

# Comparative analysis of forest laws in 12 sub-Saharan African countries

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***Comparative Analysis of Forest  
Laws in 12 Sub-Saharan  
African Countries***

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Franz Schmithüsen***

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**Abstract**

The paper resumes results of a study evaluating national forest laws currently in effect in the following sub-Saharan African countries: Benin, Burkina Faso, Cameroon, Ethiopia, Gabon, Gambia, Guinea Lesotho, Madagascar, Senegal, Tanzania and Zimbabwe. Six major themes are examined: integration of forestry into development and environment policies, new roles for stakeholders, diversification of management systems, valorisation of products and services, forest conservation and measures to promote an appropriate framework for the forestry sector. The results show that most of these aspects are taken into account in the forest laws of the countries investigated. However, they are regulated with varying intensity, and differ to some extent from standards and guiding principles established by the international community. Shortcomings relate mainly to: co-ordination of forest sector development with economic and social development objectives; reform of public forest administrations; adequate participation of stakeholders; assistance to forest owners and local communities; and compensation for social and environmental services of forests.

*Keywords:* Forest Law; Forest Policy; Environmental Law; Sector Development; Institutional Framework.

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## 1. MAJOR THEMES IN FOREST LAW DEVELOPMENT

Already between 1970 and 1980, considerable changes in forest legislation took place in many Sub-Saharan African countries (Schmithüsen 1986 a, b). Initiatives to adjust the legal framework to the principles of sustainable forest management have continued and gained in importance since 1990. Texier and Young made a comparative survey of recent trends and accomplishments in the adoption of new forest laws or amending existing legislation for a number of French, Portuguese and Spanish-Speaking countries, and for Anglophone Africa respectively (Cirelli et al. 2001). In the French, Portuguese and Spanish-Speaking countries forest management planning, local and private forestry management and environmental problems associated with forests and tree vegetation have been of considerable concern to policy makers and legislators. In Anglophone Africa similar subjects have been of concern, and more specifically land and ownership definitions, social and community issues, environmental protection, forest management and commercialisation, and institutional issues in the sector. Additional information comparing specific aspects of forest law developments or focussing on certain groups of countries is available (Bertrand 1992; Breton 1996; FAO 1996 a; Ojwang 1997; du Saussay 1996; Sinatambou 1999). Land tenure and local resource control and management as well as environmental aspects have found particular attention (Arnold 1998, Griffin and Bergin 1996, Kamto 1996; Lawry 1990; Le Roy 1996; Ribot 1995; Whily and Mbaya 2001).

This publication provides a comparative analysis of forest laws in force in twelve sub-Saharan African countries. Countries included in the survey are *Benin, Burkina Faso, Cameroon, Ethiopia, Gabon, Gambia, Guinea, Lesotho, Madagascar, Senegal, Tanzania, and Zimbabwe*. The purpose of the research is to evaluate forestry-related legislation within the framework of the current international debate on forest policy and sustainable forest sector development, and further to identify consistencies and inconsistencies between internationally claimed standards and legislation currently in force. Another objective is to assess to what extent current legislation opens the possibility of a greater integration of land-uses and for innovation in sustainable land management practices.

The research work was initiated by the Forestry Unit for Sub-Saharan Africa (Sektion Waldwirtschaft in Afrika südlich der Sahara), which co-ordinates GTZ forestry advisory projects in sub-Saharan Africa and Madagascar (Kohler 2001). Most of the review and analysis of country laws was undertaken during 2000 and 2001, in close co-operation with the staff of relevant projects, and with financial support from GTZ's Tropical Ecology Support Programme (TOEB). A complementary review of more recent information and further comparative analyses were conducted in 2002 and 2003.

Forest legislation actually in force in the selected countries was enacted between 1990 and 2002 (see section 9 Legislation Reviewed). In all countries, the law reforms undertaken reflect important changes in national forest policies, with the objectives of providing more effective measures against increasing deforestation and forest degradation, as well as placing forestry more advantageously in the broader framework of social and economic reform processes. Changes include improvements in the formal organisation and structure of legal texts; a diversification of the goals and policy objectives; a greater variety and a more coherent use of policy instruments; and more emphasis on the protection of local forest uses and participatory land management practices. There are obviously considerable differences between the laws, as they are subject to prevailing local conditions and to the scope of national resources policies. But there are also a number of comparable trends which have determined recent changes in forest legislation within the countries examined.

The analysis of forest laws in the countries included in the present survey is based on an evaluation framework which has been developed with the participants in the survey. The criteria used refer to recommendations from the Earth Summit in 1992 (UNCED) and to the principles of sustainable forest management developed subsequently by intergovernmental *fora*. They provide a reference system for analysis at the level of individual countries, as well as for comparison among countries in order to recognise common trends and differences. *Table 1* shows the eleven selected structural aggregates of the framework and the principal issues that are considered as important in the context of law and policy development. The assessment made in the table considers only the presently applicable forest laws. A more detailed comparison would require taking into consideration the implementing legislation available in governmental regulations, decrees and public administrative circulars and procedures.

A general assessment of the results is presented in *Table 1*. It leads to the overall finding that there are a number of legal or policy issues addressed in all forest laws examined. They refer to the objectives and functions of forestry (Criteria 1); to the definition and designation of forest and forest lands (Criteria 3); to the regulation of property rights and the determination of management systems (Criteria 4); to forest utilisation and benefits (Criteria 6 and 7); to forest protection (Criteria 9); and to the enforcement of law provisions (Criteria 11).

On the other hand there are a number of legal and policy issues that are so far missing, only dealt with sporadically, or only regulated in a few countries. This is the case for instance with regard to forest sector development planning (Criteria 2) which is prominent in the laws of *Gambia, Guinea, Lesotho and Tanzania* but is barely mentioned, or missing, in the laws of the other countries. Little regulation exists also with regard to the institutional framework of the sector (Criteria 5); commercialisation and transport (Criteria 8); and training and research (Criteria 10).

*Table 1* also provides a general view of the considerable differences which exist between the countries examined. They concern the regulatory intensity as well as the consistency of the existing legislation addressing forest land management and forest sector development. Countries such as *Burkina Faso, Cameroon, Gambia, Guinea, Senegal and Tanzania* have a rather complex but balanced legal framework.

The assessment of important forest law developments in the countries under review is presented according to the following themes:

- Integration of forestry into development and environment policies;
- Participation and new role of stakeholders;
- Diversification of management systems;
- Valorisation of forest products and services;
- Forest conservation;
- Measures for an appropriate institutional framework for the forestry sector.

Complementary information is available in country reports on *Benin* (FAO 1996 b); *Burkina Faso* (FAO 1995); *Cameroon* (Bomba 1996); *Ethiopia* (Mulugeta 1984); *Guinea* (Lankan Traoré 1996); *Madagascar* (FAO 1998; Finioana and Rakotonarivo 1996); *Senegal* (Ly 1996); *Tanzania* (Hitchcock and Shauri 1995; Wily and Mafwnga 1995; Lindsay 1996; Shauri 1999); and *Zimbabwe* (Bruce et al. 1993).

Table 1: Criteria for Comparative Evaluation and Regulation Intensity in Forest Laws by Countries

- not mentioned; + mentioned; ++ partly regulated; +++ regulated; \* Draft Bill

Criteria	Benin	Burkina Faso	Cameroon	Ethiopia	Gabon	Gambia	Guinea	Lesotho	Madagascar	Senegal	Tanzania	Zimbabwe
<b>1. Objectives and functions of forestry</b>		*							*	*	*	
1.1. Sustainable, multifunctional forest management	-	+++	+	+	++	+	+++	-	-	+	+++	+
1.2. Conservation of natural resources and environment	-	+++	++	+	+	+	+++	-	-	+	+++	+
1.3. Integration in environment and development policy	-	+++	+	+	+	+	+++	-	-	+	+++	+
<b>2. Forestry sector development planning</b>												
2.1. National development planning in forestry	-	-	-	++	++	+++	+++	++	++	-	+++	-
2.2. Inventory and monitoring	-	-	+	+	+++	+++	+	++	+	-	++	+
2.3. Coordination/interfaces with planning in other sectors	+	++	+	+	-	+++	++	++	-	-	++	+
<b>3. Forest and forest land</b>												
3.1. Definition of forest and forest land	+++	+++	+++	+++	++	+++	++	++	+++	+++	++	++
3.2. Classification of forest and forest functions	+++	+++	+++	+++	++	+++	+++	++	+++	+++	+++	++
3.3. Regulations for the preservation of the forest area	+++	+++	++	+++	++	+++	+++	++	+++	+++	+++	++
3.4. Conditions for demarcation/change of forest land	+++	+++	++	++	++	+++	+++	-	+++	+++	++	++
<b>4. Property rights and management systems</b>												
4.1. Attribution of management rights	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++	++
4.2. Options for the transfer of management rights	+++	++	++	+	++	+++	++	++	++	+++	+++	+
4.3. Consideration of traditional use rights	++	+++	+++	++	+++	+++	+++	+	+++	+++	++	-
<b>5. Institutional Framework</b>												
5.1. Forest administration	-	+	+	+	+	+++	+	++	+	++	++	++
5.2. Cross-sectoral advisory bodies and commissions	-	-	-	+	-	++	+	+	-	-	+	+
5.3. Mechanisms for participation of forest owners	+	-	-	+	-	++	+	-	+	-	++	+
5.4. Involvement of the public in forest development decisions	-	-	-	+	-	+	+	+	-	-	++	-
5.5. Assistance to forest owners	++	+	-	+	-	+++	+	++	-	-	+	-
5.6. Forest Fund, objectives, financing sources	-	++	+	-	+	+++	++	++	++	++	+++	+

Criteria	Benin	Burkina F.	Camer.	Ethiopia	Gabon	Gambia	Guinee	Lesotho	Madag.	Senegal	Tanzania	Zimbabwe
<b>6. Utilisation of forests</b>												
6.1. Conditions for the utilisation of forests	+++	+++	+++	+	+++	+++	+++	++	++	+++	+++	+
6.2. Forest utilisation	+++	+++	+++	+	+++	+++	+++	+	++	+++	+++	+
<b>7. Assessment and distribution of benefits</b>												+
7.1. Fees for the use of products from state forests	+	+++	+++	-	+++	+++	+++	++	++	+++	+++	
7.2. Fees for products from community/private forests	+	+++	+++	-	+	+++	+++	+++	++	+++	+++	-
7.3. Distribution of revenue from forest products	-	++	+++	-	++	+++	+++	+++	++	++	+++	+
7.4. Special fees	-	-	-	-	-	-	-	-	-	-	-	+
7.5. Valorisation of environmental services	-	-	-	-	-	-	-	-	-	-	-	
<b>8. Regulation for commercialisation and transport</b>												++
8.1. Transport, commercialisation, export	+	+	++	+	+++	+	++	+	+	++	++	++
8.2. Regulation of the certification of forest products	-	-	-	-	+	-	+	-	-	-	-	++
8.3. Forest produce processing industry	-	-	++	-	+++	-	+	-	-	-	-	++
<b>9. Protection of forests</b>												
9.1. Species and biodiversity	++	++	++	++	+++	++	+++	++	(+++)	+++	+++	++
9.2. Pests and diseases	-	++	++	++	-	++	++	+++	-	-	+++	+
9.3. Fire	++	+	+	+++	-	+++	+++	+++	(+++)	+++	+++	-
9.4. Grazing	++	+	+	+++	-	+++	++	++	(+++)	+++	+	
9.5. Seeds and plant control	-	-	-	-	-	-	-	-	-	-	-	++
<b>10. Training and research</b>												+
10.1. Institutions for applied research	-	-	-	+	-	-	+	+	-	-	+	+
10.2. Institutions for training	-	-	-	+	-	++	+	+	-	-	-	-
<b>11. Enforcement regulations</b>												-
11.1. Classification of infractions and penalties	+++	+++	+++	+++	+++	+++	+++	+++	(+++)	+++	+++	+
11.2. Competencies for prosecution	+++	+++	+++	+++	+++	+++	+++	+++	(+++)	+++	+++	
11.3. Utilisation of revenues from penalties	++	++	++	-	+	+++	++	+++	+	++	+++	

## 2 INTEGRATION OF FORESTRY INTO DEVELOPMENT AND ENVIRONMENT POLICIES

The role of forests as a source of a multitude of locally available and renewable resources has long been underestimated. Accordingly, their potential contribution to local, regional, and national development has been under-utilised. Today, a consensus is gaining ground that forestry practices have to be incorporated more consistently into national environmental and development legislation and policies. Integrating the forest sector into a multi-sector network creates synergistic effects, provided that the interrelationships between different sectors are correctly identified and analysed. Relevant criteria for an evaluation of forest law provisions are the objectives and functions of forestry, forest sector development planning, and the definition and designation of forests and forest land (*Table 1; Criteria 1, 2, 3*).

*Objectives and Functions of Forestry:* A precise definition of the economic, ecological, and social objectives of forest sector development is an essential precondition for a clear positioning of the forest sector with regard to other relevant sectors. However, only the laws of *Burkina Faso* and *Guinea*, and the forest act of *Tanzania* meet the standards of well-defined objectives and forestry functions. Legislation in the remaining countries is limited to some fairly general statements, or does not even address the principal objectives of the law, e.g. in the cases of *Benin* and *Lesotho*.

*Forest Sector Development Planning:* Forest legislation in all countries refers to linkages between forestry and other sectors of the national economy. Legislation with detailed regulations on forest development planning exists in countries such as *Gambia*, *Guinea* and *Tanzania*, providing useful guidance for co-ordination and co-operation with planning in other sectors. The laws of *Lesotho* and *Burkina Faso* mention co-ordination with other sectors as a general requirement.

According to the recommendations of UNCED in 1992, National Forest Programmes (NFPs) are appropriate instruments for initiating the process of identifying societal choices and objectives, and engaging different stakeholders in implementing the defined targets. NFPs provide an operational framework for national forest sector planning. Legal commitments for the elaboration of such programs exist in *Gambia* and *Guinea*. The *Tanzanian* forest act provides for the establishment of the National Forestry Advisory Committee, which is entitled to make forest policy reviews. The forest law of *Ethiopia* is restricted to the planning of state and regional forests. In *Lesotho*, the law is limited to some general directions given within the description of the Chief Forestry Officer's duties. While forest legislation in *Madagascar* refers to a forestry development plan, appropriate guidelines are not provided. Countries such as *Burkina Faso*, *Madagascar*, *Senegal* and *Tanzania* have elaborated and ratified additional administrative documents, which explicitly refer to co-ordination in planning procedures.

*Definition and Designation of Forests and Forest Land:* Fairly detailed provisions on the classification of forests exist in all countries. However, the regulations on the classification of forest areas, and in particular the procedures for legally converting forests to other land-uses, only take a rather limited account of economic, ecological, and social considerations. Procedures equivalent to a systematic environmental impact assessment (EIA) are rarely established. They are only mandatory in *Burkina Faso* and *Cameroon*, if the intended activities are judged to have a serious environmental impact. *Senegal's* forest law prescribes an EIA in the case of forest conversion. The national environment act of *Gambia* stipulates that forest administration has to be consulted in the case of forest conversion. The provision also applies to the conversion of natural forest vegetation into plantation forests. The

*Tanzanian* forest act requires impact assessments for certain developments in forest reserves and other specified forest areas.

### 3 PARTICIPATION AND NEW ROLE OF STAKEHOLDERS

An application of the principles of sustainable forest management requires a new understanding of the roles of stakeholders in the forest sector. This involves an efficient state administration with decentralised local and regional structures; co-operation with other local and regional public entities; and a functional distribution of the respective competencies. Developing the use and management of existing local and regional resource potentials implies a systematic involvement of land-owners and other stakeholders concerned. New policy instruments and co-ordination processes are crucial in reaching a social consensus on the management and conservation of forest resources. Relevant criteria for evaluating and assessing the development of forest laws are provisions with regard to forest administration, cross-sectoral advisory bodies, public involvement in decision-making, and mechanisms for the participation of forest owners (*Table 1; Criteria 5.1-5.4*).

*Forest Administration:* The delegation of management responsibilities to regional and local institutions, including private forest owners or their representatives, calls for a revision of the state's mandate concerning forest management and conservation, and necessitates clearly defined mandates for public forest administration, including its functions and responsibilities. It is useful to distinguish between general tasks of state administration (i.e. superintendence of the sector and law enforcement; provision of advisory and technical services for private and public stakeholders) and entrepreneurial management tasks in state-owned forest areas. The forest laws of *Gambia* and of *Zimbabwe* specify the organisation and mandates of the Forestry Administration. The *Gambian* forest law provides for a well-structured territorial structure in line with the general organisation of its public administration. In *Zimbabwe*, the Forestry Commission is affiliated to – but not integrated with – the Ministry of Environment and Tourism. The Commission manages its own budget and is directed by a Board of Directors.

The laws of *Lesotho*, *Senegal* and *Tanzania* include a special chapter on the role and function of the forest service which addresses its mandate, structure, and organisation. In *Senegal* the “Service des Eaux et Forêts” is in charge of state forest management, whereas the decentralised communities have the right to appoint their own forestry staff, commissioned by the forest service. The decentralised communities can decide on the conversion of forest areas outside designated forest reserves. *Tanzania* provides for a general obligation to respect the principles of delegation and decentralisation. Relationships between the central forestry agency and regional and local administrative units are, however, not regulated in detail. *Madagascar's* forest law contains a similar provision. While the duties and competencies of the forestry administrations are mentioned, the laws of *Benin*, *Burkina Faso*, and *Ethiopia* do not dedicate particular sections to this subject. In *Burkina Faso*, for example, the territorial communities are empowered to establish their own management structures. In *Gabon* the duties and organisation of the public forest administration are regulated by special decree.

*Cross-sectoral Advisory Bodies:* Forest legislation usually concentrates on the forest sector and establishes links with other sectors only in exceptional cases. It follows that most laws contain no regulations, or only rudimentary regulations, which enable the establishment, and putting into function, of cross-sectoral advisory bodies and commissions. A new development in the legislation of several countries is the establishment of commissions in order to ensure the participation of local community authorities in the process of designating forest areas and approving the conversion of forest land.

In *Benin* a commission for land classification is to be established, which is composed of representatives from various public institutions. In *Gambia* a joint committee comprising professionals and representatives from the public is in charge of designating land for forest parks and forest reserves. *Madagascar's* forest law provides for a forest commission for the designation of forest areas, in which public institutions as well as representatives of NGOs and forest managers participate. In *Zimbabwe* the law provides for a conservation committee which participates in decision-making on the utilisation of natural forests. Several laws call for the establishment of commissions or committees, which could have a direct impact on forest utilisation and management. For example, a "competent" commission has to approve the allocation of concessions and logging permits in *Cameroon*. In *Gabon* a committee for industrialization of the forest sector has to examine and provide an opinion on most categories of forest permits and licences.

These regulations can be considered as first steps towards political and administrative co-ordination and co-operation. However, the integration of the forest sector into national environmental and development policies will require a more consistent legal framework and more effective public rules in the future. Further revision and amendment of legislation should provide more opportunities for forestry commissions and advisory bodies to contribute to environment protection and economic development.

*Public Involvement in Decision-making:* The establishment of advisory bodies is a first move towards a more substantial involvement of various stakeholders in decision-making processes. At the present time, however, their participation is still largely limited to the local level and to public authorities. The forest law of *Madagascar* is an exception in that it stipulates that representatives from NGOs are to be members of the forest commissions. *Tanzania's* act has another approach, providing for the creation of a National Forestry Advisory Committee. Its members, representing the various participants in the forest sector, may participate in decisions which concern the development of forest resources in general. The members are to be appointed by the Minister, who is to ensure a fair balance between public and private interests and an adequate representation of stakeholders from outside the public administrations. In *Lesotho* public participation is limited to the presentation of a forestry sector plan, for comment.

*Participation of Forest Owners:* Forest owners participate in the development of the forestry sector by managing private or community forests within the framework of the applicable regulations. In spite of their important role they have so far only few institutionalised opportunities to intervene actively in the formulation of national forest policies and in forest sector planning. Most forest laws at present barely mention and recognise the role and competencies of forest owners associations and of professional organisations of contractors in the forest sector.

#### 4 DIVERSIFICATION OF MANAGEMENT SYSTEMS

In terms of access to forest resources and management rights, the forest sector in the countries under review was and still is dominated by state competencies and public interventions. So far, most state forest administrations have not been in a position to develop sufficient capacities for taking effective care of their far reaching mandates and responsibilities. Their limited capacities to implement sustainable forest management according to the prevailing regulations, together with conflicting customary use regulations at local level, have in many cases slowed down the development of the sector. There is at present a trend – at least in some forest laws recently adopted – to look for new approaches with regard to management

systems. Important issues for comparative evaluation are: the allocation of rights to use forest resources; the transfer of management rights to local groups; the protection and development of traditional use rights, and the distribution of benefits from forests. (Table 1; Criteria 4, 7).

*Allocation of Rights to Use Forest Resources:* Regulations regarding the access to forest resources constitute the fundamental framework for the development of various systems of forest management. The legislation of all countries under review recognises three forms of property: state-owned forests, privately owned forests, and forests owned by communities and local authorities, i.e. common-property regimes. The share of different ownership categories, especially the importance of community forests, varies according to conditions within the country. An important factor is the stage of reform processes reached within public administrations, i.e. the promotion of decentralisation or the redefinition of the role of the public sector.

Regulations concerning the management of state-owned forests lay down that the forestry administration is either in charge of managing state-owned forests, or that it may transfer utilisation and management rights to a third party by granting forest concessions, licences and permits. Similar provisions exist in all countries with regard to the management of forest plantations under community and private tenure. The owners have to respect certain restrictions in order to ensure protective forest functions, but have considerable liberty in decision-making. In the case of natural forest areas, regulations vary considerably between countries. Again the competencies of communities or decentralised local authorities concerning the rights of use and the management of such areas depend to a large extent on the promotion of decentralisation of the public sector. Where private forest tenure exists in natural forests, the ownership rights are usually even more restricted by law, in that any utilisation of natural forests must be declared to or authorised by the forest administration.

*Transfer of Management Rights to Local Groups:* The transfer of management and utilisation rights to local groups has the potential to bring about considerable changes with regard to a more active involvement of different stakeholders in forest management. With the exception of *Ethiopia*, the forest laws of the countries under review provide for such transfers. These are however in general subject to the following three conditions: approved management plans, formal agreements, and a functioning collective management institution. The main differences between countries concern the degree of intervention by forest administrations, the importance of supervision functions, and the level of advisory services and technical assistance. Regulations in this respect can be found in the legislation of most countries. In *Madagascar* the transfer of forest management rights is determined within the framework of provisions which relate generally to renewable resources.

In *Gambia* the transfer of management and utilisation rights is a central element of the law. The Forest Bill contains a clear commitment, provides detailed directives and stipulates for measures designed to support the management activities of local groups. Transfer procedures take place in two phases with the result that the formal management rights can only be transferred after a successful probationary period of three years. The bill provides for a system with multiple management and utilisation rights. Provisions relating to the designation of village land forest reserves and community forest reserves promote management by local groups. The transfer of management rights can take place upon request by individual groups, which live adjacent to the forest or which are otherwise interested in wood production, and forest management. The forest service has the task of encouraging the creation of community forests.

Measures to encourage social forestry form a prominent part of the forest law of *Benin*. It provides for a transfer of forest management to local populations adjacent to the forest, on condition that formal management agreements and management plans exist. While the forest areas remain legally under state tenure, the agreements specify management practices in favour of local groups, including the use of the income derived from forest activities. The law grants forestry administration various options to intervene. In *Burkina Faso* and *Senegal* the utilisation of the forest by decentralised institutions is emphasised. These, in turn, can transfer management and utilisation rights to local groups. Farming contracts are a particular form of such transfers. They allow the temporary agricultural use of allocated areas, followed by reforestation and silvicultural treatment. According to *Cameroon's* legislation, state-owned forests can be entrusted to village communities on the basis of a special form of contract, which is subject to the provisions of a formally approved management plan. The public forest administration has to ensure that the conditions of utilisation are met, as contractually specified. It has a mandate to make technical assistance available for the preparation and implementation of management plans if this is requested by the local communities.

*Traditional Use Rights:* Customary rights are generally acknowledged in the laws of all countries. They are limited to subsistence needs and exclude the commercial use of forest products. There is an important difference in the exercise of traditional rights inside or outside declared forest reserves, in particular in the regulations of *French-speaking* countries. While these rights are severely restricted inside forest reserves, they are less restrictive on other forest lands. Traditional use rights can be limited or even abolished in forests for which management plans have been adopted. In *Gambia* and *Tanzania* a detailed survey of customary rights as well as of the necessary compensation in case of restrictions is part of the procedures for demarcating forest areas and preparing management plans. *Cameroon* and *Guinea* provide for financial compensations in case of temporary or permanent limitations of traditional use rights. In contrast to the other countries under review, *Ethiopia* and *Lesotho* prescribe the payment of fees for forest products in the context of traditional use rights.

*Distribution of Benefits Derived from Forests:* The laws acknowledge the principle that forest owners should receive the revenues derived from the utilisation of their forest. This also applies in the case of transfer of management rights to local groups. However, special provisions may be made which regulate benefit sharing between the local groups and forest administration. In *Cameroon, Gambia, Lesotho, Madagascar, Senegal, Tanzania, and Zimbabwe* regulations regarding the financing of forest development funds provide to a certain extent for a partial redistribution of revenues from forest products. In a few cases more concrete specifications exist which allow the local population additional benefits from revenues derived from forest activities of third parties within their traditional living area. In *Cameroon*, for example, the forest law stipulates that all contributions to investments in social infrastructure must be transferred to the communities concerned. In order to sustain the development of village communities adjacent to certain state forests, the law determines that part of the revenues derived from the sale of forest products is to be utilised for the benefit of these communities.

*Gambia's* Forest Bill prescribes that the use of revenues generated by the sale of forest produce harvested in the course of forestry operations in community forests will be decided upon by the forest committee concerned. The proceeds are to be used in order to promote the protection and development of community forests, but are also a general contribution to community development. Resources spent for community development activities other than forestry may not exceed sixty percent of the deposits into the account. Fifteen percent of the

total financial proceeds are to be transferred to a national fund as a contribution to general forest development and compensation for technical services rendered by the forestry department in managing community forests. Regarding the granting of permits and licences, *Tanzania's* law requires the proof of consultation with the adjacent population, co-operation with the local populations, and mechanisms for conflict management.

## 5 VALORISATION OF FOREST PRODUCTS AND SERVICES

The benefits from forests and from the forestry sector have been, and generally still are, considerably undervalued. This is true both for marketed products and for environmental and ecological services which result as positive external effects from protecting forest vegetation and managing the resource as a multifunctional system. The concept of sustainable development places new demands on the regulatory framework for the utilisation and management of trees and forests in order to increase the economic and social values generated by the sector for public and private forest owners, and for society as a whole. Important legal issues in this context are the scope of management plans, the framework for forest utilisation, and regulations concerning the commerce of forest products (*Table 1; Criteria 6, 8*).

*Scope of Management Plans:* In all countries under review, management plans are one of the main instruments in improving forest utilisation and balancing public and private interests in land management. However, the applicable regulations vary to a considerable degree with regard to the categories of forest areas subject to management planning, to the requirements applicable to different groups of forest owners, and to the specific contents and standards of such plans. The role and influence of public forest administrations in terms of approving management plans and assisting in their implementation is more or less dominant in all countries. With regard to ongoing national and international debates concerning sustainable forest management, the findings show that improvements have been made. The prevailing regulations will however need further amendments to ensure a forest land management which provides a wide range of forest products and environmental services.

In *Benin, Burkina Faso and Cameroon* management plans are required in designated forest reserves and permanent forests. *Benin's* legislation specifies directives regarding the demarcation of management units, regulations concerning standards of forest practice, and procedural rules which ensure the participation of local residents. In *Burkina Faso*, the forest law has given forest administration the competence to prepare management plans and to control their implementation. While the Ministry is to approve plans for state-owned forests, the competent local authorities are entitled to approve management plans for forests in which they have the use rights. In *Guinea, Madagascar, and Senegal* the law requires management planning for all public forests. The responsibility for the preparation of the plans lies with the institutions which have the use and management rights. The plans are subject to approval by the competent authorities. In the case of *Madagascar*, approval is given by the authorities of the decentralised institutions.

*Cameroon's* forest law contains fairly general statements and stipulates that procedural aspects and standards for management plans are to be regulated by decrees. The law demands that the plans be revised and updated periodically. In communal and privately owned forests the requirements for such plans are less comprehensive than in state forests. *Gabon's* forest law contains more detailed regulations on management planning in regional units (Unité Forestière d'Amenagement, UFA), such as being obliged to integrate a socio-economic and biodiversity analysis, to define the objectives and costs of management, and to provide for monitoring and revision procedures. Regional management plans have to be supplemented by

industrialization schemes within a period of three years. Each regional unit is subdivided into forest management units (Unité Forestière de Gestion, UFG) for which the annual allowable cut, the range of species to be harvested and the series of cutting perimeters have to be determined.

In *Gambia* management plans are mandatory for all categories of forest ownership, provided that the area comprises natural forests and exceeds 25 hectares. The forest owners are responsible for the elaboration of the plans. In *Tanzania* similar regulations are in effect. The law lays down general regulations for different categories of management plan as well as for minimum standards to be promulgated by decrees. In *Lesotho*, the forest administration is responsible for the management of natural forests. Management plans have to be elaborated for all forest reserves and are subject to defined minimum standards and to approval by the Minister. Transfer of utilisation rights to co-operatives or private individuals requires agreements with approved management plans. In *Ethiopia* management plans are to be prepared for state-owned and regional forests. No regulations concerning standards, duration, or procedures are stipulated in the law.

*Framework for Forest Utilisation:* In state-owned natural forests there are usually two types of regulation for the organisation of forest utilisation. Management, timber harvesting, and marketing of round-wood may be carried out by the public forestry administration. Alternatively, the management and exploitation rights may be transferred to private contractors. There are several procedures for the transfer of rights: (i) management agreements, i.e. the transfer of management and timber harvesting for limited periods; (ii) concessions, transferring the rights for relatively large areas and long periods; (iii) sales of standing timber of certain species in a defined area; (iv) harvesting permits for a specified quantity of products; (v) permission to practice traditional use rights. The forest laws of the various countries contain different choices and combinations of these options.

*Benin's* forest law requires utilisation permits and the payment of fees in public forests, whereas the utilisation of private forest land is not bound to a special permit, provided there is no danger of degradation. The law of *Burkina Faso* is limited to general statements. In the case of state-owned forests, contracts with a list of conditions detailing harvesting and distribution of products may be issued. In *Ethiopia* the law does not include specific regulations on procedures to grant concessions other than the requirement of a written permit from the Ministry or the appropriate regional entity. The regulations laid down in *Lesotho's* act are similar. Forest utilisation requires a licence, except in plantations of individuals, communities or co-operatives. The forest administration is entitled to issue licences and to collect fees. The act neither specifies the fees nor the modalities of issuing licences. According to *Senegal's* legislation, the utilisation of forest products in state forests is conducted by selling timber cuts, standing volume or timber units. In forests owned by local entities, utilisation requires the authorisation of the village head or of the president of the rural council. Private forests may be used according to the needs of the owners. Utilisation is generally subject to the payment of taxes and fees as defined by decrees.

In *Gambia's* Forest Bill licences and permits are compulsory for any type of activity in state forests. In the case of state forests under the competence of forest committees, the committees may decide on the type and number of licences and permits to be issued, in collaboration with the forestry department. They have the right to monitor the licence holders' activities and performance. The procedure for issuing licences and permits, and the modalities for fixing the fees are regulated unequivocally. The law of *Guinea* defines common principles which apply to all types of forests regardless of tenure rights. The rules for the transfer of user rights are

also fairly transparent. Formal regulations prescribe the issuing of forest management contracts and of logging permits. Details are to be determined in by-laws and regulations. The rules apply to state forests as well as to community, district and village forests.

In *Madagascar* rights may be transferred through utilisation and harvesting permits. Utilisation permits refer to all or to selected forest products, as indicated in a list, specifying the products and the practices applicable. Moreover, there is an obligation on the part of the users to reforest, or to pay financial compensation. The law does not provide specific information on the determination of fees or modes of granting such permits. Harvesting permits are applicable for the practice of traditional use rights. They entitle the holders to use limited quantities of forest products to meet personal, non-commercial needs. Again, the procedures are to be specified by decrees. In *Madagascar*, commercial logging and marketing of round-wood require the recognition of the operator as a professional contractor by the forest administration.

The legislation of *Cameroon* contains fairly detailed provisions on the use of forests. They vary according to different property regimes. Forest utilisation in state-owned production forests is conducted either by timber sales or by forest agreements. Forest agreements allow for a long-term transfer of utilisation rights, along with determined management duties. A list of specific regulations is part of the agreement, concerning its duration, the area allocated, and the establishment of wood processing facilities. A series of payments are due, comprising annual fees based on the area, taxes on the production of timber, progressive surcharges on the export of non-processed forest products, investment contributions for social infrastructure, and special fees for carrying out forest inventories and forest management activities. With the exception of inventory and management fees, the forest charges are determined on an annual basis by special decree of the Ministry of Finance. Legislation in *Gabon* contains similar regulations. A major policy objective in attributing utilisation permits is the promotion of local wood transformation and the development of the wood processing industry.

The new *Gabonese* forest law defines three categories for permits and concessions and regulates in detail the conditions under which they may be granted. Individually issued permits (Permis de Gré à Gré) refer to stumpage sales of a maximum of 50 trees. Associate forest permits (Permis Forestier Associé) are area permits up to 15,000 hectares if integrated in a forest concession, and up to 50,000 hectares if attributed to an individual company. Both classes of permits may only be issued to nationals. Forest concessions under sustainable management (Concession Forestière sous Aménagement Durable, CFAD) are area permits for areas of 50,000 to 200,000 hectares in permanent forests. They may be issued to individuals and companies in general. An exception is made for those forests declared as permanent which have been classified for local management and wood utilization.

In comparison with other countries the law of *Tanzania*, grants comprehensive rights to those responsible for a forest area, provided that the intended activities are based on adequate management planning. For certain activities, in particular for the export of forest products, the Ministry is competent to issue permits. The duration of permits extends over a period of three years and can be renewed for a maximum period of fifteen years. The law specifies several factors to be considered in assessing forest fees, such as the estimated market value of the products, access to the site of operation, the purchasing power of the buyers, as well as the sustainability of production, based on site productivity. In addition to permits, concession rights can be granted by the Minister. The conditions for such agreements are determined by law and decrees.

In *Zimbabwe*, legislation authorises the Minister, on recommendation of the Forestry Commission, to lease parts of demarcated forests. Financial proceeds derived from concessions are at the disposal of the Forestry Commission. The law refers to logging permits as well as to permits and licences under the communal land forest produce act, which addresses forest products on communal land. The licences apply to exploitative activities in both natural forests and plantations. They must be established in written form and specify the amount and conditions of payment for the forest products. The forest law lays down the following specific regulation in the case of planted forest resources: Use rights and income derived from forest products belong to the individuals or institutions which planted the trees. There are, however differences in terms of the conditions attached to this rule. For example, according to *Madagascar's* legislation, a permit is required to exercise uses, whereas a mere declaration is sufficient in *Burkina Faso*. In *Benin, Guinea, and Senegal* there are no restrictions if the uses are in accordance with management plans.

*Regulation of Forest Product Commerce:* New approaches to forest utilisation systems require a more progressive marketing of forest products to meet the ambitious objectives for the forest sector. The provisions of most forest laws concerning the marketing of forest products are at present mainly restrictive. Transport, storage, and trade of forest products are frequently subject to cumbersome public regulation through permits and controls.

The laws of *Cameroon* and *Gabon* provide for measures designed to foster an active participation in the development of market structures. Several instruments are used to promote domestic processing of forest products. Firstly, the granting of concessions requires the establishment of wood-processing enterprises. Secondly, there are progressive taxes for the export of round-wood. Government encouragement of inland wood processing in the present form, which is intended to add value to forest products, has its limitations and drawbacks. It tends to prevent the establishment of open log markets with free competition for the raw material, and results in an under-valuation of the raw material. With cheaper raw material available, there is also less pressure for the industry to process timber efficiently. However, these obstacles can be overcome. Since production and marketing of forest products are closely linked, it is decisive for all countries to realise that instead of largely relying on regulative measures, public instruments to influence marketing conditions should be re-oriented towards incentives and promotional measures.

The forest law of *Guinea* provides another approach with regard to marketing conditions. It introduces a quality certificate for sawn timber, i.e. a product certification based on the monitoring of defined qualitative standards. This is different from certification schemes as advocated in international debates, which refer largely to ecological and social criteria and indicators of sustainable forest management.

## 6 FOREST CONSERVATION

Forest ecosystems contain a large part of terrestrial biodiversity. Tropical, temperate and boreal forests together offer diverse habitats for plants, animals and micro-organisms, and are thus a home to a majority of the world's terrestrial species. Forest biodiversity is being reduced, due to rapid deforestation, fragmentation, and degradation of forests. Protecting the forest, particularly primary forests, has consequently become of essential significance for the conservation of biological variety and genetic resources.

The main instrument is the Convention on Biological Diversity (CBD), internationally agreed upon and adopted as a result of UNCED in 1992. The Convention is based on a holistic

approach, as it combines the preservation of biological diversity with the utilisation of this diversity, as well as with an equitable sharing of the benefits that may derive from its use. The countries which signed the Convention have adopted a “Work Programme on Forest Biological Diversity”. It follows a cross-sectoral ecosystem approach and refers explicitly to the close connections with international forest policy dialogues and to the need for harmonisation. Relevant criteria for an evaluation of forest law provisions are the preservation of biological diversity, the prevention and control of pests and diseases, the protection against fire and grazing and the regulations concerning seeds and plant control (Table 1; Criteria 9.1, 9.2, 9.4, 9.5).

*Preservation of Biodiversity:* A direct reference to international conventions is made in *Tanzania*' act. The Minister has the obligation to facilitate the implementation of international conventions and agreements relating to the reduction of global greenhouse gas concentrations, the conservation of biological diversity, the protection and enhancement of forests and the preservation of wild plants, for which agreements have been signed and ratified. The act confirms the sovereignty over biological resources in forests and determines that they shall be conserved and utilised for the people of Tanzania. A similar provision regarding the protection of genetic resources exists in the forest law of *Cameroon*.

The *Gabonese* Forestry Code is noteworthy in that sustainable management of the water and forest sector is defined as the rational use of forests, fauna and wildlife, and inland fish resources. A considerable part of the law refers to wildlife management. The laws of *Cameroon*, *Ethiopia* and *Lesotho* mention obligations regarding the preservation of biological diversity, without, however, reference to international conventions. The forest law of *Ethiopia* obliges forest owners to implement the overall directives issued by the Ministry on environmental protection and those pertaining to catchments, unique habitats, and endangered tree species and forest communities within the region. The texts of *Cameroon* and *Lesotho* give general indications about the maintenance of biological diversity as a duty of the forest administrations. All forest laws contain regulations with regard to the protection of endangered indigenous tree species.

*Forest Protection:* More classical topics such as forest protection, measures in case of calamities and natural disasters, and protection against fire and grazing find considerable attention in the forest legislation of the countries under review. Some texts refer to special legislation, as for example in the case of bush fires in *Madagascar* or of grazing in *Benin*. *Cameroon*, *Ethiopia*, *Gambia*, *Guinea*, *Lesotho* and *Tanzania* have adopted regulations regarding the prevention and control of pests and diseases. Forest owners have the obligation to defend against dangers, and the forest authorities are allowed access to endangered areas and may carry out appropriate measures. With regard to the protection against fire and grazing the texts reflect two different points of view. The laws of the first group of countries acknowledge fire and grazing as traditional forms of use in forest areas and determine criteria according to which these uses may be limited and to what extent (*Benin*, *Burkina Faso*, *Guinea*, *Gambia*, *Lesotho*). In the laws of the second group of countries it is assumed that the use of fire and grazing is generally forbidden, whereby exceptions may be made under specifically determined circumstances (*Ethiopia*, *Tanzania*, *Zimbabwe*).

*Seeds and Plant Control:* None of the forest laws taken into consideration contains regulations regarding the control of production and commerce of seeds, and the production of forest seedlings. However, the laws of *Burkina Faso* and *Cameroon* have regulations preventing the introduction of invasive alien plant and animal species. They prescribe that the

introduction of plant or animal species onto the national territory is subject to an authorisation from the forest administration.

## 7 MEASURES FOR AN APPROPRIATE INSTITUTIONAL FRAMEWORK FOR THE FORESTRY SECTOR

Relevant issues for comparative analysis are regulations concerning the operation of forestry development funds; support to private and community forest owners; promotion of education and training, and facilities for forest sector research (*Table 1; Criteria 5.5-5.6, 10*).

*Forest Development Funds:* In view of the multiple roles of forests in providing private and public benefits, their sustainable management requires public stewardship and investment in developing the productive potential of the sector. Forest development funds in which part of the proceeds from goods and services produced are collected offer incentives and compensations in order to continuously supply economic, ecological, and social services in the public interest. Precise descriptions of the organisation of such funds, the composition of decision-making bodies, and the supply and allocation of financial means are necessary in order to ensure their functioning correctly.

Among the countries under review the forest laws of *Gambia* and *Tanzania* contain detailed regulations regarding the establishment and the functioning of a forestry development fund. In *Gambia* a national fund, as well as local funds, for the promotion of community-based forest management are provided for in the law. Income derived from state-owned forests is allocated in equal parts to the national budget and to the national forestry fund. Fifteen percent of the income created from community forests goes into a central fund, while the remaining eighty-five percent are available for local forestry development. The act in *Tanzania* contains clear objectives and directives concerning the organisation and administration of such a fund. Moreover, it entitles the people concerned in the forest sector to participate in decision-making regarding its utilisation. The financing mechanisms are based on a levy of two percent of every prescribed fee payable under the act and a levy of three per cent of any royalty payable under the act. Further income is derived from the sale of confiscated goods, from voluntary governmental, private, or external contributions, and from proceeds from projects financed by the fund.

*Cameroon's* regulations are rather general. While there is a special forest development fund, to be financed from revenues derived from the utilisation of forest resources, the amount of the contribution is not specified in the law. In *Benin, Burkina Faso, and Guinea*, the creation of forestry development funds is also laid down by law. However, the objectives are not specified, and there are no indications as to the organisational and administrative structure of these funds. Sources of financing are mentioned, without clarifying the range of contributions to be made. In *Lesotho* the entire income derived from fees, taxes, and fines flows into the forestry fund. One of its major objectives is to provide financial support to private forest owners, communities and co-operatives. The proportion of proceeds to be made available for these measures is not specified. The Forestry Fund is independent from the forestry administration, as it is managed independently in a separate public account. A similar solution exists in *Senegal*, where the law stipulates that all revenues derived from fees, royalties, and the sale of forest products flow into the national forestry fund, with the objective of financing forest resources development.

The forest law of *Madagascar* addresses the creation of a forestry fund in general terms. Supplementary decrees determine that the fund is to be financed from revenues derived from

the transfer of utilisation rights on forest products in state-owned forests. In order to facilitate its functioning, additional regional funds are established. The distribution of the proceeds between national and regional funds is still to be decided upon. Ratios of 30 % to 70% are being discussed. The management of the fund is temporarily entrusted to the forestry administration, until new provisions are made by decree. *Zimbabwe's* law establishes a forestry reserve fund to be financed from contributions which amounts to three fifths of the surplus of the Forestry Commission. However, as there has been no surplus in the past years, the fund has not become operational so far.

*Assistance to forest owners:* The transfer of utilisation and management rights to local communities, user groups and co-operatives requires appropriate skills and managerial capacities at the local level. The same is true with regard to private land owners engaged in tree planting, and managing wood lots and forest lands. The public forest administration has an important role to play in this context.

According to *Benin's* forest legislation the administration has a mandate to support actively the transfer of management rights within the framework of agreements with local communities. Support measures include the promotion of negotiating processes, advisory services, and technical, material, and financial assistance. The law, however, does not provide definite directives which will enable interested partners to claim such assistance in a formal manner. *Gambia's* forest service is to provide assistance to local management committees for the elaboration and implementation of management plans as part of social forestry initiatives. Private forest owners can receive similar assistance upon request. In *Guinea*, the corresponding regulations are less specific. The forest administration is to assist decentralised communities in the elaboration of management plans and in promoting forest plantations in general.

In *Lesotho* the mandate of the forest service refers to the promotion of forestry and agro-forestry in co-operation with the agricultural advisory services. Moreover, there is an obligation to plan and establish suitable advisory services and technical support to private forest owners and co-operatives upon request. Fees are collected to cover the costs of these services. The laws of *Ethiopia* and *Tanzania* mention technical advice and assistance only in a general way, as a specific mandate of the forest administration. Addressees, procedures and the extent of these services are not specified. In *Burkina Faso*, *Cameroon*, *Gabon*, *Madagascar*, *Senegal*, and *Zimbabwe* the laws contain little on measures in favour of forest owners. With the exception of *Benin*, financial support to forest management, such as incentives to promote reforestation or the transition to sustainable management of natural forests, are not specifically regulated in the laws of the countries under review.

*Education, Training and Research:* Forest sector development and sustainable forest management require appropriate training, and technical and professional education of staff for all categories of forest ownership and at all functional levels. According to the forest law of *Gambia*, the establishment of training centres is one of the important tasks of the forest service. Its own staff, as well as personnel from other public institutions and interested individuals from local organisations and communities, should be provided with adequate education and training. The forest laws of other countries under review only give general indications without specific provisions concerning scope, addressees, contents, organisation, or financing. In *Ethiopia*, it is the task of the ministry to make sure that sufficient qualified personnel is available for the management and development of state and regional forests. There are also provisions for support of the regions in organising training activities and in promoting general education programmes related to environment issues.

With regard to applied forest research, there are only few provisions to be found in the forest laws under review. This is the case in *Gambia* for instance, where the forest service is mandated to carry out this kind of research. Similar regulations exist in *Guinea*, *Lesotho*, and *Zimbabwe*. Training, as well as research, is mentioned as one of the principal elements for achieving sustainable development of the sector in the introductory part of the law of *Gabon*. *Tanzania's* law addresses research with regard to regulations concerning the collection of wild plants for scientific purposes. Moreover, the forestry fund may be used to promote applied research in forestry, and educational campaigns on the environment.

## 8 DISCUSSION OF FINDINGS AND CONCLUSION

*Development of Forest Laws:* Recent forest law developments in the countries under review show that important regulatory aspects are addressed and that the legal framework provides new opportunities for further improvements to reach sustainable forest management. However, the findings according to the selected criteria for comparative evaluation indicate that regulations have been made with varying intensities. Further progress is needed in order to achieve the standards and guiding principles established by the international community with regard to effective national forest policies and forest sector development. Gaps and inconsistencies vary from country to country, but there are common patterns and issues of concern that can be identified.

*Sector Co-ordination:* The economic, political, institutional, and demographic environment, as well as a country's area, regional distribution and the productivity of its forest resources are driving forces in the development of the forest sector. Important factors are, for instance, access to forest land uses and management rights; the range of demanded goods and services; and access to financial markets and technology. Other important factors are the role of the informal economy, access to existing or developing markets, the organisation of civil society, and the role of the media in influencing public opinion. Demographic pressure on forest land, migration and urbanisation trends, and the availability and effectiveness of education and research facilities determine to a large extent the road towards sustainable land management. Many sectors have forward and backward linkages to forest land use, and many public policies have impacts that are to be considered as part of the institutional framework that shapes forest sector development.

Modern forest laws need more explicit institutional and procedural provisions as well as appropriate co-ordinating instruments which ensure that the forest sector fully participates in the evolution of the economic, social, and physical environment. Prime examples are the actual and potential conflicts on the one hand between sustainable utilisation for the economic production of goods, and on the other the need to protect and conserve forests and forest lands for environmental and ecological reasons. There is an increasing specialization of land use regulations and planning activities, often based on parallel, or in part divergent, organisational and resources allocation structures.

Altogether, the findings show that forest regulations do not provide a sufficiently developed framework for the organisation of political processes based on negotiation and consultation in a transparent form. More comprehensive provisions are needed which will clarify in a transparent form the tasks, rights, and duties of the many stakeholders of the forest sector. Amended legislation should encourage flexible and transparent planning processes and provide instruments for the definition of forest policy objectives, priority areas and strategies, and the monitoring of implementation.

*Reform of Public Forest Administrations:* Public forest administrations are in a process of considerable change. Until now, taking on regulatory responsibilities and tasks has been considered as their principal role. This becomes evident from the prevailing provisions of forest laws, which are largely based on the concept of a centralised state forest administration with multiple competencies related to forest policy setting and law enforcement. In addition, many national forest administrations have the responsibility of managing large forest areas under state and communal ownership. There is need for a new understanding of the mandate and tasks of public forest administrations as process-steering public services and facilitators, which are in a position to involve and advise stakeholders and to arbitrate between parties with conflicting interests in order to find solutions.

This implies foremost the delegation of power in forest management and in decision-making to local communities and to the private forest sector. Some of the more recent laws take first steps towards a redistribution of competencies and tasks between public and private actors in the sector. They establish a legal framework for decentralised institutions, stronger participation of land owners in policy decisions, and increased involvement and operational capacities of forest managers. In the majority, however, the laws only give general indications and do not sufficiently encourage innovative changes. Further amendments and revisions will be needed in order to provide for more transparency in public decision-making, monitoring and control; to develop more functional and effective structures between forest administration and other public services involved in land management decisions; to provide for workable contractual arrangements between the public and private sectors; to facilitate the transfer of responsibilities to the actual land managers; and to foster decentralisation i.e. the shift of decision-making and implementation authority to regional or local units.

*Improved Management Systems:* Even if practically all forest laws provide several alternatives to transfer utilisation and management rights to individuals, local entities, small operators and large industrial companies, the applicable regulations are still much oriented towards a predominant role of public administrations. Past experiences show that they often lack the necessary means and capacities to fulfil the numerous duties stipulated by law. A reorientation of the forest sector's framework calls for the establishment and strengthening of local and regional management systems. These should be geared towards social forestry, multifunctional forest management objectives, and private sector initiative.

Regulations which admit the transfer of management responsibilities and a more flexible approach in implementing them will facilitate such developments. Although the benefits and limits of a stronger integration of regional or local groups as well as of private contractors are, at least in some cases, still controversial, there are positive experiences which support this approach. Essential conditions for a successful transfer of user and management rights are the employment of qualified managers, the economic profitability of forest production and reforestation, the promotion of management skills and professional and technical education.

The laws put considerable emphasis on forest management planning, and regulate the content and procedural aspects of the preparation and implementation of such plans with considerable detail. However, they contain little to strengthen the entrepreneurial forces of the sector by providing an appropriate environment. Instruments and measures to this end include the transparent allocation of exploitation rights, clear directives for sustainable use, the deregulation of markets, and the development of self-regulating mechanisms such as the certification of forest products. Besides, the laws focus on the production of timber and consider much less the need to foster sustainable practices for non-timber forest products, both for subsistence and for commercial purposes.

*Protection of the Environment:* International conventions integrate national efforts and requirements into the worldwide context of forests as a heritage to mankind. Environmental aspects such as CO<sub>2</sub> fixation are gaining public recognition and are a major issue of the Framework Convention on Climate Change (FCCC). While markets for these services are not developed or are only just emerging, the need to address these services and their significance to society in forest resources planning and management is obvious. Integration of the demand for environmental services into economic systems requires agreements at national and international levels, which translate non-marketed values into marketable products. Examples include charges for watershed protection or the sale of certificates based on quantities of CO<sub>2</sub> fixed in forest plantations. Indicators of the increasing importance of biodiversity and preservation needs are in particular the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). They commit the signatory nations to provide “new and additional funds” for the global preservation of biological diversity.

Altogether the findings show that the present forest legislation does not address environmental aspects at a significant level. With the exception of *Tanzania*, none of the laws under review explicitly establishes a direct relation to international conventions and agreements. However, some legal provisions are based on a cross-sectoral ecosystem approach and identify the preservation of biological diversity as consistent with international conventions. A general draw-back is the absence of regulations regarding sovereignty over and access to genetic resources as well as the transfer, handling and use of organisms that may have adverse effects on biological diversity. Further amendments will be required to address these issues, in order to combine forest sector development with ecological sustainability.

*Institutional Support:* As has been said, forest development funds provide an important opportunity to generate re-investment in the management of natural forests in use, to stimulate new investments by public and private forest owners, and to enhance forest sector development. While the establishment of such funds is mentioned in several forest laws, the purpose, mode of functioning and source of financing are usually not sufficiently elaborated to make such funds operational at a significant scale. Instruments which provide incentives to public and private forest owners in order to implement the forest law’s objectives are poorly developed. The laws mention such assistance, but provide little or no directives as to the addressees or to the ways and means to make available advisory and technical services.

Another draw-back with considerable weight results from the fact that forest owners do not have legally confirmed rights to call on the administration for such assistance. The focus on monitoring tasks and on advisory services to forest management groups and to private forest managers implies the need for new profiles in applied forest research, professional education and technical training. The promotion of managerial and operational capabilities of beneficiaries, to whom management rights have been transferred within social forestry programmes, is of particular importance.

*Conclusion:* In conclusion it may be said that a clear move to promote local and private forestry practices can be recognised in the forest laws that have been examined. This is evident from provisions relating to the acknowledgement of local use and management practices, the gradual transfer of management responsibilities to local entities and co-operatives and from efforts to support such developments by public forest administration. With regard to environmental aspects, the major contribution of forest legislation remains its regulatory function in protecting forest cover, classifying forest areas according to major uses,

and providing for preservation of nature reserves, protected areas and national parks. Sustainable forest management through appropriate planning, which considers not only wood production, but increasingly other products and services of the resource, is an established part of the legal framework that regulates the use and development of forests. These developments provide a more flexible and integrative basis for the sector's development. However, it must also be acknowledged, that the present legal framework needs further amendments, precisions and resources if its regulations are to be implemented in a consistent manner and on a significant scale. Procedural aspects of implementation, improvement in co-ordination with other sectors, and effective monitoring and evaluation of tangible results are among the most pressing needs to increase the effectiveness of forest legislation.

## 9 FOREST LAWS REVIEWED

*Benin* 1993: Loi No 93-009 du 2 Juillet 1993 portant régime des forêts en République du Bénin

*Burkina Faso* 1997: Loi No. 006/97/ADP portant Code Forestier au Burkina Faso

*Cameroun* 1994: Loi No 94/01 du Janvier 1994 portant régime des forêts, de la faune et de la pêche

*Ethiopia* 1994: Proclamation No 94/1994 to provide for the conservation, development and utilisation of forests

*Gabon* 2001: Loi No 016/01 portant Code Forestier en République Gabonaise

*Gambia* 1998: The Forest Bill, 1998

*Guinée* 1999: Loi L/99/013/AN portant Code Forestier

*Lesotho* 1998: Forestry Act 1998

*Madagascar* 1997: Loi No. 97 – 017 du 16 juillet 1997 portant révision de la législation forestière

*Sénégal* 1998: Loi No 98 – 03 de janvier 1998 portant Code Forestier

*Tanzania* 2002: The Forest Act 2002; 7<sup>th</sup> June, 2002

*Zimbabwe* 1996: Forest Act, Chapter 19:05, Revised Edition 1996

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