

Understanding cross-sectoral policy impacts

policy and legal aspects

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***Understanding Cross-
Sectoral Policy Impacts:
Policy and Legal Aspects***

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1. NEED FOR CROSS-SECTOR POLICY COORDINATION

The conditions for policy-making have changed fundamentally as reflected in trends towards globalization, multilevel policy networks, privatization and increased democratic participation (Box 1.1). International treaties and norms add new dimensions to the existing patterns of governance at national, regional and local levels (FAO, 1999; UNFF, 2001). The distinction between private enterprise and public administration is increasingly permeable. The private sector has to deal with the incorporation of external effects in management and public authorities start to work with models from business administration. Current trends in national and international politics are important because they:

- influence the behaviour of citizens, land users and land managers;
- lead to an increasing number of linkages among different public policies and laws;
- produce complex political networks and multilevel policy frameworks;
- require more effective forms of cooperation, conflict resolution and public arbitration;
- need concerted and integrative approaches in policy implementation;
- determine the competences and steering processes among public administrations;
- require specific information on economic impacts and trade-offs;
- need evaluation of the combined policy results.

Box 1.1 – Important trends influencing public policy and law

- Globalization of the economy and of trade.
- Internationalization of environmental and nature protection.
- Privatization and a changing understanding of the role of the state.
- Participation of stakeholders and the public.
- Influence of non-governmental organizations in public decisions.
- Diversification of society's demand for forest goods and services.

People want politics and laws to be transparent and responsive to their needs. They expect that measures taken by government and public administrations are effective and efficient. People also demand more information on economic and environmental issues and more participation in policy formulation and implementation. In such an environment policy-makers and civil servants need to take into account important linkages which exist between different public policies as well as their local, national and international dimensions. Policy development and implementation need to be based on substantial and flexible interactions between government and the stakeholders concerned, such as citizens' action groups, land users and land managers, private companies and community organizations.

Civil society expectations are high and extend to new issues, in particular to environmental protection and sustainable development. Society's demands for goods

and services from forests and the forest sector are changing and growing. Forests are expected to provide timber, protect watersheds and soils and provide shelter from natural disasters. They are expected to host a wide range of unique species and offer a scenic backdrop for sportsmen and city dwellers seeking tranquillity and recreation. New demands, such as the use of forests as carbon sinks, illustrate that the social meaning of forests is a dynamic one. It can be subject to rapid and unpredicted changes. SFM is one option among several land use alternatives. This means that there is competition between maintaining the forest cover and land clearing, and between the forestry sector and other sectors of the economy. In fact, in countries with a rapidly growing population the conversion of forests to other land uses is often a necessity and may, if properly managed, contribute to the sustainable development of a society. However, the growing pressure on forest lands is to the disadvantage of many users and often the poorer part of the population. In other regions and countries, forested areas increase and provide new opportunities for goods and services.

A framework of public policies and laws with coordinated aims, strategies and instruments is essential in order to overcome complex problems and develop more comprehensive solutions that correspond to the overall goal of sustainable development. Taking cross-sector impacts into account and approaching problems in a more integrative manner are key concepts for improving the effectiveness and efficiency of public policies, legislation and administrative decisions and activities. An important trigger for nations and the international community to focus on cross-sector impacts and policy linkages was UNCED. In Agenda 21, cross-sector approaches are seen as a prerequisite for the sustainable development of society. The separation of land management issues by various public policies is considered as a reason for the lack of development which balances economic advancement, sustainable ecosystem management and environmental protection. A more comprehensive approach is advocated which integrates economic, social and environmental policy objectives. National governments and the international community are advised to pay more attention to cross-sector impacts and to develop more consistent public policy frameworks for sustainable development (Agenda 21, Chapter 8 - Integrating environment and development in decision-making).

The need for more coordination between sectors relevant to forestry development and forest resources conservation is underlined, for instance, in Chapter 11, Sec. 31(e), of Agenda 21 on combating deforestation. It is also advocated in Section 9 of the non-legally binding authoritative statement of principles for a global consensus on the management and sustainable development of all types of forests adopted during UNCED. The Intergovernmental Panel on Forests (IPF), and subsequently the Intergovernmental Forum on Forests (IFF), called for inter-sector approaches and coordinating mechanisms with all programmes and projects affecting forests. In particular, issues affecting land use, poverty, food security, energy needs and environmental protection are seen as important (Commission on Sustainable Development, 1996). Enhancing policy coordination and fostering cross-sector cooperation is now a core element in the mandate of the United Nations Forum on Forests (UN ECOSOC, 1999, 2000; UNFF, 2001).

The World Summit on Sustainable Development (WSSD) reconfirmed the outcomes of the major United Nations conferences and international agreements. The plan of implementation adopted at WSSD builds on the achievements made since UNCED and expedites the realization of the remaining goals. The decisions of WSSD 2002 place forests in a coherent and comprehensive context of sustainable development and

as a natural resource base for economic and social advancement. They acknowledge the multiple and varying functions of forests for poverty alleviation, as raw material and energy sources, and as natural habitats and environment. The implementation plan highlights the role of forests in several policy domains such as natural resources management (Section 24), agriculture (Section 40d), desertification (Section 41d), mountains (Section 42b) and sustainable development for Africa (Section 62n). It also shows that forests and forestry development are closely linked to the decisions that address measures on climate change (Section 38), biodiversity (Section 44) and the institutional framework for sustainable development (Section 137 ff.). This implies that international processes, for instance the goals of the climate change and biodiversity conventions, have to consider more systematically the need for improvements in the forest sector.

It follows as well that forest policies have to integrate more strongly with environmental and nature protection objectives. The provisions on forests (Section 45) focus on the importance of SFM of both natural and planted forests for timber and non-timber products as essential to achieve economic and social progress. It stresses forest management as a critical means to eradicate poverty, to reduce significantly deforestation and to halt the loss of forest biodiversity and land and resource degradation. Its role in improving food security and access to safe drinking water and affordable energy is specifically mentioned. Altogether, SFM provides multiple benefits of both natural and planted forests and trees, and contributes to the well-being of the planet and of humanity. Achievement of SFM, nationally and globally, through partnerships among interested governments and stakeholders, including the private sector, indigenous and local communities and non-governmental organizations (NGOs), is an essential goal of sustainable development.

Cross-sectoral linkages are now important issues within the system of the UN agencies. FAO has launched several programmes in agriculture, water management and forestry which examine positive and negative impacts of relevant policies and legislation on the integrated use of natural resources. Other agencies such as UNDP are committed to more effective inter-agency coordination and support of member countries in order to foster a more consistent approach in addressing sustainable management of the resource base. The World Bank and the Regional Development Banks in Africa, Asia and Latin America play a catalysing role in integrating different public policies within the overall framework of sustainable development. The statements of the World Bank underline the urgency to contribute to the dialogue with governments towards more effective coordination of public policies and projects. A new and more comprehensive cross-sector approach is considered to be of particular importance. The need for such an approach follows from the observation “that the impacts on forests and forest-dependent peoples of what the Bank does in support of policy reforms and investments outside the forest sector are equal to, or even greater than, its forest sector activities. Non-forest interventions, such as rural development and infrastructure programs and projects and economic adjustment measures, must be carefully formulated to take account of their influence on forest outcomes” (World Bank, 2002: 2).

In accordance with Chapters X and XI of the Plan of Implementation of WSSD 2002 addressing the institutional framework for sustainable development, the international development banks are increasingly using their comparative advantage in analyzing and coordinating policies and projects and in assisting governments to launch and implement cross-sector approaches that foster SFM or ensure that negative

cross-sector impacts of investment projects in areas with high conservation and protection values are minimized.

Investment projects now focus to a considerable extent on the combined objectives of poverty alleviation, economic development and protection of environmental values.

2. RELEVANT POLICY DOMAINS

2.1 Public policies

The term public policy designates the contents and choices made in specific fields or sectors as determined by dominant plans, goals and actions which regulate important issues of public concern (Parsons, 1997: 16). Public policy analysis describes these contents and explains them in relation to the prevailing institutional setting, the polity and, as influenced through political processes, the politics. Public policies and law are important because they:

- steer government intervention;
- influence markets and market transactions;
- concern the immediate decisions of consumers;
- have important impacts on the behaviour of land users and land managers.

In a state of law public policies are based on constitutionally founded competencies of the state and are determined through laws, regulations, rules and other decisions of public authorities. Nationally or locally relevant combinations of policies change over time. Driving factors are new economic needs, political demands and social values. Specific combinations of policy domains and laws depend, for instance, on:

- the stage of socio-economic development;
- the demands for goods and services;
- the prevailing cultural values;
- the extent of forest area and its biodiversity;
- the productivity and fragility of ecosystems;
- the establishment of a framework for the promotion of development providing subsistence and well-being as, for example, through technology, environmental or educational policies.

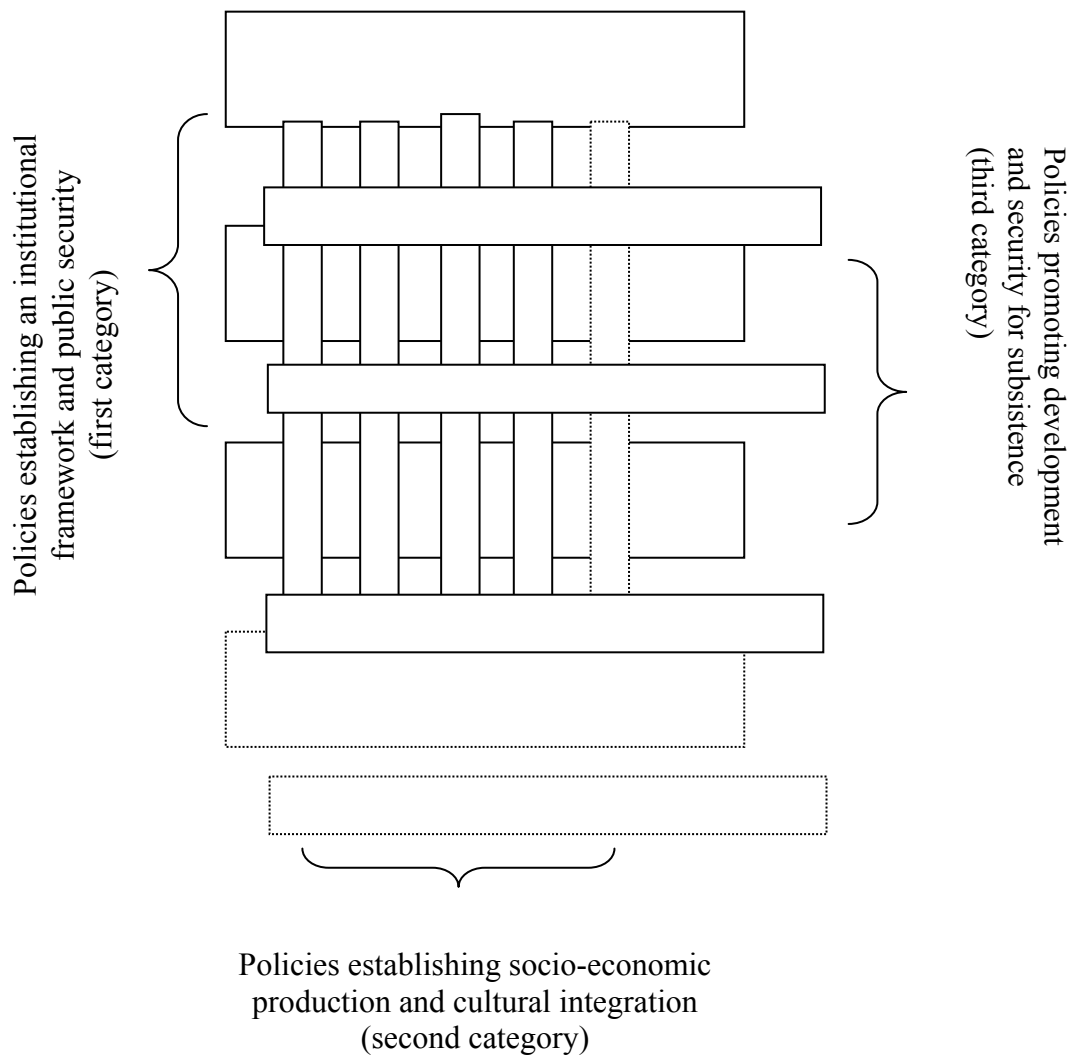
Figure 1.1 illustrates the dependencies between categories of public policies. Policies of the first category have strong forward linkages with most other policy domains. The establishment of a constitutional framework and of a public security system are fundamental to other policy areas as they provide the foundation for state interventions through guaranteeing the rule of law. Policies of the second category have strong backward links to the constitutional framework as well as important forward linkages to the sector and cross-sector policy programmes of the third category. It is obvious that economic and finance policies, for instance, influence many other policy areas.

There are also important feed-backs from the third category of policy domains inasmuch as education, technology or environmental conditions determine economic productivity and income generation. Policies of the third category promoting development, security of subsistence and the well-being of people depend to a large extent on backward linkages to social and economic policies as well as on the

constitutional framework that regulates, for instance, ownership rights and entrepreneurial activities. Sector policy programmes also show a high degree of positive and negative connections among each other.

The fact that public policies are complementary and have a considerable number of linkages among each other has far-reaching consequences for the way in which states and governments are able to steer political decision and implementation processes. Many issues, in fact, cannot be tackled by one single policy domain or body of specific legislation. Effective solutions for most societal problems have to be found through different agencies and actors as well as through coordination among the goals and instruments set out in different policy areas.

Figure 1.1 - Relationships between different categories of public policies

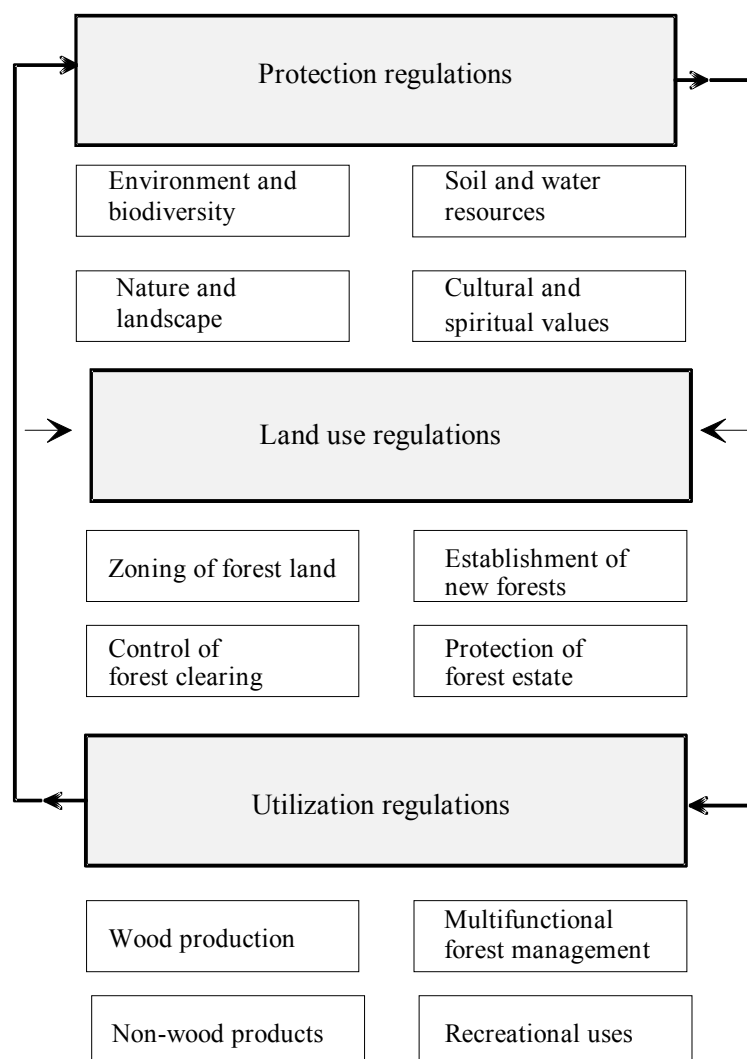


Source: von Prittwitz *et al.*, 1994 : 54

2.2 Forest policies and law

The objectives of national forest policies have become more diversified and comprehensive and acknowledge both the importance of production as well as conservation. Their goals refer to the role of forests as multidimensional resources, their economic potential and their importance in the environment. They address a variety of ecosystems, the need to maintain biodiversity and the preservation of forest lands for reasons of nature and landscape protection. Policies stipulate increasingly the need to balance timber production, recreational uses and the protection of forests for soil and water conservation and against impacts from natural calamities. With regard to conservation and sustainable utilization, different types of policy objectives and regulations exist (Figure 1.2).

Figure 1.2 - Forest policy regulating protection, land use and utilization



Protection regulations refer to measures on 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. Utilization 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 as well as public access to forests and recreational uses.

An important aspect in recent forest policies is 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. Where the national level remains responsible for forest conservation and development, sub-national entities become more strongly involved in policy formulation and implementation. Altogether, this provides more opportunities for participatory political decisions and for the negotiation of locally adapted solutions. Transfer or delegation of competencies allows for more participation of people in democratic decision-making processes in which they can express their specific interests and values associated with forest management and utilization.

As a result of policy and institutional changes a significant acceleration in the revision of forest-related laws has taken place around the world (FAO, 1999; FAO, 2002). Important trends in new and revised legislation concern provisions on local forest management, environmental functions of forests, management planning, forest utilization contracts and procedures for implementation (Box 1.2).

On the whole new policies and legislation have become more proactive in many countries and rely more widely on incentive and monitoring measures. They set minimum requirements and performance standards. They confirm forest owner rights in using services offered by the private sector and promote contractual arrangements with third parties. Guidelines for best management practices are increasingly used. Implementing forest regulations implies precise demands on the tasks and services to be performed by administrations and public entities with more 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 necessitate the development of criteria for financial controlling. They measure efficiency (output/input), effectiveness (attainment of objectives) and economy (real costs/standard costs) based on best practices. These developments require on the side of public authorities more emphasis on process-steering and a shift from individual decisions and projects to comprehensive land management and resources conservation programmes.

Box 1.2 – Important trends in forest legislation

Promoting local forest management: Recent law reforms give a great deal of attention to the promotion of local management arrangements: first, mechanisms for the devolution of forest management to local communities, user groups or family households are established in order to facilitate co-management agreements, community forestry leases and the delineation and titling of communal or cooperative forest tenure; second, in some countries new forest legislation shows increased recognition of historical land or territorial claims of local people. Indigenous people's rights have thus been acknowledged in several countries in the African, Asian and Latin American regions. In Central and Eastern Europe, new laws contain provisions which allow the restitution of land including natural forests and commercial plantations to dispossessed communities and individuals; third, the move towards decentralized competences to local governments in forest management leads to use and management regulations which provide more consultation and participation of local communities and the public.

Enhancing environmental functions of forests: In recent years and particularly since UNCED in 1992, national legislation in many countries reflects more explicitly the environmental importance and the need to protect more systematically the biodiversity of forest ecosystems. This is apparent in the preamble or in the statement of objectives of many forest laws which refer to protection and preservation objectives, sustainable forest management and the country's international commitments. More specific provisions relate to inventories, planning procedures and classification regulations which allow a more integrative use of forest resources balancing economic and environmental requirements. Recent forest laws allow for more flexible land classifications including the designation of forest nature reserves, watershed forests and protection forests. Environmental impact assessment is another important tool that gains importance, either by explicit reference in forest legislation or through general environmental laws.

Forest management planning: There is a discernible trend in forest legislation to broaden the objectives of management planning. Legal provisions increasingly oblige public and private planners to use not only economic planning criteria but also to consider a range of ecological and social requirements. Plans for local management units should be consistent with regional and national land use planning and with nature and landscape protection programmes. Recent forest laws also provide for more opportunities of local stakeholders and the public to intervene and participate in forest management planning. An important aspect in making the legal provisions more effective is the need to determine the legal status of management plans.

Forest utilization contracts: In countries in which public authorities allocate to the private sector timber harvesting and forest management rights through concessions and forest utilization contracts, the legislative framework regulating this form of tenure needs further improvements. This refers in particular to the definition of procedures and criteria that govern the granting of concession and contract tenure. More recent laws and regulations determine in some detail the framework leading to the awarding of a contract and the basic elements for an auction and bidding system. This refers, for instance, to the content of the call for bids, the form and content of submissions, deadlines and decision-making time frames, and the professional qualifications of auctioneers. The law may specify under which conditions governments may use non-economic criteria to distinguish among competing bids. Specifying the process of how to award contracts leads to greater transparency and accountability, establishes equal conditions among competing firms and ensures that technical specialists are involved in the decision-making process. A consistent process of evaluation and granting forest utilization contracts may also better promote the interests of third parties and the public.

More emphasis on implementation: While it is obvious that considerable efforts have been made to adjust forest laws to a widening range of economic, social and environmental concerns and demands, the most important problem at present is to overcome the discrepancy in many countries between the content of law and its implementation on the ground. Effective legal reforms need to be commensurate with the capacity and willingness of governments and other private and public actors to implement new legal commitments that need to be monitored closely with regard to the effects they produce.

2.3 Policies and law in other sectors

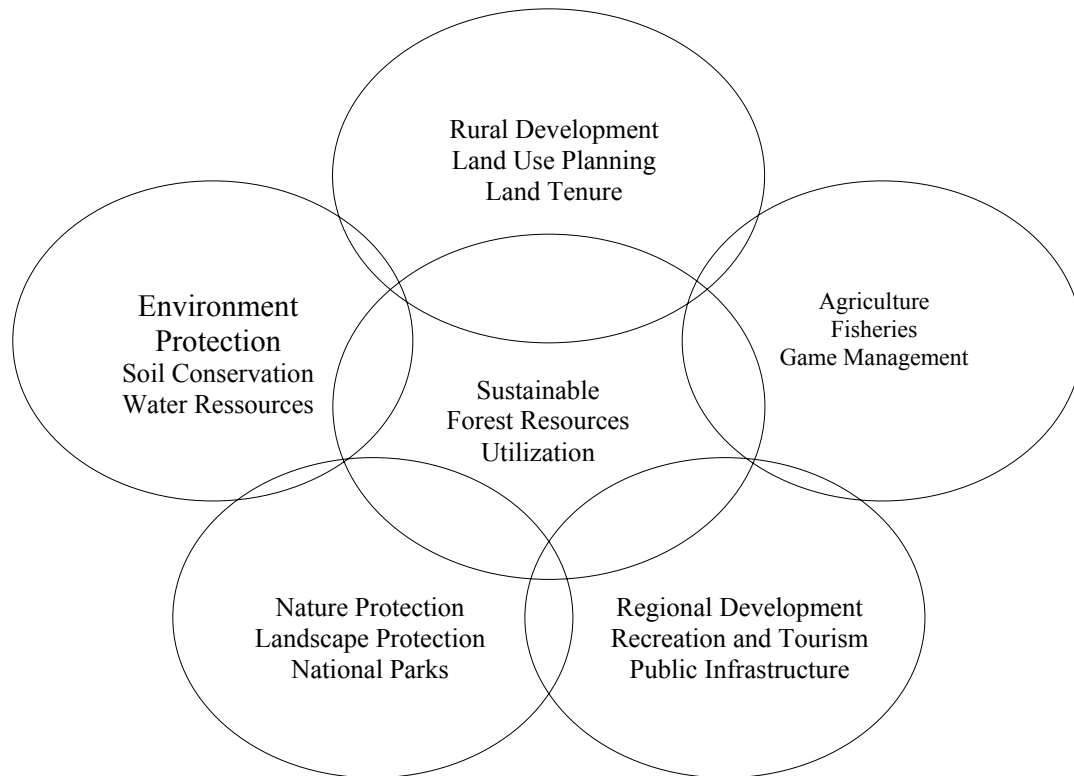
There is a strong interdependence between forest policy and other public policies of a more general scope such as economic, natural resource and environmental policies. They have substantial positive or negative effects on the development and implementation of forest policy programmes and may thus foster or impede sustainable land use and forestry practices. The development of forestry and wood processing is determined by such factors as population and economic growth, liberalization of trade, and technological innovations which create new demands and markets for wood products as well as for other goods and services. An important factor is the price of energy which influences the relationship between processed wood products and competing materials. Public policies related to economic growth, employment and social affairs; energy and industry; research, technology development and education; infrastructure and communication set the conditions for the development of the forestry and wood processing sector.

Forest conservation and sustainable forestry practices are prominent examples of political issues that are addressed by several policy domains. A number of policy domains that are today of particular relevance have emerged and gained importance during the past 30 years. They relate to environmental protection, nature and landscape conservation, land use planning and regional development. Policies addressing specific sectors of the economy such as agricultural policy, water protection and water management policies, fishery, hunting and wildlife conservation policies are of great importance in this context (Figure 1.3).

A fundamental element is the principle of sustainable land use and management of the natural resource base in an integrated manner. It has immediate and far-reaching consequences for the status and uses of different categories of forest lands. It leads to new approaches in regulating forest uses, management requirements and current forestry practices. Nature and landscape policy, for instance, provides increasingly that forest management be subject to review and assessment with regard to ecological criteria. It establishes a de facto, and in some countries a formal, participation of conservation and user groups in decisional processes. Ecological and landscape inventories become an important source of information, planning and monitoring forestry activities. It follows that forest owners and managers as well as public forest services have to consider ecological and protection aspects more intensively than in the past. This again encourages consultation processes among public and private stakeholders. It also calls for more explicit coordination among governmental agencies that have competencies in forestry matters, environmental protection, land use planning and rural development.

The growing complexity of public policy domains addressing land uses and management of the natural resource base is reflected in corresponding developments of legislation. While each country has its own constitutional context and traditions in organizing its administrative law system, one can nevertheless identify, in addition to the global trends mentioned at the beginning of the chapter, driving factors that have influenced legal changes since UNCED in 1992 (FAO, 2002). These, for instance, are concerned with transition to market economies, regionalization, good governance and devolution and decentralization of governmental powers (Box 1.3).

Figure 1.3 - Public policies with impacts on sustainable forest management



The content of legislation reflects the variety of socio-economic conditions and of the physical resource base within countries and regions. However, there are fundamental issues which have to be addressed by an appropriate legal framework for sustainable management of the natural resource base (FAO, 2002). Key questions to be asked in assessing strengths and weaknesses of legal frameworks regulating sustainable use of the natural resource base are:

- Does the law provide an appropriate positive regulatory environment for activities in support of sustainable development?
- Is the law relatively free of unnecessary regulatory constraints that could inhibit activities that are essential for achieving the goals of sustainable development?
- Are the mandates for different institutional actors clear, coordinated and desirable?
- Does the legal framework provide mechanisms by which people may obtain meaningful and secure rights to the assets essential for their pursuit of sustainable livelihood?
- Does the law enable the formation and empowerment of appropriate stakeholder organizations?

Box 1.3 – Driving factors influencing legal changes

Transition to market economies: With the collapse of centrally planned economies many countries have been faced with the need to create new legal institutions in order to allow a transition to a market economy. Fundamental legal changes have been undertaken in order to define property rights in land management, set a framework for exchanging such rights, determine the rules for the functioning of markets by demand and supply, and create the frame conditions to promote competition among the actors. Many countries have thus been engaged in legal reforms from changing their constitution and civil codes to laws on taxation, banking, status of companies and commercial transactions in order to create a modern national legal framework necessary for the functioning of a market economy.

Regionalization: Changes in national legislation result from the growing number of regional entities. This, for instance, is the case in countries engaged in the process of joining the European Union (EU) which are faced with the task of conforming laws on a wide range of subjects in agriculture and natural resources law to EU requirements. MERCOSUR, CARICOM and NAFTA are other regional entities which have influenced the respective national legislations of their members.

Good governance: The goal of good governance increasingly influences legal and institutional reforms. Concepts such as participation in decision-making, access to information, transparency and accountability start to influence law design in many sectors as well as the way in which governments interact with civil society on matters such as awarding forestry concessions, setting food control standards, or monitoring environmental compliance. The Declaration of the World Food Summit, for instance, gave special emphasis to the importance of strengthening the rule of law and good governance to solve socio-economic problems and achieving food security.

Devolution and decentralization: There is a growing move in many countries towards decentralization and devolution of government powers. Legal frameworks are being changed to reflect policies promoting local decision-making and community-based initiatives in a wide variety of fields. Decentralization gains importance as a strategy for reform in national governments and international agencies and finds expression in numerous legal instruments. The promotion of community initiatives and engagements figures prominently in current thinking about environmental and natural resource management. In forestry, water management, fisheries, land use, wildlife and other areas the emphasis is on moving away from more or less exclusive state competencies to stronger management responsibilities and property rights in local governments and communities. The political commitments made at UNCED, in particular Agenda 21, the convention on biological diversity and the Forest Principles engage governments in reviewing legislation and property regimes in order to provide a better legal framework for local government and community-based natural resources management. This requires appropriate legislation which enables and guides such activities and in many cases a significant reorientation of legal texts and public institutions.

3 CROSS-SECTORAL POLICY IMPACTS

3.1 Typological Elements for Specifying Impacts

Cross-sectoral linkages between the forest sector and other sectors result from policies that have an immediate or an indirect influence on the behaviour of landowners, forest users, governmental agencies and NGOs. Most problems in the real world relate to many different issues and do not respect the borders of legally defined policy domains or formal competencies of governmental departments. Political decisions in one policy are dynamic elements, which affect directly or indirectly other policies. Decisions made in one policy domain have usually positive and negative effects and often unforeseen repercussions in others. In fact many public policies show strong

impacts from decisions taken outside of their own field of competence. Cross-sector policy impacts can thus be defined as the supporting or impeding effects from one policy on another one. They may be the intentional result of a coordinated process of policy formulation. Others may not have been intended by policy-makers and their effects are revealed only during the implementation process. Public interventions are, at any rate, not always well coordinated and may lead to contradictory policy results.

To a large extent the success or failure of a given policy depends on the supportive or impeding impacts that result from other policies. To assess the kind and directions of cross-sector effects among different public policies requires a thorough understanding of policy formation and implementation processes. The analysis has to take into account the combined outcomes and results from economic, social and environmental policies and law that influence forest conservation and forestry development.

In a recent survey cross-sectoral policy impacts between forestry and other sectors have been examined (Broadhead, 2001; Broadhead and Dubé, 2002). The majority of the examples were from South and Central America (32 percent), Asia (27 percent) and Africa (11 percent). Over four times as many examples of external public policies impacting on forestry (71) were mentioned by the respondents than of forestry policy having an impact on other domains. Altogether 40 percent of the quoted cases refer to policies establishing the institutional framework, 38 percent were attributed to policies addressing specific economic sectors and 22 percent concern policies promoting development. In high-income countries a considerable proportion of impacts are associated with special economic sectors. In low-income countries policies establishing the institutional framework for forest management are of greater importance.

Box 1.4 gives an overview on typological elements which serves as a checklist in order to examine the characteristics of cross-sectoral impacts from different public policy programs on forest conservation and forestry development. The listed elements facilitate comparative analysis of policy networks operating under different social, economic and ecological conditions. Each typological element is briefly discussed hereafter.

Public policy domains establishing a general institutional framework define the constitutional rules of state organization, the role of the public and private sector and the extent of intervention by government and public administrations. They establish procedural requirements for the involvement of people and interest groups in political processes and define rules for the settlement of societal conflicts. Policies of this kind relate to the macroeconomic framework, to political institutions and good governance, and to institutional aspects of social conflict resolution. Public policies that relate to specific economic sectors and to alternative land uses usually imply controversial objectives which need to be balanced in the broader context of sustainable development of the natural resource base. Policies and laws on agriculture and forestry, energy and water, or to transport and public infrastructure range in this category. Public policies promoting development and precaution for subsistence refer, for instance, to environmental protection, nature and landscape conservation, as well as technological innovation, education, research and public information. They are essential for maintaining and increasing future development options of society.

Regional economic and ecological context: Differences in population density, income opportunities or with regard to government institutions and competencies provide quite a different context for the implementation of public policies within a country. If one considers, for instance, the conditions of temperate and boreal forests as compared to those of tropical lowland forests, it becomes obvious that there are differences in the way public policy regulations operate and the effects which they produce. The same is true in comparing the conditions of densely populated regions as compared to areas with a low population density. The conditions of mountain forest areas (e.g. Alps, Andes or Himalayas) and the utilization of trees and forests in semi-arid and arid zones are addressed by other policy objectives and measures. Examples of the variety of policy and legislative goals and regulations under different ecological and socio-economic conditions are presented in the country case studies of Chapter 2. The physical conformation of the forest resources in a country, the prevailing economic and social context and the combination of goods and services in demand determine the policy framework in which they are managed.

Box 1.4 – Typological elements for specifying cross-sectoral impacts

Public policy domains

- Institutional policy framework
- Sector policy framework
- Development policy framework

Regional economic and ecological context

- Population growth and density
- Social product and per capita income
- International trade relations
- Importance of forest goods and services
- Environmental conditions
- Forest ecosystems
- Extent of forest area

Level of policy decision-making

- International
- Supranational
- National
- Sub-national

Policy instruments

- Regulatory instruments
- Incentive instruments
- Information instruments
- Process-steering instruments
- Organizational instruments

Direction of impacts

- Impacts from other policies on forestry policy
- Impacts from forestry policy on other policies
- Reciprocal impacts between forestry and other policies

Valence of impacts

- Positive impacts
- Negative impacts
- Neutral impacts

Source: Schmithüsen, Bisang and Zimmermann, 2001

Level of policy decision-making: Policy programmes originate from legislation and administrative decisions that are made at different levels of government. The constitutional repartition of competencies provides for national institutions and for sub-national public entities such as municipalities and local communes. In states with a federal constitutional structure there is a repartition between the constitutional responsibilities of the federal state and those of member states. An analysis of the relevant governmental decision-making levels and prevailing structures of public administrations is essential in order to understand the political network in which policies and legislation operate. The present trend to transfer or delegate an increasing part of national competencies and decision-making processes on forest resources management to sub-national levels and/or to local governments and institutions is of particular significance in this context.

Policy instruments: The choice of instruments plays an important role in designing and implementing a policy and produces different kinds of impact. Policies and regulations focus more and more on the determination of specific targets, precise commitments of the beneficiaries and accountability on proven results in relation to the committed public funds. Regulatory instruments are important in particular with regard to the protection of natural resources and the environment. Incentives gain importance, for instance, in promoting sustainable land uses, providing for multiple use management, maintaining biodiversity and preserving endangered ecosystems. Compensatory measures for landowners for performing specific tasks in the public interest become an important issue in integrated land management.

The direction in which policy linkages operate is another important aspect to be examined. Most of the available studies have focused so far on the influences of external policies on forests and forestry. How forestry policy objectives and instruments influence the objectives of other policy domains has until now not been given much attention. However, a meaningful examination of policy linkages between the forestry and other sectors demands a holistic approach which pays considerably more attention to the impacts of forestry policies on other policy domains. This refers in particular to positive policy linkages which result from protection forests and multiple-use forest management that exist towards agriculture, water resources management, rural development and environmental protection. A recent study on Bhutan's biodiversity policy shows, for instance, that major achievements in the domain of nature and landscape conservation result from a series of improvements in the country's national forest policy and legislation (Tsering, 2000).

Valence of impacts: Cross-sectoral policy links produce positive, negative or neutral effects in other domains (Box 1.5). The criterion for qualifying an impact as positive or negative is to be judged under the perspective of the policy domain in which it operates. Altogether it is important to identify and analyze cross-sector impacts which contribute to a more efficient and productive use of land and forest resources. Impacts which show positive effects in several policy domains provide opportunities for cooperation and alliances. A similar situation exists if impacts result in negative effects on both sides and where both domains will benefit from a change of policies. A positive valence on one side combined with a neutral effect on the other leaves room for new approaches. Prospects for improvements also exist if negative effects in one policy area can be reduced with rather modest changes in the other. A more difficult situation exists if the policy links result from measures that produce substantial benefits in one policy domain and strong negative effects in another policy area. In such cases, which are frequent in land use and natural resources management,

it is difficult to develop meaningful policy changes and cooperative arrangements. Political arbitration combined with concrete efforts to find alternative solutions in order to avoid or reduce negative effects are essential.

Box 1.5 – Positive and negative effects from external policies on forestry		
Policy domain	Positive effects	Negative effects
<i>Agriculture</i>	<ul style="list-style-type: none"> - <i>Soil protection</i> - <i>Water management</i> - <i>Wind barriers</i> - <i>Rural forestry</i> - <i>Agroforestry</i> 	<ul style="list-style-type: none"> - <i>Forest clearing</i> - <i>Overgrazing</i> - <i>Soil disturbance</i> - <i>Lack of regeneration</i>
<i>Public infrastructure</i>	<ul style="list-style-type: none"> - <i>Protection forests</i> - <i>Stand stability management</i> - <i>Infrastructure works</i> - <i>Access to areas</i> 	<ul style="list-style-type: none"> - <i>Forest clearing</i> - <i>Increased utilization</i> - <i>Ecological disturbance</i>
<i>Nature protection</i>	<ul style="list-style-type: none"> - <i>Ecosystem conservation</i> - <i>Natural forest</i> - <i>Biodiversity</i> 	<ul style="list-style-type: none"> - <i>Access restrictions</i> - <i>Management obligations</i> - <i>Production restrictions</i>

3.2 Available information

A considerable number of studies review policy developments at national and sub-national levels and contain information on cross-sector linkages influencing forestry development. They examine relevant public policies and stress the fact that their importance has to be identified in the context of a particular country and at a given time. This is the case, for instance, for a series of forest policy papers that have been

published for the African, Asian and Latin American regions (FAO 1993; FAO, 1996; FAO, 1998a). Legal frameworks in Latin and North America, Asia, Africa and Europe are addressed by publications of the FAO Law Development Service (FAO, 1998b; FAO, 1999; Cirelli, 1999; FAO, 2001b; FAO, 2002). A survey of relevant policies and cross-sectoral impacts according to broad ecological regions and socio-economic conditions has been undertaken by de Montalembert (1994, 1995). Country papers on national forest law development have been produced by the IUFRO Research Group on Forest Law and Environmental Legislation (IUFRO, Current).

Important sources of information are publications and reports which focus on specific external public policies and their positive and negative impacts on forests and forest resources management. Policy analysis has come forward from authors associated with multilateral development institutions and deals mainly with forestry issues in the tropics and subtropics (Repetto and Gillis, 1988; World Bank, 1993; Contreras Hermosilla, 2000). Valuable sources of information are country studies elaborated and distributed by CIFOR in collaboration with other international research institutes and NGOs (CIFOR Poley Listserver). Recent studies examine, for instance, the role of national parks in maintaining tropical biodiversity, land use and watershed management, land tenure and resource governance, reforestation, environmental aspects and public incentives, paper production and environment, the political economy of pulp and paper and the impact of technological change on agriculture plantations especially forest losses. Another context where policy linkages have gained considerable attention is the work of the International Panel on Climate Change (IPCC, 2001).

Kaimowitz and Angelsen (1999) provide a synthesis of major cross-sector linkages and make recommendations for policy-makers in international organizations and at national level on how to take linkages into account. The guidelines on integrated coastal area management and agriculture, forestry and fisheries provide an example of how to integrate more closely different impacts from public policies in natural resources development (FAO, 1998c). At present there is a clear trend towards studies that analyse country specific policy and legislative networks in a more comprehensive manner. Impacts are seen as being complex, varying in accordance with a particular social and economic context and depending on the prevailing political institutions. Of particular interest are policies related to macroeconomics, agriculture, transportation, mining, land tenure and planning, and environmental protection. Research designs rely on empirical case studies, analysis of legislation and official planning and project documents, expert opinion panels and literature reviews. The newer the text, the more impacts and linkages among public policies are made explicit and self-evident (Contreras Hermosilla, 1999, 2000, Wunder 2000).

The available documentation on North America shows the considerable impact that results from environmental and nature protection policies on forest resources development (Schmithüsen and Siegel, 1997; FAO, 1998). For instance, significant trends are the network of environmental regulations at the federal level in the United States which results from new air, water and soil protection policies; the effects of landscape and nature protection regulations; and the importance of laws providing for a closer integration of natural resources management at national and local levels. Important policy issues, both in the USA and Canada, are SFM practices on public and private lands, impacts from policies addressing land ownership and land uses, public resources allocation and taxation, public land management versus privatisation, and the role of local government.

In European countries major policy issues refer to integrating forestry management planning into the broader context of rural and agricultural development, and to a more consistent approach in combining forestry practices, landscape management and nature protection (Schmithüsen et al., 2000). In countries in transition to a market economy, important cross-sector linkages to forestry result from privatization and land tenure policies (Mekouar and Castelein, 2002). Countries in central and eastern Europe are in the process of adjusting land tenure, wood processing and forest management practices to the rules of competitive markets, as well as to environmental standards and SFM practices set by international agreements and the rules of the European Union. Policy linkages, and in particular those from environmental policy, are largely similar to those found in other industrialized countries. A study on the policy context for forestry and forest industry development in Europe analyses cross-sector impacts on forestry and wood supply, wood-processing industries, international trade in forest products and demands for forest products (Peck and Descargues, 1997). A recent study undertaken by ECE/FAO identifies major policy scenarios that have an impact on SFM and wood processing (UNECE/FAO, 2002).

4 INTERNATIONAL POLICY AND LEGAL FRAMEWORKS

4.1 Multilevel policy frameworks

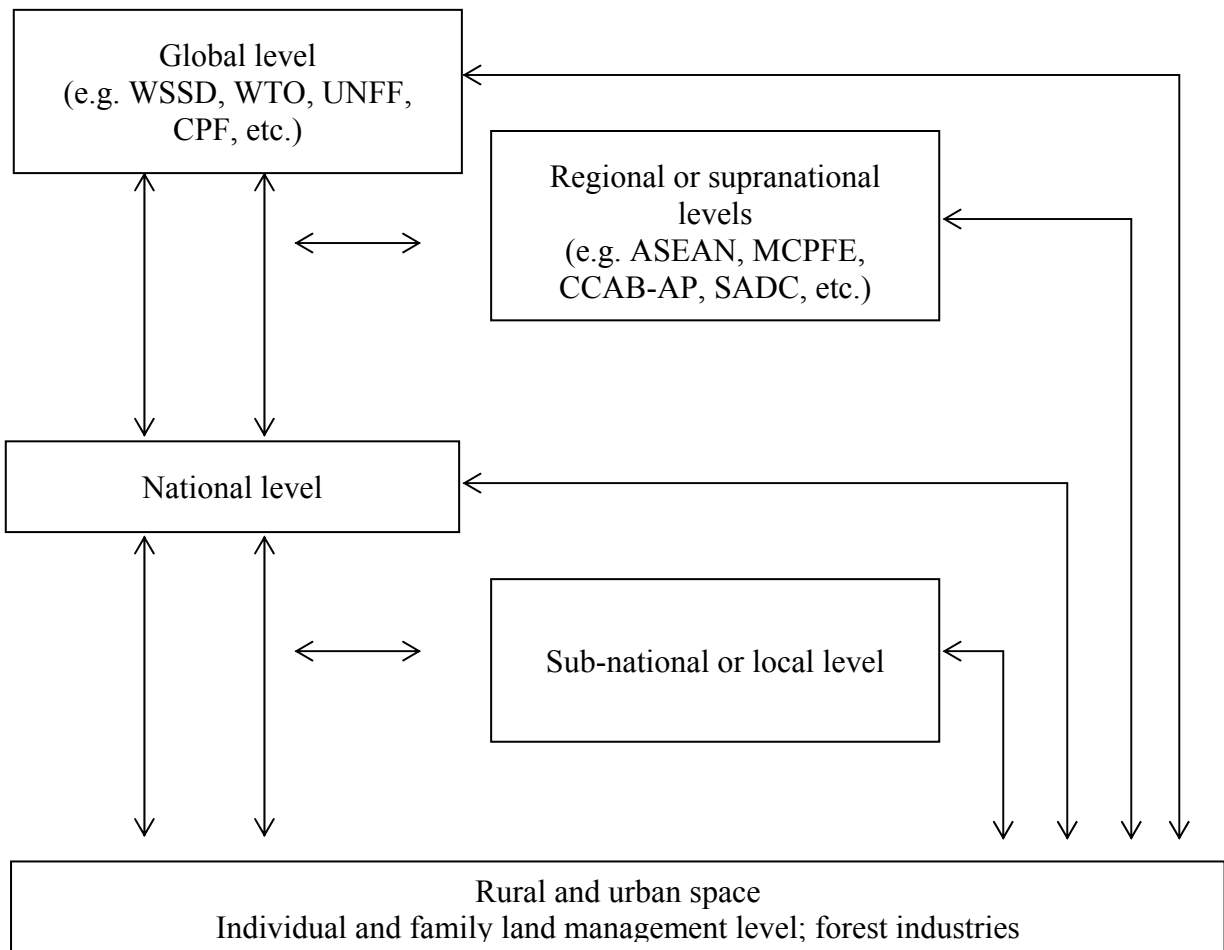
At present, an increasing range of worldwide, continental and regional processes involving the United Nations as well as multilateral and supranational entities forms the international system. This enables governments to institutionalize both worldwide and regional cooperation and to establish consensus-building processes (FAO, 2002). International commitments to sustainable development based on the principle of joint responsibilities between the international community and states are driving forces which lead to an increasingly complex framework of multilevel policy impacts (Figure 1.4).

The issues at stake vary at different levels of the policy network. At the global level, free trade, environmental protection and biodiversity are dominant subjects. 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 supranational level, major issues are structural changes in agriculture and the protection of the environment and water resources. Afforestation of marginal lands and criteria and indicators for sustainable forest development are of importance. 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 level, multiple forest uses providing employment, protection and recreation are of immediate concern. Policy-making in complex multilevel governance offers new opportunities to develop more consistent solutions that satisfy different social groups and policy actors. Box 1.6 indicates important policy networks and processes.

The IPF/IFF and UNFF processes: During its 1997-2000 deliberations, the International Forum on Forests (IFF) reached considerable consensus on the most important topics to be addressed by member countries and the international community. The active participation of non-governmental and indigenous peoples' organizations taking a leading role in a number of regional and global initiatives has

been a strong input into the complex and sometimes controversial international dialogue. At its fourth session in 2000, IFF recommended that the Economic and Social Council (ECOSOC) and the UN General Assembly establish the United Nations Forum on Forests (UNFF). UNFF is at present the major UN political platform which integrates national governments, NGOs, the private sector and international organizations in forest-related policy discussions.

Figure 1.4 - Public decision-making towards SFM at international, national and local levels



Collaborative partnership on forests: The collaborative partnership on forests (CPF) was established in April 2001, in response to the invitation issued in the resolution of ECOSOC establishing UNFF in October 2000. CPF member organizations (CBD; CIFOR; FAO; GEF; ITTO; UNCCD; DESA; UNDP; UNEP; UNFCCC; World Bank) support UNFF in three main ways by:

- supporting the implementation of IPF/IFF proposals for action;
- providing expertise and advisory services to UNFF;
- assisting UNFF in monitoring, assessment and reporting on forests.

Regional forest-related initiatives: An important development which is complementary to the worldwide international framework is the recent initiative for more cooperation among regional groups of countries (FAO, 2001a: 110). Major

issues that appear from the objectives and work programmes of the regional initiatives are a closer integration between different policies addressing natural resources utilization and environmental protection, and the promotion of a more consistent policy framework for forest conservation and the development of the forest industry sector.

Box 1.6 – Policy networks and processes

- IPF/IFF and UNFF processes
- Collaborative partnership on forests
- Regional forest-related initiatives
- Conference on Central African Moist Forest Ecosystems (CEFDHAC)
- Yaoundé Declaration
- Southern African Development Community (SADC)
- Central American Council for Forests and Protected Areas (CCAB-AP)
- Treaty for Amazonian Co-operation (TCA)
- Association of Southeast Asian Nations (ASEAN)
- Ministerial Conference on the Protection of Forests in Europe (MCPFE)
- Pan-European work programme on the conservation and enhancement of biological and landscape diversity in forest ecosystems
- Regional processes on criteria and indicators.

In Africa several regional initiatives have been engaged. The *Conference on Central African Moist Forest Ecosystems (CEFDHAC)* was launched in 1996 as a forum for consultation, information exchange and the strengthening of sub-regional cooperation in matters concerning Central African forests. It is essentially a process with governmental and non-governmental stakeholders. The Yaoundé Declaration was adopted by the summit of Central African Heads of State on the conservation and sustainable management of tropical forests in 1999. It is mainly a government-steered process aiming at actions to harmonize national policies; participation by the rural population and the private sector in decisions on forests; creation of transboundary protected areas; reduction of poaching and unsustainable exploitation; financial systems supporting SFM; and international cooperation. The Southern African Development Community (SADC) provides a framework for cooperation in forestry through its forestry sector policy and development strategy of 1997. SADC's forestry programme of action provides for developing and implementing regional projects focusing on forestry training and education; improved knowledge of the resource base; forestry research; forest resources management; forest industries, markets and marketing; and environmental protection.

The *Central American Council for Forests and Protected Areas (CCAB-AP)* was established in response to the Central American Agreement on Biodiversity which was signed in 1993. It acts as an advisory body of the Central American Commission on Environment and Development (CCAD) and focuses its strategic work on research and inventory of species; economically sustainable uses of forests and wildlife; valorization of environmental services; strengthening and consolidation of Central America's national systems of protected areas; promotion of co-management within protected forests and wildlife areas; studies on the agricultural frontier and on agroforestry; and promotion of a regional strategy for the prevention of forest fires. The Treaty for Amazonian Co-operation (TCA) fosters collaboration among member

countries with regard to policies and activities in agriculture, fisheries, forestry and the environment in the Amazon watershed. Forest-related activities carried out under the treaty concern the development of common criteria and indicators for SFM; research on the potential of secondary forests within the region; and the formulation of a common strategy for the valuation of natural tropical forests as a carbon sink.

The *Association of Southeast Asian Nations (ASEAN)* implemented a strategic action plan for cooperation (1999-2004) as the first step in a long-term strategy for the food, agricultural and forest sectors. Specific forestry objectives focus on SFM; joint approaches addressing international and regional forestry issues; promotion of intra- and extra-ASEAN trade in forest products and private sector participation; increasing productivity and efficient utilization of forest products; and capacity building and human resources development. Following the large-scale fire problems of 1997, monitoring of hazards and measures to prevent forest fires have become an important part of cooperation within the region and with international partners. Other activities that have led to increased regional cooperation concern the development of common criteria and indicators for SFM; the development of comprehensive forest information databases; the establishment of a network of demonstration forests; cooperation in using geographic information systems; and the promotion of low-impact logging and modelling growth and yield in forests.

The *Ministerial Conference on the Protection of Forests in Europe (MCPFE)* involves more than 40 countries including the Russian Federation. The initiative started in 1990 with the purpose of addressing common threats to the forests in the region as well as opportunities for improvements in forest management. It consists of a series of ministerial conferences at which resolutions are adopted and mechanisms for follow-up activities defined. The third conference held in 1998 in Lisbon adopted two resolutions. The first one calls for further development of human resources through increased dialogue with the public; education and training; more involvement of women in forest-related activities; and enhancing the socio-economic functions of forests. The second one is of particular importance inasmuch as it endorses the Pan-European criteria and indicators for SFM and the Pan-European operational guidelines for sustainable forestry practices.

The work programme formulated in 1999 covers four main areas which refer to dialogue with society based on:

- public participation, public relations and education;
- socio-economic issues, in particular rural development, goods and services from renewable resources, training, education and gender issues, countries in transition;
- biological diversity and conservation, in particular biological and landscape diversity, forests and climate change, management of mountain forests; and
- planning, monitoring, evaluation and reporting, in particular as related to national forest programmes and to criteria and indicators.

The fourth ministerial conference in Vienna in 2003 follows these lines and has been placed under the title “Living forest summit – common benefits, common responsibilities”. It focuses on benefits for urban societies and rural communities, building strong partnerships and tackling global challenges. An important complementary element to the activities of MCPFE is the *Pan-European work program on the conservation and enhancement of biological and landscape diversity in forest ecosystems*.

Regional processes on criteria and indicators: The development of a common grid of relevant criteria and indicators that can be used at eco-regional levels is an important necessity in order to assess and monitor progress in SFM at the national level as well as in response to internationally agreed commitments. A number of initiatives have been undertaken by governments, the private sector, NGOs and international institutions to develop and implement criteria and indicators for SFM at regional levels (FAO, 2001a: 116). In response to countries' demand there are at present nine such processes engaged in elaborating a common basis of understanding on what the principle of sustainable management implies in a given socio-economic and ecological context (Box 1.7).

Box 1.7 - International criteria and indicator processes

- ITTO criteria for sustainable management of tropical forests
- Pan-European process on criteria and indicators for sustainable forest management
- Montreal process on criteria and indicators for the conservation and sustainable management of temperate and boreal forests outside of Europe
- Tarapoto proposal for criteria and indicators for sustainability of the Amazon forest
- Dry-Zone Africa process
- Near East process
- Lepaterique process of Central America
- Regional initiative for dry forests in Asia
- African Timber Organization for the identification and testing of criteria and indicators for sustainable forest management in its member countries.

4.2 International forest-related instruments

Progressive role of international forest-related instruments: The dynamic international policy processes have led to a substantial expansion of international law on environment and development and to an increasingly complex legal and political framework for forestry (FAO, 1999: 92; 2001a: 106; 2002: 272). This refers in particular to a number of international forest-related instruments adopted during and after the UNCED conference in Rio (Box 1.8). They encourage countries to accept a broad range of obligations aiming towards a more sustainable use of natural resources. International legal arrangements have to balance multiple and often divergent interests of governments and stakeholders. This is the case with forests and forestry, which involve environmental protection at a global scale, as much as issues of economic and social development at national and local levels.

The development of international law on environment and natural resources shows to a considerable extent soft law instruments which establish foremost enabling mechanisms for international consensus building and cooperative arrangements. They facilitate compliance with legally binding responsibilities and support countries with a lower level of advancement in certain policy areas in order to agree step-by-step on a higher level of commitment. In their initial stage soft law agreements and instruments are general in purpose, leave options with regard to the time frame for implementation and provide opportunities for countries to choose their own approach in addressing problems of common concern. One of their functions is to provide working tools flexible enough to accommodate competing interests, changing situations and

evolving scientific and technical knowledge. Even if concrete results are scarce in the beginning, legal instruments facilitating a phased adoption of responsibilities can lead to substantive progress in the long run. This has been the case, for instance, with the Montreal Protocol, where a special fund was set up to finance projects addressing the reduction or phasing out of ozone depleting substances. Another example that allows for gradually increasing commitments through subsidiary instruments is the Kyoto Protocol meant to implement the convention on climate change.

Box 1.8 – International forest-related instruments and political commitments

Adopted prior to UNCED

- Convention on International Trade in Endangered Species (CITES)
- Ramsar convention
- UNESCO convention for the protection of the world cultural and natural heritage
- ILO convention concerning indigenous and tribal peoples in independent countries
- International Tropical Timber Agreement (ITTA)

Adopted at and following UNCED

- Convention on biological diversity (CBD)
- Convention to combat desertification (CCD)
- Framework convention on climate change (FCCC)
- Kyoto Protocol
- Chapter 11 of Agenda 21 and the Forest Principles
- World Summit on Sustainable Development 2002; Johannesburg Declaration on sustainable development and plan of implementation

International instruments adopted prior to UNCED 1992: Some international instruments were adopted prior to UNCED. A common feature is that most of them originated within specialized agencies of the UN addressing particular issues and problems. They refer to specific aspects of protecting biodiversity and ecosystems such as CITES, as well as the Ramsar convention protecting wetlands of international importance. Other agreements address cultural and social issues that need attention on a worldwide scale such as the UNESCO convention on the world cultural and natural heritage and the ILO convention concerning indigenous and tribal people. The International Tropical Timber Agreement refers to trade and forest resources utilization and operates under the United Nations Conference on Trade and Development (UNCTAD).

The purpose of CITES is to control and limit international trade in endangered species of wild fauna and flora. However, the impact of CITES is rather limited since the convention addresses only those species that are in danger of becoming extinct, and its regulations refer only to imports and exports of such species. Endangered tree species may fall under the regulations of this convention. The Ramsar convention imposes on contracting parties the obligation to formulate and implement planning in a way that ensures conservation and wise use of wetlands within their boundaries. The biological relation between wetlands and forestry ecosystems is well known. By protecting wetlands, some forestry ecosystems will also be protected. But for practical purposes, this link is only implicit, and there is nothing in this legal instrument that addresses forestry issues specifically.

The *UNESCO convention for the protection of the world cultural and natural heritage* puts emphasis on the outstanding universal value from a historical, aesthetic, ethnological, anthropological, scientific, geological or natural point of view. The enabling mechanisms of this instrument facilitate the establishment of "recognized sites" and provide support under the convention. By protecting sites of universal value, the international community has to protect important forest sites, but there is nothing in the instrument that addresses forestry issues in particular.

The *convention concerning indigenous and tribal peoples in independent countries* of the International Labour Organization (ILO) establishes the obligation for state organizations to develop jointly with interested peoples coordinated and systematic actions to protect the rights of indigenous peoples, and to ensure their integrity. The ILO convention contains provisions for the protection of land use rights of indigenous peoples as well as their traditional knowledge base. Such protection is an indispensable prerequisite for sustainable uses of forests owned by indigenous communities.

The *International Tropical Timber Agreement (ITTA)* of 1983 was negotiated with a limited life span under the auspices of UNCTAD and came into force in 1985. It established the International Tropical Timber Organization (ITTO) which became operational in 1987. Unlike some other commodity agreements, ITTA has no price regulation mechanisms or market intervention provisions, and accords equal importance to trade and conservation. ITTO's underlying concept is to sustainable development of tropical forests by encouraging and assisting the tropical timber industry and trade to manage and thus conserve the resource basis upon which they depend. A successor agreement to ITTA 1983 was negotiated in 1994 and came into force on 1 January 1997. The new agreement continues to focus on the world tropical timber economy. It contains broader provisions for information sharing, including non-tropical timber trade data and allows for consideration of non-tropical timber issues as they relate to tropical timber. The 1994 Agreement gives new emphasis to the policy work of ITTO. It enshrines the Year 2000 Objective and establishes the Bali Partnership Fund to assist producing member countries to sustainably manage their tropical timber producing forests.

International instruments adopted at and following UNCED 1992: UNCED 1992 dealt with environment and development from a global perspective. Three legally binding instruments, the conventions on climate change, biodiversity and combating desertification, were agreed upon during UNCED. The three conventions contain provisions that address the need for financial resources transfers in order to support the goals and activities under each convention. They emphasize the importance of research in order to understand the relevant processes and the urgency to develop and make available appropriate technologies for environmentally friendly production and consumption processes and for more efficient utilization of the natural resource base. They put considerable emphasis on the interactions between trade, environment and sustainable resources management.

The *convention on biological diversity (CBD)* establishes as objectives "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding". Many provisions defining the commitments of the

convention are of relevance to forests, including: to develop national strategies, to undertake identification and monitoring of components of biological diversity, to establish systems of protected areas, to facilitate access to genetic resources, to provide access to technology and biotechnology, to protect the knowledge of traditional and indigenous communities, and to provide financial resources for developing countries. However, the convention does not address forestry issues in the terms set out by Chapter 11 of Agenda 21 and by the Forest Principles by taking into account the multiple roles and values of forests, and in particular their productive development potential as renewable resources. On the other hand, sustainable forestry practices and a multi-pronged approach in forest management combining different use intensities and preservation has a considerable potential for contributing to the implementation of the objectives of the biodiversity convention. This requires a comprehensive understanding of biodiversity in natural habitats, and in particular forest ecosystems, as well as in intensively managed production forests.

The *convention to combat desertification (CCD)* puts emphasis on land uses, with special provisions for the problems of African countries. It refers in particular to the protection of traditional knowledge, and to trade practices that may cause desertification. As in the case of other conventions, forests are implicitly addressed by several provisions of the convention, but there is no systematic consideration of them. With regard to conserving and restoring the vegetation cover, forestry and more integrative land use and forest policies can play a significant role in reaching the objectives of the convention.

The purpose of the *United Nations Framework Convention on Climate Change (UNFCCC)* and related instruments, e.g. the Kyoto Protocol, is "the stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". The convention explicitly recognises the role of forests as carbon sinks. For example, forests are an important source of carbon dioxide emissions to the atmosphere when their biomass is reduced from degradation and deforestation. In their efforts to lower greenhouse gas concentrations in the atmosphere, countries are therefore encouraged to conserve and enhance forests. The objective of stabilizing the concentration of greenhouse gases (GHG) by reducing emissions at the source and sequestering additional carbon in so-called sinks has been quantified for the industrialized countries in the 1997 Kyoto Protocol. The Protocol sets net emission reduction targets for these countries. Forests are of considerable importance in this context since they offer renewable energy and act as carbon sinks when their area and/or productivity increase.

The *Kyoto Protocol* allows within certain limits and under strict conditions to offset greenhouse-gas emissions by enhancing carbon removal through afforestation, reforestation, forest management and some practices on non-forest lands. However, an industrialized country selecting forest management as an offset activity must then also account for losses of carbon from forests due to natural or anthropogenic causes within certain limits. The operational details for integrating forestry measures into climate change negotiations have been the subject of protracted and difficult negotiations. A first agreement was reached at the end of 2001 during the 7th Conference of the Parties to the UNFCCC in the Marrakech Accords. Practical methods for quantifying the contributions of forests are the topic of a work programme of the Intergovernmental Panel on Climate Change scheduled for completion at the 9th Conference of the Parties in Milan, Italy. The Kyoto Protocol and decisions related to it will have important consequences for forests and forestry.

Chapter 11 of Agenda 21 and the non-legally binding statement of principles for a global consensus on management, conservation and sustainable development of all types of forests (the Forest Principles) recognize the environmental, economic and social importance of forests and forestry, and suggest a comprehensive approach in dealing with all types of forests. The text of both political commitments shows that the significance given by the international community to forests has changed in qualitative and quantitative terms. They express the political will to approach forestry issues in an integral manner recognizing the many uses and multiple values associated with forests. The principal limitation of Chapter 11 and the Forest Principles is the lack of mechanisms to arrive at practical and concrete solutions. For instance, on various occasions the texts refer to the need for additional financial resources and technologies to support developing countries in their efforts to implement sustainable forestry practices. But there is little on specific commitments to provide for financial transfers and to facilitate access to appropriate technologies. International coordination is advocated and there is strong emphasis on exchange of experience and information on global or regional forest developments. But again, mechanisms, such as a conference of the parties, are missing.

There remain at present significant gaps between the instruments on forest protection and management and the goals and obligations from the three UNCED conventions. This makes it difficult, for instance, to translate global and cross-sectoral objectives on climate change, biodiversity and combating desertification into consistent national policies on forests and SFM. One of the important tasks of UNFF at present is to act as such an intergovernmental platform which facilitates inter-sectoral coordination.

Political declaration and plan of implementation of the World Summit on Sustainable Development (WSSD): The political declaration and the plan of implementation adopted at WSSD in Johannesburg in 2002 confirm the fundamental principles of the Rio declaration and reaffirm the need for the full implementation of Agenda 21. They contain a firm commitment to the achievement of the internationally agreed development goals including those contained in the United Nations Millennium Declaration and in the outcomes of the major United Nations conferences and international agreements since 1992.

The plan of implementation determines specific commitments and temporal and/or quantitative achievement criteria that relate to poverty eradication, access to clean drinking water, regeneration of fishery resources, biodiversity preservation, use of chemical substances and an increase in development aid. Other commitments that are of a more general nature address, for instance, the necessary change of unsustainable patterns of consumption and production, the protection and management of the natural resource base of economic and social development, the need to implement the internationally agreed measures to combat climate change and desertification, the importance of sustainable development for human health, and the importance of acknowledging specific development needs of small island developing states as well as those in Africa. A considerable number of provisions refer to means of implementation and to the institutional, political and social framework for sustainable development. A significant aspect of the WSSD plan of implementation is that forests and forestry be put into the broad comprehensive, coherent and largely cross-sectoral context that relates to the overall issues of economic and social development. At the same time the broad contributions of SFM are specifically acknowledged.

4.3 Supranational policies of the European Union

The European Union (EU) offers an interesting example where a supranational policy framework has gained considerable momentum and importance both for policy-making in the member countries as well as in international policy processes. With regard to forest conservation and forestry development the EU example is of particular interest inasmuch as its policy and legal framework relies increasingly on cross-sector measures (Cirelli and Schmithüsen, 2000). The supranational framework operates through Community Council regulations and decisions which are implemented by the member states either as direct EU regulations or by a transfer into and adjustment of national policies and regulations. Not having specific competencies in forestry matters, the EU has adopted numerous measures in other policy domains that have immediate and largely positive impacts on forests and forest management (Box 1.9).

Box 1.9 – Forestry measures in EU policies

Policy domain	Regulation	Forestry-related impacts
Agriculture	1096/88	Setting aside of excess agricultural land. Support scheme for forestry measures in agriculture. Financial support to afforestation costs and maintenance. Compensation for income losses. Investment and improvement of woodlands. National and regional multi-annual programmes
Rural development	1257/99	Structural fund with specific provisions for forestry. Support for the maintenance and development of economic, ecological and social forest functions. Funding of afforestation, harvesting and processing of forest products. Establishment of forestry associations.
Nature conservation	92/43	Network of protected areas (Natura 2000).
Environment	3528/86	Forest protection against atmospheric pollution. Forest health report based on uniform inventories. Support to field experiments and pilot projects.
	2158/92	Reduction of forest fire outbreaks. Funding of monitoring and information campaigns. Classification of risk areas and preparation of forest fire protection plans. Funding of uniform reporting system.

Council Resolution of December 15, 1998 on a forest strategy for the European Union identifies, inter alia, as a substantial strategic element “the need to improve coordination, communication and cooperation in all policy areas with relevance to the forest sector within the Commission and between the Commission and the member states, as well as between the member states”. The forest strategy is foremost a policy coordinating instrument. It identifies strategic elements for SFM, the principle of subsidiarity, participation in international processes, and the need to improve policy coordination within the Commission. The strategy stresses the need to coordinate activities between the Commission and member states and to encourage participatory approaches involving more closely NGOs. It is, however, not an instrument for arriving at a common forest policy framework to be applied in a uniform manner in the member states. Harmonization of forest laws, for instance, is only required with respect to a few issues, such as data collection, classification of roundwood, regulations concerning reproductive materials, and fire protection activities. The evolution of Community actions puts increasing emphasis on common forestry-related actions. Such actions, for instance, require member states to prepare special funding programmes, to adapt data collection procedures or to modify national policies and regulations. EU funding of forestry activities is undertaken in order to support the attainment of objectives in policy domains with important cross-sectoral linkages between forestry and other sectors.

Financial incentives to forestry are made available under specific regulations in agriculture such as, for example, Council Regulation (EEC) No. 1096/88, which established a community scheme to encourage the cessation of farming by compensating farmers who set aside for a minimum of five years at least 20 percent of land in order to reduce excess agricultural production. An additional grant was allowed if such land were devoted to forestry production. Council Regulation (EEC) No. 2080/92 establishes a Community aid scheme for forestry measures in agriculture, covering both production and protection-oriented projects. The scheme comprises contributions to cover part of afforestation and maintenance costs during the first five years. Other payments are made to compensate income losses to farmers taking agricultural land out of production. In addition, investment aids for improvement of woodlands may be granted. Member states have to submit national or sub-national multi-annual programmes with specific requirements subject to approval by the Community. Zonal afforestation plans, reflecting the diversity of socio-economic and ecological conditions of agricultural structures, are accepted.

More recent policy measures of the Community’s “structural funds” for the period 2000-2006 include specific provisions on silviculture. Council Regulation (EC) No. 1257/1999 considers forestry as an integral part of rural development and provides support for the maintenance and development of economic, ecological and social functions of forests owned by private persons or municipalities in rural areas. Measures eligible for funding include environmentally compatible afforestation, investments to improve the value of forests, and the harvesting and processing of forest products. New financial incentives are foreseen for the establishment of forest holder associations that support their members in achieving sustainable and efficient forest management. Financial contributions cover part of planting costs, maintenance costs for a period of up to five years, and compensation to farmers for loss of income during a maximum period of 20 years. A significant contribution to nature conservation and maintaining forest biodiversity is Council Directive (EEC) 92/43 on the conservation of natural and semi-natural habitats and wild flora and fauna (Habitat

Directive). The objective of the Directive is the creation of a European network of protected areas (Natura 2000) to be progressively set up by the member countries.

Within the framework of trade policy, Community regulations address the processing and marketing of forestry products (Council Regulation EEC No. 867/90), the classification of roundwood (Council Directive EEC No. 68/89) and the marketing of forest reproductive material (Council Directive EEC No. 66/404). Other EU regulations refer to common standards for the collection of forestry data and the establishment of a common forestry information and communication system. The system reports on the existing situation of woodlands, developments in afforestation, and on conditions that concern harvesting, processing and marketing of forest products.

A number of forestry-related measures emanate from EU environmental regulations. Council Regulation (EEC) No. 3528/86 on the protection of the Community's forests against atmospheric pollution establishes a Community scheme to protect forests mainly with the objective of safeguarding the production potential in agriculture. Member states committed to forest protection may obtain financial support for preparing regular reports on forest health on the basis of inventories carried out according to comparable standards. The scheme supports field experiments and pilot projects. A committee on forest protection gives scientific and technical advice and assesses the suitability of measures proposed by member governments. Important environmental policy measures refer to combating and preventing forest fires. Council Regulation (EEC) No. 2158/92 on protection of the Community's forests against fires establishes a funding scheme for regular monitoring and information campaigns based on yearly programmes submitted to the Commission. Member states are obliged to classify their territory according to the degree of forest fire risks. In high and medium risk areas, protection plans to reduce fire risk, especially to combat the outbreak of forest fires, are to be prepared. Funding is also available for a uniform system of monitoring and reporting.

5 NATIONAL POLICY AND LEGAL FRAMEWORKS

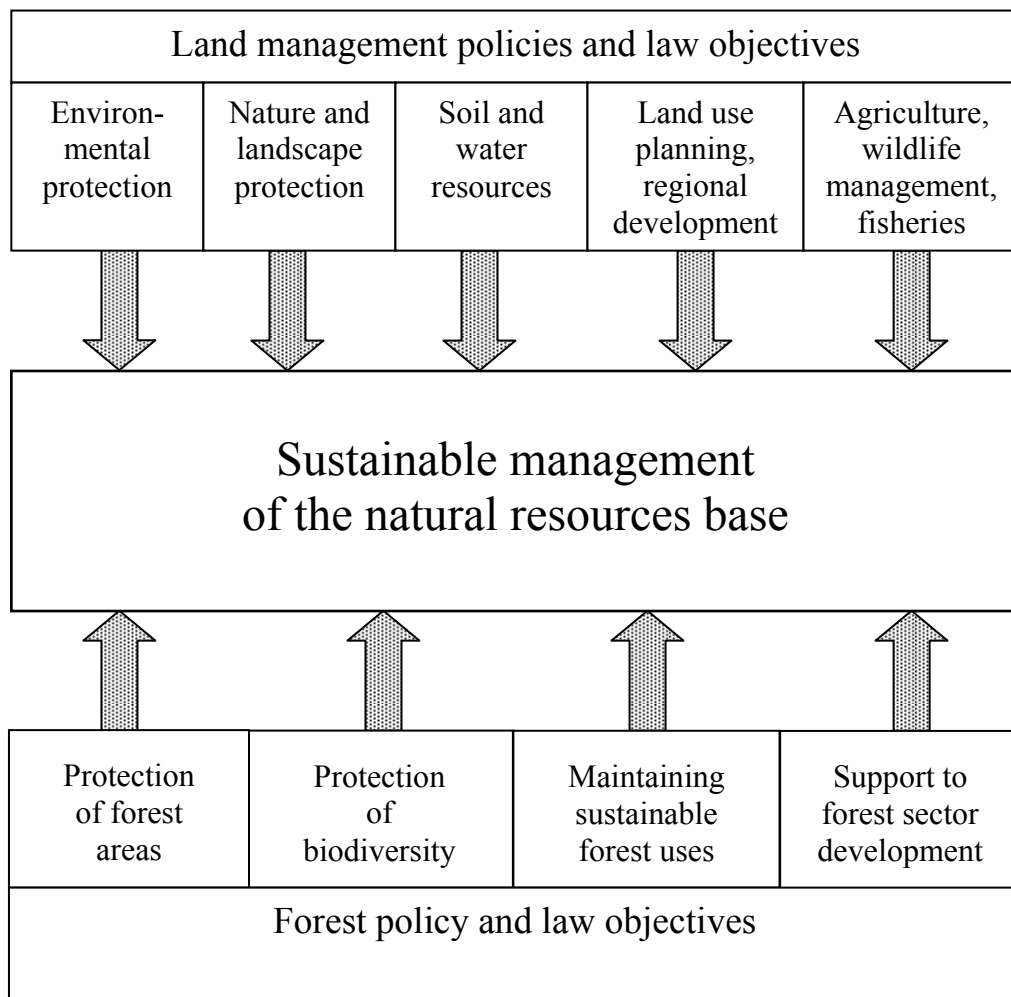
5.1 Policy networks and stages

Figure 1.5 shows a cross-sectoral policy network using, as an example, a combination of objectives addressing sustainable use of natural resources and development of rural areas. It relates the broader goals of sustainable use of natural resources and rural development to the more specific policy objectives of various policies and legislations.

The issues related to individual and collective interventions in dealing with forests and landscapes are determined by environmental and ecological potentials, risks and limitations and especially the variety and extent of the natural resource base. Environmental and ecological factors decide to which degree qualitative and quantitative needs can be fulfilled and which fundamental management options are available. Regulating mechanisms determining sustainable land use practices are social and cultural values and norms, market rules, law and jurisdiction, governmental institutions, land tenure systems, and specific rules on land management.

The actors addressed by public regulations are situated on different societal levels, with society, people and citizens as the most general one, social groups and corporative actors as agents at the intermediate level, and individuals as the actual land users, consumers, land managers and decision-makers at the level where the actual action occurs. The actors benefiting from utilizing the natural resource base exercise their influence in order to shape the conditions for managing the resources according to their needs and values. The decisions on which uses are to be promoted, which ones are acceptable, and which ones are undesirable and should be avoided are determined by many actors at different societal levels. In some cases decisions are largely left to individuals and foremost to the land users, while in others corporative actors and social groups are dominant.

Figure 1.5 - Policy and legal network addressing natural resources development

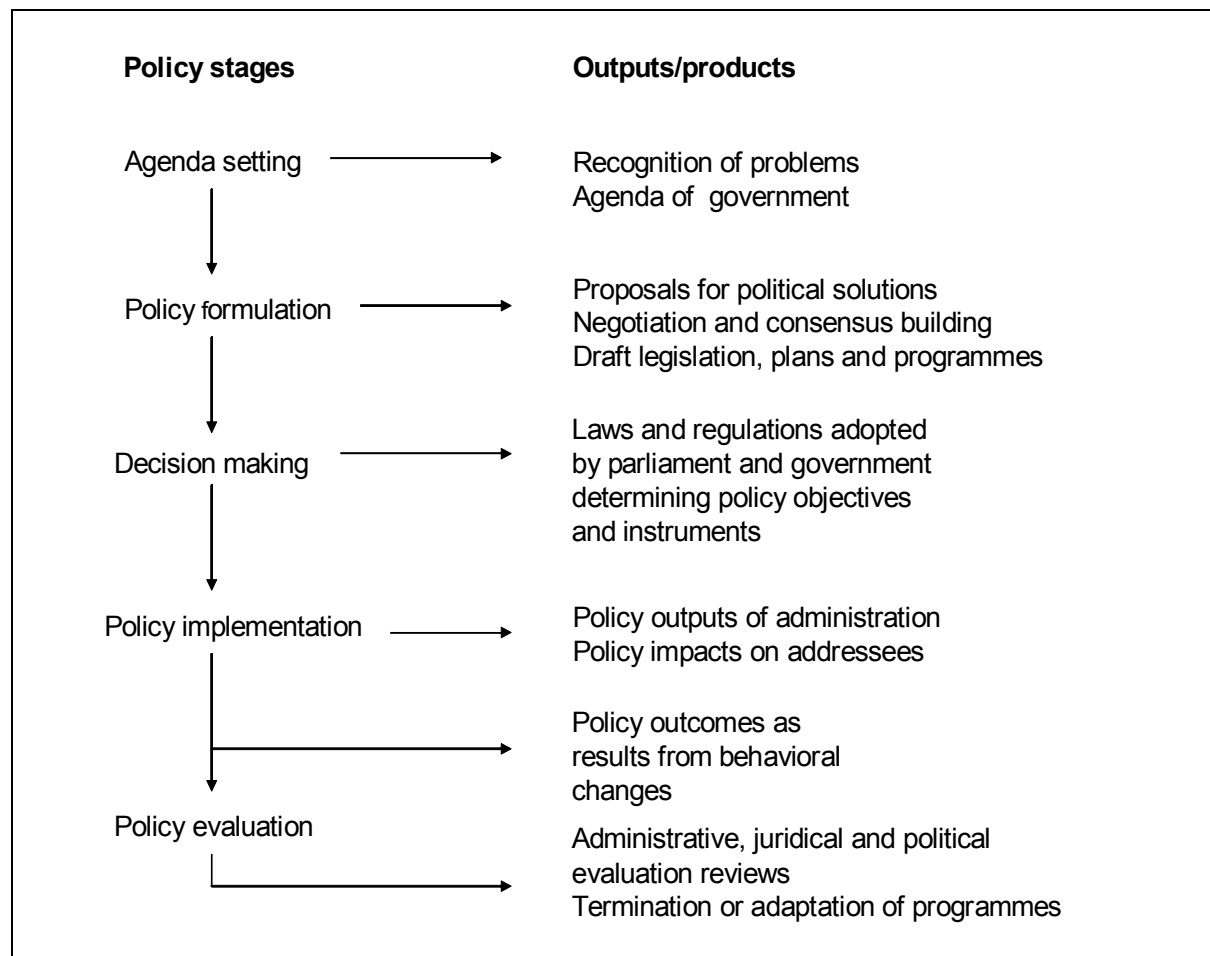


The concept of policy cycles offers a useful approach in order to determine in which way development and implementation of policies and laws are organized. It allows for the identification of the critical paths of intervention in order to solve particular political problems through new or improved policies and legislation. The concept is based on the understanding that elaboration, adoption and implementation of policy

and law follow defined stages, produce specific outputs at each stage, and show sequential structure with strong forward and backward links between the stages. Figure 1.6 shows a sequence of five policy stages and the outputs produced. Each stage and, respectively, the relevant outputs correspond to a contextual phase of applied problem-solving (Howlett and Ramesh, 1995).

Policy development: The agenda setting stage addresses the need for problems to be recognized before solutions can be found. It is a process during which problems come to the attention of and onto the agenda of government. Proposals for acceptable political solutions are developed at the policy formulation stage based on a compilation of information, formal and informal discussions between stakeholders and interest groups, and negotiations that seek consensus leading to draft legislation, plans and programs. The decision-making stage corresponds to the choice of solutions to be formally approved by parliaments, governments, and public administrations with outputs determining objectives and instruments in the form of laws, budgets or international treaties adopted by parliament; parliamentary and governmental decrees and regulations; and administrative decisions, rules and procedures.

Figure 1.6 - Five stages of the policy cycle with outputs/products



Policy implementation: During the policy implementation stage the adopted laws, regulations and programs are put into effect. Implementation processes require individual and concrete decisions, as well as procedural rules and regulations (outputs) from implementing public agencies. They lead to impacts meaning concrete positive or adverse reactions on the side of the target groups to which the measures are addressed or of those actors that are incidentally affected by them. The actual policy result (outcome), i.e. the real effects of the changes, depends on the willingness or resistance of target groups to modify their behaviour. Of interest are, for instance, the outcomes of forest and other public policies that have impacts on the state and development of forests. Important effects to be observed are, for instance, the size and distribution of forest land, the stand volumes maintained, the variety of flora and fauna, and the economic and social sustainability of forestry practices.

Monitoring and evaluation: Monitoring and evaluation that allow for the assessment of the impacts of public policies and laws and the contributions that they have made in order to solve existing societal problems. Depending on positive and negative effects and on the nature of a given political problem, a policy programme may be terminated. New or additional political initiatives and incremental steps for revised and new legislation will lead to new sequences of policy stages.

5.2 Actor networks

One of the functions of states and governments is to participate, respectively, in organizing political networks among stakeholders, or to act as mediator between different societal actors. Network management refers to any purposeful attempt to guide political interventions and to coordinate decision-making processes among a large number of private and public actors with often controversial interests in different policy areas and at various levels of government. Managing policy networks is a difficult and complex task which often requires mediation and alternative conflict resolution techniques. Network analysis examines the consequences which follow from existing links for political steering processes. It refers to the relations between actors and stakeholders that are concerned by and/or in a position to influence political decisions. This includes, for instance, governmental agencies, private firms, private and public associations, NGOs or key persons and personal leadership.

Stakeholder networks: Stakeholder networks exist in many ways following the contextual aspects of a specific issue. In the private sector, for instance, stakeholders of an enterprise relate to the owners and investors, to the clients and the suppliers, to employees and management, and increasingly to groups interested in the implications of the entrepreneurial activities on sustainable development. In the present context relevant stakeholder groups are primarily composed of private organizations and public institutions interested in, concerned about or affected by public policies and legislation that address social and environmental problems related to the sustainable utilization of the natural resource base. Stakeholder networks focusing on forest uses and nature conservation represent, for instance, the interests of forestry production and of the wood industries, multiple use interests for other activities, nature and landscape protection interests, and local and regional interests in economic and social development (Box 1.10).

The conservation and development of rural space, and the increase in its production potential is the pivot and the ultimate objective of the political networks addressing

sustainable uses of lands and natural resources. National regulations induced by international agreements, as well as directly applicable provisions, for instance in the case of international and multilateral projects, affect primarily individual and family land management decisions. It is largely at this level that the policy objectives have to be put into workable, socially acceptable and economically feasible programmes. The envisaged solutions are of a cross-sectoral and multisectoral nature. Issues which are at the forefront of global or supranational concerns are superposing a national and local demand. The combined effects have to be assessed in relation to specific needs and potentials. The impacts on individual and family land management decisions are incremental.

The concepts and attitudes, the behaviour and preferences, and concrete actions of private and public landowners play a key role as actors in natural resources management networks. In fact, many of the related public policy objectives as well as positive and negative cross-sectoral impacts which result from them influence strongly individual land management decisions and the behaviour of the users. Impacts of different public policies on the behaviour of forest owners and users form the primary cause-effect relation. Impact means in this context not only influences on identifiable actions but also lack of influence in orienting or changing behaviours of the target addressees. Some behaviour is particularly important to observe, such as forest clearing, timber harvesting, uses of non-wood products, utility of forest services, management practices, and biodiversity conservation and nature protection.

Box 1.10 - Examples of stakeholder networks in forestry management and nature conservation

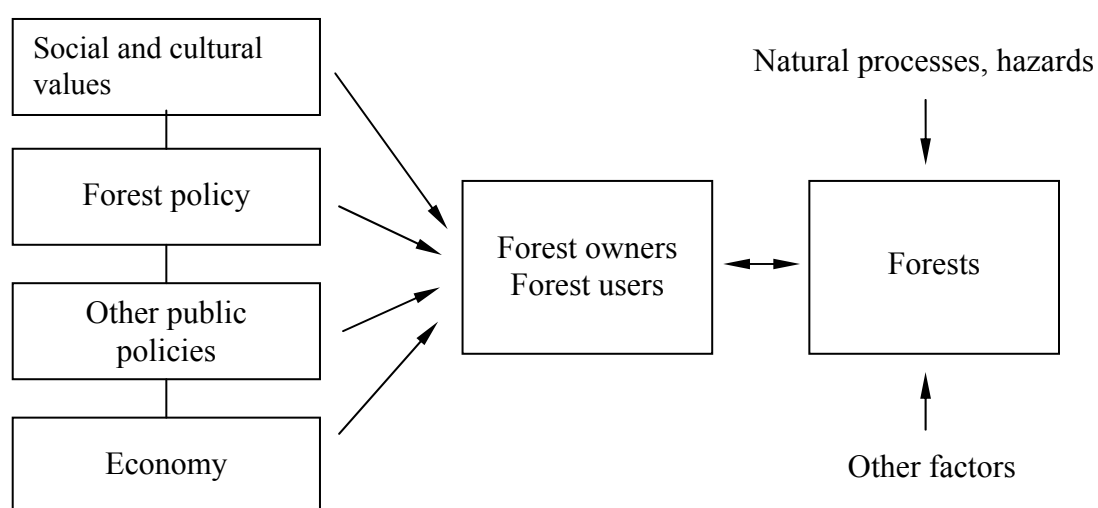
Forestry production and wood industries	Multiple forest uses
Forest owners' associations	Hunting and fishing associations
Forestry cooperatives	Recreation and sports associations
Forest industry associations	Tourism associations
Farmers' associations	Regional development associations
Nature and landscape conservation	Economic and social development
Nature protection associations	Local planning associations
Landscape protection associations	City and village councils
Environmental protection associations	Local community associations
Special forest protection associations	Citizens' associations

The behavior of forest owners and forest users is a key determinant in evaluating the impact of public policies on the state, use and management of forests (Figure 1.7). The particular characteristics of the prevailing ecosystems determine to a large extent the scope of action and establish a reciprocal relationship between the state of forests and landowners and users. The state of the forest is also considerably influenced by natural processes and hazards. Socio-economic factors that influence the actions of forest owners and users are indicated on the left side of the figure. They are determined by social and cultural values, national and local economies, desired goods and services as economic outputs, and by public policies and their effects and impacts. All of these factors are interwoven with each other.

5.3 Policy instruments and financial resources

Policy instruments can be classified according to their purpose as they relate to public regulation, market intervention, market facilitation and persuasion and information (Box 1.11). The choice of policy instruments is currently in a process of change, putting more emphasis on financial incentives, persuasion and participatory procedures than on regulation. Labelling, for example, aims to influence the behaviour of timber customers by making the external costs of products more transparent. Voluntary agreements become more frequent between landowners and the public sector for the establishment of nature protection zones providing compensation for income losses from alternative uses. Persuasive instruments are more widely used as policy measures can be implemented more effectively if the addressees and stakeholders understand their reasons and agree with them. Regional planning and participatory decision-making are important in this context.

Figure 1.7 - Framework explaining behaviour of forest owners and users



Source: Schmithüsen, Bisang and Zimmermann, 2001: 43

A shift takes place from state control to legislation which favours new forms of joint management responsibilities involving forest owners, the private sector, NGOs and public authorities. Policies and laws set the frame determining the requirements and performance standards of the parties concerned. Procedural arrangements support the promotion of cooperative forms of decision-making and contractual arrangements with third parties. Guidelines for best management practices, procedures for mediation and the exchange of information become institutionalized. Public authorities are increasingly involved in process-steering and in implementing more comprehensive programmes of land management. Negotiated activities on a contractual basis replace direct governmental intervention. They require a more precise understanding of targets, outputs and impacts of public policies and legislation. With more attention given to collaborative policies, informational and

persuasive instruments gain considerable weight. Monitoring and evaluation of concrete results combined with free access to such information ensure greater involvement of citizens and stakeholder groups in public decision-making processes.

The expanding framework of policies and laws requires a high amount of process-steering on the side of public agencies and concerted decision-making on the side of the principal users and environmental groups. This implies a shift from state control of forestry practices to legislation which favours new forms of joint management involving forest owners, NGOs and public authorities. Legislation sets a frame for defining the requirements and performance standards of the parties concerned. It supports efforts to develop cooperative forms of decision-making and contractual arrangements with third parties. Guidelines for best management practices, procedures for mediation and the exchange of information constitute a substantial part of this framework. From the viewpoint of the authorities it puts emphasis on process-steering and more comprehensive implementation programmes. It supports negotiated activities on a contractual basis and reduces direct governmental intervention.

Box 1.11 - Classification of policy instruments

Regulative instruments	Property rights Status of forest lands Resource protection Management obligations Landowner responsibilities
Market intervention	Planning/programming Public land management Public purchases Public insurance programmes Public compensations Public incentives and grants Taxation policies
Market facilitation	Public infrastructures Marketing boards and contractual arrangements Prices and tariffs Management agreements Marketing of environmental goods and services
Persuasion/information	Public education and training Dissemination of information to policy-makers and the public Extension, advice and technical assistance Information gathering and research

Source: Merlo and Paveri, 1997; Le Master *et al.*, 2002 (modified)

Sustainable use of natural resources implies that the rate of resource consumption and environmental impacts which result from it are a constitutive part of management decisions. The use of natural resources is not a mobilization of production inputs and consumption values without costs. Sustainable management practices require re-investment and new investments to maintain and increase productivity and the available resources potential. New demands from private and public stakeholders arise and lead to additional responsibilities of landowners incorporated in laws and regulations. Such developments need to be qualified in accordance with the constitutional rights of ownership. It is primarily the responsibility of the landowners to define the objectives of forest uses and to choose the management options which fit them best. It is up to them to decide to what extent they are able and willing to provide goods and services for which markets do not, or do not yet, exist. In particular, private landowners are barely in a position to carry the incremental costs of external benefits without compensation.

Financial means in managing the natural resource base derive from a variety of sources (Figure 1.8). Most important are the income from market sales of goods and services and the investments and financial contributions of the landowners themselves. In addition, financial resources for sustainable land development include proceeds from compensation payments of individual users, private user groups, and public local entities; from incentives of national and sub-national governments; and in certain cases from contributions of international institutions and organizations. It is important that public policies and legislation acknowledge the financial dimensions of supplying private and public goods in sustainable resources management and facilitate the sharing of financial commitments consistent with the economic realities of multiple uses.

Instruments that favour an adequate transfer of resources commensurate with tasks and responsibilities in land management are instrumental in generating an optimal combination of private and public benefits. Developing the potential of the rural space means, in fact, facilitating the economic and social interactions between landowners, immediate beneficiaries and public entities. Policies and laws have thus to be concerned with the financing of multiple outputs and services and to determine, in accordance with the principle of subsidiarity, frame conditions for financial transactions between landowners, immediate beneficiaries and public entities.

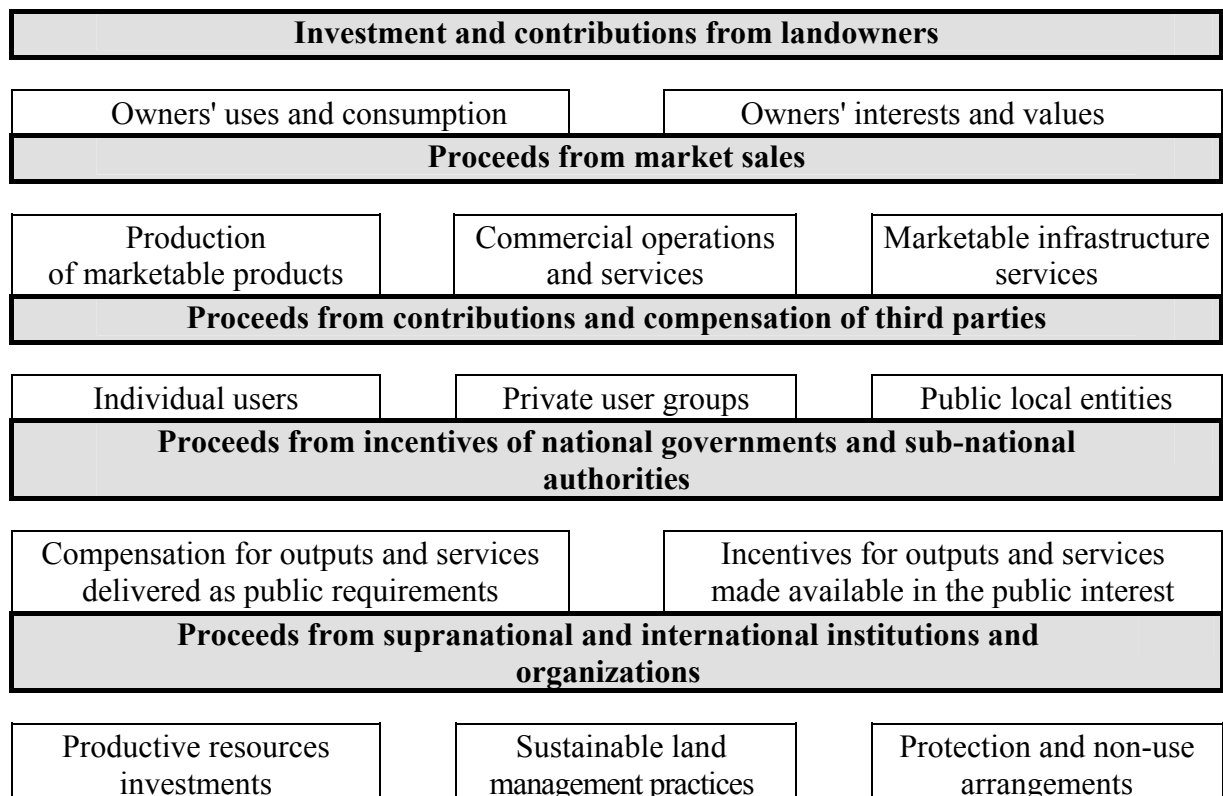
5.4 Consistency of policy and legal networks

National forest programmes (NFP) are promoted as coordination and planning instruments at national and sub-national levels. Their purpose is to reach the goals of sustainable forest development through a holistic approach different from previous sector planning procedures. The principles for national forest programmes to be debated in Vienna in 2003 at the Ministerial Conference on the Protection of Forests in Europe show the comprehensiveness and integrative character of NFP (Box 1.12).

Within NFP, inter-sector approaches are seen as a necessary core element. Knowledge and experience on how to deal with cross-sector policy impacts within the framework of NFP evolve gradually. Recommendations made by FAO stipulate that such programmes need a multidisciplinary effort to become successful, that professionals in different fields and with different land use experience should be associated during their preparation, and that cross-sector linkages have to be taken into account (FAO,

1996b: 18, 31ff.). Examples of national coordination mechanisms such as high-level inter-ministerial coordinating bodies are proposed. There is need to develop effective administrative procedures, to elaborate well-structured, transparent and accessible information and databases, and to establish procedural arrangements for a continuing dialogue among stakeholders.

Figure 1.8 - Financing multiple goods and services in sustainable land management.



Legal networks: With regard to the functioning of legislation, general requirements to ensure consistency are: public efforts to devote sufficient resources to law implementation; anticipation of the modes and costs for effective implementation; pragmatic attitudes in evaluating real progress that can be made from newly introduced legislation; sufficient understanding and acceptance of the law by regulators and users; and appropriate judicial mechanisms to ensure law enforcement at the courts (FAO, 2002; Lindsay et al., 2002). Judicial coordination ensures consistency between forestry laws and the laws that address other land uses, nature and wildlife conservation, water development and environmental protection (Knuth, 2002). Law issues that require particular attention are:

- congruence of the mandates of sectoral authorities involved;
- clear terms of reference of the concerned institutions;
- regulations that support an improvement in institutional linkages through coordination and cooperation;

- clear definition of the regulatory-making powers under the basic laws addressing the various sectors.

Box 1.12 - Principles of national forest programs

- Participation
- Holistic and inter-sectoral approach
- Iterative process with long-term commitment
- Capacity building
- Consistency with national legislation and policies
- Integration with national sustainable development strategies
- Consistency with international commitments recognizing synergies between international forest-related initiatives and conventions
- Institutional and policy reform
- Ecosystem approach
- Partnership for implementation
- Raising awareness

Issues which frequently come up in connection with the promotion of sustainable development include predictable, understandable and enforceable rules that:

- govern access to and management of public goods, such as water and other natural resources;
- address the externalities of public and private actions, including environmental, land use and public safety implications;
- regulate the activities of government officials to ensure basic limits on the exercise of discretion, and to support transparency and accountability;
- ensure rights of meaningful participation, including access to information.

Regulations may hinder sustainable development by increasing costs and creating undesirable incentives. Constraints result from bureaucratic procedures that increase transaction costs of management activities without producing corresponding public benefits. Legislation should clearly determine which agency has the power to make certain decisions. If this is not the case a key government stakeholder whose action is critical to the success of a particular strategy might find its authority to undertake that action open to challenge. Where the authority is fragmented among different sub-agencies which do not function well together, governmental action is again sub-optimal. An uncoordinated series of laws and regulations authorizes inspections of the same business, resulting in repeated and, in the end, harassing visits.

Secure rights in land, trees, water and other resources are essential for fostering investment, conservation and development. Many national legal frameworks do not, or at least not sufficiently, support sustainable access to – and provide secure rights over – such resources for rural people. In fact, some regulations curtail and even criminalize the practice of traditional rights. Sustainable development depends on effective organization and empowerment of stakeholders which involves in particular local groups for the promotion of community-based management initiatives. It is important that there be a sufficient legal basis for the creation or recognition of such institutions in which real rights, powers and responsibilities are vested.

Important criteria to assess the effectiveness of policy and legal networks in natural resources and forest management are consistency, comprehensiveness, subsidiarity and applicability (Box 1.13).

Measures of coordination: Coordination mechanisms and network management include several possible approaches with different policy outputs and outcomes. The following institutional aspects are relevant:

- coordinated planning and consultation procedures;
- inter-ministerial coordination mechanisms;
- establishment of public *fora* for informal or formal exchanges between different stakeholder groups;
- establishment of effective coordination procedures among public administrations;
- allocation of resources to governmental departments and units commensurate with their responsibilities and cross-sector linkages.

Box 1.13 - Criteria for assessing the effectiveness of policy and legal networks

Consistency: This criterion requires the compatibility of objectives and instruments with constitutional values and democratic rules, with public policies addressing land use, economic development and environmental protection, and in accordance with international commitments and multilateral agreements.

Comprehensiveness refers to the policy objectives with regard to forest protection and forestry development, to different types of forest tenures, and to the rights and responsibilities of various categories of forest owners.

Subsidiarity relates to the role of forests as national, regional and local resources as well as to the double role of forests as private production means that may be used according to the decisions of landowners, and as resources that yield numerous benefits to the community.

Applicability refers to the policy framework as a whole and to the role of public administrations. It depends on clearly established responsibilities and tasks, and on appropriate forms of participation of forest owners and interest groups in regulating forest uses and management practices. Coordination of competencies among public entities is an important aspect in evaluating the applicability of policies and regulations.

In order to seize potentials and boundaries of coordination, it is helpful to distinguish between positive and negative coordination (Scharpf, 1993). In positive coordination actors try to optimize the utility of all activities to be envisaged. They evaluate the options and likely commitments of other actors and parties involved and choose what they consider the optimal solution to them. A prerequisite for positive coordination is that the participating actors share a clear understanding of the advantages and disadvantages which may accrue to each party. Actors that are bound to accept disadvantages should be compensated in order to keep them as partners in longer-term cooperation. Multilateral coordination needs to be institutionalized and has to provide a guarantee that the focus is on issues of common interest that are to be negotiated.

Maintaining and developing the already existing coordination and cooperation patterns is of considerable interest since the creation of new policy networks is usually quite costly.

Negative coordination on the other hand implies the reduction in the degree of inferences from one agency with the competencies of other units. A comparatively frequent case is negative coordination on a bilateral level with only two agencies or actors. It requires the precision of the responsibilities and the terms of activities of the interfering actor by limiting his sphere of intervention to his constitutional and/or administrative mandate. Negative coordination is unlikely to promote new solutions but helps to clarify the competencies of government and administration as consistent with the objectives and instruments of the prevailing public policies.

Administrative coordination is complementary to the establishment of organizational structures but cannot replace the formal distribution of competencies and resources among governmental agencies. Coordination functions well if it generates additional benefits for at least one of the involved partners. It is effective and operates smoothly if the majority of the partners, be it within the administrations or in combination with external interest groups, can rely on policy objectives and linkages with positive effects. However, one has to be aware of the limits of inter-administrative coordination, especially if important and largely controversial interests shape the content of different public policies and if cross-sector linkages have largely impeding or contradictory effects. Administrative coordination procedures have limited potential and become easily inoperable if competencies and resources are unequally distributed or if the redistribution of responsibilities and resources is at stake. In such a situation political and/or hierarchical decisions on a higher level within government are required. Decisions from outside will be more effective and enable the actors involved to develop a more rational and efficient way to coordinate various policy goals and policy instruments.

Interagency coordination: A current practice is that sector responsibilities remain with the competent government units but administrative procedures and regular meetings are institutionalized to inform, negotiate and decide on cross-sector issues (Knoepfel, 1995). An independent unit is charged to organize, moderate and mediate the meetings. A second option is to bridge the gaps between different administrations by implanting cells in other relevant departments. A forestry cell, for instance, in a land use office will be in a position to explain and advocate the rationale of requirements for sustainable forestry development. If the new procedures prove viable in the administrative environment, a review of the repartition of competencies and responsibilities may be appropriate. A third option is to handle specialized issues in a less downright manner, for example through filling vacancies with staff from other professional backgrounds. This is a rather informal but sometimes effective way to increase knowledge and understanding of the potential and requirements of cross-sector relations.

6 CONCLUSIONS

Important trends such as globalization of the economy and trade, internationalization of environmental and nature protection, privatization and a changing understanding of the role of the state, increased participation of stakeholders and the public, a growing influence of NGOs in public decisions, as well as an increase and diversification of society's demand for forest goods and services form the context in which the impacts of public policies on SFM and forest sector development have to be seen.

Public policies are based on constitutionally founded competencies of the state and on laws, decrees, governmental regulations and decisions of administrative authorities. A useful distinction may be made between policies which provide institutional frameworks for state intervention and public security; policies addressing social equity, economic production and cultural integration; and policies promoting development for subsistence and well-being. Specific combinations of policy domains are of importance, depending on the stage of socio-economic development, demands for goods and services, cultural values, and the area, biodiversity, productivity and fragility of forest ecosystems. In some countries and regions policies establishing an institutional framework, in others policies addressing specific economic sectors or promoting development have been identified as being of particular relevance at present.

Cross-sector linkages between different public policies have an immediate or indirect influence on the behaviour of landowners, forest users, governmental agencies and NGOs. Of importance are the combined outcomes and results from policies and legal instruments that address economic, social and environmental issues and their positive and negative effects on sustainable land management practices. This refers to the positive and negative effects of relevant policy domains on SFM as well as to the positive and negative effects of specific forest policies and regulations on economic growth, biodiversity and the environment. Useful typological elements to specify cross-sectoral impacts are the combination of relevant policy domains, the regional and local socio-economic context, the levels of political decisions, the combination of policy instruments, the direction of impacts and the kind of outcomes and results that are produced.

International legal instruments adopted prior to and during UNCED, as well as the Rio follow-up processes, aim at a balance of economic, social and environmental factors as the primary objective of sustainable development. Together with continental, regional and supranational processes they establish multilevel policy and legal frameworks which increasingly influence political choices at national and sub-national levels.

At national and local levels, the significant policy domains, the kind of linkages that are most important and the scale of positive and negative effects which result from them need to be examined. The criterion for selecting the major factors is the usefulness of new knowledge gained to the main stakeholders, to the representatives of national public administrations and to policy-makers. The focus is on the actors involved, the instruments and procedures that influence their behaviour, and on the causal relationship between forest and other policy domains in both directions. This implies a reconsideration of the role and mandate of forest administrations and their

ability to operate with success in a changing political environment in which effective stakeholder participation and a dominant role of the private sector are key determinants. Policy instruments related to process-steering, public organization and financial resources allocation gain importance.

There is need to focus on public capabilities to manage complex political networks with a wide range of stakeholder interests in different land use systems and management practices. It is important to find out to what extent those interests are compatible or conflicting and the reasons for both. In the case of compatibility of interests one has to know in which way public policies can foster synergy and optimize the available resources. In the case of conflicting interests one has to find out to what extent modified political solutions and regulations can be found or to what extent complementary measures and/or compensation may reduce or neutralize negative policy effects. One needs to examine more consistently how arbitration procedures among stakeholders from the private and public sector, cooperation among landowners and the industry, and mechanisms for inter-administrative coordination function in practice and what critical problems need to be solved. Useful criteria for assessing the effectiveness of policy networks and legal regulations are consistency, comprehensiveness, subsidiarity and applicability.

A considerable amount of investigation on cross-sectoral impacts in forestry has already been initiated, in particular by CIFOR, FAO and the World Bank but also by individual researchers and national research institutions. Further work on legal, policy and organizational issues, more explicit natural resource accounts, econometric analysis and impact will provide additional knowledge and information to policy-makers and to the public. Important is the specificity of the findings at national, sub-national and local levels providing concrete empirical information on successes as well as on gaps and drawbacks in a given social, economic and political context.

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