The new Federal Swiss forest legislation constitutional competencies, objectives, instruments and policy actors

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The New Federal Swiss Forest Legislation: Constitutional Competencies, Objectives, Instruments and Policy Actors

Franz Schmithüsen and Willi Zimmermann

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1. POLITICAL SYSTEM AND FOREST POLICY ACTORS

The Swiss Federal System: Switzerland has been a federal state since 1848 with a three-tiered political structure: the Federation, the cantons and the local authorities (Linder 1998; Federal Chancellery 1999). The division of political decisions and competencies in a federal state was established by the Swiss Federal Constitution adopted in 1848. It was the basic framework for the total revision of the Federal Constitution in 1874 which remained in force until 1999. The federal state is one of the pillars of the new Swiss Federal Constitution that was adopted by the two Chambers of Parliament in December 1998 and approved by popular vote in 1999 (Bundesblatt 1997; SR 101). The new Federal Constitution of Switzerland has been in force since the 1 January 2000.

Federal and Cantonal Constitutional Competencies: The new Federal Constitution (FC) of 1999 follows the principles of its two predecessors and determines the division of competencies between the Federation and the cantons. Powers that are not constitutionally given to the Federation remain cantonal competencies. Any new transfer of powers to the Federation requires a change of the Swiss Constitution (Art. 3 FC). The country is formed by 23 cantons, but three of them are divided into two half-cantons for historical reasons (Art. 1 FC). Each canton and half-canton has its own constitution, parliament, government and courts. The cantons are divided into representative political communes in which decisions are made by local councils (ca. 80%) or by the assemblies of all citizens (ca. 20%). The degree of autonomy given to local authorities is determined by the cantonal constitutions and varies widely. At present there are almost 3,000 communes; the number is tending to become smaller because of merging of local units.

Political Organisation of the Federal State: The members of Parliament are elected by some 4.6 million citizens. The Federal Assembly (Art. 148 FC) has two chambers: the National Council with 200 members elected by common rules valid throughout the Federation (Art. 149 FC) and the Council of States with 46 representatives elected (2 for a canton, 1 for a half-canton) by the people according to the rules of each canton (Art. 150 FC). The United Federal Assembly, i.e. both Councils together, elects the seven members of government, the Federal Council, and the Chancellor in charge of the Federal Chancellery. The 30 members and 30 substitute judges of the Federal Court as well as the 9 members of the Insurance Court are also elected by the United Federal Assembly (Art. 168 FC).

Federal Government and Administration: The government is formed by the Federal Council (Art. 174ff FC). It defines the fundamental goals of state action and determines the necessary resources for their attainment; represents the Federation within the country and abroad; conducts the preparatory procedure for new
legislation; submits proposals and laws and decisions to the Federal Assembly; enacts regulations as empowered by the Constitution and by federal laws; implements the laws and decisions of the Parliament; and prepares the budget. The administration is organised into 7 federal departments with the following competencies: foreign affairs; home affairs; justice and police; defence, protection of the population and sport; finance; economic affairs; environment, transport, energy and communications.

Popular Referendum and Initiative: In addition to the representative elements (election of the members of Parliament), the Swiss political system contains two instruments of a direct democracy: the referendum, which may be compulsory in some cases and optional in others, and the popular initiative. Both instruments are constitutionally founded and currently used in different ways in the three levels of the country’s political system.

In general terms the referendum is an approval or a veto cast by a popular ballot with regard to acts of parliament and/or government (Linder 1998). A popular ballot (referendum) is compulsory for all amendments to the Federal Constitution and on agreements with international organisations or supra-national entities on collective security (Art. 140 FC). The adoption of a proposal requires a majority of the valid votes cast throughout the country as well as a majority of the cantons in which the voters have adopted the proposal. The amendments of laws and the promulgation of new laws by Parliament, and certain treaties in international law are subject to an optional referendum (Art. 141 FC). A popular ballot is held if 50,000 citizens request so with their signatures within 100 days of the official publication of the legal act. The optional referendum has the effect of popular approval or veto with regard to acts of Parliament (laws) and certain international treaties.

The popular initiative is a political instrument by which citizens may seek constitutional amendments, changes in legislation or the adoption of new legislation. At the federal level only popular initiatives aiming at constitutional amendments are possible. With a popular initiative, citizens may seek a popular vote on an amendment to the Federal Constitution (Art. 138, 139 FC). The initiative may be formulated as a general proposal or as a precise text, the wording of which cannot be influenced by Parliament or government. The federal authorities may respond to the proposal of an initiative by a usually less far-reaching counter-proposal. The launching of a popular initiative requires the collection of 100,000 supporting signatures within a time limit of 18 months.

Forest Policy Actors: In recent years new actors have appeared on the scene, which have shaped political processes leading to the adoption or reinforcement of forestry programmes (Schmithüsen 1995, 48). This refers to the role of citizens and of the mass media, which acquired a much higher sensitivity for the political impact of conservation. It also refers to the spectrum of political parties, environmental parliament groups and commissions as well as to a considerable number of non-governmental organisations.

At the federal level, the two chambers of Parliament and the Federal Council are the principal actors in setting federal public policy in forestry (Schmithüsen/Zimmermann 1999a). They are responsible for programme formulation and annual decisions on public funding. Since 1998 policy implementation has been the task of the Federal Department for the Environment, Transport, Energy and Communication. Within the
department, the Swiss Agency for the Environment, Forests and Landscape is in charge of forest-related matters as well as of game protection and protection against natural calamities among others. At the cantonal level parliament and government play an important role in the formulation of new cantonal forest policies. Forestry matters may be implemented by various departments such as departments for agriculture, public infrastructures and environment. A public forest service with headquarters, field districts and range units exists in all cantons. The conference of the cantonal forest directors and of the chiefs of the cantonal forest services act as liaison units between the cantons and the federal administration.

Figure 1: Institutional Forest Policy Actors at Federal and Cantonal Levels

<table>
<thead>
<tr>
<th>Federal Level</th>
<th>Cantonal Level</th>
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</thead>
<tbody>
<tr>
<td>Parliament with 2 Chambers</td>
<td>Cantonal or Great Council (Parliament)</td>
</tr>
<tr>
<td>Federal Council</td>
<td>Government Council</td>
</tr>
<tr>
<td>Department for Environment, Transport, Energy and Communications</td>
<td>Various Departments, e.g. for Agriculture, Public Infrastructures or Environment</td>
</tr>
<tr>
<td>Swiss Agency for the Environment, Forests and Landscape (SAEFL)</td>
<td>Cantonal Forest Services with District Officers and Range Units</td>
</tr>
<tr>
<td>Swiss Forest Agency in charge of forest-related matters, wildlife and protection against natural hazards</td>
<td></td>
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</tbody>
</table>

Policy Coordination Units

- Conference of Cantonal Forest Directors (Ministry – Department level)
- Conference of Chiefs of Cantonal Forest Services (Agency level)

Source: Schmithüsen 2000, p. 141 (translated and modified)

Forest Sector Associations: The Swiss Forestry Association, the Swiss Forest Owners Association and the cantonal affiliates are the principal representatives of the forestry sector (Schmithüsen 2000). The interests of forestry personnel are represented by other specialised organisations. In the wood-processing sector a larger number of associations exists representing different branches of manufacturers and wood product traders. Joint committees and liaison groups such as the Swiss Association for the Forest, the Rio Committee on Forests and the Swiss Wood-Processing Industry Conference have been established. These organisations facilitate an exchange of information and foster cooperation among different policy actors.

Nature Conservation and Environmental Protection Associations: A significant development is the creation and consolidation of non-governmental organisations, which engage in the promotion of nature protection (Schmidhauser et al. 1993; Schmidhauser 1997). The role of these groups is important in several ways. They are not only the driving force behind articulating public concern, but they also assume a major role in the implementation of conservation programmes by using the expertise
of their members. By using their rights of appeal in the courts, they are important agents in administrative decision-making (Flückiger et. al. 2000).

**Figure 2: Swiss Associations and Groups Involved in Forest Policy Development**

| **Forest Sector Associations:** | Swiss Forestry Association  
|                               | Swiss Forest Owner Association  
|                               | Swiss Association of Engineers and Architects  
|                               | Swiss Foresters Association  
|                               | Forestry Personnel Association of Switzerland  
|                               | Swiss Association of Forestry Enterprises  
| **Forest Industry Associations:** | Swiss Sawmill and Wood Industry Association  
|                               | Swiss Carpenter's Association  
|                               | Association of Swiss Furniture Manufacturers  
|                               | Swiss Association of Paper Manufacturers  
|                               | Association of Swiss Timber and Sawnwood Traders and others  
| **Interest Groups Representing Specific Uses:** | Cantonal Hunting and Fishing Associations  
|                               | Swiss Jogging Association  
|                               | Swiss Sports Association  
|                               | Swiss Union for Walking-Trails  
|                               | Regional Tourism Development Associations  
| **Joint Committees and Liaison Groups:** | Swiss Association for the Forest  
|                               | Rio Committee on Forests  
|                               | Swiss Forest Industry Conference  

Source: Schmithüsen and Zimmermann 1999b, p. 32

**Figure 3: Major Swiss Nature Conservation and Environmental Protection Associations**

| **Nature Conservation Associations:** | Pro Natura (Swiss League for the Protection of Nature)  
|                                    | World Wildlife Fund Switzerland  
|                                    | Swiss Association for the Protection of Birds and Nature  
|                                    | Swiss Homeland Association  
|                                    | Swiss Alpine Association  
|                                    | Swiss Water and Air Protection Association  
|                                    | Aqua Viva (National Committee for the Protection of Rivers and Lakes)  
| **Environmental Protection Associations:** | Swiss Association for Land Use Planning  
|                                              | Swiss Environmental Protection Association  
|                                              | Helvetia Nostra  
|                                              | Swiss Energy Foundation  
|                                              | Swiss Traffic Association and others  

Source: Schmithüsen 2000, p. 223 ff
The conservation groups formulate criteria on sustainable forest resource utilisation and set up monitoring systems in order to evaluate policy results. Swiss environmentalist groups include approximately 10 organisations with specific nature conservation objectives. Together the four largest groups have more than 300,000 members (including double memberships on the part of some members). While forest owners and forest industry organisations represent primarily economic interests and special-use associations tend to have rather limited objectives, conservation groups have more general concerns dealing with the environment, sustainable development, nature- and landscape protection. At the cantonal level, user groups that practise a wide range of recreational activities play an important role in influencing policy formulation and forest management planning.

2. OBJECTIVES, MEASURES AND INSTRUMENTS OF THE NEW FEDERAL FOREST LAW 1991

*Previous Federal Forest Legislation:* Federal competencies in forest-related matters were established by the revised Federal Constitution of 1874 (Bloetzer 1978). As stipulated in Article 24, federal powers in forestry matters were limited to mountain regions. The first federal forest law was adopted in 1876. In 1898 federal constitutional competencies were extended to the country as a whole by omitting the words “mountain regions.” The revised Article 24 (FC 1874) provided: “The Confederation shall have the right of supervision over water engineering and forestry police. It shall support the correction and regulation of mountain torrents and the afforestation of the areas around their source and shall take the necessary protective measures to maintain these works and the forests already there.”

In 1902, the Federal Law Relating to Supervision of Forest Police was enacted for the whole of Switzerland on the basis of revised Article 24 of the Constitution. The Federal Forest Law of 1902 with amendments was in force until it was superseded by the present Federal Law on Forests. It was subsequently supplemented by various general and specific executive decrees. The most important one was the 1965 Ordinance to the Federal Law Relating to Federal Supervision of Forest Police.

*New Federal and Cantonal Forest Legislation:* The current Federal Forest Law became effective on 1 January 1993. As provided for in Art. 24 (FC 1874) and following previous forest regulations, it established joint constitutional competencies in forestry matters between the Federal Government and the cantons. The law thus regulates the competencies of the federal authorities as well as the federal requirements for the cantonal legislators. Following the promulgation of the new federal forest law (FFL), the cantons have revised their forest legislation (Keel/Zimmermann 1997). Major issues which require cantonal regulation are the definition of minimum criteria for forest areas (Art. 2 FFL); the system of compensation in kind for land for which a clearing permit is issued (Art. 7 FFL); the regulation of access for mass-events in the forests (Art. 14 FFL); forest management planning (Art. 20 FFL); public financial transfers to forest owners (Art. 35ff FFL); and the organisation of cantonal forest services (Art. 50 FFL).

*Federal Frame-Law Competence on Forests:* The frame-law competence at the federal level leaves room for the cantons to adopt complementary and subsidiary
legislation on forestry matters (Jenni 1993; Kissling/Zimmermann 1999). It leads to joint responsibilities at both levels in determining public policies and regulations with regard to forest protection and sustainable forestry development. The federal-level competence focuses on protection of forest lands. The cantons are responsible for the implementation of federal and cantonal regulations. They have a fairly large domain for their own competencies, which include forest management planning, support for public and private forest owners, and organisation of the cantonal forest services. The joint public land management system, laid out by the Federal Constitution, facilitates a balance between national and regional interests and contributes to a wide range of locally adapted political solutions.

*Figure 4: Evolution of Swiss Forest Legislation with Incremental Policy Objectives*

<table>
<thead>
<tr>
<th>Constitutional Competencies</th>
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<tbody>
<tr>
<td>1874</td>
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<tr>
<td>2nd Federal Constitution</td>
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<tr>
<td>1999</td>
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<td>3rd Fed. C.</td>
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<thead>
<tr>
<th>Federal and Cantonal Forest Legislation</th>
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<tbody>
<tr>
<td>1876</td>
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<tr>
<td>1902</td>
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<tr>
<td>1991</td>
</tr>
<tr>
<td>1st Federal Forest Law</td>
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<tr>
<td>2nd Federal Forest Law</td>
</tr>
<tr>
<td>3rd Federal Forest Law</td>
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<tr>
<td>Cantonal Forest Laws</td>
</tr>
<tr>
<td>New Cantonal Forest Laws</td>
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<table>
<thead>
<tr>
<th>Incremental Policy Objectives: Forest Conservation and Sustainable Use of Resources</th>
</tr>
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<tbody>
<tr>
<td>Protection of Forest Areas</td>
</tr>
<tr>
<td>Sustainable Wood Production</td>
</tr>
<tr>
<td>Protection against Natural Hazards (Floodling, Avalanches, etc.)</td>
</tr>
<tr>
<td>Close-to-Nature Silviculture</td>
</tr>
<tr>
<td>Multiple-Use Concepts</td>
</tr>
<tr>
<td>Support of Forest Owners</td>
</tr>
<tr>
<td>Nature- and Landscape Protection</td>
</tr>
<tr>
<td>Maintenance of Biodiversity</td>
</tr>
<tr>
<td>Specific Conservation Areas</td>
</tr>
</tbody>
</table>

Source: Schmithüsen, 1995b, p. 7 (revised and amended)
Altogether the Swiss forest legislation both at federal and cantonal levels has considerably evolved since the adoption of the principle of joint responsibilities for forest protection and sustainable forestry in 1874. A changing policy context has led to incremental policy objectives (Kissling/Zimmermann 1996) which are reflected in the subsequent federal and cantonal forest laws.

**Important Aspects of the Federal Forest Law of 1991:** The new law reacts to important changes in the role of forests in society and focuses on two central issues. First, it aims at a balance between the interests and possibilities of forest owners and the increasing and diversified interests of public user groups. Second, it tries to establish equilibrium between public demands and public commitments to protect forest lands and to maintain a wide range of socially desirable forestry outputs. The forest law retains the principle of forest protection and conservation, which so far has proved to be useful (Kissling/Zimmermann 1999). It provides for multifunctional sustainable forest management, which aims at protection from natural hazards, wood production, recreational and educational uses, and landscape and nature conservation as well as at forestry sector development (Art. 1 FFL).

The protection of nature and landscapes has become one of the specific requirements to be addressed in planning and management regulations. Forest utilisation may be reduced in certain areas if compatible with the general objectives of the law. In addition, specific forests may be set aside by the cantons in order to maintain and conserve biodiversity (Art. 20 FFL). With regard to forestry development, the law introduces the principle of compensation to forest owners if they are required to carry out work or provide services of public interest at costs that cannot be covered otherwise (Art. 36-38 FFL). Furthermore the law regulates federal support for education and training as well as monitoring activities (Art. 29, 33 FFL). It also allows for the possibility to transfer specific tasks to non-governmental organisations, and contains a new article which stipulates that public and the political authorities have to be regularly informed (Art. 32, 34 FFL). The principal measures as determined by the Federal law on forests are addressed by different categories of policy instruments.

**Regulative and Incentive Instruments:** Whereas previous legislation relied mainly on prohibitions and obligations, a more proactive approach with a wider range of policy instruments is now taken (Zimmermann 1994; Kissling/Zimmermann 1996). Regulative instruments keep their importance, in particular, protecting forest areas from uncontrolled changes in land-use and from devastating practices. Instruments that restrict forest management decisions, however, are replaced by joint management systems which engage forest owners and public authorities on a negotiation and contractual basis. A critical review of existing incentives for afforestation, forest roads and cooperation of forest owners is necessary in order to develop output-oriented systems and accurate measures of performance and impacts (Limacher et al. 1999). New categories of incentives for close-to-nature silvicultural practices, multiple-use management and promoting measures are introduced in order to maintain biodiversity. Compensatory payments to forest owners for specific tasks or restrictions in the public interest are provided for by the new federal forest law. On the whole, policy instruments are more specifically related to determined public targets with precise commitments to the beneficiaries.
Measures Addressed by Regulative Instruments
- Ban on Deforestation with Exemptions (Art. 5 FFL)
- Compensation in Kind in Case of Exemption (Art. 7 FFL)
- Restriction for Motorised Traffic in the Forest and on Forest Roads (Art. 15 FFL)
- Prohibition of Harmful Activities (Art. 16 FFL)
- Prohibition of Buildings in Close Proximity to Forests (Art. 17 FFL)
- Prohibition of Environmentally Hazardous Substances (Art. 18 FFL)
- Authorisation for Use of Timber (Art. 21 FFL)
- Ban on Clear-cutting (Art. 22 FFL)
- Obligation for Reforestation of Clearings (Art. 23 FFL)
- Obligation to use Plants Adopted to the Station (Art. 24 FFL)
- Approval for Sale and Partition of Forests (Art. 25 FFL)

Measures Addressed by Incentive Instruments
- Profit Accruing from Deforestation Authorisations (Art. 19 FFL)
- Compensation Related to Protection against Natural Catastrophies (Art. 36 FFL)
- Compensation Related to Prevention and Repair of Damage to the Forest (Art. 37 FFL)
- Indemnities Related to Minimum Tending Measures and Silvicultural Measures Required by Authorities in Protection Forests (Art. 38 Sec. 1a and b FFL)
- Financial Support to Forest Planning and Management (Art. 38 Sec. 2 FFL)
- Financial Support Related to Protective Measures in Forest Reserves (Art. 38 Sec. 3 FFL)
- Financial Support Related to Professional Training (Art. 39 FFL)
- Investment Credits (Art. 40 FFL)

Informational (persuasive) Instruments: With the shift to a collaborative forest policy, informational and persuasive instruments have gained considerable weight (Schmithüsen 1995a). This refers to information and debate in Parliament and other political entities, to information and arbitration processes among different interest groups, and, particularly, to a more substantial dialogue between forest owners and public authorities. Monitoring and performance measurement systems produce information on forest health, composition of forest stands, and on the impact of uses, as they affect forest ecosystems and biodiversity. There is also an increasing demand for information on the economic performance of forest enterprises and on services rendered to the public as part of sustainable forest management.

Process-steering instruments: These instruments are particularly concerned with the organisational structures and competencies, and communication practices between governmental services and non-governmental organisations. Decision-making
procedures among public agencies, the establishment of lead agencies, organisation of public hearings, as well as regular assessment and evaluation are important issues. A noticeable element is the tendency to separate more clearly the regulatory function of public forest services from their role as managers of forest land. The allocation of financial resources in relation to specific targets based on global budgeting and/or service contracts is a new feature in public process-steering (Schmithüsen/ Schmidhauser 1998). It requires criteria for financial controlling, which measure efficiency (output/input), effectiveness (attainment of objectives) and economy (real costs/standard costs) based on best practices.

*Figure 6: Principal Measures as Addressed by Information and Process Steering Instruments: Swiss Federal Law on Forests of 1991*

**Measures Addressed by Information Instruments**
- Federal Responsibilities in the Area of Training (Art.29 FFL)
- Cantonal Responsibilities in the Area of Training and Counselling (Art.30 FFL)
- Research and Development (Art.31 FFL)
- Surveys (Art.32 FFL)
- Information on Forests, Forestry and the Timber Industry (Art.34 FFL)

**Measures Addressed by Process Steering Instruments**
- Competent Authorities for Exemptions in Case of Deforestation (Art.6 FFL)
- Co-ordination with Area Planning (Art. 11ff FFL)
- Cantonal Obligations Related to Planning and Management Regulations (Art.20 Sec.2 FFL)
- Federal Competences Related to Prevention and Repair of Damage to the Forest (Art.26 FFL)
- Cantonal Competences Related to Prevention and Repair of Damage to the Forest (Art.27 FFL)
- Extraordinary Competences of the Federal Assembly in the Event of Forest Catastrophe (Art.28 FFL)
- Delegation of Tasks to Associations (Art.32 FFL)
- Right to Appeal for Private and Public Actors (Art.46 FFL)
- Implementation Competences of the Confederation (Art.49 FFL)
- Implementation Tasks of the Cantons (Art.50 FFL)
- Organisation of the Forestry Service (Art.51 FFL)
- Approval of Cantonal Dispositions for Implementation (Art.52 FFL)
- Communication of Cantonal Dispositions for Implementation to the Federal Office (Art.53 FFL)
3. IMPLEMENTATION OF FOREST POLICY INSTRUMENTS

**Impact and Outcomes of Policy Instruments:** To date there has been no systematic and scientific evaluation, either of the whole public forest policy programme or of some individual or specific instruments or measures (Zimmermann 1998). Switzerland is still a long way from having a systematic, scientifically oriented evaluation of its public forest policy. However, data and information are available that are suitable for a partial evaluation of the principal instruments of Swiss forest policy. From the Forest Statistics Yearbook, for example, we know in which region or canton deforestation permits have been granted. The development is marked by a certain regularity concerning the annually deforested surface. With regard to the purpose of deforestation, three categories are dominant: traffic installations, raw material and refuse. No information is available on the number of applications and the area involved, which are refused formally or informally by forest authorities. It is not evident whether private or public bodies submit more applications for authorisation for deforestation. The same refers to information on the amount of land reforested as compensation in the same region. Altogether we know little about the influence of the policy instruments, other policy programmes and other social and economic factors on the development of forest areas. Crucial questions in connection with impacts and outcomes, effectiveness and efficiency of the federal forest conservation policy can thus not be answered.

Very similar is the situation relative to financial contributions, the second principal instrument of federal forest policy. From the budget and the account of the Confederation we know the amount allowed each year by the Federal Assembly for financing of three types of measures: forest tending, protection against natural hazards, and improvement of forest management conditions. Due to the fact that the majority of public financial support is granted for measures carried out in protective forests, the mountain regions are far more affected by financial decisions than the rest of the forest areas. An estimate, based on 1996 figures published in the official gazette, shows that the share of the Alps and Jura in decisions made by the Swiss Forest Agency on the use of public funds, was as follows (Zimmermann 1998): 85% for forest tending; 100% for protection against natural catastrophies; and 75% for measures improving forest management conditions. 90% of the decisions of the agency thus referred to forests in mountainous regions, which is considerably higher than the proportion of these forests within the country.

With regard to the impact and outcome of financial incentives and compensation in forestry, important questions remain to be answered. It would be interesting to know whether, and if so how and to what extent, federal and cantonal funds have influenced the behaviour of forest owners or forest enterprises (how effective are these funds)? For example, have financial incentives encouraged tending of more forest areas? What would forest owners have done without public financial support? Have they changed their activities in a direction suggested by the forest policy programme? What are the cost-benefit effects (how efficient are these funds)? Are the goals of financial incentives achieved completely or only partially? What are the positive and negative side-effects of the various financial measures on the structure of forest enterprises and for the timber industry? There remain a lot of questions to be answered through scientific research and forest administration.
4. COMPETENCIES IN FORESTRY MATTERS OF THE NEW FEDERAL CONSTITUTION 1999

The new Federal Constitution of Switzerland 1999 follows the principles and partition of competencies of the one which it replaced (Bundesblatt 1997). It is in fact mainly a formal revision and modernisation of the Federal Constitution of 1874 with some new elements that have been introduced. With regard to federal competencies in forestry matters Art. 24 (FC 1874) is now replaced by Art. 77 (FC 1999) which reads as follows:

Art. 77 Forests

1. The Confederation shall ensure that forests may fulfil their protective, economic and social functions.
2. It shall establish principles for the protection of forests.
3. It shall encourage measures for the conservation of forests.
A comparison with its predecessor shows that the focus of federal competencies has remained the same and, even if the wording is different, it corresponds much better to the understanding of the citizens of today. The article establishes again a frame law competence at the federal level by referring to "principles for the protection of forests" and provides a basis for incentives for forest conservation. A more explicit and more modern element of Art. 77 is section one which provides a comprehensive federal constitutional commitment on the importance of forests by referring to their protective, economic and social functions. This wording corresponds to the objectives of the Forest Law of 1993 as expressed in Art. 1. The constitutional continuity in defining competencies in forestry matters in the Confederation has led to the fact that the Federal Law of 1993 is fully consistent with the new Constitution and that no modifications had to be made since its entering into force.

Figure 8: Financial Support Allocated by the Confederation for Forest Measures (1969-1996)


A point of considerable interest is that the Swiss Federal Constitution has incorporated over the years many federal competencies and objectives relevant to the protection of forests and to sustainable forestry practices. The new Federal Constitution provides for a comprehensive set of federal competencies with regard to natural resource development and environmental protection (Mader 2000). Forest-related competencies result e.g. from Art. 73 FC Sustainability, Art. 74 FC Protection of the Environment, Art. 75 FC Land-use Planning, Art. 77 FC Forests, Art. 78 FC Protection of Nature and Landscape and Art. 94 Sec. 2 Economic Welfare and Stability. Federal competencies on water protection and management (Art. 76 FC), energy policy (Art. 89 FC), fishing and hunting (Art. 79 FC) and agriculture (Art. 104 FC) are also relevant in this context.
Figure 9: Selection of Articles of the Swiss Federal Constitution of 1999 Relevant to Forests and Forestry

Articles Giving Competencies in Forestry Matters

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<td>Frame Competence on Forests</td>
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<td>78</td>
<td>Nature and Landscape Conservation</td>
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<td>94 Sec.2</td>
<td>Economic Welfare and Stability</td>
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Articles Referring to Sector Aspects

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<thead>
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<th>Art.</th>
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<tbody>
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<td>Water Protection and Management</td>
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<td>Fishing and Hunting</td>
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<td>89</td>
<td>Energy Policy</td>
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<td>104</td>
<td>Agriculture</td>
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Figure 10: Selection of Articles of the Swiss Federal Constitution of 1999 Referring to Cross-Sector Aspects Relevant to Forests and Forestry

<table>
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<th>Article</th>
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<td>63</td>
<td>Professional and University-level Education</td>
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<td>27, 94, 95</td>
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<td>110</td>
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There are further federal competencies that have to be considered since the policies they establish can have important impacts on forest protection and forestry development. Cross-sectoral competencies such as training and education, scientific research, commerce, entrepreneurial activities and employment are cases in point (Kissling/Zimmermann 1996, 1999).
5. DEVELOPMENTS IN FOREST-RELATED LEGISLATION

Based on federal constitutional competencies, there is an increasingly complex network of public policies and legislation that directly and indirectly affects forest conservation and forest resource utilisation. This refers to sustainable development in general and, in particular, to cross-sector policies and laws related to environmental protection, nature and landscape conservation, land-use planning and regional development. It also refers to sector policies and laws such as regulations on agricultural development, water protection and use, fishery and hunting practices, and wildlife conservation.

Sustainable Development: Art. 73 FC is a new constitutional requirement and stipulates that the Federal Government and the cantons strive for a balanced relationship between nature and human requirements for forest resources (Mader 2000). The new constitutional provision confirms previous strategies and decisions of the Federal Government that had been undertaken in order to implement the commitments of the 1992 UNCED Conference in Rio (Agenda 21). For this purpose an interdepartmental commission representing 20 offices was established in March 1993 (Mühlemann 1999). A report has been produced, concerning the operationalism of sustainable development, together with an inventory of actions (IDARio 1996) which were updated in 1997 (IDARio 1997). An action plan for sustainable development, which incorporates mid-term planning, has been devised by a small, high-level expert group (Conseil du developpement durable 1997). Based on these findings, the Federal Council presented a strategy for sustainable development in 1997 which is now the main document for further action (Federal Council 1997). The strategy focuses on measures in different policy fields realisable in the 1995-99 legislative period. In the meantime, Parliament has requested the Federal Council to present a proposal for ecological tax reform. The administration will now formulate proposals for the attention of the Federal Council. The Council has employed an elected advisory board of international experts since March 1998 whose task is to develop innovative ideas for sustainable development.

Criteria and Indicators for Sustainable Forest Development: Switzerland is a signatory to the resolutions adopted at the three ministerial conferences on the protection of forests in Europe, which have taken place in Strasbourg (1988), Helsinki (1993) and Lisbon (1998). It made specific contributions in implementing the six resolutions of Strasbourg as well the four adopted in Helsinki (Conference Report Vol. I 1998). With regard to the guidelines for sustainable forest management and for conservation of biodiversity (Resolutions H1, H2), the main actions are an assessment of Swiss forest policy (Limacher et al. 1999), a national debate on appropriate criteria and indicators for sustainable forest management, the elaboration of a middle-term forest development strategy, the setting aside of forest reserves, and the establishment of a gene reserve network (Conference Report Vol. II, 227, 1998). The major challenge is now to foster specific actions and monitoring and to re-enforce international cooperation with regard to public policies that involve a wide range of governmental and non-governmental stakeholders. This is, for instance, reflected in the objectives of the Swiss Forest Agency which emphasise quality standards of forestry management, promotion of a public debate on the role of forests, and measures for long-term financing of sustainable forestry practices.

Nature Conservation and Environmental Protection: A centrepiece in the expanding federal conservation policies was the adoption of the Nature and Landscape
Conservation Act in 1966 (Schmithüsen 1995a, 46 f). The law was the starting point for a new policy area, which evolved considerably during the 1980s. The law emphasises the systematic conservation of biotopes, remaining mire (marsh) landscapes and alluvial forests. The most important instrument introduced by this law was the right to appeal for non-governmental nature conservation organisations (Keller et al. 1997). The constitutional amendment on environmental protection of 1971 provided for "protecting man and his natural environment from harmful or irritating impacts." Its legal implementation was achieved in 1985, when the Federal Law on Environmental Protection was adopted. The law establishes general guidelines such as principles of general prevention and responsibility for intervention (VUR/Keller 2000). It contains procedural and administrative provisions on the right to appeal of non-governmental organisations, environmental impact assessment procedures and designation of competent governmental authorities among others. In addition, the law addresses specifically those conservation areas that have not been regulated before: air pollution, protection against noise, control of environmentally dangerous substances, soil protection and waste disposal. Many conservation and protection measures apply directly or implicitly to the forest areas (Zimmermann 1991). One of the most effective instruments in this context is the right to appeal against deforestation permits (including forest roads) by recognised private nature conservation organisations. Similarly the environmental impact assessment gives an opportunity for conservation agencies and private organisations to intervene in administrative procedures at an early stage and thus to ensure a forest area is maintained while settlement is reached in its disposition.

Current legislation and federal jurisdiction require that conservation aspects have to be considered (Art. 5, 4 and 20 FFL). The forest authorities are thus obliged to consider ecological and conservation aspects with the same attention they examined silvicultural and economic aspects in the past. The inventories elaborated during recent years have accumulated a wide range of information which can be used to evaluate more accurately the ecological importance and relative conservation value of all kinds of land including forests (Brassel/Brändli 1999). At present these inventories are mainly relevant to cantons when examining the need to establish new nature protection areas in forests. In the future they will be of increasing importance in connection with forestry operations and forest management planning.

Land-Use Planning: A federal policy on land-use planning was initiated with the adoption of the planning law in 1979 (Aemisegger et al. 1999). Its principal objectives are conservation of available space and a balanced development of settlements in the various regions. It establishes nature- and landscape protection as one of the important elements in planning and regulation of land use. It integrates the available information on land development activities, indicates conflicts between use and protection, and provides participatory procedures for arbitration. Its principal instruments are development plans for the cantons which are binding for all authorities, land-use plans of the communities that are binding for land owners, and development concepts of federal authorities by subject areas. The objectives and principles determined by the Federal Land-Use Planning Law (Art. 3) provide for the protection of natural resources and forests, preservation of landscapes and recreational areas, as well as the maintenance of important forest functions. In addition to these cross-sector objectives, there are those of the forest law, which stipulate the maintenance of the country's forest in its extent and prevailing regional
distribution (Art. 5 and 7 FFL). The co-ordinating role of land-use planning involves sectoral policy areas including transport, energy, agriculture, forestry, mineral exploitation as well as urban and regional development. The role of land-use planning is of particular importance if demands for forest clearing arise, if the land is divided in settlement areas and open spaces by zoning, if forest areas and forestry related land-uses are determined, and if nature and landscape protection areas are to be established.

Important linkages between land-use planning and forest regulations exist when determining forest areas and forestry-related land use. The forest law provides that the borders of forests have to be defined and are to be marked in land-use plans (Art. 11ff FFL). The Federal Law on Land-Use Planning requires the agreement of the land-use planning and forestry authorities for forest roads, forest operating centres and other permanent infrastructure (Art. 22 and 24). An area that needs a more co-ordinated approach is the extension of nature conservation and recreational zones to forest lands. Since this may imply considerable restrictions for forest owners and forestry, the participation of the competent forestry authorities in making such decisions is essential. Aspects that have received little attention in both policy programmes are the linkages between regional development and forestry and the potential impacts of changing land uses outside forest areas on the forest.

CONCLUSIONS

The multiple demands on forests in a rapidly evolving economic, social and political environment require maintaining a high level of forest management and a flexible adaptation of forestry practices to the complex interactions between private and public interests. Public intervention implies a complex balance between political objectives and instruments, between public benefits and financial resources, and between multiple forestry outputs and cost sharing to produce such outputs. New ways of implementing public policy programmes based on target-oriented outputs and contractual arrangements have been introduced to improve the efficiency of the public sector and to link commitments and required resources more consistently. The forestry sector and forest administrations have, in fact, been chosen in several cases as pilot efforts to gain experience with the application of new public management concepts.

The diversification of public demands on forests, a new understanding of sustainable development, profound changes in the relationship between government and citizens as well as structural limitations on financial resources are decisive factors that determine the range of action of public forest administration. This will require even more than now:

- openness and flexibility in reacting to public demands on forests and forestry practices;
- comprehensive and continuously renewed knowledge on the ecological, social and economic criteria which determine their political relevance;
- transparency in the preparation of decisions and negotiation abilities with non-governmental organisations, citizen groups and other administrations;
- co-operation and co-ordination between key actors and institutions of forest relevant policy fields;
and economic thinking in using scarce public funds for specific tasks in order to foster multifunctional forest resource development.

The recent changes, both at the level of the Federal Government and of the cantonal forest services are important steps in this direction. Further efforts will be required to ensure sustainable uses and the conservation of nature in the forests of Switzerland.

Considerable changes have occurred at federal level with regard to the constitutional and legislative framework for forest conservation and sustainable forestry practices. These changes involve more involvement of different interest groups in decision making and more emphasis on nature and landscape protection and on recreational demands. The objectives of the new federal forest law, as well as other legislation and public policies, address these issues consistently. The formal aspect of change refers to changes in the new Federal Constitution, to new laws and public policies, and to a continuous process of revision usually combined with incremental public goals and new policy instruments. Altogether the policy framework addressing forest protection and forest uses has considerably expanded and leaves less room for cantonal initiatives. On the other hand, the task of the cantons to implement both federal and their own legislation has become significantly larger.

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