forestry. It can be seen in industrial and trade promotion initiatives such as ‘*Legno & Legno*’, ‘*Vero Legno Naturale*’ etc. aiming at consumer information on wood quality and its environmental benefits – see the advertising campaigns recently launched in the mass media.

3.1 Gaps between policy goals and reality

There is no doubt that the management of large tracts of forests in Italy fully reflect the wishes, vision, goals and objectives of Italian society as a whole, as is the case of Alpine forestry, parks and conservation areas in various part of Italy. Local authorities, particularly in tourist regions, are very careful in respecting public wishes and demands. However, gaps can be seen in several other contexts. Management plans are applied to only some 40% of Italian forests, notwithstanding financial support considered by the majority of regions – 10 of 15 of ordinary autonomy (Corrado, 1998). The small plots of private forests are excluded and remain only subject to the Forest Law and the Landscape Act. Action within management plans of homogeneous forest areas owned by large number of proprietors are still experimental see ‘*Piani riordino forestale*’ (Del Favero et al. 1988). In certain contexts and regions there are still active lobbies aiming, above all, at draining subsidies for a supposed ‘productive forestry’ that has never been put into action (e.g. Progetto Speciale 24, Act 125/1975). Large tracts of coastal forests are often neglected, and blighted by unregulated access, while lacking basic maintenance and surveillance (e.g. garbage collection, dustbins, picnic sites control, etc.). The millions of hectares of abandoned coppices and agricultural land, now classified as forest by the 1985 Forest Inventory (ISAFMA-MAF 1988), are ‘grey’ areas where it is difficult to say if anything is happening. The only thing certain is that private forest owners (66% of total forest area) have lost interest, while public owners often lack financial resources and willingness to invest in forestry.

3.2 Policy tools

The Forest Law of 1923 (Decree 3267) was mainly based on mandatory tools, i.e. forest protection, obligations to respect certain land uses and practices, prohibiting the conduct of others, etc. The law was enforced, whenever necessary, by means of forest policing. Certain forms of forest incentives, above all tax relief, extension services and other advantages were also considered, and applied. Various premiums were awarded, for example, whenever forest management plans were adopted and consortia amongst landowner established. In general, however, restrictions to forest management did not

consider any form of compensation, let alone incentives intended as compensation plus some profit for those accepting to join a certain programme. It was argued that excessive indiscriminate applications of mandatory rules and bonds, aimed at protecting the interest of the general public, has led, particularly after the 1985 Landscape Act, to further discouragement of active forestry and in many cases definitive abandonment of forests. It is questionable whether this non-management can be seen as conservation of forests, or rather as a sort of Hardin's *tragedy of the commons*, i.e. abandonment of a public good due to lack of individuals' interest in its conservation.

Financial support to forests, in exchange for its various public benefits, represents a more recent, voluntary tool aimed at stimulating forestry avoiding disaffection, typically by means of various compensations and incentives considered for stimulating the production of environmental goods and services according to a Pigouvian internalisation of positive externalities. Measures taken by individual Regions, Park Authorities, Local Authorities must be mentioned. In recent years, however, it has been the EU that has taken the lead in using/promoting these tools of particular importance being Regulations 2080 and 2078. Tools based on transformation of public Recreational Environmental Goods and Services into real Market Recreational Environmental-Products, paid for by the consumers are voluntary, now gaining momentum as shown by case studies carried out in Italy in the context of a EU FAIR project (Mantau et al. 1998). These measures follow a Coasian rationale, and answer the OECD call for a beneficiary pays' approach (OECD 1996).

4. STAKEHOLDERS AND ACTORS

What can be called complementary, or persuasion measures, have also been considered by forest policies. Development of extension services and the new orientation of regional and national Forest Services, have greatly aided this approach. It is, however, the media that is now playing a major role, first in terms of general information, and technical orientation via the specialised press. In this field, Forest Services, particularly in certain regions, have proved to be rather effective, for example, the participation of forest administrators in TV programmes (e.g. *Linea Verde*), integration of well-known athletes in the CFS, TV serials centred on forest officers and the presentation of forestry and forests at environmental societies and schools.

The picture of forest-related stakeholders/actors both public and private is complex and dynamic. Figure 2 tries to outline the situation.

Compared to recent years (Pettenella 1994), certain public stakeholders/actors have lost importance (e.g. the Ministry of Agriculture and Forestry), others have disappeared (the Agencies for Forest development in Southern Italy), whereas others have gained importance (e.g. the regions, the Park Authorities, the Ministry of the Environment). In the private sector, the various Trusts, Amenity Societies related to forests, have gained importance. The say of industry and trade organisations has remained fairly stable, while that of land/forest owners has declined.

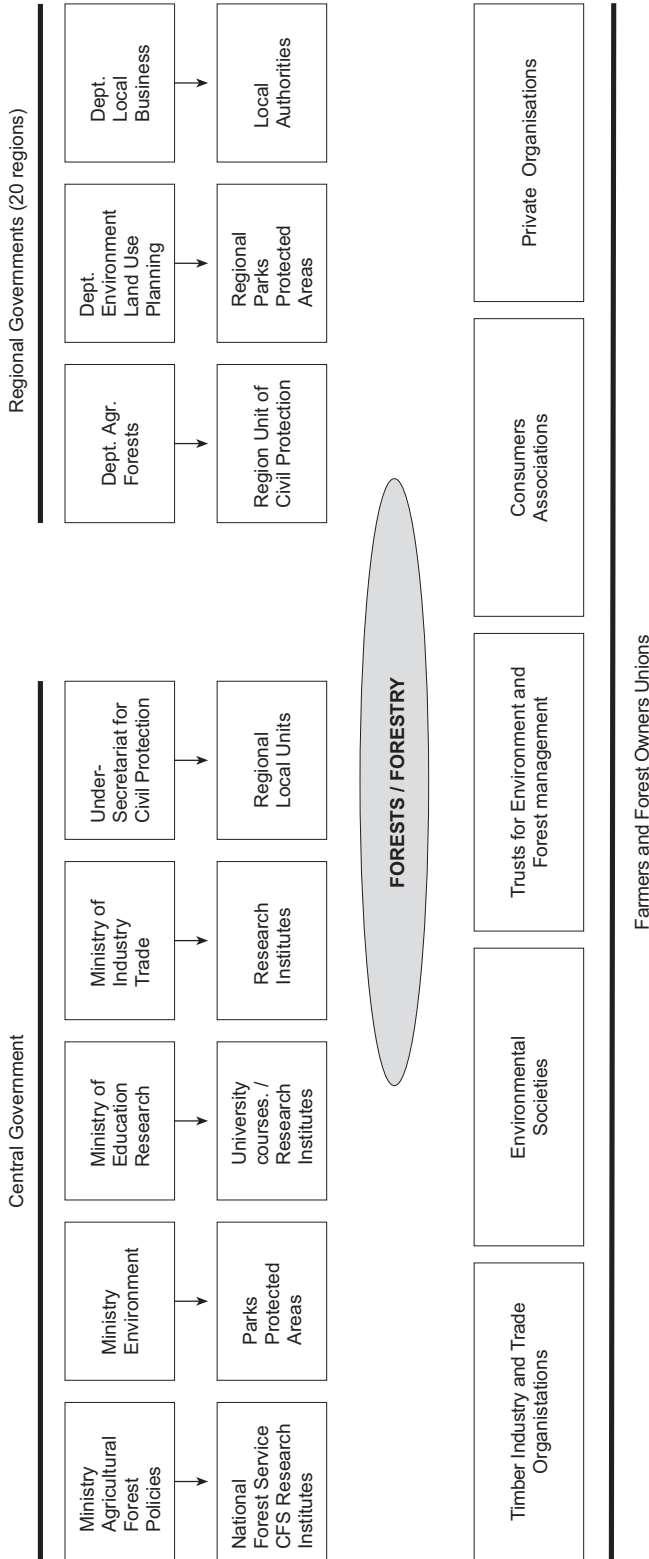


Figure 2. An outline of Italian forests stakeholders and actors.

4.1 Participation

As far as environmental/recreational goods and services provided by forests are concerned, a broad base of society is involved, thanks to various participation processes. Land use planning by Local Authorities as well the definition/planning of Parks, include statutory policy processes, where specific channels have been designed to make participation possible and to allow for the formal involvement of people. Another institutional channel is that linking farmers/forest owners interests, organised as unions, and recognised lobbies. Their weight is, however, minimal, with a basis linked to traditional forest activities.

Industry and trade lobbies (timber, paper, etc.) are also interested in participating in forest policy formation. They have always theoretically supported conservation processes, useful to their market image. In practice, 80% of the timber used by the industry originates from foreign forests. With the exception of poplars, the timber-based industries, are not greatly affected by Italian forest policies. If an alliance can be recognised, it is between environmental concern and marketing of wood-based products used by the timber industry advertising/communication tools. Another alliance has been developed by conservationist and land/forest owners trying to impede the access of hunters, and other forms of high-impact recreational activities. The alliance, inconceivable in other countries, owes its existence to hunting property rights owned and sold by the State, not by the forest owners. A specific referendum against hunting has, however, not reached the demanded quorum. It should be noted that hunters do not only belong to the 'elite' but are well distributed amongst the social strata, particularly, within the rural 'working class'.

The leading public authorities able to determine forest policy-making are those outlined in Figure 2. Here again, we have the point that environmental interests have gained importance, while agricultural/forest interests have lost. This is reflected both in the public administration and private sector groups. A further point is that forestry in itself is now far from being the well-identified subject it was a few decades ago under the Ministry of Agriculture and Forestry. The forests' various administrative functions are now divided among many subjects. This is not always a shortcoming as can be seen in terms of total financial resources made available. However, it is also evident that lack of coordination, and overall administrative responsibility, makes the development of comprehensive policies – whenever these are truly necessary – difficult, if not impossible.

5. INTER-SECTORAL COORDINATION

The 1988 NFP was given final approval by the Inter-ministerial Committee for Economic Planning, as required by the Italian planning system. This formal procedure should not lead to the inference that forest policies, let alone forest administrations, result from inter-sectoral coordination. Only public expenditures are checked by intersectoral bodies. In general, however, forest matters are discussed with the Ministry of the Environment at national and regional levels. The Under-Secretariat for Civil Protection is also involved in forest questions concerning fire-fighting organisation,

landslides and avalanches. Public Works are related to forest administration regarding watershed management, landslides and avalanches. Other fields of coordination are given by the army, fire brigade and the police. Amplitude and seriousness of consultation is difficult to judge. However from central inter-ministerial committee, to regional and provincial levels Italy is a country where problems, and possible solutions, are often discussed at official levels. Achievements and courses of action resulting from these open debates are more difficult to judge. Complaints are not only directed at the lack of debate and transparency, but the lack of decision-making and action. Forests and forestry are no exception.

Land use planning is certainly a crucial sector where cooperation and coordination are applied and considered very important. It is primarily in the hand of Local Authorities (the Communes or Municipalities) of which there are more than 8000 throughout the country, from big cities to remote rural villages. Their plans (*Piani Regolatori*) must be in line with regional land use plans (*Piani Territoriali Coordinamento Regionale*), according to the Urban Development Act of 1942. The regions have the right to approve plans prepared by Communes and, if the necessary, to veto them. Clashes with forest authorities have been common in the past – e.g. delivery of planning permissions to build on forest land or illegal building. In general, however, the forest regime prevails over local plans. Now, after the tumultuous urban development of the 1960s and 1970s, conservationists and the people as a whole are grateful for the strict forest regimes and how they were imposed by the forest authorities – particularly the CFS. Coordination of urban planning and forest planning is formally required by 5 Regions (Corrado 1998). Instruments to achieve this coordination (consultation, participation etc.) are available throughout Italy – this does not mean, however, they are always effective.

It is difficult to envision a close relation between forest policies and macro-economic planning, given the trivial, almost negligible weight of forestry on the GDP. Strong relations certainly exist with the timber-based industry much dependant on economic policies, and economic cycles. The timber industry, however, in Italy is not much linked with national forestry, as mentioned.

6. SPECIAL INSTITUTIONALISATION FOR PLANNING

Given the regionalisation/decentralisation process and developments of the past 20 years and the adoption of the ‘subsidiarity’ principle as a key concept of EU policy-making, centralised forest planning institutions are inconceivable. The last attempt in this direction was the 1988 NFP, a failure in terms of resource mobilisation and implementation of directives, as seen previously. Failure was, however, not due to the lack of forest institutions: the CFS had 8.000 technically well-educated men and women distributed throughout Italy. The blame must be placed on the overlapping roles of central/regional institutions, unclear definition of responsibility and wishful thinking by central authorities without financial resources.

At the regional level, there have always been formal forest planning institutions since the Forest Law of 1923 set up the so called *Comitato Forestale*, a consultation/decision

body for forestry operating in each of Italy's 100 Provinces. Its collocation in each provincial 'Chamber of Trade, Industry and Agriculture' was rather significant of the participatory approach adopted at that time. Now it has been substituted, according to regional organisations, by other regional bodies responsible for forest management, plan approval, forest practices definition, land use restrictions and other mandatory limitations.

Traditional forest planning, since the 1923 Forest Law, is now the object of a cycle conceptually similar to the process in Figure 3 – namely inventory, the management plan and its implementation, evaluation and revision. Integration with local physical planning is required by several regions. In others, forest planning is taken into account *ex post* by local land use plan. Local land use plans and forest management plans overlap at times; this risk was once reflected by planning permissions, now by natural resources management, recreation and other uses of the forests. The issue seems to need better regulation in several regions. However, contrasts and clashes are not frequent, also in designated areas where the problems are most seriously felt.

In Italy, a policy process schema as the one outlined in Figure 3 is commonly applied to land use (physical) planning at regional and local levels. Forests, as a specific land use, should be part of this process which naturally, far from being sectoral and limited to a specific land use, should be comprehensive, rational and continuous, as shown by the most relevant literature on planning in western societies (Chadwich 1971; Lichfield et al. 1975; McLoughlin 1969). From this point of view, the concept of a NFP can be questioned there is the most significant issue: to what extent can forests be the object of a sectoral plan when they perform multiple of functions far from the traditional perception of forestry?

Forests being part of the environment and a specific component of the landscape, are often advocated specific frameworks and institutions based on the Ministry of the Environment. The administrative structures have been rather weak up to now compared with the country needs. Agreements in certain cases have been signed with the forest administration particularly for parks and other designated areas. The possible

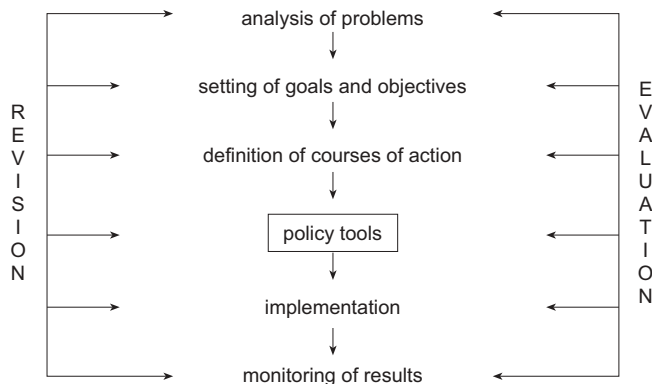


Figure 3. The policy process applied to land use and natural resource planning.

integration of part of the CFS within the Ministry of the Environment could strengthen this relatively new Ministry, and help the process of managing forest considerably within designated areas.

According to Helsinki resolutions, the Ministry for Agricultural/Forest Policies (Corrado 1998) has developed a forest map in one region of Italy (Liguria) using the most innovative technical means (remote sensing, Geographical Information Systems, Multi-resource Forest Inventory). Forest externalises (recreation, soil conservation, biodiversity) have also been considered. Preliminary criteria and indicators are being developed from that map, and available information should be used in preparing management plans. They are, however, far from being tested completely, let alone a routine instrument.

Up to now, the outcome of UNCED 1992 conference, particularly the 'Forest Principles' and the process initiated by the International Panel for Forests (IPF) have been ignored by Forest Administrations both State and Regions. This is perhaps due to the understanding that environmental problems linked to forests are a matter in developing countries (deforestation) or to northern countries applying very intensive forest management practices (clear felling, use of harvesters). In addition, it must be mentioned that the only Ministry carrying out an international environmental policy is the Ministry of the Environment, quite active, for example, in the recent 1997 Tokyo conference on Climate Change.

7. COMMENTS AND CONCLUSIONS ON THE STATE OF THE ART OF NATIONAL FOREST PROGRAMMES IN ITALY

From the analysis in this paper the following comments and conclusions may be drawn:

- (i) It is rather difficult to envision a National Forest Programme in Italy. The concept is not accepted by the Constitutional revision where devolution of forest administration is clearly stated. It is true, however, that certain functions can be undertaken in the most efficient way at national level, for example, in the case of coordination, statistics, environmental policing. Compliance with international conventions is another field where a National Forest Programme, or National Guidelines, are necessary;
- (ii) It is clear from Italy's experience that the idea of planning cannot work when the institutional/administrative structures are not well defined in their responsibility and role; overlapping of authorities can impede the application of any plan, even if clear and well-prepared;
- (iii) A NFP must also be seen according to the 'subsidiarity' principle now much advocated by the EU: it is certainly acceptable to adopt European/national environmental policies/programmes, when problems affect several member States, less acceptable is pure forest policy where regions, if not sub-regions, have proven to be the more suitable level of policy making;

- (iv) Forest policies and programmes can be justified, and more effective, at national level whenever environmental issues are concerned. In this case, however, responsibility seems to be left to the Ministry of the Environment rather than the traditional Ministry of Agriculture and Forestry as seems to be now the case in countries such as Belgium, Denmark and, to a certain extent, Switzerland and Ireland (FAO 1988). These developments should be watched carefully by the forest establishment. A lack of attention to the happenings outside forestry often results in unsuitable courses of action as clearly shown by the 1985 Italian Landscape Act, heavily affecting forestry, however conceived and implemented without the participation of forest institutions who were busy preparing their own sectoral National Forest Programme;
- (v) According to the Italian policy/administrative situation, the only fields where planning has proved to be strictly necessary and fruitful are given by budget expenditures and land use planning. It would prove a great success if forests could be appropriately included in these plans in a coordinated way (rational, comprehensive and continuous), which does not mean a sectoral forest plan/programme, but solely expenditure – land use plans taking of forests into account as an essential part of the land use system. A NFP, or National Guidelines, should therefore be linked to a higher level of planning including land use and financial planning. It must not be forgotten that the mandate given to the International Panel on Forest in 1995 was to promote ‘National Forest and Land Use programmes’ according to 1992 UNCED ‘Forest Principles’ and ‘Agenda 21’. In addition, the specific case of EU member Countries requires compliance with the main EU policies: the accompanying measure of the CAP reform and Agenda 2000, as well rural and regional development Structural Funds.

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CONTEXT AND CONTENT OF NATIONAL FORESTRY PROGRAMMES IN THE NETHERLANDS

Freerk K. Wiersum¹ and Kees van Vliet²

¹ Sub-Department of Forestry, Wageningen Agricultural University
The Netherlands

² Institute for Forestry and Nature Research (IBN-DLO)
The Netherlands

ABSTRACT

Two consecutive national forestry plans were formulated in the Netherlands in 1984 and 1993 respectively. The first Long-term Forestry Plan was formulated as a contribution to the national rural planning debate. On basis of an evaluation of the results of this plan a new Forest Policy Plan was formulated. In the meantime several important changes in thinking about how to deal with forestry took place. Three major strategic changes with respect to formulating the plans, their content and instruments for their implementation took place: (i) A change from a sectoral to a more integrated approach, especially with respect to nature and the environmental value of forests, (ii) A change from state supremacy in dealing with forest policy and management issues to a more decentralized approach, (iii) A change from a process based on professional expertise to a more participatory process involving a multitude of stakeholders.

Keywords: Forest Policy Plan; Policy Objectives; Policy Process; Policy Instruments.

1. INTRODUCTION

During the last decade, important changes in forestry policies took place in the Netherlands. This is reflected in the fact that, since the early 1980s, two consecutive national forestry plans have been formulated. In 1984 the government issued a Long-term Forestry Plan. The results of this plan were evaluated in 1992. On basis of the experiences obtained, a new Forest Policy Plan was formulated in 1993. In this paper, the context and content of these plans will be presented, as well as the process in formulating them and evaluating their results. First, the role of forestry in the Netherlands will be described, followed by a characterization of the main stakeholders in forestry. Then, a comparison will be made of the two forestry plans. Attention will be

given to the policy processes which were involved in formulating these programmes, policy outcomes as well as experience with their implementation. The process of formulating, implementing and evaluating of these national forestry plans had started prior to the international discussion on the need to develop national forest programmes (NFP's) in Europe. Although the Dutch policy process took place independently of the NFP discussions, its features closely match the proposed features for the process of formulating and implementing NFP's.

2. ROLE OF FORESTRY IN THE NETHERLANDS

The Netherlands is one of the most densely populated areas in Europe with an average population density of approx. 460 persons per km². The forest area is 335,000 ha, or only approx. 10% of the total land area. This means that the per capita forest area is only 0.02 ha. These forests are relatively young. Due to over-exploitation and conversion of forest to agricultural land around 1880 there were only 220,000 ha of forests. Thanks to major plantation efforts, the forested area has since increased by 50%. This increase is still continuing with an annual increase of approx. 1,000 ha. The Dutch government aims for a forest area of approx. 400,000 ha by 2020.

At the beginning of the century, forests served a limited number of functions: wood production, stabilisation of sand dunes and soil improvement, and (for a small group of wealthy estate owners) prestige and hunting. Since the 1950s, forest functions have gradually diversified, and at present, the forests have a multiplicity of functions for Dutch society (Oosterveld 1997). Obviously, wood production is one of these functions. Annually approx. 1.3 million m³ of wood is harvested; this wood supplies 7% of the domestic wood consumption. Approx. 53 thousand people are employed in forestry and wood trade and processing (including that of imported wood); the annual value of wood trade and processing is approximately Dfl 14 billion. However, due to the high degree of urbanization, other functions are at least as important. Annually, approx. 200 million people visit forests for recreational activities; the average number of visitors is 600 persons/ha/year, but this number may increase to 10,000 /ha/year for the most intensively visited forests. Nature and amenity functions of forests are highly valued. This is reflected by the fact that private nature conservation organisations own approx. 11% of the forests. Also the environmental functions of forests are being increasingly acknowledged and sometimes also financially rewarded. Recently, for instance, electric companies have been funding afforestation as a means to sequester carbon-dioxide. Similarly, a water supply company has started a trial to compensate forest owners for switching from coniferous to deciduous species in order to decrease evaporation and, thus, reducing parching. Another function of increasing importance is the improvement of the living environment of housing areas. In some areas, the vicinity of forests adds up to 10% to the value of real estate property, amounting to billions of guilders in total.

3. THE ROLE OF DIFFERENT STAKEHOLDERS IN POLICY FORMULATION AND IMPLEMENTATION

A corollary of the multifunctional nature of the Dutch forest is that there are different kinds of stakeholders who are interested in one or more specific functions of the forests. Three major categories of stakeholders may be distinguished, i.e. forest owners, forest users and policy makers. The Netherlands government policy is explicitly aimed at involving various groups of stakeholders in forest management and policy. In the following, the major characteristics of the different categories of stakeholders, as well as their role in policy formulation and implementation will be summarized.

3.1 Forest owners

In the Netherlands, forest ownership is rather diverse. Forests are owned either by private owners (41 %), the state (31%), local authorities and other public bodies (16%) and nature conservation organisations (11%).

At present, close to 50% of all Dutch forests are publicly owned. Most of these public forests (62%) are owned by the state, approx. 30% by municipalities, and the remainder by provinces and public organisations such as water supply companies. Around 1940, the areas of forests owned by municipalities and the state were more or less equal, but since that time, the state forest area has increased considerably (Table 1). This reflects the opinion which prevailed for most of the 20th century, that due to the long production cycles, as well as the multiple functions of forests of which many cannot be financially rewarded through market mechanisms, the state holds a major responsibility to maintain forests. Thus, during much of the 20th century, the state took over many of the private forests being sold by their owners. The State Forest Service is in charge of managing these forests.

The area of non-public forests is owned either privately or by nature conservation organisations. In contrast to the relatively large tracts of state owned forest, the forest plots owned by private persons are characterized by their small size. Approx. 45% of the private forests are between 0.5 and 5 ha in size; only 18 private owners have a

Table 1. Forest ownership in the Netherlands (in % of total forest area).

Ownership category	1942	1963	1968	1983
State	14.8	21.2	24.4	31.5
Municipalities	14.7	15.5	15.6	15.1
Other public bodies	0.5	0.7	0.9	1.5
Nature conservation	5.3	3.9	5.1	11.1
Private owners	64.6	58.6	54.0	40.8
Total area (×1000 ha)	249.9	260.3	279.6	310.8

forest area of over 500 ha. For most private owners forestry is not their main means of livelihood, rather forests are kept as part of estates, as ancestral lands, or outdoor recreation area for the family. Especially for small private landowners the motives to maintain forests are mostly amenity and conservation reasons rather than productive and financial reasons (Van der Ploeg and Wiersum 1996). Consequently, forest owners tend to be rather individualistic and many are not professionally oriented to forestry. This is reflected by the fact that efforts of the Dutch government to stimulate professional cooperation between private forest owners only became effective after a subsidy of Dfl 10/ha was provided for forest owners who joined regional cooperative groups.

The financial results of private forest enterprises were mostly negative during the last decades. Regardless of the fact that for many forest owners financial gains from forestry are not the major motive for maintaining forests, the continuous financial losses in maintaining forests have forced several private forest owners to sell their forests. Consequently, during the last fifty years the area of private forest ownership has decreased by 25% (Table 1). Up until the 1970s, these forests were mainly bought by the state. Since that time, however, forests have increasingly been bought by nature conservation organizations, in many cases with financial support from the government. Recently, private forestry has again increased somewhat, especially due to the afforestation of farm lands (Grayson 1993).

Traditionally, forest managers exercised a relatively strong influence on forestry policy, especially due to the fact that the State Forest Service originally played a triple role: managing state forests, giving extension to private forest owners, and forest policy development. In 1988 this service became a semi-autonomous forest management agency without responsibility for forestry extension and policy development. With respect to the owners of non-public forests the nature conservation organisations have a much stronger political profile than the private forest owners.

3.2 Forest users

The Netherlands is not only densely populated, it is also highly urbanized. According to the OECD Rural Indicator Project approx. 85% of the country is predominantly urbanised. In an affluent society, people have increasing leisure time (Oosterveld 1997). People's attitudes to forests are predominantly shaped by the perception of forests as antipoles to urban areas, characterized by naturalness and quietness. In contrast, the cutting of trees for wood production is generally not highly appreciated. This situation is strengthened by the fact that the consumption of wood(products) is covered more than 90% by imports, and that no (regional) tradition of wood manufacturing has been developed. Most Dutch wood is used for bulk production (first mine props, at present industrial wood) rather than high-value special products (wooden shoes being an exception). Both timber trade and timber manufacturing are characterized by a multitude of relatively small companies; this situation further limits an integrated forest-wood chain.

Another characteristic of Dutch society is its high level of organisation: almost every opinion or policy issue is supported by a finely detailed network of associations and

societies. This is reflected in the variety of organisations of forest users (Oosterveld 1997). Several organisations are related to the production function of forests (e.g. timber trade organisations, organisation for Dutch timber, hunting society, organisation for farm forestry). However, both with respect to number and membership, these organisations are outnumbered by organisations for nature conservation and recreation. For instance, over 1 million persons are a member of one of the Dutch nature conservation organisations. Some of these organisations are mainly engaged in managing nature reserves (including forests), but others act as lobby groups advocating more attention to environmental protection and nature values. The latter are rather critical to former prevailing forest management practices, and have been very influential in stimulating discussion on new approaches to forest management.

The need to reconcile forestry planning and management in accordance with the wishes of urban society emerged as early as the early 1970s (Oosterveld 1997). One of the first events was the case of the Amelisweerd estate, where for ten years pressure groups prevented 600 trees, from being felled for motorway construction. Subsequent public debates inspired by lobby groups focused on the improvement of nature values of forests by changing the single-species and single-age plantations to mixed forests, leaving more dead wood in forests, and increasing (low density) forest grazing. At first, efforts at influencing forestry practices were restricted mostly to policy debates. Recently, such public protests are gradually being dealt with more constructively (especially in case of urban forests situated near cities) by involving local forest user groups more directly with the planning of forest management activities.

Still another category of forest users with an increasing influence on forest management and policy are various utility companies such as water and electricity supply companies. As noted above, these companies are increasingly willing to pay a sort of function endowment for the environmental services of forests. With respect to the recreational function of forests such arrangements are still less common. It is considered that forests should be open (on the paths) to the public as a basic recreational facility. For this purpose a governmental subsidy is paid to all forest owners whose forests are accessible to the public. Only in case of additional recreational facilities (excursions, special events), a direct financial payment from the recreation sector to forest owners can be negotiated (Hekhuis and De Baaij 1997).

The relations between various categories of forest users and forest owners can be summarized as follows: traditionally the forest-wood chain is rather weakly developed. As a consequence of the government policy to subsidize forest owners for providing basic recreational facilities, no forest-recreation chain with structural relations between forest owners and the recreation industry has developed. Recently, a start was made to develop chain relations between forest owners and utility companies, with the latter paying a kind of function endowment for the environmental services of forests. So far, the most important influence of forest users on forest management and forest policy is effectuated through a multitude of non-governmental organisations. Particularly, the environmental and nature conservation organisations, backed by a large constituency of members, have been influential in setting the policy agenda on how to develop forest management. Thus, social attitudes rather than market forces have been most influential in steering forest policy processes in the Netherlands.

3.3 Policy-makers

The Netherlands can be characterized as a decentralised unitary state in which policy responsibilities are distributed between national (State), regional (provinces) and local (municipalities) level. The national government is traditionally responsible for forestry related matters (Van Vliet 1993). The main responsibility with respect to forestry policy rests with the Ministry of Agriculture, Nature Management and Fisheries (note that the name of this ministry was changed in 1990 to include nature management). But the responsibility for the timber industry lies with the Ministry of Economic Affairs. Due to this divided responsibility, no strongly developed policy towards stimulating an integrated forest-wood manufacturing chain has developed in the Netherlands. In addition, forestry policy is influenced by the Ministry of Housing, Regional planning and Environment which holds responsibility for town and country planning and environmental policy matters. Of special relevance are the regulations on regional planning, which are based on a system of local (community) decision-making with respect to land-use zoning. Especially in case of afforestation of agricultural lands, these regulations have at times been used by farmers to oppose afforestation of lands adjacent to their fields.

Within the Ministry of Agriculture, the State Forest Service was originally responsible for both general forestry policy development and management of state forests. As indicated above, it was decided in 1988 to separate these dual functions with a ministerial Department of Nature, Forests, Landscape and Fauna becoming responsible for policy matters and the State Forest Service becoming a semi-autonomous forest management agency.

As a result of the Netherlands decentralization policy, provincial authorities play an increasingly important role in countryside planning as well as forest management. Recently, several tasks of implementing the national forestry policy have been delegated to the provinces. In some cases provincial governments have also developed their own incentives for forestry. For instance, the Province of Gelderland stimulates the development of the so-called Integrated Forest Management by means of an extension scheme, while the province of Overijssel stimulates the same process through a subsidy scheme.

The local authorities do not have any specific role with respect to forestry policy formulation, but they have a great influence on the implementation of the policies. Especially through their authority to decide on detailed land-use zoning they have an important role in regulating the use of private and public property. Furthermore, as indicated above, some municipalities are also forest owners, which makes them a considerable factor in forestry policy.

4. FORESTRY POLICIES IN THE NETHERLANDS

4.1 Introduction

Government involvement in forestry, as we know it today, has its origins in the late 19th century. The social and economic benefits of forests were gradually acknowledged, and

there was growing support for government action in sustaining the forest resource. Through the State Forest Service (founded in 1899) public funding started for the purchase of woodlands and nature reserves and for the afforestation of unproductive land. In addition, financial support and advice was given to public bodies for similar purposes. The first Forest Law was enacted in 1922 to safeguard the forest land base and to protect the natural beauty of forests and woodlands. Fiscal measures were taken to alleviate the financial burden for private forest enterprises and afforested country estates.

In the second half of the 20th century, outdoor recreation and ecological functions grew more important than timber production. Closing down of the coal mining industry (a major outlet for inland timber) aggravated the financial situation of forest owners. The Industrial Board for Forestry (a non-governmental organisation representing the forest sector) urged government to start giving financial support to forest owners on a regular basis. Moreover, the same organisation presented some thorough proposals for a Dutch forestry strategy, putting forestry firmly on the political agenda. The Ministry of Agriculture and Fisheries took up its responsibility and issued a sector study on forests and forestry in 1977 as a contribution to the national rural planning debate (Ministry of Agriculture and Fisheries 1977). This started a learning process of national forest policy making which resulted in two major milestone documents in 1984 and 1993.

4.2 The Long-term Forestry Plan of 1984

Reasons for formulation. As a consequence of the national rural planning debate, it was considered necessary to work out the major aspects of the rural policy framework for forestry. Within this framework, aspects of land-use, outdoor recreation and nature conservation, as well as timber production, landscape enhancement and financial consequences had to be considered.

Process of policy formulation. The process was at first mainly internal to the Ministry of Agriculture and Fisheries. A small group of experts from the State Forest Service and some related institutions worked out a first draft that was discussed internally and with other ministries. After several revisions, a formal forest policy proposal was issued in 1984 for public consultation. This was part of a general procedure, including also political discussions with other authorities and expert advice on specific subjects. The results of this consultation period were published in a separate paper and processed internally in formulating the government decision on forest policy (issued in 1986). This definitive policy document was submitted for approval by Parliament and was generally welcomed. In 1990, the policy plan was completed with an implementation programme, giving details of specific actions and instruments to reach the stated objectives.

Main policy objectives. The Long-term Forestry Plan (Ministry of Agriculture and Fisheries 1984) covers the total field of forest policy up to the year 2000, with an additional longer-term perspective towards 2050. The main objectives are:

- Sustainable conservation and development of the present forest area in its current location;

- Promotion of a sustainable and generally balanced performance of the forest's multiple functions: to wit outdoor recreation, timber production, natural values, and landscape quality;
- Achievement this conservation and performance at a socially acceptable cost level;
- Expansion of the forest area by 30-35,000 ha by the year 2010 by both government (multi-purpose forests) and private landowners (production plantations).

Tools for implementation. The tools for the implementation of the Long-term Forestry Plan fall within three major categories: i.e. legal, financial and communicative instruments.

The legal framework for forestry is dominated by the Forest Law (maintenance obligations) and the Landscape Act (tax incentives); other relevant laws are the Nature Protection Act (nature reserves) and the Land Use Act (town and country plans).

Financial instruments vary according to the category of forest owners that is affected. The State Forest Service is financed directly from the government budget (investments and management costs). All other forest owners can apply for subsidies under the Forestry Grant Scheme; these are directly related to specific reforestation or forest management activities. Nature conservation organisations can receive additional management grants and financial support for extension of their territory. For private forest owners several tax reductions (e.g. in relation to inheritance tax) exist as well.

Communicative instruments include education, research and advice, assisting forest owners and the forestry sector at large. A special political instrument in the Long-term Forestry Plan was the encouragement of provincial authorities to develop regional forest policy plans on an experimental basis.

4.3 Evaluation of the Long-term Forestry Plan

The government decision on the implementation of the Long-term Forestry Plan included the provision that its results should be evaluated after five years. The results of this evaluation were published in 1992 (Ministry of Agriculture, Nature management and Fisheries 1992). It was concluded that the main objectives of forest policy were still valid and continued to be widely supported. In addition, the evaluation showed a growing awareness of the interrelations with other policy fields, such as the European agricultural policy, environmental policy and countryside planning. New developments in these fields, as well as changing concepts of forest management and better insight in the production potential of forests, called for a re-thinking of the way in which the forestry objectives should be reached. Notwithstanding the financial problems in the field of forest management and afforestation, it was considered necessary to raise the targets for enlargement of the forest area in order to meet growing demands for the various forest functions. Several advisory committees and task groups were already studying selected topics of forest policy such as finance for nature, function endowment, afforestation targets, timber provision and forest ecology. It was decided that the results of these studies, together with the reformulation of present objectives, would be included in a new forest policy plan that was to be issued within a year.

4.4 The Forest Policy Plan of 1993

Reasons for formulation. In addition to the findings of the evaluation mentioned above, the formulation of the new Forest Policy Plan was also affected by the process of reconsidering the position of national government. The new philosophy was that policies at national level solely had to be outlined in broad terms, while implementation in terms of targets and budgets had to be devolved to the provincial level (Oosterveld 1997). Another new development was the growing attention to the international aspects of forest policy, following the UNCED-conference in Rio de Janeiro and the Helsinki process in Europe. Together with new insight in the functioning of forests and the relations to other policy fields, this provided sufficient reason for a new forest policy plan.

Process of policy formulation. Compared to the earlier period, the policy process was more open and participatory in character. The Ministry of Agriculture, Nature Management and Fisheries, still being the primary actor, created several opportunities for the involvement of other authorities, experts as well as various organisations from the forestry sector and related fields. Unfortunately, the process of formulating the new forest policy plan coincided with general budget cuts that also affected the forestry sector. Some of the hearings that were organised to stimulate participation had to be cancelled because of conflicts over the budget. Nonetheless, the forestry sector appeared to have found new strength and used the powers it had to influence the political process. The differences with the earlier period are summarized in Table 2.

Main policy objectives. In the 1993 Forest Policy Plan (Ministry of Agriculture, Nature management & Fisheries, 1993) the following policy priorities have been formulated for the period up to the year 2020:

- Sustaining and developing the present forest area, with special attention to characteristic forest ecosystems;

Table 2. Main features of the 1984 and 1993 policy process.

Policy process	Long-term Forestry Plan 1984	National Forest Policy Plan 1993
Agenda setting	Forestry sector, ministry (Agriculture & Fisheries)	Several ministries, international conferences
Policy formulation	State Forest Service, experts (mainly internal)	Department of Nature Management, expert groups (also external)
Participation	Consultation of other authorities and forestry sector on the basis of policy proposal	Involvement of other authorities and forestry sector on the basis of preliminary drafts
Decision making	Ministry – government – Parliament	Ministries – government – Parliament
Implementation	Mainly State Forest Service (ministry)	Several ministries, provincial authorities

- Promoting optimal fulfilment of the functions of forests (recreation, timber, nature, landscape and environment);
- Extending the forest area by government and stimulating afforestation by other authorities and private persons;
- Promoting sustainable forest management (of which the costs should be covered from marketable products) and seeking to make a more efficient use of government funds;
- Contributing actively to sustainable forestry world-wide and extension of the global forest area;
- Promoting active involvement and responsibility of other authorities, non-governmental organizations and private parties in the field of forest policy.

With respect to the Long-term Forestry Plan several, changes in objectives for forestry development took place, these are summarized in Table 3. The increase in social value of forests, which has occurred since the early 1980s, is reflected by the fact, that 1984 Long-term Forestry Plan provided for an area of 30-35,000 ha of new forests to be established until 2010 and the 1993 Forest Policy Plan increased this to 65-75,000 ha to be planted by 2020. Approx. fifty percent of these new forests (35,000 ha) should be achieved by afforestation on private agricultural lands or through amenity planting in land consolidation schemes. Another 10,000 ha should be established near cities or in peri-urban areas, mainly for recreational purposes. Most of these peri-urban forests will be publicly owned. In addition, 20,000 ha of new forests should come to being by means of natural forest development within the framework of the so-called Main Ecological Network. The establishment of such a network of integrated nature areas was

Table 3. Main objectives of 1984 and 1993 policy plans.

Long-term Forestry Plan 1984	National Forest Policy Plan 1993
Conservation and ecological development of forest area on the basis of pre-selected forest target types	Same, but on the basis of ecosystem zoning instead of forest target types
Promotion of optimal performance of multiple forest functions, i.e. recreation, wood production, nature, and landscape quality	Same, with environmental quality as additional function
Socially acceptable cost levels	Same, focusing on market approach and budget efficiency
Expansion of forest area by at least 30,000 ha in 2010 by government and private landowners	Expansion of forest area by at least 65,000 ha in 2020, with other authorities as an additional target group
	New: contribution to sustainable forestry worldwide
	New: involving other authorities and private parties

identified in the Nature Policy Plan of 1989 (Ministry of Agriculture & Fisheries, 1989) as one of the main policies to strengthen nature conservation. Forests are one of the major land-use types in this ecological network.

Their role in this ecological infrastructure should be optimized by giving more attention to spontaneous forest development rather than striving for pre-selected forest target types. Whereas in the 1984 plan, for example, the increased use of Douglas-fir (*Pseudotsuga menziesii*) was mentioned as a means to increase timber production, this policy aspect was no longer included in the 1993 plan.

Tools for implementation. The instruments for reaching the stated objectives have remained for the most part the same as those under the Long-term Forestry Plan. However, a major difference has been that the principles for use of financial instruments were changed by switching from input subsidies to output subsidies. The traditional subsidies for reforestation and forest maintenance were abolished. And the Forestry Grants of Dfl 90/ha for private forest owners who have opened their forests to the public, was replaced by the introduction of a function endowment scheme for public and private forest owners (the State Forest Service and nature conservation organisations still have separate systems). Due to the multiple functions that forests fulfil, this function endowment scheme provides a general subsidy of Dfl 140/ha for all forests that are open to the public. Forests that are closed to the public merely receive 25% of this base amount; forests of public bodies receive only half of the regular subsidies (or nothing if they are not open to the public). On top of this, special grants of Dfl 40/ha can be provided for the preservation of a limited number of specifically identified characteristic forest ecosystems.

Other differences have been the development of financial and communicative instruments for mitigating the negative effects of environmental stress on forests. Finally, project subsidies have been introduced as well to stimulate initiatives from within the

Table 4. Main instruments of 1984 and 1993 policy plans.

Long-term Forestry Plan 1984	National Forest Policy Plan 1993
Forest Law, Landscape Act, Nature Protection Act, Land Use Act	Same
Tax reduction	Same
Forestry Grant Scheme with additional subsidies for specific management activities (e.g. reforestation)	Function Endowment Scheme
	New: "Survival Plan" for forests and nature to mitigate environmental stress
	New: project subsidies for forestry sector
Communicative instruments with regard to extension, research and education	More directly aimed at reaching policy objectives, but lack of clarity who has primary responsibility for forestry extension

forestry sector that contribute to reaching the policy objectives. Unfortunately, the position of forestry extension in general was not regarded in the decentralization of the tasks from the national to the provincial levels, and consequently it is not clear who is primarily responsible for this task. This oversight is now being readressed. The differences with the Long-term Forestry Plan are summarized in Table 4.

4.5 Recent developments

Since the publication of the 1993 National Forest Policy Plan, further forestry policy changes have taken place in the Netherlands. This reflects the rapid changes in thinking on the social values of forests, and the need for the development of more appropriate policy instruments for conform forest management to a changing society. A major event was the 1997 evaluation of the status of nature in the Netherlands. In the framework of this policy study, several assessments of the forestry situation were carried out (Paasman 1997). This illustrates how forestry is increasingly being incorporated within a broader context of social appreciation for nature conservation. The evaluation contributed much information to the formulation of a new government programme to facilitate the management of both nature, forest and landscape, the so-called Programme Management (Ministry of Agriculture, Nature Management & Fisheries, 1997). In this programme, which is still pending government approval, the distinction in policy instruments for stimulation of forest management by either public authorities, nature conservation organisations or private forest owners is changed to a system with equal instruments for all forest owners. This illustrates the tendency that forestry is no longer considered a primary government task, but an activity involving various stakeholders. Government efforts to stimulate improved forest management should treat these different categories equally.

It is expected that these recent developments will be reflected in a new policy plan for nature, forests and landscape, towards which the initial steps have recently been taken.

5. RELATIONS TO RURAL AND ENVIRONMENTAL PLANNING

The Netherlands has a long history of policy planning in town and country planning, as well as environmental planning; this experience has positively contributed to the process of forest policy planning (Grayson 1993). As indicated in Chapter 4.1, the first initiatives to formulate the 1984 Long-term Forestry Plan were taken in response to the then on-going national debate on rural planning. Thus, from its inception, the process of formulating and implementing national forestry plans was not solely focused on the development of the forestry sector as an isolated activity, but was embedded in a wider context of land-use development planning. In this context, explicit attention was given to the both productive and amenity values of forests. During the formulation of the 1984 plan, the first discussions on forest degradation due to environmental pollution had

started, but such environmental concerns were not yet explicitly incorporated in the plan. In the following years, environmental concerns grew quickly. In 1989, the first Dutch National Environmental Policy Plan (NEPP) was published, followed by revisions in 1990 (NEPP plus) and 1993 (NEPP2). Not only technical goals and objectives with explicit time frames to overcome environmental problems were formulated in these plans, but measures for societal mobilisation to reach these goals as well. These included legislative and financial tools, as well as negotiated agreements with industry.

The increased environmental concerns and the experiences obtained with environmental policy learning, including development of new instruments for policy implementation (Bressers and Plettenburg 1997), have impacted on the process of forest policy-making. Firstly, the interactions between environmental concerns and forest management received increased attention. Measures were identified to relieve forests damaged by environmental stress, and forest management was acknowledged as a tool for environmental management (e.g. by sequestering CO₂ or increasing the groundwater supply). Consequently, in the Forest Policy Plan of 1993 environmental quality was added as a forest function which needed optimization. In the second place, the identification of environmental concerns resulted in the identification of a new group of stakeholders in forestry, i.e. utility companies supplying water and energy. As a result of the experiences gained with the implementation of the environmental policy plans, these companies have become much more conscious of their societal duty to contribute to environmental management. Rather than awaiting government regulations, they are increasingly interested to anticipate government policies and negotiate direct agreements on environmental management with other stakeholders. This attitude positively influenced the willingness to consider new approaches to function endowment for forests by the utility companies.

6. CONCLUSION

Since the early 1980s, much attention has been given to formulate and implement new national policies to stimulate the conservation, wise utilisation and sustainable management of forests in the Netherlands. Within less than a decade two major policy papers were issued in which the principles for planning and implementation of forestry activities were formulated. During this period, several important changes in thinking about how to deal with forestry took place. These are reflected in the process used to formulate the plans, in their contents, as well as in the instruments for their implementation. Three major and related strategic changes took place:

- A change from a sectoral to a more integrated approach, in particular with regard to the environmental and nature value of forests;
- A change from state supremacy in dealing with forest policy and management issues to a more decentralized approach;
- A change from a process based on professional expertise to a more participatory process involving a multitude of stakeholders.

These developments were based on a growing recognition that, due to the multiple-function characteristic of forestry, one has to deal with multiple stakeholders in planning forestry activities. For many issues, this can best be effectuated at a local or regional level rather than at a national level. This recognition dovetailed with the more general recognition of the need to decentralise state authority whenever possible, and to allow for more market influence and stakeholder negotiation in shaping socio-economic and land-use developments.

As a result of this democratisation and decentralisation process, the perceptions and preferences of forest users rather than those of forest owners have become more influential in shaping the development of forestry. Due to the high degree of urbanisation forests are increasingly valued for their contribution to serving urban demands for rest, recreation and nature enjoyment rather than solely for productive purposes. Consequently, forest and nature conservation policies are becoming more and more integrated. These developments require new approaches to forestry and a restructuring of the forestry sector. The functional relations between forests and wood manufacturing industry need to be strengthened in order that the wood production function of forests may compete with other demands on the forests. In addition new functional chains between forest owners and the recreational sector, as well as other enterprises profiting from the environmental services of forests need to be established.

The establishment of such new and diverse relations will not be possible without changing the existing institutional framework of forestry. Consequently, regardless of the fact that forestry is confronted with a tendency towards decentralisation of state responsibilities and the development of a stronger civil society, important issues of forestry development which should be dealt with at state level remain. The changing social and political conditions should thus not be considered as a hindrance to National Forest Programmes. Such programmes should be considered essential instrument to identify new institutional frameworks for forestry in a changing society, and to formulate new approaches to facilitate a more diversified approach to planning and implementing forestry activities.

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Anders Qvale Nyrud

Department of Forest Sciences,
Agricultural University of Norway
Norway

ABSTRACT

For European standards, Norway produces an average amount of roundwood, the net increment being 20 million m³, and the annual harvest amounting to 8.3 million m³. 37% of the total land area is covered by forest. In 1995, forest products accounted for 5.9% of total Norwegian exports. Norway has a fairly long tradition in forest policy planning. The National Forestry Board, a sub-department of the Ministry of Agriculture, is responsible for designing the forest policy according to the visions of the Government. The National Forest Service implements the policy according to the guidelines received from the National Forestry Board. Several non-official organisations – land owners, industry and environmental – influence forest policy making.

Keywords: Norwegian Forest Policy; Forest Policy Planning.

1. INTRODUCTION

The total land area of Norway is approximately 32 million hectares, 12 million hectares – or approximately 37% – of which is covered by forests. The productive forest (net annual increment ≥ 1 m³/ha) corresponds to 7 million hectares – 22% of the total land area (Tomter 1996). Total growing stock and annual increment is estimated at 590 million m³ and 20 million m³, respectively (Tomter 1996). Although Norway is sparsely populated (approximately 7.3 hectares of land *per capita*) only few forests in Norway have remained unlogged during the last two hundred years (Frivold 1995).

The forest ownership pattern in Norway differs from other areas in Europe. Approximately 77% of the productive forest area is owned by private, non-industrial forest owners. The Norwegian state possess approximately 13% of the productive forest area, while the remaining 10% is owned by foundations, business corporations and municipalities. The greatest share of privately owned land is distributed among many,

small forest owners, resulting in a fragmented ownership structure with an average size of 50 hectares. Most estates are joint agriculture/forest family enterprises, and 75% of the private forest owners live in the estates (Statistics Norway 1989). Thus the issue of forest/land tenure is of importance in regional aspects as well.

The primary commercial exploitation of Norwegian forests is for wood production. Average annual harvest throughout the nineties has amounted to 8.7 million m³, corresponding to an average of 3134 million NKR, or \$ 425 million (Statistics Norway 1995). Norway produces an average amount of roundwood for European standards. As less than half of the annual increment is cut, the total growing stock is increasing (this “under-harvesting” has taken place for decades). In addition to wood production, the forest area has traditionally been used for hunting, livestock grazing and harvesting of edible mushrooms and berries, along with recreational purposes. In recent years, two alternative uses have emerged, (i) the use of forests as carbon basin and (ii) the use of forests to maintain biodiversity. These have been, and are, to some extent, being discussed and evaluated with regard to forest policy measures and goals.

The forest sector (forestry and forest industry) accounts for 1.5% of the Norwegian GDP. Its products are primarily logs (pulpwood and saw-logs), lumber, wood pulp and paper. In 1995, 5.9% of the total Norwegian export value was products from the forest sector (Statistics Norway 1996). After excluding the exports related to off-shore activity (i.e. export of oil and rock gas), the forest sector accounted for 12.1% of Norwegian exports. Thirty-eight thousand persons were employed in the forest sector, accounting for approximately 2% of the total Norwegian work force (Statistics Norway 1997).

Historically, the forest sector’s ability to draw attention of decision-makers has been good successful. This is due to several factors. After World War II, the forest was viewed as a valuable resource for future economic growth and prosperity during the process of restructuring and rebuilding the Norwegian industry and infrastructure. Therefore, much attention was paid to increase forest production, thereby securing a steady supply of raw material to the industry. Prior to the extensive mechanisation of forest operations, the forest sector was also important for employment reasons. Another reason why the forest sector has been attracting attention is its regional importance. Domestic Norwegian politics are heavily focused on regional, and thus rural, issues. Although the number of persons employed within the forestry sector is small – and diminishing – forestry and forest related activity is still of regional importance.

2. BACKGROUND

2.1 Governmental administration

The Norwegian Forest Service is responsible for defining and implementing the government forest policy. It is located within the Ministry of Agriculture (Landbruksdepartementet 1998). Due to the increasing importance of environmental issues in governmental decision-making, the Ministry of the Environment (Miljøverndepartementet) is becoming increasingly influential in shaping the governmental forest and forest-related policy.

The Norwegian Forest Service consists of the National Forestry Board (Skogavdelingen) and several county-level agencies. The main task of the central office is to design forest policy and prepare guidelines, while the primary task of the county agencies is to implement and carry out the national forest policy in accordance with the guidelines set by the central office. Until 1993, the Forest Service also had officials at the municipality level. This model has been abandoned, and at present each municipality is free to organise the forestry officers according to local needs. In many cases, this has led to a redefinition of the duties of forest officials, resulting in a decrease in forest related tasks.

2.2 Parliamentary committees

National forest policy is designed by the government. The governmental goals and guidelines for the forest policy are formulated as Governmental Propositions (Storingsmeldinger), which are submitted to the Parliament for discussion and approval. Propositions on forestry and forest policy are made approximately every ten years. These guidelines are drawn up by the Ministry of Agriculture. At the moment, a new proposition is being prepared, due to be released in the autumn/winter in 1998.

The propositions are treated within Parliamentary Committees before being submitted to the Parliament. The two committees of importance in forest issues are: the Committee of Commerce and Trade (Næringskomitéen) and the Committee of Energy and Environment (Energi og miljøkomitéen). Propositions from the Government administration are committees discussed in these and prepared for the legislative assembly.

2.3 Legal framework

The legal tradition concerning forestry in Norway is extensive, the first forestry act was adopted in 1857. It was, however, the Forestry Act of 1932 which first focused on forest production and protection, and required efforts to secure regeneration of cut forest in order to minimise the risk of over exploitation. In 1965, Forest Production and Protection Act (Skogloven) was passed. This act reflected the mainstream forestry/forest policy objectives in post-World War Norway, focusing heavily on forest production. In 1976, the first paragraph of the act of 1965 was amended. The formulation “forest production” in its heading was abandoned in favour of the neutral term “forestry”. According to this change of title, the intention of the act was changed in favour of multiple-use forestry goals (recreation, landscape protection, conservation of animal and plant habitats, and areas for hunting and fishing).

In addition to the Forestry Act, several other laws influence forestry and forest-related activities, for example:

- land tenure is affected by the Allodium Act (Odlesloven) and the Concession Act (Konsesjonsloven). Privileging close relatives and by considerable official regulation of prices are restricted on the forest estate markets;

- forest operations are affected by the Plan and Building Act (Plan og bygningsloven). Severe encroachments, e.g. road construction, are restricted by this law;
- preservation of forest is covered by the Nature Conservation Act (Naturvernloven).

2.4 National capacity

In addition to the governmental administration, the national capacity on forestry is closely connected to the institutions for forestry training and research. The Agricultural University of Norway (Norges landbrukshøgskole, NLH), the Norwegian Forest Research Institute (Norsk institutt for skogforskning, NISK) and the National Forest Inventory (Norsk institutt for jord- og skogkartlegging, NIJOS) are the main institutions in this regard. Some regional colleges also educate forestry advisors and carry out forestry research. In addition, pure biological and ecological aspects are covered by all universities and several regional colleges. Although not in a forestry context, the research and education carried out by these institutions contributes to the national capacity on forestry. The Directorate of Nature Management (Direktoratet for naturforvaltning, DN) and the Norwegian Nature Research Institute (Norsk institutt for naturforskning, NINA) have further substantial national capacities on biology, ecology and wildlife management.

There are also private institutions and NGOs with considerable capacity on forestry issues. The Forest Owner Associations (Norges Skogeierforbund, and NORSKOG) play an important role in forest policy issues, focusing on the rights of forest owners. In addition, various NGOs are gaining importance in forest related issues. Their main interest is nature conservation and recreation. The remaining private institutions are mainly related to the industry. They are funded by the industry and their capacity is thus concentrated on the needs of the industry, i.e. securing sufficient supply of high quality raw materials. The Forest Owner Associations almost exclusively rely on income from the commercial services they provide (e.g. income from acting as an intermediary for its members when selling roundwood, consulting etc.). The NGOs mainly rely on two sources of income: the membership fees and governmental funding.

3. TARGETS AND STRATEGIES

The official goal of the Norwegian forest policy as stated in § 1 in the Forestry Act (Statistics Norway 1989) is to:

“... promote forest production, afforestation and forest protection. It is aimed at generating a sufficient return to the people practising forestry by means of rational silviculture, and securing an efficient and steady supply of raw materials to the industry. Furthermore, the importance of forests as a source for recreation as an important part of the landscape as a habitat for plants and animals and site for hunting and fishing should be emphasised.”

This goal is now considered out of date. In connection to the on-going work on a new proposition on forest policy, a new Forestry Act (influenced by the recent Swedish and Finnish work on this subject) has been signalled. The Ministry of Agriculture (Landbruksdepartementet 1998) now formulates the goal of the Norwegian forest policy as:

“... to make conditions favourable for profitable use of the forest resources, both in the short- and long-term, and to simultaneously take care of and further develop the environmental values in the forest.”

This new goal differs from the Forestry Act in two basic points by: (i) ruling that wood production and environmental values are to be given equal importance, and (ii) focusing on profitability.

The finances spent on economic policy means in 1994 amounted to NKR 325 million (or \$ 43 million) (Framstad 1996). After increased subsidies during the 80s, the governmental spending stabilised during the 1990s. The recent trend is that the government is less willing to set aside money for wood production (e.g. planting, road construction or drainage). Instead, subsidies for multiple-use operations and supporting the establishment of profitable commercial activity are gaining attention. It must be pointed out, however, that the Norwegian government is still, and most likely will carry on, spending considerable amounts on subsidising wood production measures.

The main goal of the forest owners' organisations is to assist the forest owners in maximising the commercial income from their forests. The most important factor in this respect is normally the income from timber production. Historically, these organisations have thus concentrated on increasing the wood production, keeping the annual harvest as high as possible, as well as seeking to establish high timber prices. In recent years, the attention has, to some extent, shifted towards utilising alternative resources, namely, game and fish as well as some additional environmental goods.

The industry requires timber as raw material. Its main goal is thus to keep the supply of industrial timber on a high and steady level. This goal coincides with official policies – as stated in the Forestry Act above. Lately, the industry has become increasingly focused on the environment. Because of consumer demand, it is attempting to influence forestry by demanding “environmental”, and certified timber as a raw material for its production.

There are two main groups of NGOs. The Norwegian Forestry Society (Skogselskapet) is an ideal organisation, its main task being to distribute information on Norwegian forests and forestry. Its origin can be traced back to the deforestation debate at the beginning of the century, and its goals – afforestation and sustainable wood production – are coloured by this fact. Secondly, the environmental organisations have recently been increasing their capacity on forest issues. Their visions and goals on forest related issues are marked by its public interests. The emphasis is therefore directed towards public rights, recreation, and conservation of forest ecosystems and biodiversity.

As mentioned above, there are two dominant visions concerning the Norwegian forests and forestry: (i) wood production, and annual felling must remain on a steady, preferably high level, as the forest owners income depends on the amount harvested,

and the industry demands a reliable supply of raw material. Domestic forestry capacity depends on forest activities taking place as well. (ii) The sole focus on wood production must be abandoned in favour of environmental, multiple-use forestry. Forest's importance with regard to public needs (recreation, biodiversity etc.) is receiving increased importance and should not be neglected.

The main principle of the Forestry Act is that the owner should be free to manage his/her property without intervention, as long as this is carried out in accordance with the principles of sound forestry practice. Prosecution of forest owners on the basis of the Forestry Act has hardly occurred. The forest policy tools used by the Government have thus been normative guidance, education, and economic grants and disbursements. Economic measures to achieve multiple-use objectives are currently being debated.

A forest policy tool which is currently gaining interest is the possibility to use consumer power to attain goals according to public interests. If the public demands "environmental products", the industry will start demanding raw material from forests that have been tended in line with "environmental guidelines". The hope is raised that the growing public awareness will influence the forestry towards establishing "environmentally correct" silvicultural practices according to public demand. A joint effort project, the "Living Forests" (Levende skog) programme, is meant to define criteria and documentation for certification of sustainable Norwegian forestry. To some extent it resembles the FSC-programme. The Norwegian government has partly been funding this project. This can be regarded as a policy tool in respect of establishing a silvicultural treatment programme based on public preferences.

4. STAKEHOLDERS AND PARTNERS

The National Forest Service is mentioned above. In addition to designing and implementing national forest policy, the National Forestry Board is responsible for the State Forest (Statens skoger ASA), several state owned sawmills, the State Forest Nurseries, the State Forest Seed Station and the Norwegian Forest Research Institute. Some of these institutions are not under the direct control of the National Forestry Board, they are individual corporations, the Norwegian State being the sole owner of the companies, e.g. the State Forest.

The Norwegian Forest Owners' Federation (Norges Skogeierforbund [NSF]) and the Norwegian Forestry Association (NORSKOG) represent the non-industrial forest owners. NSF is the biggest national forest related actor. Its members account for 56% of Norway's productive forest land (Knutssøn 1991). It is the largest supplier of roundwood with a share of more than 75% of the annual harvest. NORSKOG accounts for approximately 12% of the annual cut (Knutssøn 1991). The role of the forest owners' associations is mainly to protect the economic interests of forest owners and land owners, to influence government forest policy in favour of its members, and to maintain a professional and skilled body of officials and forest owners.

The pulp and paper, and wood based panels industry is represented by the Norwegian Pulp and Paper Association (Treforedlingsindustriens Bransjeforening), a sub-department of the National Association of Process Industry (Prosessindustriens

landsforening). The sawmills and lumber manufacturers collaborate in The Norwegian Sawmill Industries Association (Trelastindustriens Landsforening). These organisations are not solely concentrating on influencing forest policy. Their main objective is to secure favourable conditions for the industry, i.e., inexpensive raw materials and energy, etc., as well as supplying a uniform profile to customers.

As mentioned earlier, the NGOs can be divided into the forestry “friendly” and the conservationists. The Norwegian Forestry Society is mentioned above. The most important environmental/conservationist NGOs are: the Norwegian Tourist Association (Den Norske Turistforening [DNT]), The Society for Nature Conservation (Norges Naturvernforbund [NNF]), Future in our hands (Fremtiden i våre hender), World Wildlife Fund (WWF).

The Norwegian Tourist Association and the Society of Nature Conservation account for 179,000 and 43,000 members respectively. They have a considerable impact on the public and environmental policy issues. Most of the environmental and recreational organisations are encompassed by the Council for Outdoor Recreation (Friluftsrådernes Landsforbund) which acts as an umbrella for its member organisations.

The role of environmental NGOs within the sphere of Norwegian forest policy is mainly to supply a public counterbalance to the commercial actors within the forestry sector. Due to this fact, they almost exclusively emphasise environmental factors: recreation, biodiversity and conservation. Attention to forest policy is mainly directed towards the effect of modern forestry operations on forest ecosystems/biodiversity, and conservation of old-growth forest.

Corresponding to §1 of the Forestry Act, the matters of forest production and securing the supply of raw material to the industry, i.e. commercial objectives, have been important goals of the forest policy. Such biased policy goal-setting is now being abandoned in favour of a more balanced view on the potential of the forest resources. Nevertheless, the Norwegian forests have always been accessible to the public, and the public use of the forest resources is fundamental to the Norwegian people’s way of life. What is taking place, also considering the environmental aspects in the forest policy, is a more distinct inclusion of rights/goals which most Norwegians have taken for granted in the past.

Alliances between the various forest-related actors are traditionally within the borders of mutual interests. The industry and forest owners have been in close cooperation. The ownership structure of the industry – the forest owners’ organisations have owned substantial parts of it – has affected this collaboration. Thus the actors that benefit commercially from the forest form one alliance, while the non-commercial users make up the opposing alliance.

Between the commercial forest alliance and the environmental forest alliance, the government ministries, the Ministry of Agriculture and the Ministry of Environment, are in charge of designing and implementing the policy. The Ministry of Agriculture has traditionally cooperated closely with the commercial forest actors. One important reason for this is the relatively small number of people with a background/education in forestry. The Ministry and the forest owner organisations have both been recruiting officials with similar backgrounds.

The leading authority on forest policy questions is the Ministry of Agriculture, as it has the sole responsibility for the Norwegian forest policy. All other forest-related actors

including the Ministry of Environment, can only affect the forest policy-making indirectly by means of influencing the policy-makers and decision-takers, or by constraining the framework within which the forest policy makers work (e.g. the Ministry of Environment is responsible for the conservation of forest).

5. INTER-SECTORIAL CO-ORDINATION

As a part of the budget process, the government makes annual macro-economic plans for the entire country. The sums assigned for the forestry sector is low compared to most other sectors. Issues related to forestry are, therefore, seldom included in the planning process. Forest policy planning is of minor interest regarding macro-economic planning. Inter-sectorial and inter-policy co-ordination is rare in the sphere of forest policy planning, and no formal corporate planning scheme exists at present. Yet the impact of governmental planning is considerable for the National Forestry Service, and the private non-industrial forest owners. Land-use is constrained by national and sub-national land-use plans. This planning is considerable and can impose restrictions on forest production and operations (by e.g. nature conservation areas), as well as the location of industry.

6. SPECIAL INSTITUTIONALISATION

The National Forest Inventory, and Division on Primary Industry, Statistics Norway, conduct annual surveys to gather data and statistics on the forestry sector and the Norwegian forests. The National Forest Inventories were carried out as early as in 1919. Knowledge on how the state of the Norwegian forest has developed this century, as well as the present state of the forests are well documented. In addition to information on the state of the Norwegian forests, information about the forest estates has been supplied since 1927 by Statistics Norway, by the Census on Forestry (later by the Census on Agriculture and Forestry, the Census on Forestry and the Census on Agriculture was merged in 1969). Statistics Norway also collect data on the forest industry. In addition to this, the Norwegian Institute of Forest Research has been monitoring the environmental status of the forests since 1984. Sites across Norway are visited annually and inspected for the purpose of surveying the health of the forest (this is done by measuring indicators, e.g. the density of the canopy etc.).

The forest policy planning frameworks and institutions have been successful in several respects due to a set of well functioning forest planning instruments and institutions. Firstly, institutions such as the National Forest Inventory and Statistics Norway have supplied the policy makers with the information needed to monitor the forestry sector and carry out forest policy planning. In addition, a body of suitably educated officials and well-defined political guidelines have made the process of forest policy planning efficient. Secondly, the National Forest Service has supplied a well suited framework for implementing the forest policy and for accomplishing the stated goals.

Aside from national forest policy planning, Norway has also been quite active on the international level. Norway was intensively involved in the UNCED process and has later took part in the succeeding work that was carried out – in both global and European initiatives. This work is mainly carried out within the framework of Agenda 21 of the UN, the Helsinki Resolution and in the IPF process. The outcome of the UNCED resulted in the introduction of concepts such *sustainable development* and *preservation of biodiversity*. The initiatives that have been taken in the wake of the UNCED process have thus been aimed at taking care of forest values related to these key elements.

7. CONCLUSIONS AND OUTLOOK

The present state of the Norwegian forests and the forestry sector has gradually evolved as a result of forest policy and scientific development. In addition, institutional factors have influenced the development of the Norwegian forests and forestry. The large portion of small, privately owned, forest estates, and the varying Norwegian topography have resulted in a diverse management of the Norwegian forests.

Looking into the future, the most likely development of Norwegian forestry, and the forestry sector is a further adoption and integration of the concepts of multiple-use and sustainability in the Norwegian forestry practices. One fact pointing in this direction is the “Living Forest” certification programme. Recently, the participating organisations agreed on standards for a “sustainable Norwegian forestry” (Sanness 1998).

The NFP framework supplies a comprehensive framework for forest policy-making. With a global objective, it provides a great opportunity and challenge for forest policy makers and decision-makers around the world. The international aim of the NFPs makes it possible to supply a comprehensive international standard which, once decided upon, can be used as an efficient tool for supervising, evaluating and comparing the different forest policies of different countries. The global aim might also turn out to be an obstacle. It is explicitly stated that national sovereignty and consistency with national policies is a part of the fundamental principles of NFPs. This might lead to inconsistency between the way different countries interpret and practice the concept of NFPs.

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NATIONAL FOREST PROGRAMME FOR POLAND

Krzysztof Kaczmarek

Forest Research Institute
Warsaw, Poland

1. INTRODUCTION

The purpose of this paper is to provide an overview of the current state of formulation and implementation of *policy framework for the achievement of sustainable forest management* (see UN-CSD-IPF 1997, §8). In Poland, this framework is created through the Policy on Forests (1997) and a few action programmes. For the purpose of examining to what extent the new Polish forest policy and forest operational plans correspond to the *basic principles* of National Forest Programme (NFP), a presentation of their content is included here.

It should be also noted in the introduction, that in recent years the most important issue concerning Polish forestry has been the process of forest reprivatization. The scale of returning forest holdings to the former owners amounts to even 56% of the total forest area in Poland. As this question is still under political discussion, the scope of potential consequences of reprivatization for forests and forestry in Poland are not yet clearly known.

2. THE FOREST SECTOR IN POLAND

2.1. State ownership and use of Polish forests

As of December 1995, forests occupy 8.7 million hectares (or 28%) of Polish territory and. Thanks to the afforestation efforts, forest cover has increased steadily in the last 50 years, from approximately 6.9 million hectares in 1945. There are at present 0.22 hectares of forests per inhabitant.

The greater share (83%) of the country's forests is owned by public authorities. 82.1% constitutes the property of the State Treasury: 78.4% is under the management of the State Forests, 2% makes up National Parks and 1.7% is found within other units. 0.9% of the forested area is owned by *gminas* (units of local government

administration). Private forests account for 17% (15.9% owned by individuals) of the total surface, although their surface in central and eastern parts of the country is considerably higher (30-60%). The total number of private forest holdings (owned by individuals) amounts to 900,000 (see Statistical Yearbook of Forestry 1997).

As a result of extensive deforestation in past centuries and very widespread post-war reafforestation, Poland's forests are highly dispersed and isolated spatially. The holding of the State Forests comprises 28,000 complexes, of which more than 6000 cover no more than 5 hectares. The average size of a private holding does not even exceed 1 ha, and a holding of this size may often be made up of several separate plots.

A decisive majority (63%) of the country's forests are in a coniferous forest (particularly pine forest) habitat. The moderately humid pine forest habitat, typical for Polish conditions, constitutes 29.7%, mixed/coniferous forests 29.6% and mixed forests 18.4%. Stands are dominated by coniferous species to an extent of 77.9%, of which Scots pine is predominant at 69.4%. The share of broadleaved species in the composition of stands has risen in recent decades from 13 to 22.1%. Nevertheless, the situation remains problematic in relation to excessively simplified biological structure and the large proportion of stands, whose species composition is not in accordance with the habitat. These problems result from a past preference for monocultural cultivation as stands were renewed. The mean age of stands is 55 years in the State Forests and 36 years in those in private hands (see report on the state of forests – 1996). The total growing stock in forests amounts to approximately 1,908 million cubic metres (an increase of 750 million cubic metres if compared to the year 1945). This converts to a mean of 183 m³ per hectare (196 m³/ha in the State Forests and 116 m³/ha in private forests). The total over-bark volume increment amounts to 56 million cubic metres or 6.2 m³/ha. The present level of annual timber harvesting is a very good expression of the performance of forests' sustainability concept. It is recently only about 32 million cubic metres over-bark on the average, that yields an index of about 3.6 m³/ha. The ratio of harvest size to increment size is approximately 0.57. This assures a continual and stable growth of forest resources in Poland (see National Report on Resolutions H1 and H2 – 1997).

The overall state of health of forests gives cause for concern, despite recent improvement. Forests are endangered by diseases and pests, unfavourable climatic phenomena, fire and the contamination of the air. Locally, these threats have led to the death of forests and a disastrous ecological situation (e.g. in the Sudetic Mountains). The share of damaged trees, both broadleaved and coniferous, has exceeded 50%.

As a consequence of their serving functions other than those perceived productive, nearly half of state-owned forests are classified as protective. These are forests which protect soils from erosion and waters from excessive runoff and pollution, though damaged by industry; offering refuge to animals under species protection; forests which are in the vicinity of large agglomerations, sanitoriums and spas; or forests subject to scientific research or mass tourism. Forests are fundamental elements in the national system of protected areas, their surface accounting for 62.8% of the area within National Parks, 65.9% of that in Nature Reserves and 55.1% of that in Landscape Parks.

Among forests in the various ownership categories, it is the private forests which appear in a relatively unfavourable light, being characterised by a very high degree of

dispersment of plots and forest complexes, poor management, a low level of tree stand resources (only 55% of the mean for state-owned forests), a low mean age of tree stands (36 years as opposed to 55 for state-owned forests), a low raw timber harvest per unit area of forest (about 40% of that in state-owned forests), a low level of formal attainment of protective functions (the complete lack or rare occurrence of private forests with designated areas, Nature Reserves or protective zones for protected species (see National Policy on Forests 1997).

2.2. Economic and political importance of the forestry sector in Poland

Despite the relatively large proportion of forest resources in Poland, forestry is of rather little importance in terms of production within the national economy. In 1996, the share of forestry amounted to 0.6% of the gross national product (GNP), compared with the total share of agriculture, hunting and forestry to 6.0%.

In foreign trade, forestry products also play a minor role in the balance of trade, with export accounting for 0.22% of total export, import 0.08%, the forest industry sector being of considerable importance, with export of its products amounting to 11.4% of total export and import to 4.4% (see Statistical Yearbook of Forestry 1997).

In 1996, approximately 70,000 persons were employed in forestry (0.5%), the majority of which (about 50,000 persons) were employed in the State Forest Enterprise "State Forests" (*Panstwowe Gospodarstwo Lesne "Lasy Panstwowe"*). During the last few years, the number of employees in forestry was reduced steadily (up to 50%), mainly due to the transformation of national economy level of employment amounted to 155,000 persons in 1988 (125,000 in the State Forests).

In recent years, forestry has increased its ability to gain resources. In 1996, public expenditures on forestry, from the state budget, amounted to 160 million PLN or 0.1 per cent of total state expenditures, whereas forestry received only 27 million PLN or 0.07% in 1992. However, in 1996, the agriculture sector received 2000 million PLN (1.4%) and 550 million PLN in 1992 (1.4% of total state expenditures). In comparison to the agriculture sector, forestry has a rather poor capacity to gain resources, although in recent years its ability has grown steadily.

The Ministry of Environmental Protection, Natural Resources and Forestry consists of thirteen divisions, with about four hundred employees. At the Division of Forestry, Nature and Landscape Protection, there are only seventeen persons responsible for forest-related questions or 5% of the total employment in this Ministry.

There is in Polish Parliament, Standing Commission of Environmental Protection, Natural Resources and Forestry (28 persons of 560 members of the Polish Parliament), which deals regularly with forestry-related topics.

The most important issue concerning Polish forestry in recent months has been the concept of reprivatization of forest holdings. The scale of returning forests to the former owners amounts to approximately 4,9 million hectares, or 56% of total forest area in Poland. As the reprivatization process is still under political discussion in the Polish Parliament, new projects are being prepared and considered among governmental bodies.

3. LEGAL AND POLICY FRAMEWORK FOR FORESTS AND FOREST-RELATED ACTIVITIES IN POLAND

The Polish government and Parliament are currently working on country's administration reform. This should cause the decrease in the number of provinces from 49 to 17 administrative regions, and should lead to the determined level of the authority delegation. Unfortunately, as this process is yet not complete, we cannot say what important implications it will have for forestry in Poland.

3.1. Legal framework

Following legal acts refer to forests and forest-related activities in Poland:

1. The Forest Act from September 28, 1991 (with the latest update on April 24, 1997);
2. The Nature Protection Act from October 16, 1991 (now in revision);
3. The Environmental Protection Act from January 31, 1980 (with the latest update on August 29, 1997);
4. The Arable and Forest Land Protection Act from February 3, 1995;
5. The Land Development Law from July 7, 1994.

The following is a short description of the state of existing forest and forest-related law in relation to the legal framework of forest activities in Poland.

The Act on Forests defines the principles of preservation, protection and growth of forest resources, as well as the basic rules of forest management linked with other environment elements and the economy of the country. These regulations apply to forests in general, regardless of the form of their ownership. Under the Forest Law, the public forests are supervised by the Minister of Environmental Protection, Natural Resources and Forestry and private forests are supervised by a voivode or local government administration unit. Forests owned by the State Treasury (public forests) are managed by State Forest Enterprise "the State Forests" (Panstwowe Gospodarstwo Lesne Lasy Panstwowe) with the exception of forests which

1. are managed by national parks,
2. constitute part of The State Treasury Agricultural Agency (Agencja Wlasnosci Rolnej Skarbu Panstwa),
3. are perpetually leased in accordance with separate regulations.

As a part of the administrative function they carry out, the State Forests run the forest economy, manage the land and other real estate, as well as movables connected with the forest economy they draw up a register of the property of the State Treasury and determine its value as well. As a state organisation unit, the State Forests do not possess a legal status and represent the State Treasury with respect to the administered property.

Sustainable forest management, under the Forest Act is a process whose aim it is to develop the forest structure and to use it in such a fashion and rate that ensures the

lasting preservation of the forest biological diversity and abundance, maintains a high productivity and regeneration potential, possesses vitality and the ability to perform both at the present and in the future, all of which are important functions: protective, economic and social, on the local, national and global level, without harmful impact on other ecosystems. It is stated in the Forest Act that a sustainable forest management is based on the forest management plan or the simplified forest management plan and focuses on the following purposes:

1. to maintain forests and their positive influence on the climate, air, water, soil, and the environment on people's lives and health, ecosystems and an ecological balance,
2. to protect forests, in particular those forests and forest ecosystems that constitute natural sections of local nature or forests of particular significance due to their:
 - a) natural diversity,
 - b) preservation of forest genetic resources,
 - c) landscape quality,
 - d) scientific resources,
3. protection of soil and areas that are particularly threatened by pollution or damage and areas of considerable social significance,
4. protection of surface waters and underground waters, river basin catchments, in particular watershed areas and areas supplying water to underground lakes,
5. production of wood, raw materials and non-timber products based on the principles of rational forest management.

Forest management in forests constituting nature reserves or a part of a national park is based on regulations of the Nature Protection Act. Forest management in forests registered as natural monuments is managed in consultation with a monument conservationist in the province, with regard to regulations under the Culture Protection Law.

Forest management in Poland is based on the following rules:

1. common protection of forests,
2. consistent conservation of forests,
3. constant and balanced use of all functions of the forest,
4. enlargement of forest resources.

In order to promote sustainable forest management and protection of the forest, the general director of the State Forests (Lasy Państwowe) reserves the right to establish Forest Promotional Areas by decree. The Forest Promotional Areas consist of forests under supervision of the State Forests. Forests with owners can be included in Forest Promotional Areas, provided the owners have applied for such an inclusion.

Forest Promotional Areas are functional areas of ecological, educational and social importance, their functioning being determined by a consistent economic and protective programme, is prepared by the respective director of Regional Directorate of the State Forests.

For each individual Forest Promotional Area, the general director calls a scientific-social council responsible for projects and their implementation in this areas.

The forests are classified as particularly protected forests, called “protective forests”, when they:

1. protect the soil from erosion, prevent the ground from subsiding, prevent falling rocks or avalanches,
2. protect surface and underground water reserves, keep a hydrological balance in the water basin and on watershed areas,
3. limit the occurrence and expansion of shifting sand,
4. are permanently damaged as a result of industrial activity,
5. constitute seed forests, habitat for wild animals or area of vegetation in danger,
6. are of particular scientific and natural significance or are used for defence and security reasons,
7. are located:
 - a) within city administrative borders and within 10 km from administrative boundaries of cities with over 50,000 inhabitants,
 - b) in protected zones around spa or health resorts,
 - c) in the upper belt of mountain forests.

The Environmental Protection Act determines the principles of protection and rational control over environment and the preservation of its quality, in order to provide present and future generations with favourable living conditions and the right to have access to the environmental resources. Under this Act, organisations and individuals who exploit the land, are obliged to protect the earth from erosion, mechanical devastation or pollution with toxic substances, and if their activity is related to agriculture or forestry, they are obliged to use the appropriate cultivation methods. Organisations and individuals who exploit the land and operate in the field of agriculture or forestry, should apply chemical and biological substances directly to the soil, in such quantities and such a way that they do not disturb the natural balance in the environment and in particular, are not detrimental to soil and water, do not harm fauna, flora and ecosystems or deteriorate their life or cultivation conditions. The administration of forests and other organisational units operating in the field of forestry, as well as owners of forests and forest land which is not the State Treasury property, have the obligation to manage the forest efficiently and rationally, and focus on keeping a balance of nature and appropriate quality of environment.

Protection of nature under the Nature Protection Act, is to be understood as preservation, proper use and renewal of resources and natural elements, in particular wild vegetation and wild animals, as well as natural complexes and ecosystems. Nature reserves situated on the territory owned by the State Treasury are to be supervised by organisational units of the State Forest Enterprise – the State Forests (Panstwowe Gospodarstwo Lesne – Lasy Panstwowe) and, in particular, by the directors of local forest districts. Arable land, forests and other properties situated within borders of landscape parks are being used for economic purposes. In the territory of the State Forests located within the borders of the landscape park, the tasks concerning nature protection are carried out directly by the directors of local forest districts, in accordance with the landscape park protection project, included in the forest management plan.

Managing wildlife and vegetation resources should provide for their continuity, their possible abundance, and should maintain genetic variety. The above mentioned tasks are to be implemented in particular by means of:

1. protection, preservation and rational management of natural vegetation complexes, in particular forests, peat-bogs, swamps, grass, dunes, salt pans and shores, as well as natural habitats for plants and animals,
2. reproduction and expansion of endangered species of flora and fauna, protection and reproduction of habitats of unique animals as well as protecting migratory routes of animals.

The protection of forest areas, under the Arable and Forest Land Protection Act, means:

1. restricting their designation for other purposes than forest,
2. preventing degradation and devastation of forest areas, damage to the forest stand and deterioration of forest production – resulting from activity unrelated to forest management,
3. restoring the economic value of the land, that has lost its forest characteristics as a result of activity unrelated to forest management,
4. enhancing their economic value and preventing a decrease in productivity.

Designation for non-forest purposes:

1. forest land owned by the State Treasury – requires the permission of Minister of Environmental Protection, Natural Resources and Forestry,
2. other forest lands – requires the voivode's permission.

A person who has been permitted to exclude his forest land from production, is obliged to pay the basic fee and annual fees, as well as a one-time compensation in case of premature forest stand fall. Payment of a basic fee and annual fees for exclusion of the forest land from production in case of protective forests are 50% higher than regular fees and other payments.

3.2. Forest policy framework

In 1997, the Council of Ministers adopted the National Policy on Forests, prepared by the Ministry of Environmental Protection, Natural Resources and Forestry. This new policy for forests creates a comprehensive framework for forest activities and pays particular heed to:

- the provisions of the State Environmental Policy enacted by parliament in 1991, which are being drawn up in relation to forests under all forms of ownership,
- the *Forestry Principles* and *Agenda 21* approved by the UNCED held in Rio de Janeiro in 1992,

- the *European Declarations of Forestry Ministers on the Protection of Forests* (Strasbourg 1990 and the Helsinki 1993), which set guidelines for sustainable forest management and ushered in the process of establishing criteria and indicators.

A manifestation of these trends was an interdepartmental document from the Ministry of Environmental Protection, Natural Protection and Forestry entitled “Polish Policy on the Comprehensive Protection of Forest Resources” (1994), which resulted in ministerial Decisions and Orders of the State Forest General Director (State Forest General Director: Forest Promotion Areas Establishment Act (1994) and the State Forest General Director directive on grounding the forest management on ecological foundations (1995)).

In addition to the National Policy on Forests, which can be referred as *normative level planning*, there are three action plans (at *operational level planning*) within the Polish forest policy framework and these are as follows (see National Report on Resolution H1 and H2 – 1997):

- Programme for the Conservation of Forest Gene Resources and Selection Breeding of Forest Trees in Poland, for the Period 1991-2010 (1993),
- National Programme for the Increase of the Country’s Forest Area (1995),
- Programme for the Conservation of Nature and Cultural Values in Forest Districts (1996),

Playing at the *strategic level involves*:

- The project of a strategy for conservation of biological diversity in forests (1997).

4. TARGETS AND STRATEGIES

In describing goals and objectives of key elements of the existing forest policy framework for the achievement of sustainable forest management, a short presentation of goals and objectives stated in action plans and in National Policy on Forests will be provided.

The Programme for the Conservation of Forest Gene Resources and Selection Breeding of Forest Trees in Poland for the Period 1991-2010 defines foundations for conservation of forest gene resources, improvement of seed base, selection of forest trees, and sets the conditions for an efficient achievement of set goals. The Programme was initiated by the General Director of State Forests Directive No. 8 from January 25, 1993.

The National Programme of Increasing the Country’s Forest Area (adopted by the Council of Ministers, June 1995), assumes afforestation of approximately 700,000 hectares of abandoned agricultural land until the year 2020. Carrying out the programme will allow an increase in the country’s forest area of approximately 30%, in accordance with ecological and economic guidelines justifying the increase in the share of forests in the country.

The Programme of the Conservation of Nature and Cultural Values in Forest Districts, which has been an integral part of the forest management plan since 1997, was drawn up with the conviction that the problem of preserving biological diversity is, for Polish conditions, a task to be carried out in managed forests. The National Policy on Forests (1997) consists of the broad range of goals and objectives presented below:

1. The greatest aim of forest policy is to designate the complex of actions shaping relations between humans and forests, in order to preserve – under changing natural and socio-economic circumstances – the conditions for the on-going maintenance of the multifunctionality of forests, their diverse uses protection and their role in the shaping of the natural environment, keeping in line with present and future expectations of society.
2. The safeguarding of the permanence of forests, along with their multifunctionality, will be achieved by:
 - increasing the country's forest resources,
 - improving the state of forest resources and providing them with comprehensive protection,
 - reorientating forest management from the previous domination of the raw materials model towards a pro-ecological and economically-balanced model of multifunctional forest management that corresponds with criteria set for Europe by the Helsinki process, taking account of the specifics of Polish forestry.
3. The supplementation of forest resources will take place by means of
 - Increase in forest area to 30% by the year 2020, 33% by the middle of the 21st century, progressively as land unsuitable for agriculture is released for reforestation, as well as attainment of the spatially-optimal structure of forests in the landscape by means of the protection and full utilisation of the productive possibilities of habitats,
 - the restitution and rehabilitation of forest ecosystems, mainly by means of the reconstruction – in appropriate habitats – of mixed tree stands instead of single-species, as well as by means of biomelioration methods,
 - the regeneration of devastated and neglected tree stands in private forests and, in turn, their ecological rehabilitation.
4. The increasing of resources will be accompanied by programmes:
 - introducing systems of wooded areas and plantations, as substitutes for forest in productive agricultural areas and as an additional source of raw timber,
 - shaping transitional tree communities and plantations of trees and shrubs on land degraded by industry, mining, construction and military activities, and on chemically-contaminated soils.
5. For the improvement of the state of forests and their protection that they may improve and fully serve diverse purposes, the following actions will be taken within forestry management:

- projects to enhance the health of tree stands and their resistance to harmful abiotic and biotic factors, by means of the ever wider implementation of biological and ecological methods of protection,
 - limitation of the use of chemical substances (pesticides, mineral fertilisers, mineral oils, etc.) (only where the necessity arises),
 - the drawing-up and implementation of a programme to redevelop the small-scale retention of water with in view of the restorational of beneficial supplies of water to forests and improving water management in the country, especially on divides and in upland and mountain areas,
 - further improvement of methods for the active fighting of the threat of forest fires and fires themselves,
 - enhancement of the genetic and species diversity of forest biocenoses and the diversity of ecosystems in forest complexes – on the basis of natural models,
 - regulation of forms and intensifying the use of forest resources, i.e. harvesting of timber and non-timber products, as well as the forests' protective and social functions, to the extent that these activities are not able to threaten the permanence of forests or to have a negative influence on the state of tree stands,
- an acceptance that:
 - the utilisation of resources as regulated by a plan of forest use is a derivative of the needs established with silvicultural and protective aims in mind and is to ensure the continuity of production of the greatest amounts of timber of the best quality possible,
 - the amount of timber harvested in the course of tending should not exceed ongoing increments, but rather guarantee the accumulation of a timber increment in stands, thus giving a basis for enhanced reproduction,
 - the size of the timber harvest from mature stands should consider limitations resulting from the fulfilment of protective and social functions, the present and future species and age structures of forests and the degree to which they conform to habitat properties, the degree to which the planned management goals are achieved and needs where the renewal and reconstruction of stands are concerned,
- the regulation of populations of game to levels which do not threaten the silvicultural and protective purposes of a forest,
 - the regulation of recreational activities and tourism in forest areas in a manner which brings the social functions of forests in unison with the protective and productive functions,
 - enhancement of the effectiveness of the legal protection afforded to all forest land.
6. Society's expectations of a significant widening of forestry services to include the diverse benefits resulting from the varied functions will be met if forest management is multifunctional and sustainable. The drawing-up and implementation of the principles for such management will require:

- theoretical and experimental studies into a new model for forests taking into account the influence of random factors on management (in place of the previous model which determined the schematic spatial and temporal organisation of tree stands with the purpose of immediately obtaining higher incomes),
 - the adjustment of the concepts for management and utilisation to include the natural, economic and social conditions of functioning of the forest holding, the priority being natural or semi-natural cultivation, preferably for complex felling and the use of natural regeneration,
 - the development of lasting and biologically-resistant forests,
 - security on the basis of the Statutes on Nature Conservation, on Forest and on the Protection of Agriculture and Forest Land, the protection of all forests, and in particular the most valuable ecosystems and keystone or rare elements of forest biocoenoses,
 - radical restrictions on the use of forests of near primeval character, as well as those by watercourses representing ecological corridors,
 - the promotion and protection of biological diversity in the entire process of forest organisation and management,
 - the application of forestry techniques and technologies that are safe for the environment and ‘friendly’ to people and nature,
 - the ensuring of effectively regulated utilisation using precise knowledge of the structure of stand resources, which conditions the level of implementation of all the functions designed for forests in successive developmental cycles of tree stands (successive generations of trees).
7. The devising and promotion of a model of sustainable and multifunctional forest management will be served, along with the comprehensive protection of forest resources, by the (already initiated) Programme for Promotional Forest Complexes, the aim of which is to apply the model in different natural and social conditions, and to prepare it for broad-scale application in public forests, especially those of the State Forests, and later in forests under all types of ownership.
8. In addition, actions enhancing the functions of forests, public forests, in particular, will be directed at:
- ecological functions, by means of
 - compulsory consideration of ways in which the important types of forest functions can be perceived, the ecological functions, particularly in planning studies for forest areas, the shaping, and local and proper protection or restitution of ecosystems in a given region, as well as the biological organisation of ecotonal zones must be taken into account
 - compulsory consideration, of optimal field/forest boundaries, the spatial structure of forests in the landscape, the system of wooded areas and ecological corridors between forests, as well as the lifting of ecological barriers and, above all, the limitation or elimination of external pressures on forest ecosystems by means of ‘forest-friendly’ management of adjacent land, in physical development plans for gminas (units of local government administration),

- productive functions by means of
 - a search for a new forms and subjects in the utilisation of forest resources, at the same time heeding of the principles of sustainable development, i.e. the ensuring of the permanence and protection of these resources,
 - the devising of sustainable methods of use favourable to the future of forests, taking into account the changes in the global environment and ecological uncertainty, as well as their possible influence on a local, regional and national scale,
 - the perfect functional integration of forestry in the timber industry, and cooperation with other consumers of wood,
 - the stabilisation of the national market for the timber and wood,
 - the wide use of timber – an ecological material – in building, and its rational use, protection and preservation;
 - social functions by means of
 - specialised management of forests with specifically defined social functions (those in National and Landscape Parks, on the outskirts of towns and cities, in regions of intensive recreational activities and tourism, and in experimental areas), in such a way that potential conflicts with the other functions of these forests or adjacent ones are avoided,
 - integration of the aims of forestry with those of the sustainable development of society on local, regional and national scales, as well as closer cooperation with local communities in the development of local models for sustainable development that consider the state of forest resources and their functions,
 - the ecological and forest-related education of society and the shaping of appropriate awareness of forests and forestry.
9. If the diversity of functions served by forests is to be enhanced and broadened, it is essential that stands in forest under private ownership be regenerated and their ecosystems rehabilitated. This will require the establishment of appropriate legal, economic and organisational bases.

The effective creation and popularisation of a model for sustainable, multifunctional forest management requires that legislation, and the system by which forestry is financed and organised, be adapted to the changing conditions of management.

The achievement of the aims of forest policy will require the drawing-up of long-term executive programmes setting the necessary organisational, economic and legal solutions appropriate to the needs of forestry, within the realm of social and economic possibilities.

In relation to forest policy tools, the National Policy on Forests recommends improvement of existing economic (subsidies, tax system) and legal (acts, regulations) instruments as follows:

1. Systems and directions for the financing and economic improvement of forestry should consider its new aims as result of the increased significance of the ecological

and social functions, the greater threats and actual damage incurred as a result of a variety of factors and the need for partial recompensation of the outlays made by the managers and owners of forests for the public services they render. The system and directions of financing and economic improvements to forestry should aim at the following solutions:

In relation to forests under all forms of ownership:

- the greatest possible contribution of the national budget, the budgets of the local government administration and special funds and subsidies, to the realisation of the ecological and social functions of forests (the restoration of proper water relations, reforestation, the planting of trees and shrubs, the special costs of the functioning of protected and protective forests, the costs of restoration following ecological disasters, the nature and forest-related awareness of society, and programmes resulting from Poland's ratification of international conventions, in particular the Convention on Biological Diversity and the Convention on the Protection of the Climate);
- the creation of a mechanism defining the effective participation of resources from National Fund for Environmental Protection and Water Management as a compensation for damage to forests caused by industrial air pollution.

In relation to the State Forests:

- identification of principles for limited self-financing of activities as a consequence of a defining of the public functions of forests qualifying for financial support from the national budget and special funds,
- the maintenance and improvement of the system for the redistribution of financial resources originating from a level calculation between forest districts in different natural conditions of production, with a diverse range of services provided and thus, varying profitability,
- the obtaining of income from ecological surcharges on the prices of energy carriers, when introduced,
- the obtainment of payment for various forest services that were previously free of charge, e.g. for the commercial harvesting and collection of forest-floor products,
- the development and commercialisation of a new forms of management activity,
- rationalisation of employment to an economically optimal level and increased employment in forestry services, by means of:
 - defined actions guiding and supporting economic entities engaging in and rendering services to forestry,
 - the leasing of equipment for forestry work,
 - the establishment of a system of preferences for the creation and stabilisation of multi-person enterprises offering forestry services,
 - the raising of the professional qualifications of employees in enterprises offering forestry services,
 - the future concessioning of this form of service;
- the consideration of reforestation work in programmes combating unemployment at regional and local level.

2. Efforts to improve legislation should aim at:

- systemic solutions ensuring rational support for management in public and private forests by means of various economic and financial mechanisms for the achievement of other ecological and social functions, and, in addition – in private forests – for organisational activity (supervision, the setting-up of associations and forestry chambers) and for selected management goals (reafforestation, the liquidation of the consequences of disasters and the reconstruction of stands),
- extending and improving the legal possibilities for the association of private owners with the purpose of joint management of forests and joint presentation of interests to bodies of the central and local government,
- regulating the principles of wooded area management, its financing and conferring upon their appropriate status as an important component of the landscape,
- regulating the systemic mechanism and scope of compensation for the damage done to forests by industrial pollution and catastrophic events, as well the financing of efforts to enhance the ecological functions forests serve under various forms of ownership,
- the introduction of a system of fees for the utilisation of non-timber forest resources by economic entities,
- the longer-term introduction of a state environmental policy (in line with the economic system of the country and trends in the EU) of ecological surcharge on the prices of energy carriers, with the designation of some of the funds thus obtained to promote the assimilation and accumulation of CO₂ in forests and timber with the intention of counteracting the enhanced greenhouse effect (reafforestation, the increasing of plant biomass in forests, the protection of organic matter in soils and more effective and enhanced use of timber in construction work),
- the statutory subordination of organisational tasks to bodies of the central administration supervising forestry, and their entrustment to a national planning and forecasting service,
- the legal placement of Promotional Forest Complexes within the organisational system of the State Forests, as functional areas with defined ecological, productive and social goals,
- the adjustment of hunting laws to the goals of sustainable, multifunctional forestry management, and, in particular, silvicultural and protective needs.

3. Strategic Government Programme

- The inclusion of the top-priority aims of forestry in a strategic government programme is justified by the fact that forestry seeks to achieve goals important to the whole country, including ecological security (depending on forest cover, the sustainability and diversity of forests and their various environment-shaping attributes), as well as aims important in satisfying society's expectations vis-a-vis the continued provision by forests of diverse products and services.
- A Strategic Government Programme would be concerned with the development of forest area and would integrate the top-priority ecological, productive and social goals for forestry management, build the basis for the long-term implementation of national policy on forests and represent – at the beginning of the third millennium

- a solid foundation for the natural surface structure of the country and living conditions.
- The process of linking theory with experimentation and practice, characteristic of forestry, the complementary nature of the research topic and the enormous areal and functional scope of the undertakings all provide additional justification to support the main tasks in forestry resulting from national policy on forests by means of a strategic government programme.

5. STAKEHOLDERS AND PARTNERS

Under the National Policy on Forests, the drawing-up and implementation of state policy on forests is among the responsibilities of the Minister of Environmental Protection, Natural Protection and Forestry. In particular, the Minister is obligated to outline the conditions supporting the achievement of all the functions of forests; to provide constant supervision of the condition of forests and forestry management, the forests within National Parks and the preparation of programmes following a national policy. A further statutory responsibility of the Minister is to present the annual Information on Forests to the government, which is later directed to sessions of parliament.

National policy in regard to forests is pursued by:

- voivodes (heads of provinces), in the scope of perfecting the sustainable use of private forests and their resources, the improvement of the condition of such forests, and supervision of them,
- the General Director of the State Forests, in the scope of improvement of the management practices performed on the state owned forests and their use, thus allowing for accomplishment of all functions served by forests and indicated by the state policy on forests,
- the Director of the National Board for National Parks and Park Directors, to the extent determined in the Forest Act, in relation to forests under all forms of ownership and in the scope of protection and management of forests ecosystems in accordance with the conservation plans of National Parks,
- the Office of Forest Management and Survey, in the scope of introducing the principles of forest management into planning procedures, directed at achieving the goals of multifunctionality in the holding, and a monitoring of the state of forest resources and forests' conditions.

Partners in the implementation of national policy on forests are:

- units of the national and local government administrations at the appropriate level:
 - the voivodeship (provincial) administration, in relation to a planning policy within voivodeships guaranteeing maximum protection for forests (environmental protection, afforestation and systems of wooded areas),
 - the local administration and self-government, in the scope of direct cooperation with Forestry Districts of the State Forests and mutual participation in planning

- processes (forest management plans; physical development plans for municipalities; conservation plans for National Parks, Nature Reserves and Landscape Parks), in programmes to increase the ecological awareness and knowledge of local communities, and to improve local models for sustainable development on the basis of, i. a., the inclusion of the resources and valuable features of forests,
- the private owners of forests and their associations, as well as other forest managers.

Also participating in policy on forests are:

- trade unions, which are active within forestry in line with their statutory entitlements,
- Faculties of Forestry of higher education institutions, the Forest Research Institute and other scientific institutions, by means of research on the ecological and social functions of forests and their being in unison with technologies and methods of production, as well as on the implementation of programmes meant to educate society on nature and forests and to train forestry personnel,
- scientific and technical forestry associations (the Polish Forest Society, the Association of Forestry Timber-Industry Engineers and Technicians), in relation to the extension of knowledge on forests and the provision of opinions and proposals with respect to national policy in this sphere,
- the forestry press and forestry publishing houses, in relation to information on forests, training and national policy.

The following play roles in establishing a national policy on forests:

- the Sejm and Senat (lower and upper houses of parliament), regarding the framework of the law concerning forests, appropriate policy safeguards in the national budget, checks on the implementation of provisions of policy on forests and the environment, and the introduction of the principles of sustainable development,
- the government, regarding the implementation of the principles of state environmental policy in all sectors.

The wider involvement of society in policy on forests, as stated in National Policy on Forests, require:

- consultations with the people at the local, regional and national levels of government, in relation to the perfection and implementation of policy considers the needs and expectations regarding a national asset, and reconciliation of the conflicting interests of different interest groups and social strata,
- to heed the principle that people always be informed on the state of the forests, and in particular to take joint action for forests and forestry in association with interested organisations and local government.

6. INTERSECTORAL COORDINATION

In relation to the *intersectoral approaches*, we find the following statement in the Polish National Policy on Forests: the role of forests in the socio-economic development of the country, the multitude of functions served and the numerous interdependencies between the state of forests and external economic factors explain the need for a forest policy to be implemented in intersectoral systems, in particular, in association with the:

- environmental policy,
- national planning policy,
- agricultural policy,
- defence policy,
- policy regarding the use of Treasury-owned assets,
- energy and industrial policy,
- social policy, including that in education and science,
- fire-control policy,
- strategy for national development,
- strategy for the protection of biological diversity,
- strategy for climate protection.

The multidirectional nature of the links in national policy on forests is reflected by its presence within the implementational programmes of various administrative bodies and institutions. Particularly in need of reorganisation are the links between forestry and the timber industry and other clientele for wood, as well as the economic entities taking profit from forests and the sector providing services for forestry. Between forestry and its customers – particularly the timber and paper-making industries – there should be the organisation and development of functional integration and even capital-bringing benefits to both sides. This action should take the form of:

- the drawing-up and implementation of a long-term strategy for the demand for timber and the determination of a possible supply from the national base, with the stipulation that harvests should not exceed levels determined in forest management plans,
- the augmentation of the national forest timber base with wooded areas and tree plantations, on the basis of rational programmes for establishment and use,
- consideration of possibilities and needs in relation to the import and export of timber on a scale resulting from differences between demand and the possibilities of the national timber base,
- encouragement of the adjustment of technologies and directions of production in the timber industry to the quality of the range of timber, including that of small or medium dimensions produced by multifunctional forestry management,
- support from forestry and the timber industry for the process of trade in timber by means of the introduction of a modern market-oriented information system, improvement of the sales and accounting systems and moderation of the instabilities in supply and demand.

7. SPECIAL INSTITUTIONALIZATION

The existing system of planning and forecasting in forestry requires the conversion of the Office of Forest Management and Survey into a planning and forecasting body in the nature of a state agency under legal provisions to the office of the Minister supervising forestry and working for the good of all forests in Poland regardless of ownership. The tasks of such national planning and forecasting service should include (see National Policy on Forests 1997):

In relation to planning and forecasting:

- constant and continuous monitoring of the sizes, status and structure of forests,
- the drawing-up of prognoses for the needs of the government,
- cooperation with central and local government bodies engaged in spatial planning on the scales of the country, voivodeship or *gmina*, with the intention of developing the structure of the landscape optimally, and especially the area and distribution of new planting of forests and trees and the conditions for the functioning of forest landscape ecosystems,
- the making of regular checks on the implementation of national policy on forests,
- the development of a cooperation in monitoring, neighbouring countries and Europe as a whole,

In relation to the carrying-out of services:

- the drawing-up of management plans, along with a programme of nature conservation, for the needs of the managers and owners of forests,
- (for the purpose of facilitating the taking of managerial and protective decisions), the drawing-up reports for managers and owners concerning changes in forest resources.

8. CONCLUSION AND OUTLOOK

As stated in National Policy on Forests, the consistent achievement of the goals of forest policy in harmony with European provisions should ensure the following gains within the first half of the 21st century:

- an improvement in the state of forest resources and the sustainability of forests,
- an increase in Poland's forest cover to 30% by 2020 and 33% after 2050, as well as reconfiguration of field-forest boundaries to the benefit of the landscape, the functioning of forests and agriculture,
- an increase in the retentive properties of forests and a relieving of the water deficit in forest ecosystems and in the country as a whole,
- an approximate 10% increase in the amounts of carbon dioxide fixed and accumulated by the year 2000 and 20% the second half of 21st century (i. e. 4.5 and 9 million tonnes, respectively),

- an improvement in local climates and a limitation of degradational processes in the landscape,
- an increase in the natural diversity of forests, including an increase in the proportion of broadleaved species from 22 to 33% by the year 2050, an increase in the proportion of multi-specied tree stands to 48% and the introduction of a broadleaved understorey to 1 million ha of pine stands in fresh pine forest and mixed/pine forest habitats,
- an enhancement of the role played by forests in the ecological structure of the country, by means of the biological forming of forest edges and the link of forest complexes in ecological corridors of wooded areas,
- full assessment of the natural resources of forests and the creation of the conditions by which they are safeguarded,
- an increase in the forests' timber resources of approximate 15% by the year 2020 and 20% by the year 2050,
- an increase to 25% in the area covered by tree stands more than 80 years old,
- an increase in the annual harvesting possibilities for large timber in forests under all kinds of ownership,
- growth in the rational harvest of timber from plantations and wooded areas to 1.5 million m³ per year,
- an improved process for the monitoring and forecasting of the state of forests resources and management planning based on a modern databank concerning forests under different types of ownership and modern information process technologies,
- the spatial development and economic and natural improvement of private forests by means of the establishment of associations of private owners, the bringing into operation of economic stimuli, and education,
- the safeguarding of the many valuable features of forests by directing tourist and recreational activities in forests and by protecting the productive base of forest vegetation,
- the achievement of relative harmony between the different categories of forest functions,
- the broadening of society's awareness on forests, their protection and use.

The following projection was designed for the implementation of national policy on forests:

- to be completed by the year 2000: programme-related projects on the set of executive studies into national policy on forests initiated by the Forest Act of 1991, and by studies entitled: 'Polish Policy for the Comprehensive Protection of Forest Resources' (from 1994); the 'Programme of increasing the country's forest cover' (from 1995) and the 'Strategy for the Protection of Forest Biological Diversity' (from 1996). In addition: the preparation of an amended Forest Act, forestry instructions, guidelines and principles, a Strategic Government Programme and a Programme for Promotional Forest Areas, during which a system of wooded areas nation-wide will have been put into effect, along with an increase in support for forest policy from allotted funds;

- the year 2020: the transformation of forestry from being material-based to the multifunctional; an increase in forest cover to 30%; the completion of the Programme for Promotional Forest Areas and its full implementation throughout the State Forests holding; an improvement in the health of forests; systemic protection of biological diversity and a redoubling of efforts to fight the ‘greenhouse’ effect; rationalisation of forestry management in private forests; a harmonisation of forest functions and full systemic support for forestry management from budgets and special funds;
- the second half of the 21st century: all of the set goals in forest policy will have been achieved, including transformation of the species structure and the effective participation of forests in the regulation of the climate, water management and the preservation of the country’s natural heritage.

List of abbreviations

UN-CSD	United Nations Commission on Sustainable Development
NFP	National Forest Programme
GDP	Gross Domestic Product
PLN	Polish New Zloty
UNCED	United Nations Conference on Environment and Protection

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NATIONAL FOREST PLANNING IN PORTUGAL

Américo M. S. Carvalho Mendes

Universidade Católica Portuguesa Porto
Portugal

ABSTRACT

The paper starts with a brief description of the structure and trends of the forest sector in Portugal: forest coverage, forest land ownership distribution, the share of the GDP, the workforce and foreign trade.

The second part of the paper deals with the legal and institutional framework for national forest planning. Particular attention is given to the following issues: the recent reform of the Forest Services, the weaknesses in forest planning capacities, the recent Forest Policy Law and the first draft of the National Forest Programme. The paper concludes by stressing the need for capacity-building in national forest planning.

Keywords: Forest Planning; Capacity Building.

1. INTRODUCTION

1.1. A growing forest resource base

Forest area has been growing in Portugal for at least the last 120 years, reaching more than one third of the country land area today. Until the sixties, the expansion of pine forests in North and Central Portugal was the major component of forest growth. This expansion came first by the active intervention of the Forest Services to protect the dunes in the coastal lands followed by the not always pacific afforestation they carried out in the commons of the mountain hinterlands which spread to the surrounding private lands. The rural emigration in the 1960s and 1970s in those regions undermined the traditional forest management practices so that forest fires emerged as a growing risk for the pine forests whose area has been diminishing since that time.

In the 1960s the eucalyptus took off to supply pulpwood for the paper companies recently established in the country. This species has been replacing part of the decaying

Table 1. Trends in forest lands in Continental Portugal since 1874.

Species	1874	1902	1928	1956	1968/78	1980/85	1995
Conifers	210000	1020200	1198600	1309000	1376940	1358800	1136300
Maritime pine	n.a.	430200	1132000	1128000	1293040	1252300	1029200
Cork and holm oak	370000	782700	939600	1264000	1192480	1128700	1196400
Cork oak	n.a.	366000	560000	590000	656580	664000	720700
Other oaks and chestnut	60000	153600	193200	132000	99840	143200	174900
Eucalyptus	0	0	0	0	213720	385800	695100
Forest lands	640000	1956500	2331400	2763000	2969120	3108200	3358800
Agricultural lands	1886000	3111317	3283000	4834000	3879602	3879602	3800381
Land area	8879033	8879033	8879033	8879033	8879033	8879033	8879033
Forest cover rate	7.2%	22.0%	26.3%	31.1%	33.4%	35.0%	37.8%

Sources: DGF (1998a, 1998b) and INE (1947, 1992).

pine forests, mostly in Central Portugal, but also in the North and some parts of the South.

This region, however, remains the land of the most important agro-forestry systems in the country (“*montados*”) based on the cork and holm oak trees. The holm oak lost most of its economic value in the sixties due to the swine fever which demolished the stock of Iberian pigs fed on the acorns from these trees. The cork oak has kept its economic value by being the resource base for the cork industries, of which Portugal is the world’s leading producer. Recently, the EU funds for the afforestation of farm lands (Reg. 2080/92) have been used at great profit by the landowners in the South to renovate and expand the cork oak forests.

Far from the importance they carried in the native forests which covered the country in the past, the other oaks and the chestnut forests have been growing since the 1960s, particularly in North and Central Portugal.

This secular growth in the forest resource base has substantial potential to go much further. This growth can occur in two non-mutually exclusive ways:

- further growth in the forest area up to 5500000 hectares, including marginal agricultural lands not suitable for farming (Alves et al. 1986);
- substantial productivity gains resulting from improved forest management.

1.2. An important but heterogeneous sector

In Portugal, the forest sector is an important but heterogeneous sector. In fact, with 2.6% of the GDP and 5.3% of the workforce, the forest group (forestry, forest industries and related industries and services) is one of the top three in the Portuguese economy in terms of value added and employment, together with the textiles and clothing, agriculture and food industries. With 12% of the exports, it is also the second major exporting group in the country.

Important in the aggregate, the Portuguese forest sector has a heterogeneous structure which makes it difficult to coordinate for public policy. As mentioned before, the sector has evolved around three key forest products very different from each other in terms of production and business structure: pine wood and the woodworking industries (sawmilling, carpentry, panels and furniture), pulpwood and the related pulp, paper and board industries, cork production and the cork industries. These three components are very different in terms of ownership structure and forest management, as well as in terms of industrial business structure: small and medium-sized firms in sawmilling, carpentry, furniture, preparation and transformation of cork, manufacturing of paper and board products and big firms in the pulp, paper and panel industries.

1.3. The dominance of private landownership

85.7% of forest lands are under private management, the rest being almost entirely communal forests managed by the Forest Services. Behind each of the three major types, the four major stakeholders concerned with forestry in Portugal can be found:

Table 2. Gross value added of the forest cluster in 1993 (millions of escudos).

Activities	Value added
Forestry	92 468
• Roundwood	30 143
• Pulpwood	29 526
• Cork	18 774
• Non-wood products	13 925
Gaming	13 140
Sawmill industry	27 626
Carpentry	19 370
Plywood industry	1 867
Particleboard industry	7 541
Furniture industry	86 239
Handicrafts of wood and cork	488
Woodworking machinery	5 180
Cork industries	38 294
Pulp industry	24 284
Paper industry	19 363
Paper and board packing products	15 437
Resin products	5 596
Ship-building (wooden boats)	941
Total	357 834
GDP at market prices	13 674 983

Sources: Mendes (1996, 1998a)

- the Forest Services managing approx. 1/4 of the pine forests, mostly in communal lands;
- the non-industrial private forest (NIPF) owners of North and Central Portugal, typically with small holdings, managing the other 3/4 of the pine forests;
- the pulp industry managing one-third of the eucalyptus forests, the other three thirds being with non-industrial private forest owners and in communal forests;
- the non-industrial private owners of the cork oak forests in the South possessing much larger holdings than the ones in North and Central Portugal.

Table 7 shows the contrasting landownership structures between the North and the South:

- Although forest lands are usually parts of farm holdings, they are not used for agricultural purposes in the North, whereas in Alentejo, most of the forest lands are part of an agro-forestry system including agricultural crops (wheat) and livestock;
- in the North, almost 50% of the forest lands with forest use only belong to holdings with 5 ha of agricultural land or less, and between 1.5 and 2 ha of forest land;
- in Alentejo, 93.3% of the forest lands with agro-forestry use belong to holdings with more than 50 ha of agricultural land, and on average 175.5 ha of forest land.

Table 3. Workforce in the forest sector in 1993/95.

Activities	Workforce
Logging	10 000
Cork extraction	4 000
Resin extraction	2 000
Forestry contractors	3 750
Wood transportation	2 300
Forest nurseries	1 000
Game production and management	8 000
Import and export of roundwood	770
Sawmill industry	17 800
Carpentry	14 576
Panel industry	2 000
Furniture industry	76 116
Handicrafts of cork and wood	1 000
Woodworking machinery	2 349
Furniture wholesaling	3 692
Furniture retailing	31 834
Resin industry	2 000
Cork preparation	1 800
Cork stoppers	14 000
Cork agglomerates	3 400
Corkworking machinery	158
Pulp industry	5 224
Paper and board industry	4 897
Manufacturing of paper and board packing products	5 440
Forest-related services (Forest Services, other public services, fire fighting , education, research, associations)	5 288
Total workforce in the forest sector:	223 394
• Forestry, gaming and related services	21 050
• Forest industries and related services	197 056
• Other services	5 288
Total workforce (all sectors)	4 255 000

Sources: Mendes (1996, 1998a).

The communal forests are more important in the North than in the rest of the country: in the North they represent 44.2% of the forest lands, whereas the percentage is 5.6% in the other regions

1.4. Insufficient public and political awareness

Given the economic importance of the forest sector, can one say that it receives sufficient recognition in the public opinion and in the policy-making process? It is fair to say that the public opinion in Portugal does not have a correct sense of the economic importance of the forest sector. The situation is quite similar among politicians. Forestry

Table 4. Foreign trade in forest products in 1994.

Products	Exports		Imports	
	10 ⁶ esc.	% total	10 ⁶ esc.	% total
1. Fuelwood	129	0.0	94	0.0
2. Roundwood	5 318	0.2	25 743	0.6
3. Sawnwood	13 890	0.5	10 701	0.2
4. Other wood products	11 104	0.4	6 047	0.1
5. Wood chips	390	0.0	1 225	0.0
6. Plywood and panels	29 822	1.0	8 200	0.2
7. Pulp	84 281	2.8	7 441	0.2
8. Paper, board and paper & board products	77 133	2.6	81 175	1.8
9. Furniture	32 177	1.1	18 820	0.4
10. Cork	5 932	0.2	5 559	0.1
11. Cork products	90 943	3.1	2 322	0.1
12. Honey	162	0.0	67	0.0
13. Resin products	5 679	0.2	1 364	0.0
14. Chestnuts and other forest fruits	2 957	0.1	168	0.0
15. Mushrooms	355	0.0	8	0.0
16. Total (forest products)	354 954	11.9	143 167	3.2
17. Total (all sectors)	2 975 468	100.0	4 479 491	100.0

Sources: INE (1995b, 1995c)

Table 5. Ownership of forest lands in 1995.

Regions	Total area ha	Private forest lands ha %		Forests managed by the Forest Services			
				Public forests		Communal forests	
				ha	%	ha	%
Northwest	340 700	254 476	74.7	143	0.0	86 081	25.3
Northeast	292 500	98 708	33.8	0	0.0	193 792	66.2
North	633 200	353 184	55.8	143	0.0	279 873	44.2
Others	2 672 900	2 450 594	91.7	71 748	2.7	150 558	5.6
Total	3 306 100	2 803 778	84.8	71 891	2.2	430 431	13.0

Sources: INE (1996).

has been, and continues to be, a department within the Ministry of Agriculture, often neglected or underestimated in comparison to agriculture and other economic activities.

Recently, however, the forest sector is gaining ground in the political agenda. It was selected as one of the priorities in the economic programme of the current government, and in 1996, the Parliament voted unanimously for a Forest Policy Law whose application decrees are in the process of approval by the government. More recently the Ministry of Agriculture put up a National Forest Plan for public discussion.

Table 6. Forest lands by types of management and tree species in 1991/93 (1000 ha).

	Total		Coniferous species		Eucalyptus		Cork Oak		Other		Total	
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
Public forests	86	2.6	71	5.2	0	0.0	0	0.0	15	2.2	15	0.8
Communal forests	380	11.7	360	26.5	20	3.8	0	0.0	0	0.0	20	1.1
NIPF	2.497	76.9	899	66.1	319	60.3	621	90.4	658	97.8	1.598	84.6
Industrial forests	246	7.6	30	2.2	190	35.9	26	3.8	0	0.0	216	11.4
Others	40	1.2	0	0.0	0	0.0	40	5.8	0	0.0	40	2.1
Total	3.249	100.0	1.360	100.0	529	100.0	687	100.0	673	100.0	1889	100.0

Sources: own estimations based on data from the Forest Services and the pulp industry

Table 7. Distribution of private forest lands by size of agricultural holdings in 1993.

area (ha)	Forests with agro-forestry use				Forests without agro-forestry use			
	Holdings		Forest lands		Holdings		Forest lands	
	N.º	%	ha	%	N.º	%	ha	%
<u>Continental Portugal</u>								
0-1	172	1.1	63	0.0	40 516	17.7	54 738	6.3
1-5	3 615	23.6	3 866	0.4	141 775	61.8	326 340	37.6
5-20	4 431	29.0	21 148	2.4	38 912	17.0	197 996	22.8
20-50	2 371	15.5	39 188	4.4	5 763	2.5	70 725	8.2
≥ 50	4 703	30.8	834 812	92.9	2 520	1.1	217 535	25.1
Total	15 292	100.0	899 077	100.0	229 486	100.0	867 334	100.0
<u>North</u>								
0-1	30	0.8	8	0.0	13 638	14.4	14101	5.9
1-5	1 590	44.0	1 147	4.1	57658	60.8	103 336	43.1
5-20	1 454	40.2	2 643	9.5	20 218	21.3	73 353	30.6
20-50	379	10.5	2 096	7.5	2 801	3.0	23 145	9.6
≥ 50	161	4.5	21 891	78.8	516	0.5	26 110	10.9
Total	3 614	100.0	27 785	100.0	94 831	100.0	240 045	100.0
<u>Alentejo</u>								
0-1	64	0.7	45	0.0	252	7.2	4 432	5.3
1-5	1 325	14.5	1 789	0.2	1 018	29.1	3 598	4.3
5-20	2 257	24.8	15 919	2.2	948	27.1	10 236	12.2
20-50	1 546	17.0	31 814	4.3	470	13.4	5 153	6.2
≥ 50	3 920	43.0	688 010	93.3	811	23.2	60 403	72.1
Total	9 112	100.0	737 577	100.0	3 499	100.0	83 822	100.0

Source: INE (1995a).

2. BACKGROUND

2.1. Legal and policy framework

The legal and policy framework for forests and forest-related activities in Portugal is undergoing substantial change, far from settling. These changes have to do with the following aspects:

- the revision and consolidation of the forest legislation partially outdated, inconsistent and scattered throughout many different decrees and regulations;
- the reform of the public Forest Services and the creation of intersectoral co-ordination and consultation bodies to promote integration of forest-related policy instruments and the participation of the various stakeholders;
- the preparation of new and reinforced financial instruments to develop private forestry.

Each of these aspects will be touched on. The new legal and policy framework for forests and forest related activities was set out by the Forest Policy Law (Law N.º 33/96) voted unanimously in the Parliament in July 1996 and published on August 17th of the same year. This is a frame law whose main elements are:

- a statement of the principles and goals of the forest policy;
- the main policy tools to achieve those goals.

The forest policy principles and related goals adopted in the law are:

- forests are a multi-functional renewable resource which should be managed in a sustainable way;
- sustainable forest management should reconcile expansion of the forest area, productivity improvement of the existing stands and biodiversity preservation;
- forest resources are essential for the preservation of all forms of life on earth, thus, the protection of forests is a responsibility to be shared by society;
- private forest owners are the major stakeholders in sustainable forest management;
- forest owners and other economic and social groups concerned with forests should be able to participate in the preparation and implementation of forest policy measures;
- forest policy should be integrated with the other policy areas and take the international initiatives which the country is committed to into account.

The major policy tools listed but not fully specified in the law are:

1. regional forest management plans defining appropriate sustainable forest use for each zone and the corresponding norms to be followed by the forest owners;
2. compulsory management plans at the forest management unit level for forest units above a certain threshold to be specified in the regional forest management plans;
3. the definition of a National Forest Authority responsible for the preparation and implementation of the forest policy and the management of the public forests;
4. the creation of an Interministerial Forest Commission presided by the Minister of Agriculture and including the other ministries relevant for forests, whose job it is to promote the integration of the policy areas related to forests;
5. the creation of a Forest Consultative Council composed by the organisations representative of the various stakeholders related to forests and directly related to the Minister of Agriculture, whose job it is to propose new forest policy measures, analyse those the Government and the Parliament intend to approve and evaluate the implementation of those already in effect;
6. the creation of a national, regional and subregional structure for the planning and coordination of forest fire prevention and fighting, to improve the cooperation between the Forest Services related to prevention and the Ministry of Internal Affairs, and the firemen dealing with fire fighting;
7. the provision of financial incentives to create and upgrade the forest owners' associations;

8. the creation of a permanent forest fund and tax incentives to finance the development of forest production, the improvement of the forest landownership structure, the compensation of biodiversity preservation and forest research and training;
9. the creation of an Appeal Commission presided by the National Forest Authority to analyse the complaints from forest owners about the decisions of the public administration on their forest management plans and their applications for public funds.

As this is a frame law, it must be specified in decrees without which it cannot be put in practice. As of yet, the decrees approved by the Government relate to items 3 and 4.

Other pieces of legislation have already been proposed by DGF for public discussion and are at the verge of being approved by the Government. They relate to items 1, 2, 5, 6 and 9.

2.2. Reform of the Forest Services

We have mentioned parts of the new institutional framework directly following the Forest Policy Law. Aside from these changes, other very relevant reforms in the structure of the Forest Services in progress exist since the new Government took office in 1995. They basically consist of the following changes:

- at the subnational level, the foresters who once worked in the regional services of the Directorate General of Forestry particularly in the management of public and communal forests, with total autonomy with respect to the regional agricultural services of the Ministry, were merged into the 8 Regional Directorates of Agriculture;
- a proposal by the DGF ready for approval by the Government to externalise the forest management activities which the DGF carried out directly for most of this century in the public and communal forests, transferring these activities to a new company with public capital and private management rules;
- the responsibility for the analysis, approval and financing of the forest investment projects applying for public aid was fully committed to IFADAP, the public financial institute dependent on the Ministers of Agriculture and Finances, who manage all agricultural structural policy funds.

Thus, the new division of labour in the public administration related to forests will be as follows:

- DGF is the National Forest Authority responsible for the preparation and implementation of forest policy and will oversee the public forest management company, but will have no direct activities in forest management, forest extension and financing to private forestry;
- in its forest policy work, the DGF will have to consult with the forest-related organisations in the Consultative Forest Council and can call upon the Minister of

Agriculture to promote better integration with other policy areas through the Interministerial Forest Commission;

- the Regional Directorates of Agriculture will play an administrative role in assisting IFADAP in the verification on the field of the compliance by subsidised forest owners with their approved forest projects and a proactive role in forest extension directed to private forest owners;
- IFADAP will take full responsibility for the public financial system to support forest development;
- the public forest management company will take direct charge of the management of the public forests and sell qualified services to communal forests and other private forests in the hope of raising the standards of forest management in the country.

2.3. Human resources and forest-planning capacities

The personnel of the DGF and the foresters in the Regional Directorates of Agriculture make up a total of approx. 2,800 persons, including administrative staff. We estimate that personnel in other public and private forest-related services amounts to 1,000 people.

A very large majority of the personnel in the Forest Services, either at the Directorate General of Forestry or at the Regional Directorates of Agriculture are foresters, most of them holding a bachelor's degree. For more than one century, until 1986, they were a relatively small (approx. 300 graduates from 1969 to 1996) and closed "corporation", as they all came from the same school in Lisbon (*Instituto Superior de Agronomia*). The almost unique "destination" of these graduates were the public Forest Services, together with some employment opportunities in the 1960s and 70s in the pulp paper companies.

In 1986, the first graduates came from a new university in the North (*Universidade de Trás-os-Montes e Alto Douro*). Some time later, three polytechnic schools also started graduating forest students with three-year degrees. The employment opportunities in the Forest Services and in the pulp paper companies shrank. Today the profession is opening up in terms of its school affiliations and training, and one must be more creative in looking for employment opportunities.

In spite of these changes, there is still some way to go in terms of building up pluri-disciplinary teams in the Forest Services capable to deal with multi-functional forestry.

In terms of planning capacities at the national level, the Directorate General of Forestry is in great need of human resources in the fields of Law and Economics and capacities in data collection and processing. General economic data is collected and published by the National Statistic Institute but in lower quantity, detail and quality than for other economic activities. DGF only manages the following data collection systems:

- the Forest Inventory System;
- the data collection on forest fires;
- the monitoring of air pollution effects on forests.

The forest planning capacities at the forest management unit level are organised as follows:

- small private firms providing services to private owners for preparation of forest management plans and applications for public funds;
- forest management services in the pulp paper companies to supervise their own forest domains;
- foresters in the young forest owners associations which are getting started throughout the country (a total of approx. 50 associations).

Forest research is mainly concentrated in the two universities with undergraduate and graduate programmes in forestry (ISA and UTAD) and in the National Forest Research Station which is part of the public research institute of the Ministry of Agriculture. This station thrives on transfers from the state budget and on public research grants. Their researchers have been complaining for the last two decades justifiable about the lack of sufficient funding. The links with industry and private owners are relatively weak. Solely the pulp paper companies were able to set up a research network centred on the eucalyptus consisting of their own personnel in cooperation with some universities. In March 1998, a similar network got started for pine and related industries. The same type of efforts are under way for cork.

As in the Forest Services, the great majority of the work coming from the forest research system is purely silvicultural related to forestry or technological related to industry. There is nearly a total lack of work in forest policy and forest planning.

2.4. Funding

Forest services at the national and regional level, universities and forest research stations all live on the State budget. The forest owners' associations live mostly on the public subsidies from the programmes supporting producers' organisations. The private owners invest mostly with the help of subsidies from the ongoing public programmes supporting afforestation. The private forest contractors and the forest projectors are obviously dependent on these public programmes as well.

Currently, there are two programmes at work: Regulation (EEC) N.º 2080/92 and the Forest Development Plan (PDF- "*Plano de Desenvolvimento Florestal*"). Regulation (EEC) N.º 2080/92 is an EU programme not specific to Portugal, supporting the afforestation of agricultural lands. PDF, on the other hand, is a programme specific to Portugal, financed by the EU within the Common Support Framework for the period 1994/99. With subsidy rates ranging in most cases between 80 and 100%, this programme supports the following types of actions:

- afforestation;
- improvement of existing stands and reforestation, including the case of woodlands damaged by fires less than 5 years ago;
- maintenance costs of the plantations for 5 years after the first restocking;
- installation and amelioration of forest nurseries;
- selection and production of high quality seeds and plants;
- construction and amelioration of forest roads and water reservoirs;

- multiple use of forest lands (grazing lands, apiculture, gaming, aromatic and medicinal plants, etc.).

This programme also has the following specific features:

- it favours grouped projects consisting of, at least, 5 contiguous forest holdings;
- it does not support plantations with fast-growing species.

PDF will come to an end next year and its follow-up has yet to be designated in time to fit in the third Common Support Framework for the period 2000-2006, whose preparation is now underway. For that purpose, the DGF has commanded a consultancy study which will be released very soon on the permanent forest fund, proposed in the 1996 Forest Policy Law. Although the results of this study are yet not known, there are already some proposals which DGF has put out for public discussion on these matters in the new National Forest Plan.

3. TARGETS AND STRATEGIES

3.1. Background of the National Forest Plan

On March 23, 1998 the Minister of Agriculture presented for public discussion the first draft of a National Forest Plan called Plan for the Sustainable Development of the Portuguese Forest (PDSFP- "*Plano de Desenvolvimento Sustentável da Floresta Portuguesa*"). This document was prepared by DGF, building on the work of their own staff and drawing on the contributions from the following sources:

- a report (BPI *et al.*, 1997) with proposals for a National Forest Plan produced by a consortium of consultancy firms (a Portuguese bank, a Portuguese agricultural consultancy firm and Jaakko Pöyry) at the request of the major paper and panel industry companies;
- a report with proposals for the development of the cork sector produced by a consultancy firm at the request of a group of southern forest owners' associations;
- contributions from Luís Constantino, senior natural resource economist at the World Bank;
- the CESE report (Mendes 1996, 1998a);
- proceedings from workshops organised by DGF and some associations in the forest sector.

The core of this document is the following:

- the statement of general objectives and derived strategic goals for the national forest policy;
- the specification of some middle-term operational targets derived from those goals;
- the specification of some policy instruments to reach the goals.

3.2. Forest policy goals, operational targets and policy instruments of the NFP

The general policy goals proposed in this draft of the NFP are picked from the 1996 Forest Policy Law, as mentioned in section 2.1. The derived strategic goals listed in the proposal are 33. An exhaustive presentation of all of them will not be given. Some of the most relevant or innovative ones will be chosen, in the light of what the forest policy in Portugal so far has been.

3.2.1. Improving the productivity of the existing stands

The Plan sets the following productivity improvement targets to be reached through the provision of new and reinforced financial incentives:

- improvement of 70000 ha of pine forests per year;
- raising the annual increment of the eucalyptus in 1 m³/ha/year until 2003, compared to the increment in 1983 and in another 1 m³/ha/year until 2008 compared to the 2003 increment;
- improvement of 20000 ha of cork oak forests per year;
- improvement of 5000 ha of holm oak forests per year;
- improvement of 2000 ha per year of other broad-leaved species;
- until the year 2005, conversion of all the degraded and poorly located stands (15000 ha/year of eucalyptus, 1000 ha/year of *Pinus pinea*, 50 ha/year of chestnut trees and 3000 ha/year of maritime pine).

3.2.2. Expanding the forest area

The Plan sets a goal of 2% annual growth in the forest area for the next 10 years to be reach through the provision of new and reinforced financial incentives and is given as follows:

- 15000 ha/year of maritime pine;
- 2500 ha/year of *Pinus pinea*;
- 5000 ha/year of other conifers;
- 10000 ha/year of cork oak;
- 3000 ha/year of holm oak;
- 3000 ha/year of other oaks;
- 2000 ha/year of chestnut;
- 2000 ha/year of high quality broad-leaved species.

3.2.3. Improving the protection against forest fires

The plan sets the following fire protection target to be achieved through improved forest management and improved coordination among all the services involved in fire pre-

vention and fighting: a 20% reduction in the forest lands in the coming period on 1998-2003, and a 50% reduction in the period 2003-2008 compared to the period 1992-97.

3.2.4. Building forest management capacity

The plan sets the following targets to be reached by the year 2003 by means of the provision of new and reinforced financial incentives the regional forest management plans:

- a 200% growth in the number of members of the forest owners' associations;
- the forest owners' associations cover 25% of the counties;
- 10% of the timber and cork sales go through the forest owners' associations;
- a 20 to 30% increase in the timber sales due to direct negotiation between the forest owners' associations and the logging companies;
- 10 teams of firemen in the forest owners' associations;
- a 100% growth in the turnover of private and cooperative forest companies;
- 100 extensionists assisting the forest owners' associations and the set up of grouped forest management units;
- 10 communal forests with at least one permanent forester in charge of forest management;
- 300 forest management plans at the forest management unit level covering an area of 250000 ha;
- 500000 ha managed by the public forest management company under forest management plans;
- all the subsidised forest investment above a certain area is carried out under forest management plans.

3.2.5. Building capacity in forest-related services

The plan sets the following targets to be reached by the year 2003 by means of the provision of new and reinforced financial incentives, training, technical assistance, certification, competitive bidding and improved public information:

- 10% of the forestry contractors have a level III technician;
- 30% of the forestry contractors attend training courses;
- 30% of the timber-harvesting is done using new equipment;
- there are tests and appropriate information available on all the new logging equipment on the market;
- 20% of the forestry contractors are certified;
- the forestry contractors follow the 1997 ILO occupational safety and a health code for forest workers;
- forest workers are paid at the same level as farm workers;
- only roundwood not suitable for sawmilling is delivered to the pulp paper and panel companies;

- 20% decrease in the forest investment costs due to improved public information about these costs and competitive bidding;
- 50% of the forest projectors attended specific training courses;
- prize awards to the 10 best forest projects;
- 50% of the forest investment projects getting public subsidies are inspected by special audits.

The Plan expects 20% productivity gains in the forestry contractors' work by the year 2008.

3.2.6. Creating a Sustainable Forest Management certification system

- By the end of 1999 the Pan European Indicators of Sustainable Forest Management at the Forest Management Level are tested and adapted to Portuguese conditions.
- By the year 2000, a national certification system is in place.
- The regional forest management plans incorporate the monitoring systems needed for certification.

3.2.7. Protecting biodiversity

The plan sets the following targets to be reached by the year 2003 through the provision of new and reinforced financial incentives, training, and norm-setting:

- 20% of the forest projects include mixed stands;
- 100% of the forest projects protect biodiversity;
- 10000 ha/year of private forest projects protecting habitats with high environmental value;
- all the forest contractors follow a code of environmentally friendly practices.

3.2.8. Innovating financing

Following up on the statement of the 1996 Forest Policy Law concerning the creation of a permanent forest fund to finance forest investment and management and compensate forest owners for positive externalities, the Plan proposes the following sources of financial resources for this fund:

- a new tax or a share on the corporate income tax paid by the water and electricity companies;
- a new tax on the carbon emissions by polluting companies;
- 1% of the proceeds from the tax on fuel and gas;
- bonds;
- donations;

The Plan also announces tax incentives for forest owners not yet fully specified.

3.2.9. Consolidating forest legislation

The Plan announces a Forest Code updating and consolidating all the scattered forest legislation for 1999.

3.2.10. Other goals

The plan also sets an extensive list of goals and operational targets regarding the enhancement of the protective role of forests in terms of soil and water conservation, the contribution of forests to the global carbon cycles, the protection of forest resources against air pollution and biotic agents, the integration of forest planning with the wider land use planning, inter-disciplinarity and improved coordination of forest research, development of the forest industries, commercial promotion of forest products, enhancement of the recreational use of forests and improved management of non-timber forest production, including gaming and fishing.

4. STAKEHOLDERS AND PARTNERS

This draft of the NFP has no related budget and financial feasibility study. The implicit and, at times explicitly stated rationale for this incomplete approach is to start by building a consensus or broad support for the stated goals, and later to push for the needed public and private funds, knowing from the start that it will not be easy to improve the share of forestry in the public budget.

Another important point missing in this draft is a strategy to implement the Plan on the ground involving something more than the provision of financial incentives, public information and norm-setting. In fact this first draft of the Plan does not address the issues of decentralisation, public participation and integrated development at the local level. Forest planning at the subnational level is only addressed through the regional forest management plans and the forest management plans at the forest management unit level. Both of these instruments are essentially silvicultural planning tools without the socio-economic and collective organisation dimensions needed for a real development process, the reason why we have proposed (Mendes 1998b) that participatory forest planning should be promoted at the regional and subregional level:

- the regional forest management plans should be more than forest land use norms and should contain some programming of public investment, forecasting of the private investment, capacity building and organisational measures needed for the success of the plan;
- similar types of plans should be drawn at the sub-regional level, taking as spatial basis the territory of the local forest owners' associations where they exist.

Both types of plans should be the programming outcome of partnerships between the public administration, the forest owners' and forest industries organisations, the relevant

local authorities involved and other stakeholders. Some useful dialogue and cooperation already exists at the regional and local levels between these types of partners. This cooperation could be very much enhanced if the NFP clearly put value on those regional and subregional plans.

One way to stimulate these plans would be to guarantee them middle or long-term funding through a contract between the State and the regional and local partnerships. These funds could be managed in a decentralised way to support the projects of forest owners and other relevant stakeholders contributing to the goals set out by the plans. This would be something similar to the LEADER programme.

The stakeholders and partners more likely to push for this kind of decentralised approach are the forest owners' associations, the Regional Directorates of Agriculture and other local authorities. The forest industries and the forest contractors are basically interested in the rapid growth of timber production. They urge for a quick end to the public discussion of this draft and demand from the Government a clear and credible commitment to support forest production growth. They are not so much concerned with how to deal with the fragmented forest ownership dominating in most of the North and Central Portugal. Their hopes are with the new public forest management company which will take care of the public forests and aims at managing the large tracts of communal forests.

5. METHODS OF CO-ORDINATION AND CONFLICT RESOLUTION

Until now, there has been no institutionalisation of cooperation and conflict resolution between the different bodies of Public Administration and the private sector. What exists is lobbying and informal talks between DGF and the forest interest groups, especially forest owners' organisations and the forest industries' and forest contractors' associations. Contacts between DGF and the environmental groups are much less intense than with the forest interest groups.

The Forest Policy Law contains provisions for institutionalisation of cooperation and conflict resolution between the Ministry of Agriculture and the forest interest groups, including the environmentalists. There are two commissions to be created soon in the follow-up of this law:

- the Consultative Forest Council (*Conselho Consultivo Florestal*);
- the Appeal Commission for Forest Projects (*Comissão de Recurso e Análise de Projectos Florestais*).

The Consultative Forest Council is presided by the Minister of Agriculture and includes representatives from the forest interest groups (forest owners' associations from private and communal lands, forest industries and forest contractors' associations, environmental groups, universities and research institutions, trade unions, municipalities, organisations of hunters, etc.). This council is a fora of discussion and monitoring of the forest policy whose role is to make recommendations to the Minister of Agriculture about new policies and the implementation of the current policies. The

Appeal Commission for Forest Projects is presided by the Director General of Forests and includes representatives for the following institutions:

- regional directorates of the Ministry of Agriculture;
- the Nature Conservation Institute (the agency of the Ministry of Environment for the management of the natural parks and other protected areas);
- IFADAP (the public institute responsible for analysing the applications for agricultural and forest investment subsidies and making the payments to the farmers);
- the National Association of Municipalities;
- forest owners' organisations;
- forest industries' associations;
- forest contractors' associations.

The role of this commission is to analyse the appeals of the forest owners for the decisions of the Public Administration relating to the implementation of the forest policy, particularly decisions about forest management plans and applications for the financial incentives provided by forest policy.

DGF submitted a proposal for the working rules of these two institutions to the Minister of Agriculture. They are now waiting for a decision by the Government to start their activities.

6. INTERSECTORAL COORDINATION

Intersectoral coordination of forest policy objectives with other policy areas is very weak. It was the acknowledgement of this fact that led the legislators to put the provision for a new Interministerial Forest Commission in the 1996 Forest Policy Law. The decree regulating this commission was already approved by the Government on October 1997. It is presided by the Minister of Agriculture and includes representatives from the following Ministers: Finances, Internal Affairs, Equipment, Planning and Territorial Administration, Economy and Environment.

The Ministry of Finances is there for obvious reasons, one being that, together with the Minister of Agriculture, it oversees the public institute called IFADAP in charge of the financing of the agricultural and forest structural policy. Several times in the past the blame for some problems in the implementation of the forest programmes co-financed by foreign sources (World Bank and EU) was put on the Ministry of Finances for not putting forward the necessary funds to get full advantage of those sources. Also worth mentioning is that those restrictions were part of the general macroeconomic policy conducted by the Ministry to promote economic stability and nominal convergence with the EU.

The connection with Internal Affairs basically has to do with the fact that it is this ministry which controls most of the fire fighting system including forest fires. Fire fighting in Portugal is carried out essentially by generous but insufficiently trained organisations of volunteers existing in most of the villages in the country. These

corporations of volunteers are coordinated and partially funded by the Ministry of Internal Affairs and their national leaders resist any attempt to put them under control of another Ministry.

The Ministry of Equipment, Planning and Territorial Administration is today a superministry with many links to the forest sector. Here we will mention just three:

- the best development planning capacities at the regional level are in the Regional Co-ordination Commissions of this ministry;
- these regional commissions prepare and manage the regional development programmes financed by the EU structural funds some of which have been supportive of capacity building in the forest sector, particularly in the creation of forest owners' associations;
- the Regional Coordination Commission provides technical assistance to the local governments and have responsibilities in the wider land use planning.

The Ministry of Economy is important for the forest industries, as it is in charge of the industrial policy. This Minister has a direct intervention in a major portion of those industries, as, from the three top pulp and paper companies operating in the country, two are still controlled by the public sector. The Ministry of Economy is now in the process of setting up a holding to promote some form of integration of these two groups.

The Ministry of Environment is relevant not only for the growing importance of the environmental agenda in forest policy, but also because it oversees the natural parks and other protected areas. Forestry is important in almost all of them. In some cases, it is Forest Services which are in charge of forest management in those areas. In other cases, that responsibility has been transferred to the park services.

7. SPECIAL INSTITUTIONALISATION

There are no special planning frameworks and planning institutions for forests and forest related activities in Portugal. The current draft of the NFP was made up by DGF, drawing from the background materials mentioned in section 3.1. Further contributions are expected to come from a study ordered by DGF at a Portuguese university on the financial incentives for forest development. The public discussion of the current draft is organised as follows:

- posting the draft of the NFP in the WWW-site of DGF with a mailbox for suggestions;
- informal meetings throughout the country with DGF and the various stakeholders.

The homework for the participation of the country in the international initiatives related to forests is also carried out by DGF which calls for outside technical support from other public bodies, private consultants or research institutions as the case may be. Currently, DGF is responsible for the follow-up to the Convention on Desertification Control and the Ministerial Conference on the Protection of Forests in Europe,

especially the testing and implementation of the Helsinki criteria and indicators and the preparation of the next conference will be held in Lisbon this coming June. The Liaison Unit for this conference is dependent on the Minister of Agriculture, but based on DGF headquarters.

One weakness of this structure is that it is often set up on an *ad hoc* basis. Thus, there is a need for more permanent and multi-disciplinary teams based on more regular links between the Forest Services (DGF and others) and the consultancy and research capacities existing in the country. In addition, in spite of some recent progress on these matters, there is still a long way to go to associate Forest Services, forest owners' and forest industries more closely in the follow-up to these international initiatives. We hope that when the Consultative Forest Council, created by the 1996 Forest Policy Law, starts to convene, this problem will be solved.

8. CONCLUSION AND OUTLOOK

With a Forest Policy Law in the process of being translated into the decrees necessary for its implementation and a draft for a NFP put out for public discussion after several contributions presented by some major stakeholders in the forest sector the expectations are getting higher that finally a participated NFP might come up and be assumed by the Government together within an updated and consolidated legislative framework. The problem might be to get appropriate national funding to meet some of the ambitious targets set out in the plan. Lack of a strong commitment by the Government failing to show a clear sign of the priority attached to forest development will be devastating to the forest owners and the forest industries, leading some of the major ones to withdraw from domestic investment plans and search for better opportunities outside the country.

Even if this planning and legislative process at the national level has good results, there is still a long way to go in terms of capacity building in the public administration for forest planning and forest policy-making, both at the national and at the sub-national level. In addition, the private sector is weak in this regard. The big forest industry has the means to do its job in these matters, but the rest of the industries and the forest owners still have to build a capacity for participating actively and constructively in forest planning and policy-making. The universities and the research institutions have yet to play their role in this capacity-building process.

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FORMULATION AND IMPLEMENTATION OF THE NATIONAL FOREST PROGRAMME OF THE REPUBLIC OF SLOVENIA

Iztok Winkler and Milan Šinko

Department of Forestry
University of Ljubljana
Slovenia

ABSTRACT

This paper provides basic quantitative data on forests and outlines the legislative and institutional structure of Slovenian forestry. Changes to the social and economic systems typical of transitional countries, had a strong influence on the process of formulating an NFP, which took place between 1992 and 1996. The paper outlines NFP components, the process of NFP formulating, and its main actors are also analysed. A lack of participatory and partnership principles and the seeking of consensus can be observed. NFP implementation is still in the initial phase which is the reason why implementation analysis could not be accomplished yet. NFP formulating was also influenced by international NFP-related activities.

Keywords: Forest Policy; Process; Participants, National Forest Programme.

1. INTRODUCTION

Forestry in Slovenia has a long tradition of sustainable forest management. Especially typical is close-to-nature management, for which the introduction and development of the previous political and economic system, due to a number of reasons (e.g. close regulation of private property), offered favourable conditions. Slovenian Forest Law (1993) defines close-to-nature management as a way of treating forest ecosystems, which is based on tending forests and ensuring their preservation, increased variety of autochthonous plant and animal species, and establishing a biological balance.

The intensity of forest management resulted in positive trends between 1980 and 1990, which may be observed through some of the key quantitative indicators of the situation in forests (i.e. forest area, growing stock, increment):

- increase of forest area (between 1980 and 1990 forest area increased 4% and totalled 1 091 000 ha in 1996, which is 54% of the whole Slovenian surface). Forest area increased primarily on account of agricultural areas;
- 7% increase of growing stock (6% in privately owned forests and 2% in State owned). Growing stock was 207 m³/ha in 1990 and was still increasing in the following years, which resulted in a total of 231 million m³ in 1996;
- increment grew from 4.9 million m³/year to 5.3 million m³/year within ten years. The trend kept increasing, which resulted in 6 million m³/year in 1996.

The intensity of harvesting decreased and did not reach the allowable cut set by forest management plans. Official statistical data for the period Forest Development Programme preparation indicate a 70 to 77% realisation of annual allowable cut, the figure was regarded by some to be underestimated. However, the highest estimates do not exceed 90% of annual allowable cut. This is one of the reasons why the share of forestry in GDP decreased from 1.3% in 1980 to 0.7% in 1990 and kept decreasing to 0.4% in 1995. The decrease in timber consumption was also a consequence of restructuring the wood processing industry, which lost important markets with the disintegration of Yugoslavia. Because of all these factors, the relative importance of the forestry sector is decreasing.

The following were the primary negative trends in forests, which are also reflected in the Forest Development Programme:

- large shares of forest removals were a result of natural causes (wind, ice), which resulted in unfavourable harvesting structure and unsatisfactory economic results;
- endangered process of natural regeneration caused by wildlife;
- forests damages due to air pollution;
- non-accomplished silviculture works especially in privately owned forests.

In the pre-transitional (socialist) political system, the majority of decisions of political character were typically brought up at the sector level, i.e. forestry. Because of such changes in the political system, the attitudes towards political aspects of forest management have also gradually transformed. Being one of the most salient indicators of social and political changes in Slovenian forestry, the issue of de-nationalisation of forests has attracted the bulk of decision makers' attention. Namely, due to the de-nationalisation process, the share of State owned forests is decreasing. The estimated figure is that State owned forests will comprise about 20% of all forests when the process is completed (compared to 34% in 1990).

The issues which attracted the attention of forestry policy protagonists in the beginning of the nineties were primarily connected to changes in the forestry system (the preparation of a new Law on forests, organisational restructuring of forestry enterprises, and public forestry service), property rights and utilisation of State owned forests. All these issues also called for political parties to take part in the decision making process, where different parties advocated different interests. Relative political autonomy of the forestry sector within the previous political system was primarily the consequence of its autonomous (internal) financing sources – the share of timber sold.

Financing of the forestry sector was based on its own resources (timber vendors contributed a percentage of their retail price) and solidarity. Irrespective of this, the shift to State budget financing was relatively smooth, but only as far as financing of public forestry service activity was concerned.

2. LEGISLATIVE AND POLITICAL CONTEXT OF FORESTRY AND FORESTRY RELATED ACTIVITIES

The Slovenian Constitution (1991) includes various regulations which indirectly affect forests and forestry. Among them are the following:

- the State should assist the preservation of the natural and cultural heritage;
- the right to own and to inherit property is guaranteed;
- the manner in which property is acquired and enjoyed is regulated by law so as to ensure the economic, social, and environmental benefit of such property;
- foreigners can acquire the title of property affixed to land under such conditions as are determined by statute or as are determined by the international agreement, ratified by the National Assembly, in circumstances where reciprocity of such rights of acquisition are recognised;
- land and property rights affixed to land may be compulsorily acquired. Its ownership may be limited by the State in the public interest and subject to a right to such compensation in kind or monetary compensation from the State as the statute determines;
- the conditions governing the exploitation of natural resources are also determined by statute;
- the State has a special responsibility to foster the economic, cultural, and social advancement of those members of the population living in mountainous areas;
- each person shall be obliged, in accordance with statute, to protect rare and precious natural areas, as well as structures and objects forming part of the national and cultural heritage;
- free enterprise is guaranteed; any business activity in conflict with the public interest may not be pursued;
- providing a healthy living environment is the responsibility of the State. To this end, the conditions and the manner in which economic and other activities may take place are regulated by law.

Within the general context of constitutional regulations, a basic legislative framework for forest management is defined by the following laws:

1. Forest Act (1993);
2. Act on Fund of Agriculture Land and Forests of the Republic of Slovenia (1993);
3. Environment Protection Act (1993);
4. Act on Co-operatives (1992).

The Forest Act explains fundamental principles of forest management, based on the close-to-nature concept, multiple use management, and sustainability. It defines precisely the rights and responsibilities of forest owners in forest management and protects public interest in forests. Act on Fund of Agriculture Land and Forests regulates management and disposability of State (public) forests, while the law on co-operatives provides an administrative framework for forest owners who are co-operatively organised and regulates their organisational patterns. The Environment Protection Act is a fundamental environmental law, which provides general guidelines for environmental domain. Particularly important from the aspect of forestry are parts which regulate the protection of natural resources, define measures for environmental protection, and interventions in natural environment, as well as for the monitoring of the whole environmental situation.

3. NATIONAL FORESTRY CAPACITY

National organisational facilities within the forestry field are the following:

- State forestry administration, which is an organisational unit of the Ministry of Agriculture, Forestry and Food. Part of the Ministry is also forestry inspection service. The number of civil servants in the Forestry department at the Ministry is modest (8 permanent jobs – only 5 are actually occupied – and 17 inspectors). Indirectly, forests and forestry are also the domain of the Ministry of Environment and Physical Planning (land use), which includes the National Protection authority;
- Slovenian Forest Service (public forestry service) with 825 employees and State budget financing;
- forestry enterprises, organised in various legal forms (entrepreneurs, joint-stock companies, limited liability companies). There are now 125 of them and they employ 2300 people. They operate in accordance with market principles and acquire their income by performing various commercial services in forests (felling, hauling and transportation of wood, silviculture and protection of forests, construction of forest roads and hauling tracks), by selling timber and also by various other activities and services (sawmilling, forest nursery and others). Forestry enterprises are obliged to be members of the Chamber of Commerce and Industry of Slovenia, part of which is also the Association of Forestry;
- forestry and agricultural co-operatives – they are the organisations of private forest owners. There are currently 26 combined forestry-agricultural co-operatives and 9 specialised forestry co-operatives in Slovenia. Co-operatives may associate with the Co-operative Union of Slovenia on a voluntary basis. Co-operatives presently employ 7 engineers of forestry, 23 forestry technicians and also 27 forest workers of their own;

- the Forestry Department at the Biotechnical Faculty of the University of Ljubljana, which offers a 4 year long undergraduate course, as well as post graduate studies in the fields of forestry and renewable forest resources. The Department also provides a 3 year college forestry education;
- the secondary School of Forestry and Wood Processing in Postojna, which offers a 4 year long educational programme for forestry technicians, 3 year long vocational training programme for forest workers and also various shorter courses of supplemental training for forestry workers;
- The Slovenian Forestry Institute, which engages in research. In addition, research is also performed by the Forestry Department at the Biotechnical Faculty. There are 43 forestry researchers in both institutions (26 FTE researchers).

4. CURRENT FORESTRY ACTIVITIES

Guidelines for different forestry activities are given at the national level, while their implementation is the task of several institutions and organisations. Local governments have very limited authority in the forestry field (they may give their opinion on forest management plans). They participate in forestry policy decision-making process, and in forestry the policy implementation process is modest. The core forestry policy measures are defined almost entirely by the Ministry of Agriculture, Forestry and Food, in professional collaboration with the Slovenian Forestry Service and, periodically, also with the collaboration of the Faculty and Institute. Other institutions, e.g. Association of Forestry, Association of Wood Processing Industry, Association of Cellulose, Paper and Paper Processing Industry, Co-operative Union and the like, participate in the decision-making process more or less only at public presentations of various forestry documents. Guidelines for forest development are defined in the Forestry Development Programme, passed by the parliament in 1996.

The Forestry Development Programme specifies at a national level the close-to-nature policy of forest management. Instructions are given for the preservation and development of forests. The Programme also defines conditions for the exploitation and multiple use of forests. Part of the programme is also a programme for preservation and management of wildlife in forests space. A forest space is a forest or forest plot and non-forest plots of land ecologically or functionally linked to forest, together guaranteeing the performance of the function of the forest.

The idea of the national Forest Development Programme first emerged in 1989, but was given legal framework with the Forestry Law in 1993. The Forest Development Programme is uniform for the whole country, while forest management plans are regional, local or detailed. Regional plans are forest management regional plans (there are 14 regions in Slovenia) and include general and land use planning elements. The general part of the forest management plan is defined by the Government, while land use planning elements are designed in accordance with regional planning acts. The plan is designed by the public forestry service. Forest owners and other concerned parties

may participate in the phase of its public presentation, where they may contribute their remarks and objections.

Local plans are designed by forest management units (there are 251 forest management units in Slovenia, their average size is 4400 ha). These plans are also publicly presented. Forest owners and other concerned parties may contribute their objections. It is obligatory for public forestry service bodies to review and comment on such objections.

On the basis of guidelines provided by the general part of the forest management region plan, hunting plans set goals and directions, as well as measures, for the preservation of endangered populations of wildlife and for the preservation of the natural balance between wildlife and environment. The body responsible for wildlife management plans is the Slovenian Forestry Service. However, hunters, farmers, nature conservationists and others, whose activity is connected with wildlife, take part in designing the plan also.

Finally, detailed plans are the silviculture plans in which silvicultural goals, guidelines and measures for the management with individual forest ecosystems and their parts are defined. Silviculture plans are the basis for the selection of trees for cutting. Silviculture plans are designed by field foresters from the Slovenian Forest Service in co-operation with forest owners.

The entire forest-related planning takes place at the Slovenian Forest Service, which was established in 1993 and carries out all activities which secure the preservation and development of forests and also protects public interests in respect to forests. The planning is more or less decentralised and is the task of the local and regional units of Slovenian Forest Service, which renew forest management plans relatively promptly (keeping in mind the time lost in the period 1990-1993). The problem is in processing of public presentations of plans and their recognition by the Ministry of Agriculture, Forestry and Food.

5. GOALS AND STRATEGIES OF THE FOREST DEVELOPMENT PROGRAMME

The Forest Development Programme acknowledges specific natural and social conditions for forest management in Slovenia, but at the same time respects the country's international obligations and adopts general guidelines documented in the Resolution from the Ministerial Conference on Conservation of Forests in Europe (Strasbourg 1991, Helsinki 1993) and in the Convention on Biological Diversity (Rio de Janeiro 1992).

Forests are considered an essential feature and constituent part of the environment in Slovenia, and their protective and social importance is steadily increasing. Accordingly, the Programme is based on the following general starting points:

- the development of forest management is closely connected with the general social, economic, and physical development of Slovenia. Accordingly, developmental aspirations of rural areas are taken into account, and so is the ecological and social developmental trend of Slovenian agriculture;

- competence and knowledge are the key factors for integrated management of forests and other renewable natural resources;
- changes in property relationships have had a vital impact on forest management, since the rights and responsibilities of forest owners have expanded, as has the responsibility of the government to ensure public interest in the forests.

Apart from ensuring the development of ecological and social forest functions, forest management aims toward the production of high quality wood, an essential basis for the development of the wood industry. Income from timber is also important for the conservation and development of mountain farms and country areas. The Programme of sustainable development of forests in Slovenia secures the preservation and development of forests and their functions. Natural development of forest ecosystems, public interest, financial structure, and the needs and interests of forest owners were taken into account by the Programme designers. Developmental guidelines for various domains of forest management are given, and so are professional guidelines for co-operation between forestry and other sectors in society. Additionally, the Programme defines key measures for the implementation of close-to-nature and multiple use of forest and forest space management, as well as organisational, personnel, and financial measures.

When setting the goals, the Programme takes into account the sensitivity of forest ecosystems, as well as their productive, ecological, and social functions. The most important goals which direct forest development are:

- the conservation and development of all forests, their flora and fauna diversity, their ecological, social and productive functions;
- the conservation of natural environment and ecological balance in landscape;
- conservation of landscape settlement and cultivation, improvement of the quality of life in the rural areas;
- optimal use of site and other forest potentials;
- development of environmentally sound and humane timber production technologies with particular emphasis on the safety of working conditions.

Additionally, the Programme sets specific goals in various areas of forestry activity. Slovenia has a relatively high proportion of forested land (54%). Therefore, forest management should not be directed at further extension of forest area. Instead, it should be focused on tending existing forests, on better utilisation of their site potential (in terms of quantity and especially quality) and on the conservation, forming and establishment of solitary trees and groups of forest trees outside the forest. Enhancement of forests and their functions in accordance with principles of tending, close-to-nature, multiple use and sustainability, is the most fundamental developmental task of silviculture. Suitable for this goal are small-scale systems, which allow a flexible adaptation to natural site conditions and to natural forest development trends. They also preserve natural diversity, as well as the bioecological and economical stability of forests.

At productive sites, large diameter trees of high quality should be grown, as they provide for the mechanical and biological stability of a forest, enhance its generally beneficial functions, and ensure its economic benefits.

The populations of wildlife and their living environment constitute an integrated whole and should be dealt with accordingly. The conservation of autochthonic species and their habitat is in the interest of the whole nation.

The Programme dedicates special attention to the activities which directly or indirectly contribute to or make possible the realisation of fundamental goals in various forestry domains, i.e. organisation of forestry, property structure of forests, education and training of forestry experts, forestry research, and the financing of forestry (tax policy). In addition to setting long term goals of forest management, the Programme also defines the strategy in some of the most important domains of forest management:

- forest in the landscape and co-ordination of the interests of different forest users;
- strategy of silviculture and protection of forest;
- the programme of wildlife conservation and management in forests and on other wooded land
- natural heritage protection strategy;
- strategy of exploitation of forest goods and services;
- direction towards the changing of the forest ownership structure;
- development of farms and rural areas.

Strategic guidelines constitute the framework for defining measures which enable the implementation of the former. Accordingly, guidelines are given for the organisation of the forestry profession and public forestry service in particular, but also for the domain of education and science (research), as well as in matters of international co-operation, tax policy measures, and the financing of forestry.

The Programme offers influential aid in defining forest management plans of forest management regions. This will become evident when regional plans for the period 2001-2010 will be in the preparation process. However, equally important is the basis for current forestry policy measures.

The guidelines in the Programme were positively evaluated at the very initial stage, i.e. public discussion in the Slovenian Forestry Society (Association of Forestry Professionals). However, the problem seems to be the inconsistency between general guidelines and specific measures. This inconsistency is primarily caused by the following: a delay in adopting regulations based on the Forest Act, and a drastically lower share of budget finance for investments into forests than was originally planned in the Programme. The share of State budget finances allocated for forest investments is decreasing, the only exception are finances for forest protection. Compared to projections in the Forest Development Programme in Slovenia, the realisation in 1997 was only about 45%. The result is a significant delay in the realisation of silviculture and protection works. Namely, private forest owners accomplish only about a third of necessary silviculture works, while the State in its forests accomplishes about two thirds of them.

The status of the forestry sector within the Ministry of Agriculture, Forestry and Food is not satisfactory. The bulk of formal and financial attention is dedicated to agriculture, because of the inevitable tasks deriving from harmonisation within the European Union.

The process of denationalisation of forests is not finished (particularly the question of large forest estates is still open). This is the reason why the future status of State

forests and the regulation of their management are unclear, even though the Programme declares that we should aim towards increasing the share of public forests.

Full implications of all the directions and definitions provided by the Forest Development Programme will first become clear next year, when the former will constitute (part of the) expert basis for the preparation of the forest management plans for the period 2001-2010.

5.1 The process and participants

The so-called transition process had a strong influence on new forestry legislation shaping and on defining guidelines for future development. The implementation of the market economy and democratic multi-party political system is now in progress or complete. In addition, the privatisation of former State-owned enterprises and the denationalisation process (returning of property taken away after WWII – part of which were also forests) are also in progress. Also, already at this early stage, the aim is to parallel EU solutions as closely as possible, especially in the light of our potential EU membership. It is therefore understandable that diverse political interests emerge in a situation like this both in connection with general issues and solutions, as well as in cases of more specific issues and solutions. Profiling of the programme was strongly influenced by the following two factors:

- a strong tradition of forestry planning at the local, regional, and national levels (forestry in former Yugoslavia was entirely under the jurisdiction of federal republics); and
- changes in the political and economic system, which required rapid introduction of a new forestry law as well as other regulations. Most needed was a change of perspective and attitudes towards private forest owners and a change in the role of the government in forest management.

It is the view of the government that the programme should be based on scientific grounds, but should also be supplemented and verified by members of the broader forestry community, as well as by members of other concerned groups and the public. Professional expertise for the programme was prepared by the Forestry Department at the Biotechnical Faculty. The research team was multi-disciplinary – it included both forestry researchers and other forestry experts. However, the initial expert verification of the programme was given at the conference organised by the Slovenian Forestry Association. Updated conference materials were later published and then discussed in other relevant institutions, i.e. Association of Wood-processing Industry, Association of Cellulose, Paper and Paper-processing Industry, Hunting association of Slovenia, and the Co-operative Union. On the other hand, neither local communities, nor environmental organisations and similar NGOs were invited to take part in the preparation and discussion. The discussion itself may be characterised as fairly informative, but there were relatively few substantial suggestions.

When the discussion at a level of experts was complete, the Ministry of Agriculture, Forestry and Food autonomously designed a blueprint of the programme. The

Programme was harmonised between various sections of the Government and was subsequently directed into parliamentary procedures. In parliament, those political parties which, due to their voters' background, tend to more strongly represent the interests of private farmers and private forest owners in general, demonstrated a particular interest in the re-shaping of the programme. On their initiative, the programme was supplemented by the possibility to lease State forests and, in addition, wider financial assistance was to be allocated by the State for investments into private forests. The National Council, which is a representative body of social, economic, professional, and local interests (i.e. employers, employees), also joined the discussion. The National Assembly (Slovenian Parliament) passed the programme in the beginning of 1996. An integral part of the programme was also a programme of its realisation, which among other things defined its financial structure.

In the new political and economic context, we have not yet developed adequate substitutes for some of the previously established ways of influencing forest management. And most importantly, new ways for the participation of potential forest users in the creation of developmental programmes need to be found yet. Non-government organisations, which could organise, co-ordinate, and voice the opinions of forest users concerned for forests and forestry development, have already begun to emerge (i.e. Slovenian Ecological Movement, Slovenian Forest Preservation Society and the like). However, they are only periodically active and do not continuously influence and shape the public opinion on forest and forest development related issues. At this point, these organisations do not exercise a significant influence. Parliamentary parties have reached a more or less transparent political position on some of the most important issues of forestry development (i.e. property, denationalisation and the like), but are less eager to do so with respect to specific situations and activities in forests. Opposing political interests of different political parties on forestry development are also reflected in the compromise-type legislative solutions. These have become a subject dealt with by the Constitutional Court more than once in recent times.

The medium and long term planning tradition in forestry had some favourable effects on the sustainability of forests, and has also encouraged professional organisations, as well as governmental institutions, to commence on the formulation of the programme. But, we may at the same time maintain that planning practice, established in the former system, had some negative effects on the process of formulating and adopting of the programme - a fact which could be observed primarily in the way the whole process was organised, and in terms of (non)inclusion of partners. The plan that would schedule co-operation and co-ordination of various partners was not prepared at the beginning of the process. As a consequence, partners were invited to participate only when such was the judgement of the programme preparation institution in charge (Biotechnical Faculty in the beginning, followed by the Ministry). In the former system, planning was primarily the responsibility of professional forestry organisations, which bore large autonomy in introducing the decisions on forest management policy. In this way they indirectly excluded other potential participants, which is the reason why there were no well organised and influential stakeholders at the beginning of the programme formulating process - partners that could participate on an equal basis at the very initial (i.e. preparation) stage of the formulating of the programme. The leading role of professional forestry institutions in forestry policy shaping in the past, as well as in the process of

formulation, was also encouraged by the Slovenian-specific close-to-nature forest management concept, which due to its complexity excluded in many ways members of the general public from substantial discussions.

In the programme formulation, insufficient attention was dedicated to its future enforcement and to the definition of specific implementation tasks. For this reason, the participation of partners was limited primarily to expressing their needs. However, the consequences and costs of these additional demands and goals were not fully and comprehensively analysed. The process of the programme formulation was linear, with no iterative harmonisation. Typically, participants would only take part once and individually. This meant there were no face-to-face confrontations and no seeking of compromises or reaching consensus between various interests, which would also indirectly facilitate securing financial resources for the effective implementation.

While the role of professional forestry institutions in the decision-making process within the forestry field was dominant, the situation in the forestry-related sectors was limited to within sector participation of relevant decision-makers. During the first years of political and legislative transition, various government sectors were busy designing their own programmes and establishing administrative systems in their own fields.

Even in socialist times, national-scale planning in Slovenia was never as obligatory as in countries with a centrally planned economy. Irrespective of this, the autonomy of individual sectors actually increased with independence and with the beginning of the transitional process. Two most overt examples of exclusion from processing are the agriculture and wood-processing industries. The eagerness to involve the agriculture sector in the formulation of the programme was mostly politically motivated. This motivation was partly a counter reaction to the relatively autonomous position of forestry in the past. A similar reaction was that of the wood-processing industry. As one of the best organised sectors, which due to restructuring, privatisation and the loss of former Yugoslav markets, demanded less timber from former monopolistic forestry enterprises than they used to provide in the past. Cross-sector harmonisation of the programme was accomplished at the ministry level, but co-operation was weak.

5.2 Cross-sectorial co-ordination

Cross-sectorial co-ordination in forest development planning is inadequate, which is why policy goals from other fields are not too successfully implemented. The only exception is when those goals represent obligatory directions for the forestry itself, e.g. national environmental policy directions. Even in regulating forest space, forestry is autonomous. In addition to the forestry part, forest management plans also include a land use planning part in which already formulated land use decisions (regional planning) are partially adopted (e.g. declare protective forest or forest for special purpose, cover the arrangement of forest areas in the regional planning acts, and define spatially dispersed forests, which fall under the otherwise arranged areas to which the provisions of forest management plans of management units apply; define forest areas of a special purpose in which a special importance on functions of the forest is in the interests of the local community; define forest areas for reclamation; define areas important for preserving wildlife; define uses of forest and non-forest land which is

ecologically or functionally linked to the forest; produce a review and plan of the forest infrastructure and other planned interventions in the forest space and define multi-functional areas; and define regional planning conditions for intervention in the forest space according to regional planning units).

The spatial (land use) parts of forest management plans are prepared by the public forestry service and adopted in accordance with general regulations on regional planning. The Slovenian Forest Service has large formal authority when it comes to interventions in forests and forest space. Each intervention requires permission for a spatial intervention in accordance with regional land use planning regulations, but the permission also has to be granted by the Slovenian Forest Service. The agreement of the Slovenian Forest Service must also be obtained with an approval for a spatial intervention for building a facility outside the forest if it is evident from a report on the influence on the environment that the facility, or the effects of the operation of the facility, would negatively influence the forest ecosystem and the functions of the forest.

5.3 International activity

International activity in various documents encourages the formation of Slovenian National Forest Development Programmes. It was, therefore, an important additional stimulus for the beginning of the formation of the Forest Development Programme in Slovenia.

The most important international stimuli, as far as forestry and the Forest Development Programme are concerned, were the Alpine Convention, Agenda 21 (adopted at UNCED in Rio de Janeiro 1992), and the Ministerial Conference on Forest Conservation in Helsinki 1993. A restraint for a more direct and active role of Slovenia is its relatively limited personnel and financial resources. This fact is also reflected in the modest substantial (i.e. know-how) influence of international developments in the FDP formation. Slovenia is not a very active participant of IPF. Government activity in this field is more or less limited to monitoring the implementation of the Helsinki Resolution and to preparations for EU membership. International activity (co-operation) is primarily the domain of the Ministry of Agriculture, Forestry and Food.

6. CRITERIA AND INDICATORS

We may divide the criteria and indicators that help us describe the situation in forestry into three levels:

1. Theoretical level indicators are derived on the basis of research activity. Theoretical level criteria and indicators have been defined in the research field of forest management plans and are primarily connected with sustainability and close-to-nature forest management. The criteria are: biological diversity, stand structure, state of technology (technological facilities), forestry organisation, realisation of silviculture measures and socio-economic conditions.

2. Forestry legislation does not define the criteria for monitoring the condition of forests. It lacks also definitions of criteria and indicators for sustainable and close-to-nature management. Criteria may be implicitly derived from the contents of regulation on forest management planning, used by the Slovenian Forest Service.
3. The operational level includes professional activities and the public relations of forestry institutions.

Professional forestry institutions collect various sorts of information and employ it in the process of forestry management planning: presentation of forest functions, condition of forests (e.g. growing stock, increment, development structure of forests, tending of forests, forest damage, quality of wood, damage caused by wildlife, forest development), realisation of forest management plans (harvesting, silviculture works), economic calculations.

As for the relations between forestry institutions and the public (e.g. Slovenian Forest Service, annual reports from the Ministry of Agriculture, Forestry and Food), the following criteria and indicators are most frequently used:

- the condition and the development of forests (forest area, deforestation, growing stock, structure of removals by tree species and tree size, realisation of forest silviculture and protection works, hunting, forest road constructing and maintaining etc.);
- production and selling of roundwood (e.g. forest products structure, international trade, production of edible mushrooms);
- the financing of forestry;
- results of forestry enterprises (e.g. economic result, number of employees);
- forestry capacity (institutions, research, education, international collaboration).

The majority of the criteria are closely connected with forestry, and much less with the broader economic and social environment. We may, therefore, expect that with the advancement of participation in forestry policy formulation, the process of defining national criteria and indicators for the monitoring of the condition of forests will begin in Slovenia as well.

7. CONCLUSIONS

The importance of the forestry sector in Slovenia will be fairly significant in the future. Not only in production terms, but also because of more and more emphasised ecological and social functions of forests. As far as production is concerned, we see good possibilities primarily in the production of high quality timber, the goal which is not in contradiction with other functions of the forests. Some of the social functions of the forests (especially recreational and tourist) will have to be economically evaluated and some even offered to market. This is why combined realisation of economic, ecological, and social functions of forests is crucial for the future of forestry. This goal, however,

requires a more open stance of forestry towards the society as a whole. Openness will encourage the expansion of non-production use of forests and facilitate the accomplishment of all forest functions. Isolated forestry can not succeed in gaining the support of the general public for its role. What is needed is mutual co-operation and understanding. In this sense, we see as particularly important the role of some NGOs, which include forestry related issues in their programmes.

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SWEDEN'S NATIONAL FOREST PROGRAMMES

Lars Lönnstedt

Department of Forest Economics,
SLU
Sweden

ABSTRACT

Sweden's national forest programmes have a long tradition. The discussion about a programme started in the middle of the last century. The first Forestry Act dates back to 1903. The present policy was implemented in 1994. The new policy comprises two equal goals, one for forest environment and one for wood production. The Forestry Act specifies the minimum requirements. In the new programme less emphasis is laid on forest legislation and subsidies, and more emphasis on extension service. Policy making in Sweden is a process of consensus building with the idea that, unless everyone agrees on a policy and has had some say in its development, it is unlikely to succeed in achieving its objectives. This procedure has been referred to as the "Swedish model". The policy is implemented by Forestry Boards. This is done both through enforcement and guidance.

Keywords: "Swedish-model"; Forest; Policy; Goals; Means, Stakeholders.

1. INTRODUCTION

Sweden is a sparsely populated country. The land area is 41 million hectares with a population of approximately nine million, i.e. approximately 4.5 hectares for each inhabitant. In spite of this fact, the forests are significantly influenced by hundreds of years of human activity. Only in the interior of Northern Sweden, near the area of high mountains, are there literally undisturbed forests. Today, most of these forests are totally protected or subject to tight restrictions.

The total forest area is 22.5 million hectares, of which 10% (2.2 million hectares) is owned by the state or public agencies, 39% (8.8 million hectares) by forest companies and 51% (11.5 million hectares) by individuals. In southern Sweden, in Götaland,

individual ownership dominates, 3.9 million hectares (78%) of 5.0 million hectares. (National... 1997).

Before 1993 the ownership pattern of forest land was approximately as follows: State 20%, other public agencies 5%, forest companies 25%, and individual owners 50%. During 1993, the principle parts of the State Forest, and the State Forest Industry Company were merged into a new company, AssiDomän. Slightly less than 50% of the shares were sold to private parties, mostly in small lots of 100 shares or less.

Many forest companies have their roots in former iron-ore companies that also owned large areas of forest. One of these, Stora, celebrated its 700th anniversary a few years ago. In connection with development of the saw-milling industry during the latter part of the 19th century, these companies also consolidated their ownership of forest land, and they have often been accused of buying forest land too cheaply from farmers during this period. In 1906 an Act of Parliament prohibited companies from buying forest land.

The individual ownership has its roots in the “farmers class” with specific representation in the Swedish parliament during the 18th and 19th centuries. Today, the combined agriculture/forestry family enterprises no longer dominate. The number of absentee owners has increased, as the number of forest owners who are not economically dependent on their forests has increased.

Sweden is a northern European country that experiences harsh winter climates and has short growing seasons that mitigate against tree growth. Rotation periods vary from 60 to 80 years in the south to 90 to 120 years in north. The forest ecosystems are simple and forests lack diversity, with Norway spruce and Scots pine accounting for 46% and 38% of growing stock, respectively. The Swedish forest resource situation has improved successively, and at the same time the actual and potential harvest has continued to increase. Currently the wood balance is very favourable. The gross annual increment is approximately 100 million m³, while the potential harvest is in the order of 80 million m³ (forest cubic metres) short-term and 90 million m³ long-term. The actual gross harvest is in the order of 70 million m³ (68.5 million m³ as an average for 1990-1995, 68.1 million m³ forecasted for 1996) (National... 1997).

The forest and forest industry sector is vital for the Swedish economy. Forest products consist primarily of softwood lumber, wood pulp, newsprint and other wood products. At the same time, the role of the forests is to provide non-wood goods and services. Environmental considerations are becoming more important. In the forest policy of 1994, the environmental and productive aspects of the forests were balanced.

A comparison with some other countries or regions can demonstrate the economic relevance of the forestry sector in Sweden (FAO 1993).

In 1995, the value added for the Swedish forest industry was 55 billion Kronor and for forestry 23 billion Kronor. The number of people employed by the forest industry (wood processing, pulp, paper, and paperboard goods industries) was 93,600 in 1996 and 26,300 by forestry (National... 1997).

The Swedish economy has been open by tradition. Trade barriers have been non-existent or low. The large companies are competing on the European or global markets. The politicians are very much aware of the importance of the industrial sector for the economic growth and wealth. A healthy and strong industry has been developed thanks to this policy.

Table 1. Forest products in the economy, selected countries and regions

Country/region	Production (P) Million US\$	% of GDP	Consumption (C) Million US\$	Balance (P-C) Million US\$
Sweden	10,756	4	2,051	8,705
Finland	8,959	7	1,233	7,726
Canada	30,482	5	15,391	15,091
EU(12)	45,534	n.a.	74,280	-28,756
All Developed Countries	285,377	1	288,441	-3,064
All Developing Countries	132,289	4	138,787	-6,498
World	417,665	2	427,228	-9,563

Trade accounts for approximate 30% of Sweden's GDP, with export of natural resource commodities contributing about one quarter to the total export. The forest sector is the world's second largest exporter of soft wood lumber and newsprint (after Canada), and the third largest exporter of wood pulp (after Canada and the US). The most important paper and board grades produced in Sweden in terms of export value are newsprint and container board.

The purpose of this paper is to introduce Sweden's forest programmes. National Forest Programmes (NFPs) are "the process used by a country to deal with forest issues, including the planning and implementation of forest and forest-related activities". The purpose is to achieve sustainable management, conservation, and sustainable development of forests. The approach is iterative and holistic. Thus, NFPs are continuously programming and planning alternative ways of conserving and using forests at the national and sub-national level for the mid and long terms. This paper starts with presenting the policy framework, followed by a presentation of goals and tools of the forest policy. The paper is mainly based on National Board of Forestry (1995) and Kooten et al. (1998).

2. BACKGROUND

The development of the present Swedish forest policy is an example of the "Swedish model". In such cases the formal process for policy development may include the following stages:

1. Problem: definition and terms of references
2. Problem analysis
3. Reporting

A Parliamentary Forestry Committee, established in 1992, found that the policy in force had been successful in most aspects. However, it had been less successful in promoting nature conservation and in stimulating production of high quality wood. It was also argued that the forestry had introduced some restrictions for a positive development of

these aspects. Furthermore, many types of subsidies were inefficient, and the general inventory of private land for forest management planning was considered too costly. The Swedish Parliament approved the forest policy in May 1993 and it took effect from 1 January 1994.

The policy is implemented by Forestry Boards. The major task of the Boards is to implement the forest policy. This is done both by means of enforcement and guidance. The State Forest Service was created in 1859. From the beginning it had the same structure as is still common in many countries. The Forest Service was both the central Forest Administration and the manager of the State forests. The County Forestry Boards (Private) were created in 1905, however, the National Board of Forestry was not created until 1941. Until 1981, the County Forestry Boards were rather independent, with the exception of State funding through the National Board of Forestry.

The County Forestry Boards are organised under a regional office and a number of field districts. The Boards works locally close to the forest owners. This creates favourable conditions for an effective use of the policy instruments, which mainly comprise extension services and supervision of the Forestry Act.

It was not until 1979 that the State forests were put under the control of the Forestry Act, and thus subject to control by the County Forestry Boards under the supervision of the National Board. This change in the function of the Forest Service led later to a change of name to "The State Forest Enterprises of Sweden".

From the beginning, the Swedish Parliament decided that the Forest Administration should have a firm local presence and representation. Members of the County Forestry Boards were to be selected among distinguished persons representing different local interest and ownership groups. Integration with the County Administrative Board was secured by making the County Governor chairman of the County Forestry Board, and allowing the Chief Officer of the Forestry Board to represent the forestry sector in the sessions of the County Administrative Board. Due to severe budget cuts and probably the avoidance of a merger with the county administrative boards the number of boards has recently been reduced from 24 to 11. This means that the Forestry Board regions no longer follow the regions of the county administrative boards. However, the regions of these boards are also questioned.

In addition to the feature of local representation and connection, "problem-solving" has been the main approach for the practical implementation of forest policies. Persuasion has been used much more than the law, i.e. the carrot has been used much more than the stick.

Problem solving indicates that there has been a need for close cooperation with the specialised institutes for forestry training and forestry research, notably the Forest Faculty of SLU (the Swedish University of Agricultural Sciences) and a branch research institute, the Forest Research Institute (SkogForsk). Problem-solving also indicates that forest policy measures have been closely considered from the point of view of market orientation. This implies that the policy means must be adapted to the fact that forestry is an economic activity, and cannot function unless it is economically feasible. This is one reason why forest subsidies are now used to a much smaller extent. As economic incentives have still been found to be efficient, there are a number of income taxation incentives and disincentives, which constitute important components of the total forest policy package.

The equality approach is the third of the principles which have guided the work of the Forestry Administration over the years. This principle means that, when a district forestry officer approaches a forest owner, he presents himself as a “discussion partner” rather than a representative of a central State agency. At the County level the district forest officer is part of a network consisting of forest owners, foresters employed by forest owners’ associations and forest industries, representatives of the County Administration, as well as local ecologists and ornithologists.

3. TARGETS AND STRATEGIES

3.1 Visions

Swedish forestry has traditionally been concentrated on the production of wood for its forest industries. This market served as a major incentive for the creation of high-yielding forests. Compulsory regeneration after cutting was the main substance of the first Swedish Forestry Act of 1903. Natural regeneration, sowing and planting have been used in various combinations over the years to fulfill this regulation.

The introduction of sustainable forestry in Sweden was based on German thinking and theory, and can be traced back to the iron-ore companies of central Sweden (Bergslagen) which had many early and close contacts with Germany.

The new Swedish forest policy comprises two goals, one goal for forest environment and one for wood production. The two goals have the same priority, implying that they should be given equal weight in the management of forest resources (National... 1994a).

Environmental goal

The productivity of forest sites shall be maintained at sustainable level. Biodiversity and genetic variation in the forests shall also be secured. The forests must be managed so that plant and animal species which exist naturally in the forest ecosystems can survive under natural conditions and in reproductive numbers.

Endangered species and vegetation types shall be protected. The forest’s cultural heritage, aesthetic and social values must be defended.

Production goals

Forest and forest land shall be utilised efficiently with the aim of a sustainable and valuable yield. The composition of forest production must be such, that it has a potential to satisfy a variety of future human needs.

Legislation

The goals should be viewed as visions of a desired future state, something to strive for. The Forestry Act specifies the minimum requirement. Swedish legislation is formally developed at four levels:

1. Acts passed by parliament
2. Ordinances or orders given by the government (written by the minister in charge)
3. Directions or regulations set by the responsible authority (for forestry, usually the National Board of Forestry) and supported by an act or ordinance
4. Recommendations made by the authority

The first three are legally binding, while the fourth is not and is used to further clarify how the first three should be understood. An act itself is usually very short and often lacks detail. The further one progresses down the list, the more specific the directions became. Political bodies do not have direct managerial influence on the authorities, and ministers who attempt to directly interfere with the authorities can and occasionally do get convicted. Hence, Forestry Acts serve as a general guideline, with actual implementation occurring via ordinances from the minister in charge of forestry, and directions and recommendations provided by the Forestry Boards.

The proportion of reserved forest land is considered inadequate (approximate 3.5%). Consequently, more reserves for nature conservation purposes must be set aside, mainly in southern and central Sweden. No percentage target has been set, but 5% has been mentioned as a mid-term target.

Detailed surveys of the so-called “key woodland habitats” have revealed that much of the endangered flora and fauna to be protected and maintained are often concentrated in small areas of specific or undisturbed site conditions. The number of key habitats may be in the order of 3-5 per 1,000 hectares of forest land. Based on the surveys key habitats will be identified and completely protected from cutting. Similarly, harvesting operation in non-productive forest land, and in other areas which might negatively influence the natural site conditions are forbidden.

Specific environmental restrictions exist for forests in the vicinity of mountainous areas, for forests which are also used for reindeer grazing by the Sami people, and for forests with specific regeneration difficulties. Selected valuable broadleaved forests in southern Sweden, including beech and oak woodland should be retained, but still be subject to commercial use. There are also a number of subsidies for the regeneration of selected valuable broadleaved forests.

3.2 Gaps

The Forestry Board and The Environmental Protection Agency was in 1997 asked by the government to evaluate the new forest policy. Their reports were presented in 1998 (Naturvårdsverkets... 1998; Skogsstyrelsens... 1998; Skogseko 1998). The main conclusion is that much remains to be done before the environmental and production goals are reached. When it comes to regeneration, for example, the ambitions of the forest sector have decreased since 1990. Considering the short period of only four years, the new policy has been in effect, it is pointed out that the results are not surprising. None of the agencies recommend that the main direction for the forest policy should be changed. However, the Forest Act and its application should be tightened up. More education and guidance, and more money for nature reserves are suggested.

Some conclusions from the Forestry Board are:

- Unchanged regeneration results: too little regeneration is worrying for future production. The regeneration requirements stated by the Forest Act is only completed to 80% planted and 68% naturally regenerated.
- Thinnings are not carried out to the desired extent.
- Natural and cultural heritage considerations have improved but every fourth final felled area does not fulfill the requirements of the Forest Act.

Some conclusions from Environmental Protection Agency are:

- Increased allowances for nature reserves, legal habitat reservations and nature conservation agreements in order to increase the protection of biologically valuable areas.
- Inventories, regional plans of action and continuing education of the forest owners.
- Supervision and continued evaluations, e.g. when felling cause damages to areas with species especially worth protecting.
- An overview of the rules for legal habitat protection and the possibility to dispose of more than five hectares in special cases.

The Environmental Protection Agency (1996) reported that, from 1992 to 1996, 290 areas (96,000 ha with 46,000 ha productive forest area) were protected as nature management or national parks. Half of this area is forest in proximity of high mountains, one fourth coniferous forest outside this area and the rest broadleaved forest mainly in southern Sweden. The total area corresponds to approximate 0.2% of the Swedish forest area. The total protected area (national parks, nature reserves or Forest Service reserve) in Sweden is 3.66% (832,000 hectares) of the forest area. However, of this area almost 80% is forest in proximity of high mountains, meaning that 43% of this area is protected. However, only 0.81% of the rest of the forest area is protected.

Comparing the periods 1923-1929 and 1989-1993 one conclusion is that the existence of older forest (older than 140 years) has decreased. This is most obvious in Northern Sweden (except for forest in proximity of high mountains). In this region the share of forest older than 160 years has decreased by one third during the last twenty years. In southern Sweden a small increase was recorded.

Between 1991 and 1996, approximate 500 legal habitat protection agreements were signed. This corresponds to a total area of approximate 1,000 hectares. Half of the agreements concern primeval conifers forest. The average compensation is 35,000 Swedish Kronor per hectare. It has been estimated that about 25,000-30,000 hectares can be considered for legal habitat protection agreements. With the present annual availability, it will take 50 years to cover this area.

The first agreement on special management for environmental reasons was signed early 1994. The period for the agreement is usually 50 years with an average cost of 6,300 Swedish Kronor per hectare. Since 1994 and until 1996 190 agreements have been signed covering a total area of more than 1,000 hectares of forest area.

Voluntary allocation is both for special care of areas more than half a hectare and special care at final felling. It is hard to estimate the extent of voluntary allocations. An

inquiry during 1989/91 showed that special care was taken on 0.2% of the final felled area. The number increased to 0.6% in 1993 and 1.2% in 1995. The tendency is that the voluntary allocation is greater for industrial forest owners than for small individual owners.

3.3 Policy tools

In the Swedish Forest Policy of 1994, the balance between the various forest policy tools was altered (National... 1994b; Fredman 1997). Less emphasis is put on forest legislation and subsidies, and more emphasis on extension services. Forest owners must now take greater responsibility from both the economic and management point of view.

The new legislation has been simplified and is generally less restrictive. This leaves forest owners considerable freedom of action. However, most of the basic requirements in the old Forestry Act have been retained, although subsidies as a policy instrument are only used to promote the forest environment.

4. STAKEHOLDERS AND PARTNERS

The Forestry Boards and the National Environmental Protection Agency have already been discussed. Both authorities implement the forestry and environmental policies of the government. The County Administrative Boards, town and rural districts have established their own environmental sections.

The forest and forest industry companies act as economic enterprises, trying to achieve the best long-term economic results. Most of the companies are not only sizable forest owners, they also run forest industries, pulp and paper mills as well as sawmills, and they try to optimise the economic situation of their enterprise as such. The forest management part of the forest companies are often organised as independent profit centres, meaning that they sell their roundwood to their industrial units on the basis of contracts which are influenced by the prevailing market conditions. These profit or result units are often legally different companies.

Previously, separate industry associations existed for each of four forest industry activities: pulp and paper, packaging and other paper goods, sawmilling, and other wood products and panel products. These industry associations now work collaboratively under the umbrella organisation of the Swedish Forest Industries Association in Stockholm. This association includes as members only a small proportion of the sawmilling firms, but 95% of paper producers and all pulp producers. As the forest companies now own almost 40% of the forest area, it is obvious that their associations play an important role in the development of the forest policy.

Small private forest owners are organised in seven forest owners's associations. The associations cooperate in the National Federation of Swedish Forest Owners' Associations (Skogsägarnas Riksförbund). Their 89,000 members own 5.7 million ha of forest. The associations were formed to improve the financial yield of forestry operations among their members. This is done by coordinating the timber trade and by

helping the forest owners with logging and silvicultural practices. In order to ensure a steady market for timber and to control pricing, the associations have built up their own forest industries.

The forest sector labour unions are also important actors in forestry policy making. The unions were principal advocates of the regulations in the 1970s and 1980s that led to a focus on forest productivity at the expense of land owners' profits. These included requirements on cutting, regeneration and thinning; for example, new paragraphs introduced in the Forest Act of 1981 could oblige forest owners to clear cut or thin stands with the objective of increasing short-term timber supply. However, these requirements were also designed to create employment.

There are a large number of other organisations which play an important role in Swedish forestry, including primarily environmental groups and recreationists, as the World Wildlife Fund and the Swedish Association for the protection of the Environment. By means of their ability to utilise market power the environmental organisations have been very successful in affecting the forest sector. Chlorine is no longer used by the Swedish forest industry for bleaching. Most of the forest area owned by the forest companies is or will be certified by the Forest Stewardship Council.

Policy making in Sweden is the result of much discussion and debate, and eventual consensus – it is a process of consensus building with the idea that, unless all agree with a policy and have had some say in its development, it is unlikely to succeed in achieving its objectives. This procedure has been referred to as the “Swedish model”. In forestry, the consensus involves a large number of groups, the forest land owners and foresters representing a considerable share.

The 1990 Forestry Commission, appointed by the government, included 10 members of Parliament, and representatives from government, industry, the forest owners and environmental groups. In total, 20 stakeholders were represented in the Commission. At the disposal of the Commission, a secretariat with four full-time and qualified secretaries was established (one of them being the author of this paper). The Commission met once a month for a two-year period, more frequently towards the end. The Commission also visited different parts of Sweden with the intention of meeting local stakeholders. The result of the Commission's work was a recommendation for a new forest policy. The report was presented for the minister of agriculture. The recommendation was referred to 50 stakeholders for consideration. Based on their comments and the recommendation of the Commission, the minister presented a bill for parliament. This bill must first be discussed by the Agricultural Committee.

5. INTERSECTORIAL COORDINATION

As part of the budget process, the government makes a national macroeconomic plan. This plan and the budget will indeed affect the work of public authorities. However, the direct influence the plan has on the rest of the forest sector is weak. Typically, the government has no detailed economic policy that will affect the industry. No intersectorial coordination and integration of policy objectives into/from other policy areas exist. However, a land-use plan exist which indeed influences the location of new mills.

6. SPECIAL INSTITUTIONALISATION

6.1 Planning framework

The National Forest Inventory (NFI) is an annual inventory covering the entire area of Sweden. It is performed as a sampling survey with low sampling fraction. The objective of the inventory is to provide basic data for the planning and control of the forest resource at the national and regional level and also to give basic data for forest research. The main task is, thus, to give information on the state and change of the forest resource and of land use. The NFI is carried out by the Department of Forest Resource Management and Geomatics, Section of Forest Resource Data at SLU.

The first inventory began in 1923. Since 1953, the inventory covers the entire country every year. Since 1983 the annual sample consists of some 17,000 systematically distributed circular plots. Of these plots, 10,000-11,000 fall on forest land. The inventory uses permanent plots with a radius of 10 metres as well as temporary plots with a radius of 7 metres. The permanent plots are reinventoried after 5-10 years, thus allowing an efficient estimate of changes. The main observations on all land are: land use category, ownership category, growing stock, growth, tree distribution and recent felling. On forest land: terrain conditions, vegetation cover, maturity class, age, site quality, recent and suggested silvicultural measures, degree of stocking damage and regeneration status (in young stands).

The results of the NFI are unbiased in most cases, but may have significant sample errors. The inventory is dimensioned to be able to provide high quality estimates of the total growing stock by counties with five-year material.

The General Forest Inventory was a public inventory of private farm forests, initiated in 1980. The Swedish forest policy of 1994 abolished this inventory. However, the importance of management planning is still emphasised in the new policy. Management planning is now justified from an environmental point of view as well. Forest owners must themselves provide the basic data for this planning.

6.2 International and global initiatives

For many decades, Swedish forest policies and policy implementation was guided by the same spirit as that of the UN Forest Principles. The more people became dependent on forestry and forest industries, the more important a sustainable and increased production of wood became. Swedes are used to talking about a “Swedish model” for forest policy development and implementation, i.e. an efficient and sustainable production chain from the forest to the forest industries and to the international market for forest products. At the same time there has been an increased adoption of the prevailing management systems to environmental needs.

Sweden was actively engaged in the UNCED process with Agenda 21, the development of the Forest Principles, the Helsinki Resolutions and the IPF process as a follow-up of UNCED. Promoting the capacity of countries through building and rural development have been major goals of Swedish foreign aid policy over the years.

The ownership issue was not a point of discussion in the UNCED conference in Rio. It is therefore important that a discussion on these issues take place on the global level. One hypothesis is that effective private ownership and management is better than State ownership with no management. This is one reason why the responsibility of States to develop and implement policies for the management, conservation, and sustainable development of forests constitutes such an important part of the UN's forest principles.

7. CONCLUSION AND OUTLOOK

In many ways, Sweden's history and experience with forest policy, and the forestry institutions that have evolved, are unique. They are the consequence of the historical development, the importance of forestry in the economy, the ownership structure of forest lands, and the attitudes of the people. Forestry policy-making and implementation, and forestry institutions benefit from the fact that the citizens are generally highly educated. This has meant that forestry policy is an outcome of consensus, thereby making enforcement a matter of partnership between the State and the forest owner rather than one of confrontation.

The new forest policy has been questioned. However, most representatives of the authorities stress that it is too early to make a relevant evaluation. The policy has solely been in effect for four years. The changes of the business cycle have been dramatic. It is the personal opinion of this author that this effect is much stronger than the forest policy. Other factors such as the environmental market forces have also had a dramatic effect. In addition, the National Forestry Board claimed that a change of policy was necessary and asked for additional funds. One could perhaps conclude that the reasons were selfish. I suspect that a major reason for the dissatisfaction among many individual forest owners is the fact that several individuals have bought forest land, clear cut it and sold the land.

A major characteristic of Swedish forest policy and forestry institutions has been its flexibility, despite significant public regulation and intervention. As with other sectors, there have been many Forestry Commissions, including many dealing with special issues in forestry. With some exceptions, Commission recommendations are adopted by government. Along with the "Swedish model" of consultation and consensus building, this has, in part, enabled Sweden to make significant changes in its forestry institutions during the 1990s. The major changes have involved a restructuring of the forest industry, with consequent privatisation of the Forest Service and layoffs of great numbers of workers, and adoption of greater market incentives at the forest level. These have made Sweden's forest sector more competitive and, at the same time, drawn greater emphasis on the ecological functions of its forests and the environmental soundness of the products it produces.

Major changes can be expected in the future. One concerns this author and his university. Presently the government stimulates the establishment of local colleges. Many of those try to find their identity within the forest sector. My judgement is that eventually the supply will exceed demand. Another interesting fact is an upcoming

discussion about intensively managed forest lands, a sort of plantation close to the pulp mills. These ideas can be found in a report on Forestry 2021 published by the National Environmental Protection Agency. Other areas would be preserved. This would mean a major break with the present forest policy where production and environmental considerations go hand in hand in the major part of the forest area. Yet another change that will affect the forest sector is the closing of nuclear power plants. The demand for bioenergy will increase. This will influence the roundwood market and, after some time, the forest policy.

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FOREST AND ENVIRONMENTAL PLANNING IN SWITZERLAND – A COUNTRY REPORT

Ingrid Kissling-Näf and Willi Zimmermann

Chair of Forest Policy and Forest Economics,
Swiss Federal Institute of Technology Zurich
Switzerland

ABSTRACT

Switzerland has considerable experience in planning activities related to forests and the environment at different levels. Swiss planning activities usually focus on guidelines and principles. The new forest law of 1991 which sets up objectives and instruments can be considered a forest strategy. As a consequence of this broad legal framework there is a need for planning the relevant implementation activities at different State levels. In our view, planning is needed in the area of forestry promotion, especially in the distribution of subsidies and incentives as well as for interpolicy-coordination. However, the potential of national forest and environmental planning in Switzerland is heavily restricted by political institutions. The development of long term plans is limited, e.g. by power-sharing. Swiss plans do not work with the main key characteristics cited in the recent planning literature, such as a dynamic and long term planning process, quantitative targets and a timetable, monitoring-of-performance capacity, the budgeting of plans, or a clear legal mandate.

Keywords: Swiss; Forest-Programme; Implementation; Planning; Shortcomings.

1. INTRODUCTION

Switzerland's forests and forestry are characterised by a number of particularities which are reflected in its sectoral public forest policy. One of the most unusual aspects that concerns the ownership of Swiss forests is notably the large proportion of public forests, which account for approximately 70% of the total forest area (see Table 1) (Bundesamt für Statistik et al. 1997; Bundesamt für Umwelt, Wald und Landschaft 1995; Schmithüsen and Zimmermann 1992). The structure of this public ownership has many facets and, in legal terms, is relatively complex. A great variety of public institutions own the public forests. In terms of the amount of area owned and the number of public

owners (around 3,500), the historical communes of burghers and the local authorities or communes are the most significant forest owners, while the public corporations continue to own large tracts of predominantly mountain forests in the central parts of Switzerland. Compared with these three main categories of public forest ownership, the amount of forest owned by the Cantons, the Confederation and by other public institutions is fairly negligible. As for the numerous private owners, these are largely confined to the rural areas of the Pre-Alps and the Central Plateau. Little is known about the structure of private forest ownership, but it is estimated that farmers are already a minority among the 250 000 private forest owners. The general situation of forest ownership is still complicated by the fact that it varies greatly from one Canton to another.

The distinctive structure of forest ownership also characterises the forest management system or the forest economy. Swiss forestry statistics acknowledge forest enterprises only in relation to public forests, while in the case of private forests, reference is only ever made to owners or holders. Based on these rather general forestry statistics, the following size categories are given for public forest enterprises (Table 2).

Approximately two thirds of the public owners manage their forests themselves as independent enterprises. The remainder have formed cooperatives or assign the management of their forests to public or private contractors. Generally speaking, Swiss

Table 1. Forest ownership in Switzerland.

	Ha	%
Total area of Switzerland	4 129 000	100
Total forest area	1 186 000	29
Forest ownership:		
• Communes and corporations	816 000	68
• Private owners	258 000	27
• Cantons	54 000	4
• Confederation	8 000	1

Source: Bundesamt für Statistik 1996, 65.

Table 2. Forest enterprises.

Size categories	Number of enterprises	Forest area in ha
50 ha	1 621	30 300
51 - 200 ha	1 203	131 900
201 - 500 ha	657	208 200
501 - 1 000 ha	264	181 300
over 1 000 ha	112	179 600
Total Switzerland	3 857	731 300

Source: Bundesamt für Statistik 1997, 71.

public forestry is comprised predominantly of small entities or enterprises: 70% of the public forest enterprises own holdings of less than 200 ha, and only 3% of the public owners possess more than 1000 ha. Even more extreme is the situation of the private forest owners who own an average of 1.2 ha and carry out almost 2/3 of the forest management (harvesting) themselves. Around 9000 workers are engaged in public and private forest enterprises, of which 80% are trained forest workers. The majority of this workforce is permanent. In an average year, Swiss forestry produces 4-4.5 million m³ of timber with a value of 550 million Sfr. Its contribution to Switzerland's economy is modest: the percentage of employees is 0.3%, and its percentage of the total economy (GDP) is just 0.1%. Both ratios have shown a constant decline over the years, and a turnaround is not expected in the near future. It is possible that this unfavourable economic situation is one reason why specific matters concerning the forestry sector do not attract the attention of politicians and decision makers on the national level, whose more general concern is confined to the yearly budget debate in Government and in Parliament. Although the amount of federal subsidies for forestry is relatively high compared with other countries, the yearly forestry budget is almost never contested in the official budget process.

One further particularity of Swiss public forest policy concerns the natural and geographical conditions: Woodland areas extend from an altitude of 200 m to 2300 m. More than 50% of all forests lie above the 1000 m level and more than 40% is on slopes with a gradient of 40% or more. In conclusion, around 70-80% (depending on definition) of the total forest area in Switzerland can be regarded as mountain or protective forest.

2. BACKGROUND

In a constitutional State it is evident that the framework for a public forest policy must be anchored in legislation. A necessary first step is the sharing of authority between the central government (Confederation) and the federal states (Cantons). A number of articles (24, 24 sexties, 24 septies, 31 bis) of the current Federal Constitution authorise the Confederation to enact a federal forest policy which allows the Cantons some room for manoeuvre (Schweizerischer Bundesrat 1988; Zimmermann 1991). This constitutional order was consolidated by the new Federal Forest Law of October 4, 1991, which came into effect on January 1, 1993, and by a forest ordinance with the same name and date. This federal legal forest framework also requires complementary new laws to be made at the cantonal level. Half of the Cantons have already developed their forest laws; the remainder will follow this or next year (Keel and Zimmermann 1997). At the federal level, the forest legal framework is relatively new and virtually complete; federal forest policy currently focuses on the implementation activities mainly executed by the Cantons. The cantonal level combines programming (legislation) and the implementation of forest policy activities.

The lasting political interaction between the Confederation and Cantons is one of the most interesting and distinctive aspects of public Swiss forest policy. This has been particularly evident during the process of formulating a new federal forest law, in which

the leaders of the cantonal forestry services were the main actors opposing the federal forest administration responsible for the preparation of the forest law. The representatives of the Cantons attempted to reduce the Confederation's authority over issues of forest policy as much as possible. However, they could not avoid the fact that the federal forest law had assigned the task of forest conservation (quantitative and qualitative) almost completely to the central Government. On the other hand, the Confederation is obliged to provide substantial financial support (up to 70% of the costs) for most forest measures. The Cantons retain decisive authority and responsibilities in the field of forest management, particularly forest management planning.

The federal aspect is reflected in the implementation of the forest legislation: although the Cantons are generally responsible for the implementation of the federal law, the federal administration and the Cantons communicate closely at this level. The field of promotion (financial incentives and indemnities), in particular, has witnessed a close collaboration and coordination between federal and cantonal forest services. At the federal level, the Swiss Forest Agency, a main division of the Agency for Environment, Forests and Landscape, is responsible for the implementation of all federal tasks regarding forests (decisions concerning deforestation, financing of projects and other measures, training in forestry, research, data gathering and information). At present, it has a staff of about 40 employees (half of whom are forest engineers). Due to a mandatory regulation in the federal law, the forest services have a structure common to all Cantons (Federal Office of Environment 1993):

- Cantonal Forest Office
- Regional Forest Offices (District)
- Local Forest Offices (Range or Commune)

At the cantonal and regional level there are currently 25 cantonal inspectors supported by about 80 specialised forest engineers and 160 district foresters (who are also forest engineers). The cooperation and coordination between the federal and the cantonal forest services is managed by the inspectors of the cantonal forest offices and by the management board of the Swiss Forest Agency. The establishment of a conference attended by all cantonal forest inspectors is an important sounding board for the discussion of cantonal problems, implementation questions, informal arrangements concerning the distribution of federal subsidies and for the formulation of demands to be presented to the Swiss Forest Agency.

3. TARGETS AND STRATEGIES

As mentioned earlier, the Swiss forest law is a very recent one. The process of setting up this new legislation was open-ended, enabling everyone to contribute their opinions regarding forest related issues. More than 200 actors, including institutions (Cantons, Communes, research institutes), political parties and organisations (economic and professional associations, NGOs) have participated in this process and outlined their

vision of a future public forest policy (Schweizerischer Bundesrat 1988). In view of Switzerland's political system, the new forest law can be regarded as a compromise or the combined result of all these actors' demands. This broad participation, the relatively unanimous approval by Parliament, and the lack of a referendum are indicators that the new forest law was well received by the major forest related actors and by society (Zimmermann 1996a). The objectives and instruments set up in the new federal forest law can be regarded as the democratically legitimated and broadly accepted general forest strategy for Switzerland (Zimmermann 1998).

The objectives of the public federal forest policy are explicitly set out in article 1 of the forest law. According to this legally binding article the federal Government is expected to:

- a. ensure maintenance of the total forest area
- b. protect the forest as a natural environment
- c. ensure that all the functions (protective, social, ecological, economic) of the forest are upheld
- d. promote forest economy
- e. protect population and valuable property against natural hazards.

These five objectives are very broad, are more strategic than operational, and more qualitative than quantitative. They must be made more concrete either by the selected instruments in the law or by implementation. In spite of the general nature of the objectives, a number of concrete elements can be identified. First of all, there is the legally binding obligation to maintain the quantity, quality and distribution of forest area (point a). A second politically oriented decision is the clear preference for a multifunctional forest (points b and c). Public forest policy must try to find a balance between all demands and interests expressed by society concerning the forest and its use. A third point, which is not evident, is the Government's mandate to promote the forest economy (point d). A broad system of subsidies for a whole economic sector is legitimated by this legal basis. A final and typically Swiss element is the Government's obligation to protect and promote the protective forests in particular (point e). Based on the history of Swiss forest policy (Kissling-Näf and Zimmermann 1996), this obligation can be interpreted as a priority to be included in the current and future public forest policies.

An analysis of the manifold areas of the forest law indicates the difficulty in identifying the instruments used to achieve the different objectives mentioned above (Zimmermann 1998). The federal forest law does not provide the necessary instruments for the achievement of each individual objective. The law and the ordinance follow a problem or field oriented structure. For this reason, we are obliged to 'compile' the necessary instruments. As a general observation, one can say that in order to achieve the first aim (maintenance of forest area) regulatory instruments such as restrictions are the most common. The same can be said for point b (environmental protection): there are a considerable number of restrictions imposed on a variety of forest users. However, the restrictions are combined with financial instruments (subsidies) reserved for forest owners and forest managers. Regarding points c (ensuring multifunctionality) and d (promotion of forestry), voluntary financial incentives are predominant, although these

can be supplemented by obligations or directives set up in local or regional forest plans. If obligatory directives are connected with financial contributions, they are defined by the Swiss forest law as “compensation” or “indemnity”. Point e (protection against natural hazards) includes such compensation, composed of federal financial contributions and cantonal obligations. In addition to these instruments, which essentially attempt to achieve a specific aim, the Swiss forest policy programme contains a set of persuasive instruments including education, advice, research, documentation, information, etc., which cover the entire field of forest activities or forest sectors.

To sum up the legal framework of Swiss forest policy, one can say that both the objectives and the instruments are relatively broad. Nevertheless, the legislator has taken some crucial decisions concerning the strategy and the operational activities. Currently, gaps are more evident at the implementation level than at the programme level. The legal framework, which can be regarded as a policy programme in a general sense, appears to be broad enough for establishing a more concrete National Forest Plan. The possible content of such a programme and the current steps being taken in this direction will be discussed in greater detail later (see Chapter 6).

4. STAKEHOLDERS AND PARTNERS

The principal forest-related actors on a national level appeared on the political stage during the process of formulating a new forest law (Bundesamt für Forstwesen 1987; Schweizerischer Bundesrat 1988). Within the political-administrative system, the leading role was played by the Swiss Forest Agency, which was responsible for the preparation and coordination of all relevant activities and, ultimately, for the proposal of the text and the content of the law submitted to the Federal Council (government). Neither the Government nor the Parliament have brought in fundamental changes to the proposal of the responsible administration unit. The discussion in the Parliament revealed that the political parties showed little interest in forest-related issues. The main line of conflict followed the ideological pattern of right versus left, i.e. economy versus ecology. Apart from a few exceptions, the main content of the new federal forest law was formulated by the Swiss Forest Agency. The Finance Administration; the Federal Agency for the Environment, Forests and Landscape (SAEFL) and the Federal Offices for Water Management; Regional Planning; Agriculture, and the Federal Department of Defence, Civil Protection and Sports were important partners during the process of formulating the legislation. The contributions and inputs of Federal Research Institutes played only a minor part.

The role of the Cantons in the formulation of the forest policy has already been mentioned above. In particular, the inspectors of the cantonal forestry services, using different “channels” to bring in their interests and opinions, substantially influenced the content of the federal forest law. First of all, they participated in the customary consultation procedure, and went on to attend hearings organised exclusively, or partially, for cantonal representatives of forestry services. Further opportunities, though less direct, were

raised by the fact that the cantonal forestry inspectors had access to a network of public and private institutions such as the cantonal Governments, the Conference for the heads of the cantonal forestry departments, members of the Federal Council of State and of the National Council, associations of forest owners, forestry professions and wood promotion, etc. These indirect channels were used for singular or individual interests, while the most important demands and those common to all Cantons were voiced directly by the cantonal forestry inspectors to the Swiss Forest Agency.

The third group of forest related actors are the associations and organisations. A distinction must be made between the economy and profession oriented associations, and the nature conservation and recreation oriented organisations. Representatives of the first group include the Swiss Forest Economy Association (forest owners), and 3 professional associations: the Swiss Forestry Society (forest engineers), the Swiss Foresters Association (foresters) and the Swiss Forestry Employees Association (all forestry professions). Half a dozen associations promoting the utilisation of wood belong to the same category. Their interests coincide only partially with those of the forestry associations. The second group is dominated by the organisations promoting nature conservation and environmental protection (Schmidhauser 1997). During the forest policy, formulation process the Swiss League for Nature Protection (today Pro Natura) adopted a leading role within the nature protection organisations and received support from the Foundation for Landscape Protection, the World Wildlife Fund Switzerland, the Swiss Organisation for Land-Use Planning, Greenpeace Switzerland and some regional organisations for the protection of birds. The recreation oriented organisations can be placed somewhere between the nature protection organisations and the economy promoting associations. Three different hunting associations, the Swiss Running Association, the Swiss Sports Association and the Swiss Union for Walking-Trails, contributed to the creative input (in the form of ideas and proposals).

At the national level, many of these actors discontinued their forest policy oriented activities with the enactment of the Federal Forest Law and ordinance on January 1, 1993. A relatively small group of actors interested or engaged in the implementation of the federal forest legislation remains. There has been little change in the actors within the political-administrative system. In the field of forest conservation, they have been joined by the Federal Court, an important institution, whose task is to make decisions on the more individual, important cases (Zimmermann 1996b). Furthermore, some “user” offices of the Federal Department for Traffic and Energy have enlarged the forest policy network and, in alliance with economy oriented partners, are attempting to gain greater procedural authority over decisions concerning the authorisation of deforestation. Such attempts are opposed by the nature protection organisations. Together with the Swiss Forest Agency and the cantonal forestry services (represented by the Conference of Cantonal Forest Inspectors), these organisations form the “iron triangle” which influences the implementation of the Swiss forest conservation policy. With respect to forest management and forest training they are supported by the Swiss Forest Economy Association. A National Forest Plan without the participation of one of these actors would fail. The relatively broadly selected “Forum for the Forest” could play the role of mediator in a policy planning process. Relevant network structures only partially exist but these can be extended and reinforced.

5. INTERSECTORAL COORDINATION

Public forest policy overlaps with other sectoral or institutional policies. The main forest-related public policy fields are (Kissling-Näf and Zimmermann 1996; Zimmermann 1991):

- nature and landscape protection
- hunting and fishing
- environmental protection
- walking trails
- land-use planning
- water management and water protection
- agriculture
- general economy
- regional economy
- traffic and energy
- training and research
- finance

A stronger coordination can be expected between the first four policy fields as these are issues covered by the same agency (Agency for Environment, Forests and Landscape). Very little coordination exists between the Swiss Forest Agency and other federal offices responsible for the implementation of the other policies listed. These contacts are usually restricted to individual tasks or projects, where consultation or cooperation is mandatory by law. There is no evidence of institutional interpolicy coordination at the programming or planning level. Possible reasons for this lack of communication are: the integration of different forest-related federal offices into different federal departments, the unequal division of authority between Cantons and Confederation concerning the various policy areas, the historical reasons behind the sector oriented forest policy, the specific staff of the Forest Agency (mainly forest engineers), the lack of political and legal coercion to coordinate, the size of the federal administration, etc. However, the first obstacle mentioned has been partially overcome. Since January 1, 1998, the Swiss Agency for Environment, Forests and Landscape has been integrated into the new Federal Department of Environment, Traffic, Energy and Communication. As a result, the most important forest-related “User-Offices” and the “Protection Office” can be coordinated under the same roof. However, considerable institutional distance remains between the Forest Agency and the Office for Regional Planning, and between the Forest Agency and the economy oriented federal offices.

Although each Canton has its own structures, it is estimated that a similar situation exists at the cantonal level. However, in the field of forest conservation policy, the coordination between forest policy and land-use planning appears far better than at the federal level. This progress can be attributed to the fact that the Cantons have more authority in the area of land-use planning and the legal coercion to coordinate different land-use activities and procedures. The cantons used a general plan (Richtplan) as the instrument to initiate a process of coordination which increasingly includes the issue of forest area (Bundesamt für Raumplanung 1997). If this instrument is coordinated with the new regional forest development plans (Bundesamt für Umwelt 1996) introduced by

the federal forest law, the coordination between other sectoral planning, forest and forestry planning and general land-use planning can still be improved or optimised. Following the bottom-up principle, the Swiss Forest Agency can base its future National Forest Planning on these cantonal plans and on further federal sectoral plans.

6. ENVIRONMENTAL AND FOREST PLANS SINCE THE SIXTIES – ATTEMPTS TO INSTITUTIONALISE PLANNING ON DIFFERENT LEVELS

Today, planning has become an important instrument for the coordination of public and private interests in the long term, and is also a means to improve rationality in political action. In a society where complexity continues to increase, planning provides the opportunity to structure and coordinate actions, and direct activities towards objectives. Before commenting on the current planning activities in Switzerland, it is useful to look back on past experiences with planning processes relating to forests and environment. This prevents us from repeating past mistakes and facilitates the task of choosing successful planning practices.

The definition of planning has changed over time; ranging from an extreme form of centralism in planning to a participatory understanding involving target groups and their opinions. Planning activities can be divided into four periods in Switzerland by distinguishing the planning level and planning objective: the 1950s and 1960s adopted a local and regional planning approach; the sixties up until the mid-seventies had a technocratic understanding of planning and concentrated on general concepts and sectoral plans; the 1980s was a period when planning activities again concentrated on a local level, while the focus of the last ten years has been on infrastructure oriented planning (Sachplanung). One has to consider that the political system has influenced and limited planning activities.

In the 1950s and 1960s, planning activities consisted of local and regional planning. An atypical period of land-use planning began in 1969 with the adoption of the constitutional article on land-use followed by an urgent federal decree on the same topic in 1972. At that time, the basic planning instruments took the form of legally binding general plans and national concepts. Typical examples include the general concept of land-use planning ('das landesplanerische Leitbild CK-73': Wegelin 1996b) and other sectoral plans, such as the general concept of forest, ('Gesamtkonzeption Wald': Keel et al. 1996) and the concept of energy. The general concepts and guidelines are considered to have been a reaction to the negative consequences of economic growth, while the objective was to coordinate private and public interests as well as sectoral planning activities. During this period, planning was a 'top-down' process managed by experts. Intensive planning activities were interrupted when people refused the national land-use act in 1976. (Wegelin 1996b; Vatter 1996; Vatter 1994; Lendi 1996).

The failure of this attempt can be explained by the characteristics of the Swiss political system. Implementing national planning becomes difficult in a political system where federalism, neocorporatism and direct democracy favour a short term balance of interests. Taking into account the individual interests of target groups conflicts with a long term planning activity.

As a consequence, the revised Area Planning Act of 1979 contains some general principles for land-use management, and allocates authority to different levels by making the Confederation responsible for the planning coordination, and assigning the cantonal and local levels the task of implementation. The legal framework and the failure of the national planning activities have led to a concentration on local and regional planning. Due to the failure of national plans, the planning perspective became more pragmatic and was oriented more towards practice in the following period.

In the mid-1980s, the concept of planning changes again. The concept of planning becomes more flexible, and is now recognised as a possible strategy for problem solving. The Government begins to plan activities and formulate guidelines ('Regierungsrichtlinien'). Typical examples of this period are sectoral plans for railways, for nuclear waste disposal, for AlpTransit (Minini 1996) or the Swiss concept of landscape (Walder/Zeh 1996). Concepts in the 1990s do not deal solely with traffic, but with railways or traffic in agglomeration. Therefore, planning activities are more focused and flexible (Wegelin 1996a); complexity has been reduced and more consideration is given to interpolicy coordination.

To sum up, planning activities since the sixties reflect the legal framework and institutional restrictions. Federalism, direct democracy and neocorporatism led to broadly supported and legitimised political solutions. On the other hand, these solutions are less comprehensive and legally binding and long term planning becomes extremely difficult.

7. FOREST AND ENVIRONMENTAL PLANNING IN THE 1990S

Planning in the nineties has to be understood in light of the historical development of planning and the restrictions of Swiss democracy. In order to illustrate recent planning tendencies we refer to Switzerland's National Forest Plan, to an implementation plan for nature conservation in forests on a cantonal level, and to the action plan for sustainable development. The results are summarised in Figure 1.

In order to distinguish and systematise different planning activities in Swiss forests and environmental policy, we refer to the following categories which help to categorise planning. (Cf. Jänicke and Jörgens 1996):

- Context: What are the triggers for the planning process? In order to determine the context initiators, their interests and the relevant knowledge basis should be taken into consideration.
- Objectives: First, it is important to establish the objectives that should be attained by the planning process. The output of the process could be a policy strategy, an actions plan, a policy framework or even a government declaration. A planning activity could involve the development of a sectoral or an interpolicy plan. The planning result could be the opinion of experts or, alternatively, a democratically legitimised expression of public opinion (Literature distinguishes political planning and the opinion of experts. Procedure, resultants and legitimisation are completely different. Cf. Scharpf 1973). A time frame and concrete goals

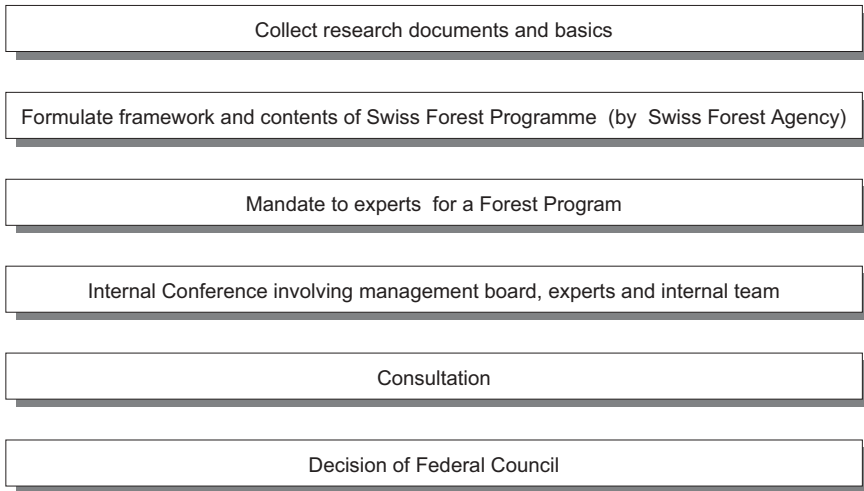


Figure 1. Planned steps for elaborating Swiss Forest Programme.

(qualitative/quantitative, and concrete and general) are important dimensions of planning. Planning could take place on a national, regional or management level.

- Procedure: A second category deals with the participation and integration of actors, and coordination with other sectoral policies. An important aspect is the societal participation with a variety of involved interest groups and the form this participation will take. The model of the planning process and the chosen procedure are central elements.
- Institutionalisation: Institutionalisation refers to the legal framework, the evaluation of plan targets, and the financing of controlling and monitoring.
- Implementation: How is this plan or strategy to be implemented? What are the main instruments and who are the actors implementing environmental and forest planning?

7.1 Swiss forest programme¹

The Swiss forest plan is a project of the Swiss Forest Agency, and the planning process began in spring 1998. Whereas objectives and principles for forest policy are laid down in the federal forest law, the Forest Plan will establish the priorities of Swiss Forest Policy on a national level. The plan should primarily represent the implementation strategy of the Swiss Forest Agency.

External and internal factors are responsible for initiating these planning activities. In the last five years, approximately 80 Million Sfr. of the national public forest budget was not spent by forest owners (Zimmermann 1998). The mid-term planning of

¹ Note that the information here is based on an interview with Pierre Mühlemann

priorities should now ensure that the entire forest budget is used and avoid a reduction of the budget. In addition, forest planning on a national level is stimulated by the proposal of the Intergovernmental Panel on Forests to develop national forest programmes (Chapter 11 of Agenda 21). However, there is no direct link to the sustainability action plan of Switzerland initiated by the UNCED Conference in 1992.

National forest planning should help the administration to direct forest policy and to establish/draw up focal points. Furthermore, planning activities could be based on recent or ongoing scientific research in the fields of monitoring (National Forest Inventory), accounting, and forest conservation, on the public's perception of forests, and on a sustainability audit of forest policy.

The procedure for developing a national programme consists of five steps. First, scientific results are collected and evaluated. On the basis of these results, the forest management board of the Swiss Forest Agency establishes priorities and a framework. This requires the different sections of the Swiss Forest Agency to formulate possible objectives and state means and partners. Using these internal reports as inputs, the forest management board will emphasise focal points and structure the contents of a report for a mid-term programme. In the next phase, a mandate will be given to an expert or an expert group. Experts, together with a small group of the administration, have the task of writing a paper or report and drawing up the mid-term forest programme. In the next round, the forest management board, a moderator and a member of the expert group will edit the report. Then a consultation of other offices, of scientific experts, of the heads of cantonal offices, NGO's and the association of foresters as well as target groups (Swiss Forest Economy Association, Forum for the forest) is planned. And finally, a decision on the programme is required from the Federal Council.

Planning activities will begin in the spring of 1998 and last until the end of 1999. At present, more information regarding goals, means, financing and evaluation are not available. The final forest programme should be approved by the Federal Council.

The forest plan will be an administrative programme that helps the Swiss Forest Agency to implement forest laws more efficiently over a ten year period. Consultation is a very common form of participation and is also used for legislation. The planned programme can be compared to the infrastructural planning in Switzerland and presently has no innovative features.

7.2 Cantonal implementation programme

A more advanced policy plan has been discovered at the cantonal level. In October 1992, the cantonal parliament of Solothurn approved a mid-term nature and landscape programme together with a budget of 52 million francs (Baudepartement des Kantons Solothurn 1997). The programme formulates principles and goals for the conservation and enhancement of space and ecosystems which are maintained as areas that are in a natural or semi-natural state. A prerequisite for this is the delimitation of large natural areas, and the objective is to conserve 10% of the natural space in agricultural and urban areas, in forests, and near water. To fulfil this general aim, subsidies for forest reserves, for tending forest borders, pasture, pilot projects in agriculture areas, etc. are paid by the cantonal administration. The objectives are very specific. For example, by

2004, 10% of forests should be delimited as forest reserves and 150 kilometers of forest borders should have undergone certain conservation measures. Management agreements are an important instrument for the implementation of these objectives.

This mid-term programme was devised by a working group comprised of politicians and members of the administration and associations. The nature conservation section, together with other offices, is responsible for the implementation of this programme. The process of implementation is followed by this working group. In 1997, the cantonal government reported the progress and performance of the programme. By the end of 1997, 1197 ha of forests had been set aside as forest reserves which amounts to 40% of the target. Concerning forest borders, 25% of the goal had been attained in 1996. The intermediate reports also provide data concerning agricultural and urban areas.

The cantonal programme is an interesting example of what we would call an implementation programme. It helps the administration to implement legislation on environment, forest and nature by fixing priorities and coordinating sectoral policies. Implementation loses the character of incremental action and becomes more rational and coordinated.

7.3 Swiss sustainability action plan

Sustainability action plans are directly connected to the UNCED Conference in Rio (Agenda 21), which states that governments should adopt a national plan for sustainability. For this purpose, an interdepartmental commission representing 20 offices was established in March 1993. Several reports have been compiled, including a paper concerning the operationalisation of sustainable development (IDARio 1995) and an inventory report (IDARio 1996) that has since been updated in 1997 (IDARio 1997). The action plan for sustainable development, which incorporates mid-term planning, has been devised by a small expert group of scientists (Conseil du développement durable 1997). Based on these results, the Federal Council presented a strategy for sustainable development in 1997 (Schweizerischer Bundesrat 1997) which now forms the main document. The strategy focuses on a few measures realisable in the 1995-99 legislative period. The only real innovation is the proposal of an ecological tax reform. In the meantime, the Parliament has requested the Federal Council to present a proposal for ecological tax reform for 1999, rather than 2001, as previously planned. Switzerland's political system obstructs the development of a comprehensive green plan. The four year long process revealed that the interdepartmental commission was unable to establish the smallest common denominator, i.e. a proposal that was agreeable to all. The administration will now formulate proposals for the attention of the Federal Council which has, since March 1998, an elected advisory board of experts whose task is to develop innovative ideas for sustainable development.

Documents concerning sustainability tend to contain general, rather than defined, objectives resembling a collection of measures in different policy fields, such as energy, finance, biodiversity, air pollution, waste, etc. Again, reports and papers reflect the institutional difficulty of long term planning in Switzerland.

The chosen plans and programmes are only partially representative of planning activities in Switzerland. Nevertheless, they illustrate the type and common features of

Table 4. Characteristics of environmental and forest planning

	Swiss Forest Programme	Cantonal implementation plan	Sustainability action plan
<u>Context</u>			
trigger	<ul style="list-style-type: none"> • spending the whole forest budget • International Panel on Forests 	pilot programme nature and conservation	UNCED 1992
<u>Goals</u>			
type of plan	government declaration strategic document policy framework actions plan	strategic implementation plan Implementation plan	strategic document
time frame	sectoral / intersectoral Long term etc.	intersectoral mid-term	intersectoral Short term / mid-term
quality of targets	quantitative qualitative concrete general number	quantitative qualitative concrete	General
<u>Participation</u>			
leading authority	government commission ministry	expert group together with administration	Interdepartmental commission
interpolicy coordination	high etc.	middle	high
participation form	weak, strong etc. public debate hearing	? / public information	consultation

Table 4 (continued). Characteristics of environmental and forest planning

	Swiss Forest Programme	Cantonal implementation plan	Sustainability action plan
<u>Participation</u> participating actors	administration experts association target groups/NGO	Administration Politicians Association	administration experts
<u>Institutionalisation</u> legal basis	zur Kenntnisnahme Bundesrat	Decision of cantonal parliament	zur Kenntnisnahme Bundesrat
special planning institution	expert group	Work group	interdepartmental commission
reports and evaluation	yearly / regular	Regular	
financing		Budget	
current status	active	Active	active
planned	planning phase		
abandoned			
<u>Implementation</u> actors		Administration Owners of land	
instruments		Convenant	

the planning process realised or planned in the last years. The common elements are listed below:

- National and cantonal planning focus more on guidelines and principles than on concrete goals
- The time frame is usually short or mid-term
- Plans are conceived as implementation programmes establishing priorities for the implementation process
- They stress the interpolicy coordination between administrations
- The participation of target groups takes the form of the usual institutional mechanisms (consultation etc.)
- Plans represent the minimal common denominator.

Swiss political systems restrict planning activities in the following way:

- Whereas in the nineteenth century, power was divided among the three political levels, the situation today is far more complex. A marked preference for extensive cantonal autonomy still exists, but the implementation of tasks requires cooperation between the three levels (cooperative federalism). It should be noted that the subsidiarity principle, in addition to cantonal autonomy (federalism), is in conflict with national planning.
- Direct democracy by means of referendum, and initiative and cooperation in commissions and government, favours negotiation and compromise in politics. "The idea of reaching consensus in a system of 'concordance', as the Swiss call it, is simple: no single winner takes all, everybody wins something from the negotiation" (Linder 1994: 124). Concordance refers to pre-parliamentary, governmental and parliamentary cooperation. Due to the political culture of cooperation, negotiation systems can be very closed and can neglect long-term interests. Another disadvantage is the loss of strategic action and planning by the government.
- Power-sharing should also be seen in the context of neocorporatism. Close cooperation between government and private economic actors exists. As a consequence of negotiations between industries and administration and government, private interests are given broad consideration.
- Not all public sector tasks are fulfilled by civil servants. In small villages, which cannot afford a professional administration, ordinary citizens are taking part in political decisions. "Milizverwaltung" is cheaper than the services of professional staff. Furthermore, the distinction between private and public interests is difficult and the implementation of public policies included in planning at the local level is dominated by short-term and local interest (Linder 1994).

The potential of national environmental planning in Switzerland is heavily restricted by political institutions. The development of long term plans is limited by power-sharing. Swiss plans do not dispose of the main key characteristics cited in the recent planning literature (Jänicke and Jörgens 1996: 3), such as a dynamic and long term planning process, quantitative targets and a timetable, monitoring-of-performance capacity, the

budgeting of plans, as well as a clear legal basis (cf. Jänicke and Jörgens 1996; Jänicke et al. 1997). Only a few key elements concerning partnerships between government and industry, and interpolicy cooperation are fulfilled.

8. OUTLOOK

Switzerland has considerable experience in planning activities related to forests and environment at different levels. Swiss planning activities usually focus on guidelines and principles, and the outputs are often legally non-binding. The new forest law of 1991, which sets up certain objectives and instruments, can be considered a forest strategy. Nevertheless, the analysis of the legal framework as well as of the planned forest activities shows that there is a need for implementation programmes at different levels. In our view, planning is urgently needed in the area of forestry promotion, especially in the distribution of subsidies and incentives. As a consequence of the scarcity of public funding, the administration should develop priorities that help to distribute subsidies more efficiently.

In terms of objectives, one has to decide whether public funds should be used for the promotion of forest reserves or for timber production. The same question can be addressed in relation to infrastructure or the promotion of the forest sector. Furthermore, establishing objectives implies greater intersectoral coordination and a harmonisation with other policy fields (land-use planning, energy, etc.).

The procedure and the organisation of the process should be adapted to the situation prevailing in a country. The planned process for the national forest programme in Switzerland risks over estimating the existing practice by using the internal report of several forest sections. From the beginning, the planning process should be open to all relevant actors implementing forest policy. During the strategic planning phase, experts (not only forest experts) together with a restricted number of representatives of target groups, of cantonal offices and of NGOs should draw up the mid-term programme. This period should follow a phase of broader public participation. Planning activities, participation mechanisms, and information campaigns should be organised and shaped in a way that facilitates the formulation of a common denominator within a reasonable time frame.

Forest planning will only become an important instrument of forest policy if it disposes of quantitative targets linked with monitoring and regular evaluation. Another important institutional element is given by its legal basis and, in this case, approval by the Federal Council is an important prerequisite. Furthermore, the implementation of a forest plan requires adaptations on the level of the federal and cantonal administrations.

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OVERVIEW OF EUROPEAN COUNTRY REPORTS

Peter S. Egestad and Heiner Schanz

Institute of Forestry Economics,
University of Freiburg
Germany

The following presents a tabular compilation of the 16 European country reports submitted providing a comparative general view of several central aspects relevant to the formulation and implementation of NFPs (National Forest Programme).

IMPORTANT: Please keep in mind that the overview is an interpretation of the submitted country reports. It is meant to complement the reports and can not be read separately from the reports without misinterpretation and/or inaccuracies. In order to minimise interpretation, quotations from the original country reports are used where possible.

The development of the comparative framework was described in the introduction of this Volume. Its main purpose was to provide a basis for the international seminar on formulation and implementation of national forest programmes, and, in particular, the workshop of the second day. The framework used is briefly described below, to make the meaning of the row-headings of the table clear.

If columns in the following spreadsheet are left open, it may be due to the following: either the framework aspect was not touched on in the country report, or the context in which it was referred to in the country was not applicable to the outline of the table.

I. The forest sector in its national context

This section contains five sub-elements hinting at the structure of forests and forestry in the countries.

I.i Ownership structure

Contains information on structural characteristics of forests in the country, e.g. percentage of forest cover, percentage of public and private forest, etc.

I.ii Economic importance

States the importance of the forestry sector from an economic point of view. Though recreation is mentioned to be of increasing importance in many countries, it is rarely included in the value of the production in the forestry sector.

I.iii Political awareness/importance

Refers to the political interest in forestry in the country and the degree of conflict existing between the different interests. Information on the sector's ability to attract money is of relevance to this element.

I.iv Dominating regulations in forestry

Information on the institutions and/or structural arrangements responsible for forestry in the country. Furthermore information on the structure of the legal and policy arrangements in the field is also stated here.

I.v Main forest policy tools

Refers to information on the major tools used by the country to meet its policy goals for the forestry sector. This can include, for example, rules or laws, economic subsidies or other voluntary arrangements.

II. Sustainability of forestry and forest development

Whereas the above section focuses on the context this section addresses the content of sustainable management initiatives in the countries.

II.i Country initiatives to ensure sustainable forest management

States information on which official initiatives have been undertaken and what has caused their emergence. Reasons for their emergence could, for example, be, pressure from the public, industry related initiatives, or inspiration from corresponding international initiatives.

II.ii Formulation of country initiatives

Where country initiatives to ensure sustainable management of forests have been prepared, it is stated here how these initiatives are framed. They can, for instance, be drawn as laws, programmes, or plans for sustainable management or when further specified as sectoral plans, strategic plans, etc.

II.iii Degree of operationality of initiatives

From this element appears how operational the above sustainable forest management initiatives are. It includes information on at what level objectives are formulated (e.g. strategic level or operational level), and if they are quantitative or qualitative.

III. Forest policy formulation

The above section concentrated on the content of sustainable forest management initiatives. This section deals with characteristics of the forest policy process.

III.i Leading authority

Provides information on the main authority or driving force in preparing and formulating the forest policies. This could be a ministry, a national level agency, or an office at the local level, for example.

III.ii Network structures/alliances

Information on existing networks is stated here. This includes information on who has a say and an interest in forest policy issues. An example could be a forestry interest organisation. Relevant information for this element is also how organisations influence, how they are able to capture resources, and how they are initiated.

III.iii Participation

Refers to the efforts made to include relevant parties in the policy making process. Whereas the above sub-element refers to the existing or emerging power structures, this one is referring to the formal efforts made to include certain groups in the process.

III.iv Methods of co-ordination and conflict resolution

Methods of co-ordination and conflict resolutions include information on how policy results are reached and communicated and what specific methods are used to co-ordinate stakeholders or solve conflicts between them.

III.v Interpolicy co-ordination

This element comprises methods of co-ordination between agencies of different sectors and their functions. Co-ordination links can, for example, be consultative, based on co-operation or on sharing of information. The extent to which it is carried out and how well it meets the interests of other sectors is also relevant.

IV. Degree of institutionalisation

This last section contains elements describing to what extent sustainable management processes in forestry is already part of an institutional system and if they are co-ordinated with the ongoing international initiatives.

IV.i Special planning institutions

If special planning institutions working on sustainable forest management exist, they are stated here. These could be new institutions caused by the NFP process.

IV.ii Evaluation/reports

If outcomes of the policy processes are evaluated on a regular basis, and if reports on progress or lack of progress exist, it is stated here. This element refers to iterativeness and responsiveness of the processes.

IV.iii Degree of consistency with international initiatives

To what extent the national policy initiatives in forestry are co-ordinated with the international initiatives on sustainable forest management is stated here.

AUSTRIA

- I.i forest cover: 47%; 80% private, 16% federal, 4% other public; generally high fragmentation of forest property
- I.ii minor role in production terms (0.2% GDP)
- I.iii low attention in politics; rather negligible position within the Austrian political system; poor capacity to capture resources
- I.iv federalistic political structure; responsibility for forestry at State level, but matter of federal legislation and administration (conflicts!); Forest Act 1975 (amended 1987), framework program in 1997
- I.v law; subsidies (spending dominated by forest interest groups, not by the public interest)
- II.i absence of comprehensive programme: far from pursuing a broad intersectoral, iterative and holistic approach to Sustainable Forest Development
- II.ii Forest Act, no special program yet: national forest policy guidelines never exceeded a first draft
- II.iii “old” sets of sustainability goals with predominance of timber production; vague and non-committal nature of targets; absence of operational criteria and indicators
- III.i Federal Ministry of Agriculture and Forestry; Forest Authority at State level
- III.ii closed networks within forestry: tight co-operation between forest authority and forest owners association; statutory interest groups (Chambers) with powerful position, voluntary interest groups dominated by forest professionals’ thinking
- III.iii closed circles of powerful lobbyists who negotiate compromises by mutual accommodation; legal restrictions favour professionally trained foresters; strong opposition towards participation by Federation of Forest Owners
- III.iv “Institutionalisation of consensus and co-operation”: division of labour rather than rivalry between forest interest groups; personal and political loyalties; informality, intimacy, and introversion; political conflicts only solvable with external resources
- III.v forestry professionals oriented bias leads to kind of introversion/exclusiveness
- IV.i established forest lands use planning system; mainly formulated by single interest groups with symbolic values
- IV.ii
- IV.iii low consistency with international initiatives; limited to the commitment to provide “appropriate” instruments

CZECH REPUBLIC

- I.i forest cover: 33%; big changes in forest ownership structure/resititution process; 1990: 95.8% State, 0.1% private, 4.1% communal/other; 1996: 66.6% State, 18.8% private (very fragmented), 14.6% communal/other
- I.ii low importance in production terms (0.6% GDP), reflected in level of salary 80% of those in national economy
- I.iii ecological restoration (biodiversity and stability, regeneration capacity and vitality)
- I.iv New Forest Act in 1995
- I.v New Forest Act in 1995; grants, subsidies, compensation
- II.i government adopted fundamental strategic objectives of policy in State forests of 1994 for whole country
- II.ii basically items of strategic planning with operational details for implementation
- II.iii
- III.i Ministry of Agriculture / Forestry Division
 - State Administration in forestry and game management (Management of State forests organised as State firm)

- III.ii several associations for entrepreneurs and forest owners (to strengthen private interests) recently established/still forming; Forestry professional organisations (narrow focus on members interest)
- III.iii
- III.iv
- III.v limited co-operation so far
- IV.i regional plans of forest development as part of a large land-use planning system prepared by commission; drafts approved by Min. Agric.
- IV.ii
- IV.iii Accepted all intern. obligations, e.g. obligation to reduce sulphur dioxide emission levels

DENMARK

- I.i forest cover: 10%; 45% private, 23% foundations/associations, 31% public
- I.ii no significant macroeconomic importance
- I.iii good options to be on the political agenda; low conflict potential, consensus feasible
- I.iv Forestry Act: changes in 1805, 1935, 1989, 1996
- I.v law, grants, income compensations
- II.i international pressure and public demand as well as change from Min. of Agric. to Min. of Environm. led to Interministerial strategic forest document in 1994: Strategy for Sustainable Forest Management
- II.ii Memorandum from government to the parliament; additional Forest Act
- II.iii mainly strategic with operational elements (development of a set of 18 criteria); esp. afforestation with quantitative goals
- III.i Important change in respons. from Ministry of Agriculture to Ministry of Environment in 1994
 - exclusively the Forest and Nature Agency (merged in 1987, thereby avoiding classical conflicts!)
- III.ii only few key stakeholders; good network structure through Danish Forestry Society (Forest and Nature Agency as associated member); major nature conservation and forestry organisations involved in councils to advice the Minister for Environment
- III.iii participation very well co-ordinated
- III.iv collaboration with private forest associations; lobbying
- III.v mainly with Agriculture; merger with Ministry of Environm.; co-ordination through plans and studies (e.g. macroeconomic studies)
- IV.i 1993 appointment of inter-ministerial committee for UNCED Forest Principles as well as Conventions on Biodiversity and Climate Change and Helsinki Resolutions
- IV.ii
- IV.iii high, aiming at a leading role concerning the implementation of international initiatives

FINLAND

- I.i forest cover: 75%; 54.2% private, 33.4% State, 7.7% forest industry, 4.7% municipalities/foundations/etc
- I.ii traditional high economic importance (forestry and forest industry 9.1% GDP), still 40% of net export earnings from wood, paper, and rel. industries; furthermore berries, mushrooms, and game meat
- I.iii high due to economic impacts of the whole forest cluster as well as demands for non-wood goods and services
- I.iv New Forest Act in 1997, several accompanying acts; long tradition with national forest policy programmes

- I.v in the 60s and 70s mix of financial, regulatory and informational means; in the 70s and 80s rational-comprehensive programming approach through Forest2000-programme
- II.i 1985 Forest 2000-programme; several new acts in direct relation to ensure Sustainable Development after Council of State decision: New Environmental Programme for Forestry in 1994; subsequent Acts and Regional Forest Target Programmes (first round 1998) as direct reaction to intern. initiatives and changes in structure and society
- II.ii Decision of Council of State 1994; subsequent several Acts for implementation of the 1994 programme (devel. by Min. of Agric. in cooperat. with Min. of env. and NGOs); esp. Act on the Financing Sustainable Forestry, new Forest Act in 1997
- II.iii 27 qualitative descriptions within the 1994 programme; recent policy developments stated in new Forest Act 1997; operationality through regional forest target programmes with overall vision "Sustainable welfare from the diversity of forests"; furthermore development of a forest certification system
- III.i Ministry of Agriculture and Forestry (Advisory Board + Regional Forestry Centers)
- III.ii in the 60s,70s and beginning 80s "Tripartite Neocorporatism" between State, forest industries and forest owners; important influence from Bank of Finland, Min. of Finance; since 80s increasing influence of nature conservation organisations and also forest researchers
- III.iii "bottom-up principle and transparence": Regional Forestry Centers, WWW-pages etc. encourage participation
- III.iv ad-hoc approach in the committee type of policy reformulation and advosory board associated with Min. of Agric. and Forestry, recently additional Regional Forest Target Programmes
- III.v due to significant economic impacts traditional close interlinkages to geneneral economic policies; in the 90's new institutions and shift from domestic economic policy towards environm. and intern. policies
- IV.i Regional Forestry Target Programmes through 13 Regional Forestry Centers; being respons. for promoting SFM; forming the basis for the National Forest Plan of Finland
- IV.ii first round of Regional Forestry Target Programmmes completed in 1998; revision every 5 years or at shorter intervals if necessary
- IV.iii "one of the pilot examples of the European countries"; some changes already initiated before UNCED; host of Intergovernm. Seminar on Criteria and Indicators of SFM; long tradition with NFPs

FRANCE

- I.i 25% forest cover: 70% private forests; 12% State forest; 18% communal forest. Patrimonial forest management.
- I.ii minor economic importance
- I.iii Forestry not considered important. Low to moderate pressure from environmental groups.
- I.iv Special law for publicly owned forests. National forest policies are not officially and precisely defined. Permanent dialogue between lobbies and the State. Most of the forestry means are managed or controlled by the Ministry of Agriculture. National Forest Office administers State and communal forests.
- I.v National Forest Fund set up in 1946 to support afforestation and provide subsidies. The fund has lost its importance since the 1990s. EU afforestation scheme functions poorly.
- II.i
- II.ii General concepts of sustainable development and multifunctionality aspects guide forestry but are not formulated in a formal way.
- II.iii

- III.i Ministry of Agriculture.
- III.ii
- III.iii
- III.iv Negotiation with stakeholders constitutes the logical basis for public decisions in the field of forestry.
- III.v Intersectoral co-ordination can indeed be considered as a missing link in French national forestry planning. Co-ordination between the Ministry of Agriculture and Environment is very limited.
- IV.i Separate institutions do separate strategic planning. The planning efforts are technical without policy or economic perspectives.
- IV.ii
- IV.iii Interministerial task force has drawn up a plan for the implementation of the forestry guidelines ratified in Rio and Helsinki. Task force chaired by the minister of Agriculture.

GERMANY

- I.i forest cover: 30%; 46% private (fragmented, only 1% of all enterprises manage forests larger than 200 ha), 34% State; 20% communal
- I.ii minor economic importance in terms of production (0.1% GDP)
- I.iii generally low (depending on national and international events), but highly controversial
- I.iv Federal structure, main responsibility for forestry issues at the State level issues
- I.v law (regulation); informational instruments and increasing financial incentives
- II.i absence of a comprehensive programme; different activities on different levels (Federal, States, NGOs)
- II.ii Forest Acts at State levels; no special programme yet; different approaches at different levels and in the different States
- II.iii “Appropriate forest management”: lack of defined goals, qualitative descriptions, unspecified target groups
- III.i (Federal Ministry of Food, Agriculture, and Forestry), Ministerial Forestry Departments of the States (*Länder*)
 - powerful State Forest Services
- III.ii approx. 60 associations dealing with forestry (economic interest; defending ideal values; social integrative functions); no access for environmental groups to traditional networks; German Forestry council as an established discussion forum (employers, employees, State and private forest owners) to focus opinions and attitudes but with power biases; most contacts via the different State Forest Services
- III.iii participation of non-traditional forest circles hindered by existing networks; but increasing influence of new actors, esp. environmental NGOs through market pressures and public relations/societal support
- III.iv mainly lobbying; established discussion forum, NGOs using public and market pressures
- III.v insufficient intersectoral communication; weak co-operation; forestry sector traditionally as passive partner in symbiotic relation with powerful agricultural sector
- IV.i Beside land-use planning, Forest framework planning obliged by Federal Forest Act but only very limited implementation in the different States with dominance of natural and economic matters in the planning process
- IV.ii
- IV.iii official endorsement of international initiatives but lack of implementation

GREAT BRITAIN

- I.i forest cover (GB): 10.6%; 35% State, 65% private
- I.ii limited importance in production terms (always timber import oriented), high importance concerning conservation and recreation
- I.iii growing importance in governm. thinking ensured by intern. initiatives and pressure by the public
- I.iv quite distinct institutional and legal structures within the different parts of GB: 1919 first Forestry Act creating a board of Commissioners, 1947 new Forestry Act, 1967 Consolidation Act to consolidate numerous references in other act, Ministerial Statements (directives) since that time
- I.v Felling licence regulation, grants, tax relief (abolished in 1988)
- II.i in former times traditionally aim to create a strategic reserve; since 1980 strengthening private sector; public pressure on government forced publication of 1991 'Forest Policy of GB' by Forestry Commission; as reaction to intern. events 1994 'Sustainable Forestry: The UK Programme'; 1998 'UK Forestry Standard: The Government's Approach to Sustainable Forestry'; but there has never been something that could be called a forestry strategy
- II.ii published by government, Appendix to government's new 'UK Forestry Standards' contains 'Forestry Accord' developed by special planning committee (see above)
- II.iii
- III.i Forestry Commission (= Forest Service, acts as government's forest department) for formulation/implementation; re-organised in 1992: 1. Policy and Resources Group, 2. Forest Authority, 3. Forest Enterprise; formulation of forest policy will possible be given to regional parliaments
- III.ii strong timber industry and investment interests and alliances; progressive merger among processor groups; several organisations within forestry profession; conservation and recreation bodies come together in umbrella organisation ('Wildlife Links')
- III.iii 1996 'UK Forestry Accord' negotiated by a committee with equal representation from forest industry and 'Wildlife Link'; forestry profession with chairmanship/policy broker position
- III.iv Re-organisation of Forestry Commission in 1992 very successful new links and consultative structures have been built up => conflicts reduced
- III.v
- IV.i Partly 'Indicative Forest Strategies' at the level of County Councils
- IV.ii Forestry Authority commissions a rolling and independent programme of monitoring the 1998 UK Forestry Standards
- IV.iii high consistency, but no talk of developing a NFP

HUNGARY

- I.i forest cover: 19%; several big changes in forest ownership since 1938; compensation/ privatisation process: 40% of total forest area privatised since 1993
- I.ii generally low in production terms (1% of GDP)
- I.iii increasing; society becoming directly interested because of forest ownership change
- I.iv Regulatory enactments as concomitant symptoms of major social and economic changes in Hungarian history: 1897, 1935, 1961, 1996
- I.v
- II.i limited to new forest law 1996
- II.ii forest law
- II.iii mainly qualitative (?)
- III.i Ministry of Agriculture / Department of Forestry
 - Hungarian Forestry Service

- III.ii different special institutions/associations
- III.iii Limited to public relation activities of classical forestry circles
- III.iv
- III.v forestry as an essential part of agriculture: aims of forestry determined within the frame of Hungarian National Agricultural Program
- IV.i
- IV.ii
- IV.iii

ITALY

- I.i 66.1% public, 33.9% private (93% individuals, 7% companies)
- I.ii very low importance of forestry in terms of production (0.05% GDP); but timber industry one of main economic sectors (strong timber import orientation)
- I.iii able to draw attention, often emotionally linked to particular events like forest fires
- I.iv National forest law (1923) incorporated into different regional forest laws after primary responsibility in forest matters was given to the regions in the 70's; loose institutional relationship State-regions
- I.v mainly mandatory tools; also compensation and incentives, „persuasion measures“. extension services and media coverage
- II.i inability to update National Forest Law because regional context has led to the development of a National Forest Plan in 1988, partly also regional plans
- II.ii no binding plan at national level
- II.iii Detailed plan; but loose institutional relationship State-regions and financial resources from other organisations (e.g. EU) resulted in an extreme dispersion of forest interventions
- III.i Ministry of Agriculture and Forestry/Forest Policies
 - State Forest Corps at national level as police force;
 - Forest authorities of the regions for implementation
- III.ii policy formulation restricted to narrow circles; environmental lobbies fully integrated because of market pressures; strategic alliances between timber industry and environmentalists (market pressure) and between nature conservationists and forest owners (impeding hunting reasons)
- III.iii various participation processes; specific channels have been designed: formal involvement of broad basis of society
- III.iv
- III.v interpolicy co-ordination through Inter-ministerial Committee; mainly with Ministry of Environment
- IV.i formal planning institutions as consultation/decision bodies always existed at regional levels; but because of devolution, it is almost unthinkable to have centralised forest planning frameworks and institutions
- IV.ii
- IV.iii low consistency, international initiatives are rather ignored

THE NETHERLANDS

- I.i forest cover: 10%; 41% private (only 18 private owners with more than 500 ha), 31% State; 16% local authorities/public bodies, 11% nature conservation agencies
- I.ii high importance in terms of non timber production (due to high urbanisation); weak forest-timber industry chain
- I.iii high, due to high degree of urbanisation and dense population; firmly on the political agenda; new strength and power of forestry sector after first national forest Plan in 1986

- I.iv “Netherlands decentralisation policy”: decentralised unitary State with responsibility distribution between national, regional, and local level; Forest Act and Landscape Act the dominating regulations in forestry
- I.v law; financial (change within second plan from input to output subsidies and project subsidies); communicative instruments
- II.i Development of rural planning leading to first activities by Ministry of Agric. and Fish.; forest policy proposal approved by parliament as Long-term Forestry Plan in 1986; first evaluation led to National Forest Policy Plan in 1993
- II.ii binding plans, approved by parliament
- II.iii plans completed by implementation programmes: detailed specific actions and instruments
- III.i Ministry of Agriculture, Nature Management (since 1990), and Fisheries
 - State Forest Service after former classical triple role split in 1988 in semi-autonomous forest management agency (no extension service, no policy development) and ministerial department of nature, forests, landscape and fauna (forest policy!); provincial authorities with an increasing role
- III.ii high degree of organisation in Dutch society: detailed network of associations and societies; strong relations between nature conservation organisations and various groups of forest users
- III.iii change from professional expertise to more participatory process involving multitude of stakeholders: hearings to stimulate participation, several opportunities for involvement of other authorities/experts/organisations
- III.iv regulatory rules of democratic government
- III.v change from sectoral to more integrated approach (esp. concerning nature value of forests)
- IV.i see above
- IV.ii 1992 first evaluation period after 5 years, evaluation report published in 1992
- IV.iii high, international initiatives provided reasons for reformulation a new forest policy plan

NORWAY

- I.i forest cover: 37%; sparsely populated; 77% private, non-industrial forest owners, 13% State forests, 10% foundations / business corporations / municipalities
- I.ii medium importance in production terms (forestry and forest industries 1.5% of GDP); aside from timber hunting, mushrooms, and berries
- I.iii general ability to draw political attention; domestic Norwegian politics focus heavily on regional, thus rural issues
- I.iv Propositions formulated by Min. of Agriculture, parliamentary committees and subsequently parliament approval; 1857 Forest Act, 1932 (focus on securing regeneration), 1965 (focus on forest production), 1976 (focus on multiple-use forestry)
- I.v almost no prosecution; much more normative guidance, education, economic grants and disbursements; subsidies increased in the 80’s, stabilised in the 90’s with focus on multiple-use operations and profitable commercial activities; increasing importance of consumer powers
- II.i Ongoing work on new proposition on forest policy; also work on new Forest Act (focus on profitability and environmental values); influenced by recent Swedish and Finnish work
- II.ii
- II.iii
- III.i Ministry of Agriculture
 - National Forest Board/Norwegian Forest Service; increasing influence of Ministry of Environment on defining and implementing forest policy

- III.ii Forest Owner Association with important role; various NGOs (nature conserv./recreation) counterbalancing commercial actors; some industrie organisations; alliances in general within border of mutual interest; closer cooperation between Min. of Agricultural and commercial actors due to professional/personel networks; new consumer project on SFM
- III.iii
- III.iv
- III.v rare, no formal corporate planning scheme exists
- IV.i annual statistic surveys; environmental monitoring; no special national planning institution
- IV.ii
- IV.iii quite active on the intern. arena; ideas such as sustainable development and biodiversity influencing forest policy formation

PORTUGAL

- I.i 37.8% forest cover. 85.7% private (mainly small non-industrial forests); 14.3%public. 3 key forest products: Round wood production for sawmill and furniture, pulpwood production, and cork production.
- I.ii Important but heterogeneous sector. Sector responsible for 2.6% of GDP. Third most important sector regarding added value and employment. Second largest sector with regards to export (12%).
- I.iii Traditionally insufficient public and political awareness. Often neglected or underestimated in comparison to agriculture. Interest increasing since 1996
- I.iv Department within the Ministry of Agriculture. 1996 Forest Policy Act. Frame law stating policy goals and tools. National Forest Authority (DGF) responsible for preparation and implementation of the forest policy and responsible for public forest management. Presently undergoing major changes. Forest Policy Law (Law no. 33/96)
- I.v Tools outlined by the new forest Policy Law but not yet fully implemented: Regional forest management plans. Management plans compulsory for larger forest units. Creation of Forest Consultative Council: organisation encompassing stakeholder organisations. Creation of forest fire prevention and fighting structures.
- II.i Draft National Forest Plan (March 1998).
- II.ii Regional forest management plans (only silvicultural plans). Planning at the management unit level by private firms for private owners (only silvicultural plans). Almost total lack of work in forest policy and forest planning (mainly silvicultural focus)
- II.iii Mainly strategic at the present. In the process of being operationalised.
- III.i Ministry of Agriculture. National Forest Authority (DGF)
- III.ii Forest owners' association, Regional Directorates of Agriculture and local authorities push for decentralised approach.
- III.iii Draft forest plan does not address the issues of decentralisation, public participation and integrated development at the local level.
- III.iv
- III.v Intersectoral co-ordination of forest policy objectives is very weak. Interministerial Forest Commission mandated by the 1996 Forest Act. Participation by several ministries.
- IV.i There is no special planning frameworks and planning institutions for forest and forest related activities in Portugal.
- IV.ii
- IV.iii DGF responsible for the follow-up on the Helsinki Resolutions and the Convention on Desertification Control

POLAND

- I.i forest cover: 28%; 83% owned by public authorities, 17% private forests
- I.ii rather low in production terms (Forestry 0.6% GDP); important protective functions
- I.iii main issues: reprivatisation of State forest holdings (56% of total forest area!); locally ecological disaster situations for forests; rather poor capacity to gain financial resources, yet increasing
- I.iv Forest Act of 1991 (updated 1997), as well as several protection acts; ongoing reform of country's administration still with unclear consequences
- I.v subsidies, tax system, law (acts, regulations)
- II.i 1997 'National Policy on Forests' adopted by Council of Ministers taking up the initiatives of UNCED and Strasbourg-/Helsinki-Resolutions and subsequent to several former policy manifestations of interdepart. and ministerial decisions
- II.ii at a normative planning level but additional action plans
- II.iii three action plans at the operational planning level (forest cover; gene resources; nature and cultural values) and one at the strategic level (biodiversity); general timetable for implementation
- III.i Ministry of Environmental Protection, Natural Resources, and Forestry with only relative small Division of Forestry, Nature, and Landscape Protection
 - State Forest Service resp. for State forests; provincial administration units resp. for private forests
- III.ii aside from forest administrations several other associations with mainly technical and scientific interest
- III.iii new forest policy framework aiming at greater societal involvement
- III.iv
- III.v presence of new forest policy framework in several other implementation programmes of other administrative bodies (particularly to forest industries)
- IV.i required conversion of the Office of Forest Mgmt. And Survey to a national planning and forecasting body
- IV.ii
- IV.iii

SLOVENIA

- I.i forest cover: 54%; 1980: 34% State de-nationalisation aiming at 20%
- I.ii decreasing importance in production terms (1995: 0.4% GDP)
- I.iii relatively high, important forestry issues like de-nationalisation of forests attracted decision makers'/political parties' attention
- I.iv mainly Forest Act 1993, E.P.A. 1993, Act on co-operatives 1992, Act on State (public) forests 1993
- I.v law (regulation), organisation/property structure, education and training, tax
- II.i "transition process": starting from expert discussions, 1996 National Forestry Development Programme passed by parliament (emerged in 1989, but priority was given to legal framework with Forest Act in 1993); additional stimulus by international initiatives
- II.ii general guidelines and directives at national level (government); to be specified in Forest Management Regional Plans (public forest service); special implementation program with financial structure
- II.iii certain inconsistencies between general guidelines and specific measures due to legal, organisational and financial shortcomings
- III.i Ministry of Agriculture, Forestry and Food
 - Slovenian Forestry Service

- III.ii several forestry associations and capacities; environmental NGOs still evolving; clear political parties' distinction at least on substantial forestry issues (property, denationalisation,...)
- III.iii Process initiation by experts/researchers; program blueprint autonomously designed by Ministry; participation at a later stage only indirect via parliamentary procedures and via National Council (representative body of social, economic, professional, and local interest); former socialist system planning influence still leads to emphasis of expert rationality
- III.iv consultation, no seeking of compromise or reaching consensus; but often compromise-type legislative solutions being subject to the constitutional court
- III.v accomplished at ministerial level, but weak co-operation; cross-sectoral co-ordination inadequate
- IV.i Entire forest-related planning takes place at Slov. Forest Service, more or less centralised
- IV.ii
- IV.iii high, but no active participation in intern. initiatives due to limited personnel and financial resources; formation of Slovenian National Forest Development Program encouraged by several international initiatives

SWEDEN

- I.i forest cover: approx. 50% (sparsely populated); 10% State or public, 80% private (49% forest companies, 51% individuals)
- I.ii vital / important, esp. in combination with forest industry (competing on European and global markets; strong export-orientation)
- I.iii in respect. to its economic importance
- I.iv our levels: acts passed by parliament, ordinances given by government, directions and regulations by responsible authority
- I.v market orientation: decreasing importance of subsidies, increasing importance of income taxation/incentives/disincentives; less emphasis on forest legislation and subsidies; more emphasis on extension services
- II.i Traditional orientation towards wood production for national timber industry; since 1994 New Swedish Forest Policy with environment and timber production as equal goals
- II.ii Forestry Act specifies minimum requirements and visions; implementation occurring via ordinances/directions/recommendations of Forestry Boards
- II.iii
- III.i National Board of Forestry and County Forestry Boards (policy implementation);
 - Swedish Forest Service until 1981 rather independent, since then under control of board (change in name to State Forest Enterprise of Sweden)
- III.ii important role of collaboration between forest industries; strong network structure because of local representation of leading authority (County Forestry Boards), "equality approach": discussion partner instead of lead agency
- III.iii "Swedish Model": consultation (discussion, debate) and consensus building; 1990 Forestry Commission appointed by government included 20 different stakeholders
- III.iv local representation and connection: "problem-solving" dominating; persuasion much more than law ("forest policy as outcome of consensus"); market pressure/forces also used by environmental groups
- III.v membership structure of County Forestry Boards secures broad integration; close relation with County Administrative Board; but no special intersectoral co-ordination exists
- IV.i no, annual inventory of forest resources and land use as general planning framework
- IV.ii after 4 years, first evaluation in 1998 by Forestry Board and Environmental protection Agency (conclusions: tightening up of the Forest Act, more education/guidance, more money for nature reserves)
- IV.iii "Swedish Model" been guided by the same spirit as the UN Forest Principles

SWITZERLAND

- I.i Federal structure. 70% public forests owned by historical communes, local communes and public corporations. Little known about structure of private forestry. 70-80% of forest area can be regarded as mountain or protective forests.
- I.ii Contribution from forestry to Switzerland's economy is modest. 0.1% of GDP. 0.3% employed in forestry.
- I.iii Forestry sector attracts low political attention.
- I.iv Federal Forest Law (in force 1/1-1993). Federal law must be followed up by cantonal laws. Sectoral public forest policy. National Forest Plan stimulated by the IPF process.
- I.v Legal restrictions, financial incentives, education advice, information.
- II.i
- II.ii The representatives of the Cantons attempted to reduce the Confederation's authority over issues of forest policy as much as possible.
- II.iii Strategic at federal level, more operational at cantonal level. Subsidies from federal towards cantonal level.
- III.i Swiss Forest Agency is a division of the Agency for Environment, Forests and Landscape.
- III.ii Federal Department for Traffic and Energy in alliance with economy oriented partners attempt to gain greater procedural authority over deforestation decisions. Swiss Forest Agency, Cantonal forestry services and the nature protection organisations form an iron triangle.
- III.iii Forest law developed through involvement of more than 200 actors. Only a few key elements concerning partnerships between government and industry, and interpolicy co-operation are fulfilled.
- III.iv Federal court makes decisions on individual important cases in the field of forest conservation.
- III.v Law formulated in co-operation with other agencies, departments. Very little co-ordination exists between the Swiss Forest Agency and other federal offices. There is not evidence of institutional interpolicy co-ordination at the programming or planning level.
- IV.i Focus during the last 10 years on infrastructure oriented planning (*Sachplanung*). Swiss forest plan project begins spring 1998. Purpose to create a national implementation strategy.
- IV.ii
- IV.iii

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