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THE ROLE OF FOREST AND ENVIRONMENTAL LEGISLATION IN SUSTAINABLE LAND USE PRACTICES

Franz Schmithüsen and Willi Zimmermann

Abstract

The paper analyses the network of public policies and legislation related to forest and forestry. It reviews current trends in forest law development that contribute to sustainable uses and management and identifies policies and laws that have a bearing on natural resources development and environmental protection. The evolving regulatory framework reflects the growing importance of forests in sustainable development. It raises new issues with regard to the respective role of the public and private sectors, to the rights of land owners facing external demands, and to compensation arrangements between forest enterprises, user groups and public entities. Decision-making processes balancing local, national and global requirements play a key role in implementing public land management policies and legislation.

Key Words: Forest Law, Environmental Law, Forest Management, Land Owners, Decision Making

Forest Laws as a Regulatory Framework for the Protection and Sustainable Utilization of Forests

Economic and social developments are regulated to a considerable extent by public policies which in constitutional states are institutionalised by legislation. Forest protection and sustainable forestry practices which imply a high degree of public interests are a typical and prominent example of natural resource law and environmental legislation. While forest laws are usually general and refer to different regions of a country, they may leave a large amount of regulatory freedom for regional and local issues (IUFRO Research Group; Schmithüsen and Iselin, 1999). In countries with mountain areas, we find specific and usually more strict provisions that protect the forest cover and determine the sustainability of forest uses (Price 1990, Brooks 1997).

Forest laws balance land ownership rights against public interests associated with multiple forest uses and determine specific management standards for private, communal and state forest tenure. With regard to conservation and sustainable utilisation, forest

legislation provides different types of regulations (Figure 1). Protection regulations refer to measures relating to environment and biodiversity, nature and landscape protection, and restrictions associated with cultural and spiritual values. Land use regulations include zoning of the forest land, control of forest clearing, protection of the permanent forest estate, and the creation of new forests through afforestation. Utilisation and management regulations determine responsibilities of forest owners with regard to sustainable production of wood and non-wood products, the protection of soil and water resources, and public access to forests and recreational uses. The following summarises important developments in legislation that contribute to foster sustainable land use practices (http://faolex.fao.org/faolex_eng/index.html).

Important aspects of recent forest laws are changes in the role of national, regional and local authorities. There is a trend to shift or delegate constitutional competencies in forestry matters to regional governments or local entities. Whereas the national level remains responsible for forest conservation and development, sub-national entities become more strongly involved in policy formulation and implementation. This provides, overall, more opportunities for multilevel political decisions and for the negotiation of locally adapted solutions. Transfer or delegation of competencies allows for greater participation of people in democratic decision-making processes in which they can express their specific interests and values associated with forest management and utilisation.

The objectives of new laws are more diversified and comprehensive and acknowledge the equal importance of production and conservation (e.g. Cirelli, 1999; Schmithüsen *et al.*, 1999). Their goals refer to the role of forests as multifunctional resources, to their economic potential, and to their importance in the environment. Increasingly they address the variety of ecosystems, the need to maintain biodiversity, and the preservation of forest lands for reasons of nature and landscape protection. Regulations stipulate the need to balance timber production, recreational uses, and the protection of forests for soil and water conservation against impacts from natural disasters. New legislation focuses on setting infrastructure conditions by defining minimum requirements and performance standards. It confirms forest owner rights in using services offered by the private sector and promotes contractual arrangements with third parties. Guidelines for best management practices and approvals by exception are increasingly used.

Regulatory instruments retain their importance particularly with regard to protecting forest areas from uncontrolled clearing and devastating exploitation. New categories of

incentives for silvicultural practices close to nature, multiple-use management and the promotion of measures which sustain biodiversity are gaining importance. Compensatory payments to forest owners for the performance of specific tasks in the public interest have become an important issue. Legislation on forest incentives is increasingly concerned with the determination of specific targets, more precisely defined stakeholder commitment, and financial accountability.

Figure 1: Principal Elements of the Regulatory Framework for the Conservation and Sustainable Utilisation of Forests

With a shift to a more collaborative forest policy, informative and persuasive instruments gain considerable weight in forest legislation. This provides for monitoring and evaluation systems that produce information on forest health, the composition of forest stands, and the impact of uses affecting forest ecosystems and biodiversity. Process steering tools regulate organisational structures and competencies, as well as communication between

governmental services and non-governmental organisations. This implies, for instance, the designation of lead agencies, the organisation of public hearings, and environmental assessment and evaluation procedures. There is an increasing tendency to more clearly separate the regulatory function of public forest services from their role as managers of forest lands.

On the whole, new forest legislation is becoming proactive and relies more systematically on incentive and monitoring measures. On the part of forest authorities, it requires more emphasis on process-steering and a shift from individual decisions and projects to comprehensive forestry programmes. In accordance with the principles of new public management, this leads to a new approach in implementing forest regulations. It implies precise demands with regard to the tasks and services to be performed by administrations and public entities with greater operational flexibility in managing human and financial resources. The allocation of financial resources in relation to specific targets based on global budgeting and/or service contracts necessitates the development of criteria concerning financial control. They measure efficiency (output-input), effectiveness (attainment of objectives) and economy (real costs-standard costs) based on best practices.

Multisectoral and Multilevel Policy and Legislative Networks

A growing number of economic and environmental laws have an impact on sustainable land management. The forest law is an important element but by no means the only legislation that addresses forests and forestry practices. The complexity of public policy networks leads to an increasing interdependence between forest laws, economic development laws, and natural and environmental resources. It requires a thorough analysis of the compatibility of laws and regulations – with particular attention to the following aspects:

- Implications of the expanding system of environmental and nature protection legislation on forest management;
- Degree to which the respective provisions support, neutralise or obstruct each other;
- Scope for inserting into environmental protection laws specific provisions related to forest conservation and management;
- Impact of natural resources and rural development legislation on sustainable forest management;

- Need for modifications of forest management regulations in order to be compatible and to support such legislation.

Many countries have created an increasingly complex network of public policies and legislation that address, directly and indirectly, forest conservation and sustainable forest resources utilisation (Schmithüsen 1996; Schmithüsen and Siegel, 1997). This refers to cross-sectoral policies and laws that have emerged during the past 30 years, such as those regarding environmental protection, nature and landscape conservation, land-use planning and regional development. It also refers to sectoral policies and laws that were adopted at an earlier stage but have since been modified and amended considerably. This includes, for instance, regulations on agricultural development, water protection and use regulations, fishery and hunting, wildlife conservation and, of course, forest policy and legislation (Figure 2).

Figure 2: Public Policies with Important Impacts on Sustainable Forest Resources Utilisation

A centrepiece of the expanding network of environmental and natural resources legislation is nature and landscape protection. It has immediate and, in many cases, far reaching consequences for the status and use of various categories of forest lands as well as for current forestry practices. There may be considerable differences between regulating uses and management requirements. Legislation increasingly recognises that

forest management is subject to review and assessment with regard to nature conservation. It establishes a *de facto*, and in some countries a formal, participation of conservation and user groups in decision-making processes. Ecological and landscape inventories are becoming an important source of information for public and private nature conservation organisations. The forest authorities are obliged to consider ecological and protection aspects with the same attention as they examine long- and short-term forest production, silvicultural and economic development objectives. This again encourages consultation processes among governmental agencies competent in regulating forestry matters, environmental protection, land-use planning and rural development.

Figure 3: Public Policies with Important Impacts on Forestry and Wood Processing

The development potential of the forestry and wood processing industry is influenced by factors such as population growth, economic growth, liberalisation of trade, new markets for forest products, and the short- and long-term production potential of large forest regions. An important factor is the price of energy which influences the relationship between processed wood products and competing materials. Public policies and laws determining macro-economic trends are of considerable importance. This refers for instance to economic growth and employment, public finances, public infrastructure and communications, energy, research and technology development (Figure 3).

International forest-related instruments contribute to the establishment of multilevel policy networks (Figure 4). They are initiated by national governments, which negotiate the framework of co-operation and at the same time are the principal addressees and agents of implementation. An increasing range of continental and regional processes involving multilateral and supranational entities form the international system at present, for example, the Alpine Convention (Tarasofsky, 1995; Schmithüsen and Ponce 1996). International and supra-national agreements and instruments reflect primarily global or continental concerns. They have, however, immediate consequences for the development of rural areas, from which the problems originate and where the solutions and development opportunities are to be sought.

Figure 4: Public Decision Making and Decision Impacts within International, National and Local Networks

At the global level, free trade, environmental protection and biodiversity are dominant topics. Forest-related aspects are; increased industrial uses through access to new

areas, reduction of large-scale deforestation, and maintenance of a minimum proportion of natural forests. At the supra-national level, major issues are structural changes in agriculture, and the protection of environment and of water resources. At the national level, emphasis is on forestry and wood processing as productive sectors of the economy, and on the regulation of forest management practices. At local levels, multiple forest uses providing employment, protection and recreation are of immediate concern.

Challenges to Research on Policy and Law Developments

New Strategies in Forest Resources Management: The expanding policy framework for forest resources management - both in its multisectoral dimensions as well as in its relevance to different political levels - requires new strategies from landowners, a high amount of process-steering on the part of public agencies, and concerted decision-making on the part of the principal users and environmental groups. The following points are of particular relevance:

- Land-use decisions can only be made in relation to specific situations and combinations of interests.
- The primary responsibility for land management is with the forest owners; they are not obliged to provide external benefits beyond legal requirements.
- It is necessary to institutionalise the involvement of the relevant interest groups and of local public entities in land-management decisions and practices.
- Multifunctional forest uses need to be balanced between the commitments of user groups and public entities and the benefits they accrue.
- Sustainable forest management requires organised mediation and arbitration processes that are facilitated and legitimised by public process-steering mechanisms.

Financial Arrangements for Multiple Forestry Outputs: Public policies and legal provisions that favour an adequate transfer of resources are instrumental in generating a combination of private and public benefits, and for developing the potential of the rural space. They set the framework for interactions between land owners, immediate beneficiaries and public entities in accordance with the principle of subsidiarity. Rural policies have to be concerned with multiple outputs and services from productive land management and natural resources conservation requiring different sources of financing (Pratt and Preston 1998). In addition to market proceeds, this may include contributions from user groups, as well as incentives and compensations from different levels of the

political community. Such an approach leads to a sharing of financial commitments, which is consistent with the economic realities of multiple-use forest land management.

Shift from Regulation to Joint Management Responsibilities: A shift from state control to legislation which favours new forms of joint management involving forest owners, the private sector, non-governmental organisations and public authorities is presently taking place (Schmithüsen, 1996). Legislation sets a framework for defining the requirements and performance standards of the parties concerned. It supports efforts to develop co-operative forms of decision-making and contractual arrangements with third parties. Guidelines for best management practices and procedures for mediation and the exchange of information are becoming institutionalised. Public authorities are increasingly involved in process steering and the implementation of more comprehensive programmes of land management. Negotiated activities on a contractual basis are replacing direct governmental intervention and require a more precise determination of targets, outcomes and impacts of public policies.

Investment in Resources Management: Sustainable uses of forests mean that the rate of resource consumption and the environmental impacts which follow from it are a constitutive part of management decisions. The use of forests is not a mobilization of production inputs and consumption values without costs. Sustainable forestry practices require re-investment or new investments to maintain and increase productivity and an adjustment of use intensities to the available potential. This needs a legitimate basis for arbitration between many economic and social interests.

Comparative Research on Legislative Developments: Recent changes in laws and regulations show a variety of approaches and may be judged from different points of view. The following are criteria that are particularly relevant for an analysis on the advancement of legislation:

- *Consistency* requires the compatibility of regulations with constitutional values and democratic rules, with national policies addressing land-use, economic development and environmental protection, and with international commitments and multilateral agreements.
- *Comprehensiveness* refers to the objectives of legislation with regard to forest protection and forestry development, different types of forest tenures, and the rights and responsibilities of various categories of forest owners.
- *Subsidiarity* relates to the role of forests as national, regional and local resources. It also relates to the double nature of forests as private production means that

may be used according to the decisions of land owners and as resources that yield numerous benefits to the community. Subsidiarity indicates to what extent public programmes support the activities of land owners.

- *Applicability* addresses in particular the organizational framework of public forest administrations in relation to changing responsibilities and tasks, and to appropriate forms of forest owner and interest group participation in regulating forest uses and management practices. Co-ordination of competencies among public entities is an important aspect in evaluating the applicability of new or amended regulations.

Research on Policy and Legislative Networks: The linkages between an increasing number of policy areas, the superposition of international and national political actors, and the increasing importance of sub-national and local entities are challenges to policy research. This refers, in particular, to implementation processes based on the transfer of financial resources in order to achieve multiple political goals for sustainable development. There is a need for research on methodological approaches to assess positive and negative impacts of sectoral policies on different land uses, cross-sectoral policies on environmental and nature protection, and regional development programmes. The combined effects must be analysed within an increasingly complex system of political governance, in which international and supra-national legal instruments influence national and local policy objectives. Research designs should investigate the impact on public opinion and on land management decisions.

Research on Process Steering Related to Multilevel Governance: The distribution of public competencies, financial and administrative arrangements, and decision-making procedures need particular attention. The role of land owners, local entities, non-governmental organisations, and the private sector are important research components. The same applies to research on bargaining processes and appropriate contractual arrangements. Case studies on negotiation, mediation and contractual arrangements contribute to a better understanding of the relationships between major user groups of the rural space. Investigations on present and future resources potentials, as determined by benefits (outputs) and investments (inputs) within a common flow of financial transfers, make the discussion on improved land development and landscape protection more substantial.

Evaluation Research on Implementation and Results: Empirical research on the evaluation of the impacts of existing policy networks and on the successes and failures

which result from them, are of considerable interest. Major issues are the relevance, implementation possibilities and effective contribution of various policy objectives and instruments to sustainable resources utilisation. Studies on implementation require an examination of programme outputs from public entities and non-governmental organisations with delegated competencies, and of the outcomes determined largely by land owners and land managers. Criteria for the evaluation of results are primarily the contribution of public policies and legislation to the improvement of living conditions, and to environmental and biodiversity conservation.

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