

# Forestry policies in the Caribbean

Volume 1: Proceedings  
of the Expert Consultation

Expert Consultation on Forestry Policy in the Caribbean:  
Strengthening Countries' Capacity and Effectiveness  
Port of Spain, Trinidad and Tobago  
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## FOREWORD

This regional study on "Forestry Policy in the Caribbean" was carried out by the FAO Forestry Policy and Planning Division in cooperation with the Commission of the European Communities (DG VIII-Development) in order to "contribute to the review of national actions aimed at promoting sustainable forest resource utilization, the follow-up of commitments made by countries in the framework of UNCED and the international assistance to the implementation of forestry policies and strategies". Special attention was paid to the recommendations and actions proposed by the Intergovernmental Panel on Forests, national forestry programmes, Protocol 10 of the Lomé IV *bis* Convention and to the approaches and principles outlined in the EC Forest Sector Development Cooperation Guidelines.

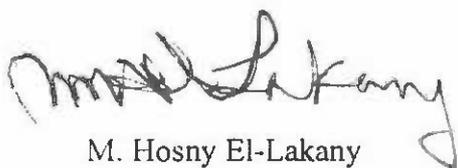
The FAO Forest Resources Assessment 1990 estimated the area of natural forest in the Caribbean region to be 47 million ha, representing 68.3% of the total land area. Forests and trees play a diversified role, depending on the size and economic importance of these resources in each country. Even where forests constitute a very scarce resource, they support other critical environmental and economic activities, such as water production, land protection and tourism. In countries where forest resources are more abundant, including Belize, Cuba, the Dominican Republic, Jamaica, Suriname and Trinidad and Tobago, they are instrumental in satisfying the needs for fuel, food, medicines, fodder and other marketable products. In both cases, forests contribute to the sustainability of development in a stable and productive environment. Yet, in spite of these known benefits, the annual rate of deforestation in the Caribbean rose to 121 800 ha between 1981 and 1990.

During the past decade, far-reaching economic reforms in these countries have resulted in the adoption and implementation of different mechanisms for deregulation, privatization, reduction of direct subsidies for specific sectoral development and changes in the role and responsibilities of the state. In the Caribbean, as in many other countries, these reforms have also affected the relationship between people and forests and the approach to forest management. Little is known about the impacts of these reforms and related policies and strategies on the forestry sector, or about the ways in which this sector will respond to evolving demands made by a growing number of stakeholders.

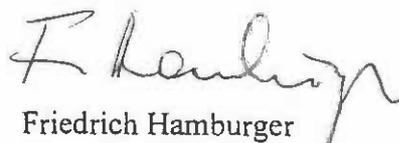
In order to improve understanding of the current status of forestry policies in the Caribbean region and their contribution to sustainable development, detailed reports were prepared for each country and territory covered in this exercise including: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bonaire, British Virgin Islands, Cayman Islands, Cuba, Curaçao, Dominica, the Dominican Republic, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Saba, Saint Eustatius, Saint Martin, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos Islands. The forestry policy reports were prepared by national and regional experts building on national forestry programmes and sector reviews. Summary reports were presented for discussion at an Expert Consultation on Forestry Policy in the Caribbean: "Strengthening Countries' Capacity and Effectiveness", held in Port-of-Spain, Trinidad and Tobago, (25 to 28 May 1998). Experts from the Caribbean countries and representatives from national, regional and international institutions shared information and experiences in policy formulation and implementation, analyzed key policy issues confronting forestry in the

region, discussed ways to respond to these issues and adapt their forestry policies, and suggested orientations for national and international actions in support of appropriate policies for sustainable development. A Resolution of the Expert Consultation recommended that the main conclusions and recommendations of the meeting be widely distributed in and outside the region.

This publication is presented in two volumes. The first volume contains the proceedings of the Consultation and analysis and synthesis of the country and territory reports. The second volume contains the reports of the 28 countries and territories mentioned above. We hope that the information will contribute to the knowledge and understanding of the forestry policy situation in the Caribbean countries, and serve as a basis for promoting regional cooperation and international support for building-up national capacity for forestry policy formation, formulation and implementation.



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## ACRONYMS

CANARI	Caribbean Natural Resource Institute
CARICAD	Caribbean Centre for Development Administration
CARICOM	Caribbean Community and Common Market
CCA	Caribbean Conservation Association
CCAB/AP	Consejo Centro-Americano de Bosques y Areas Protegidas
CCAD	Commission Centro Americana para el Ambiente y Desarrollo
CDB	Caribbean Development Bank
CONATEF	Comision National Tecnica Forestal
CPACC	Caribbean Planning for the Adoption to global Climate Change
EC DGVIII	Commission of the European Communities Directorate General Development
EC	Commission of the European Communities
EIA	Environment Impact Assessment
EU	European Union
UNCED	United Nations Conference on Environment and Development
UWI	University of the West Indies

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# **Part I**

## **REPORT ON THE**

### **EXPERT CONSULTATION ON FORESTRY POLICY IN THE CARIBBEAN:**

**strengthening countries' capacity and effectiveness**

**Port-of-Spain  
Trinidad and Tobago**

**25 - 28 May, 1998**

## EXECUTIVE SUMMARY

This study covers 28 countries and territories of the Caribbean region with a combined total population of 33 million people and a forest area of 39 407 000 hectares.

### The outcome

The results of the study provide guidelines for follow-up action by governments and international organizations in the region, aimed at strengthening country capacities for forestry policy analysis, formulation and effectiveness in policy implementation. Such enhancement of capacity is considered indispensable for securing sustainable forest management in the region.

International aid and government efforts should focus on the main issues and strategic areas identified by the country themselves as follows:

- land use planning,
- deforestation,
- sustainable forest management,
- people's participation,
- rights of indigenous peoples and local communities,
- macro-policies and the forestry sector,
- public investment in forestry,
- governance of the forestry sector and institutions,
- policy evaluation,
- water resources and forestry,
- extensive grazing,
- quarrying,
- creation of protected areas, and
- raising public awareness of the environment and development of tourism. <sup>26</sup>

Concentrating action on the above issues will ensure higher effectiveness in addressing the needs of the countries and in creating national capacity for forestry policy analysis.

### Follow-up

A programme approach at regional level is considered to be the best way to respond to the complex task of supporting forestry policy improvement in the region and addressing the issues listed above. Such an approach would address the long list of issues identified in countries concerned. The general development objective of the programme is "to enhance national and regional capacity, to analyze, formulate and implement forestry policies that help improve people's well-being and the sustainable management of forests and natural vegetation in individual countries".

The programme will have the following main components:

- **Policy studies**

The immediate objective of such studies would be to assist countries in addressing the most urgent issues requiring policy analysis. Under this component, issues, such as land use planning, feral grazing, tourism and forestry will be analyzed and policy options identified. This component will require the collaboration of international agencies with government and national experts.

- **Capacity building for policy analysis, implementation and evaluation**

The immediate objective would be to create, in the Caribbean region, a critical mass of policy analysts and the institutional framework necessary for policy implementation, i.e. a regional think-tank on forestry policy. Such improvement in human resources and institutions is expected to develop within the region the capacity for addressing its most urgent needs in forestry policy analysis, formulation and implementation.

This component is envisaged to be developed in close collaboration with regional organizations, such as the University of West Indies, the Caribbean Development Bank and the Caribbean Community and Common Market.

One of the main activities under this component would be the training of government officers and personnel of private and non-profit organizations. To achieve this goal, training will be provided through: formal courses at universities, distance learning programmes, national short courses, workshops on institutional strengthening, exchange of staff between countries in the region and with countries in other regions, internship in international and regional organizations, special programmes and projects for the advancement of public administration pertaining to forestry and policy analysis, and the creation of think-tanks.

- **Information for forestry policies and sustainable forest management**

The objective of this component would be to overcome the constraints faced by countries due to their geographical dispersion and the small population of some of them. Modern communication technology will be adapted for the collection, storage and sharing of strategic information and technical documents by governments and experts in the region. Institutional resources available in the region will also be used to conduct research into demands made by people on forestry and to monitor, on a continuing basis, the achievements and performance of the forestry sector in the region.

### **Potential for self-help in the Caribbean region**

Human resources with appropriate experience and educational background, government interest, achievements in forestry development and management in some countries, and a network of regional organizations are some of the major potentialities available in the region. Such potential gives the region special advantages for profiting from international and regional collaboration in the field of forestry policy capacity building.

**Regional support**

The findings, conclusions and recommendations of this exercise were validated in a regional consultation held in Trinidad and Tobago in May 1998. Some 50 participants attended the event, representing forestry and governmental national planning agencies, international and regional organizations, NGOs, regional development banks and academic centres. The views of the experts from the region are summarized in the following Resolution adopted in the course of this event:

## RESOLUTION OF THE EXPERT CONSULTATION

### Preamble

**Appreciating** the invaluable role played by the Food and Agriculture Organization of the United Nations in collaboration with the European Commission (Directorate-General VIII - Development) and the Government of Trinidad and Tobago in facilitating this Expert Consultation;

**Recognizing** the critical contribution of forests and forestry to conservation, economic and social development in the region;

**Recognizing** that the Study on Forestry Policy in the Caribbean is part of the work that FAO has been carrying out in Europe, Asia, Near East and Latin America which has now been extended to the Caribbean Region, in collaboration with the European Commission, to analyze key policy issues affecting sustainable forestry development;

**Recognizing** that strong commitment and support at political level is essential for ensuring the successful formulation and implementation of forest policies;

**Noting** that, notwithstanding the ecological and territorial diversities which deserve specific individual country studies, there are also common problems and issues which can best be addressed in a regional perspective;

**Aware** that poverty and food insecurity are among the causes of deforestation, as well as forest and environmental degradation;

**Recognizing** that the formulation and implementation of appropriate forest policies and strategies are an indispensable condition for maintaining and enhancing the significant contribution of the forest resources of the countries and territories in the region to the conservation and development of forests not only in the individual countries themselves but also in the world;

**Recognizing** that this study has established that the most relevant issues being discussed in the region cluster around the following categories:

- **Forest resources**
  - land use
  - deforestation
  - sustainable forest management
  - conservation
  - concession contracts
  - water resources
- **Socio-economic aspects**
  - macro-policies linkages of with the forestry sector
  - public investments
  - development of tourism
  - people's participation

- Institutional aspects
  - public administration for the forestry sector
  - strengthening of institutional capacity
  - policy formulation, implementation and evaluation
  - strengthening of regional and sub-regional processes related to forestry

### Conclusions

The participants of the Expert Consultation agree that the Study and the analysis reflect the current situation regarding forestry policy in the region and provide directions for action aimed at strengthening the regional capacity for forestry policy formulation and analysis.

The participants of the Expert Consultation further agree that the strategy for strengthening forestry policy in the region should be guided by actions in the following priority areas:

- linkages between development and forest resources
- improved country capacity
- regional cooperation
- participation of civil society
- better governance
- national ownership of forest policies
- enhanced international aid to forestry policy formulation

### Recommendations

The Expert Consultation recommends to Caribbean Governments, regional and international agencies and non-governmental organizations that priority attention be given to:

- improved forestry policy processes;
- education and training in resource economics and policy analysis;
- development of information technology;
- adoption of methodologies employed by socio-economists and public administrators in the formulation of forest policies;
- rationalization of the institutions related to forestry and natural resource management to promote their coordination, efficiency and effectiveness;
- establishment of a regional mechanism, within the context of existing regional organizations, for facilitating and monitoring the implementation of forestry policies;
- assistance in the formulation and implementation of land-use plans;
- rationalization and updating of relevant legislation and regulations;
- the rights of indigenous peoples, forest dwellers and other rural inhabitants, so that security of land tenure may be assured and sustainable forest management attained;
- enhancing the awareness of stakeholders and the regional population of the benefits of forests and forestry, and ensuring their effective participation in forest policy formulation and review;
- improving understanding by the governments in the region of the international and bilateral processes now employed to assist countries in the conservation of their natural resources;
- promoting interaction with regional, sub-regional and bilateral organizations; and
- convening a meeting of Ministers responsible for forestry to discuss forestry and forestry related issues.

## INTRODUCTION

In 1997, the Division of Policy and Planning of the Forestry Department of the Food and Agriculture Organization of the United Nations, in cooperation with the European Commission, initiated a study of forestry policies in the Caribbean. The main purpose of the exercise was to contribute to strengthening of capacities of selected countries in the region to formulate and implement effective forestry policies.

The first phase of the study was undertaken between June 1997 and May 1998. During this period, reports on the forestry policies of 28 countries and territories (Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bonaire, British Virgin Islands, Cayman Islands, Cuba<sup>1</sup>, Curaçao, Dominica, Dominican Republic, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Saba, Saint Eustatius, Saint Martin, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos) were prepared. An analysis and synthesis of these reports were undertaken and are presented in Part II of this publication: *Forestry Policies in the Caribbean: Synthesis of Country Study Reports*.

The 28 country/territory reports, together with the Synthesis, were the basic working documents of the Expert Consultation on Forestry Policy in the Caribbean, held in Port-of-Spain, Trinidad, between 25th and 28th May, 1998.

The objectives of the Expert Consultation were to:

- present the synthesis, analysis and conclusions of the FAO/EC study on forestry policies in the Caribbean;
- discuss experiences and share information related to forestry policy formulation and implementation;
- analyze the key policy issues confronting the forestry sector;
- discuss the ways individual countries responded to key policy issues; and
- identify options for forestry policies and directions for national and international actions in support of the development of appropriate policies for sustainable development.

The results and outputs were expected to include:

- an assessment of the findings and recommendations of the FAO/EC study on forestry policies in the Caribbean; and
- the identification of specific actions at national and international levels to be supported by regional governments and the international community during the period 1999-2005.

Forty-seven regional experts, including senior decision makers, forestry officers, researchers, and members of international organizations were invited to the Consultation. A list of those who attended is presented in **Annex 1**.

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<sup>1</sup> The study and all related costs incurred in relation to this country were financed exclusively from FAO's Regular programme resources.

## OPENING CEREMONIES

The opening ceremonies were chaired by **Ms Edwina Leacock, Permanent Secretary, Ministry of Agriculture, Land and Marine Resources of Trinidad and Tobago**. Ms. Leacock welcomed the participants and other invitees, emphasized the importance of the consultation, and expressed the conviction that the region's capacity to formulate forestry policies would be strengthened through the deliberations of the experts.

Mr. Don E. Robinson, FAO representative for Trinidad and Tobago, Guyana and Suriname extended, on behalf of the Director-General of FAO, Dr. Jacques Diouf, and also on behalf of the Directorate-General for Development, European Commission, and the Forestry Department of FAO, deep appreciation to the Government of Trinidad and Tobago for hosting the Consultation. He also thanked the European Union for sponsoring the forestry policy studies that had been undertaken in the Caribbean region.

He stressed that although the majority of countries represented at the Consultation were but small-island states, with relatively minuscule forests, this should not detract from the urgent need to formulate sound policies and to manage forest ecosystems effectively. Indeed, the very smallness of the islands perhaps made them more vulnerable to unwise forestry and land-use practices. As an example, he cited Haiti, which suffers from the drastic depletion of plant cover; Trinidad and Tobago, where fires in the foothills of the Northern Range in 1998, set the scene for severe erosion and flash flooding when the rains came; and the recent phenomenon in Dominica where the collapse of an entire mountain side had resulted in the damming of the island's largest river, leading to the silting of miles of coastline.

Mr. Robinson stated that FAO recognizes that forests represent an indispensable asset of the countries of the world. As the world's leading international agricultural and forestry organization, FAO has taken up the challenge of assisting member governments to manage their forest resources. Its work in the Caribbean is an expression of this commitment. Because the FAO Forestry Department is the largest and oldest international forestry organization, and because it is staffed by an experienced cadre of specialists, it is able to advise on these complex tasks.

**His Excellency Kieran J. O'Cuneen, Head of Delegation, European Commission in Trinidad and Tobago** welcomed everyone to the Consultation and noted that forestry policy formulation was becoming increasingly complex all over the world. There were so many social and environmental factors to be included and stakeholders to be consulted, that there is now the danger of over-burdening forest authorities and forest managers. Or worse, instilling a sense of paralysis - a belief that nothing can be done until a huge amount of learning and paper work has been concluded. Here, the Caribbean has many advantages. For many years, forest authorities in the region have been dealing, in practical ways, with multiple issues - not just the timber revenue generation concerns that dominated some of the larger continental countries. Foresters have become skilled at biodiversity management, tourism promotion and watershed protection, as well as in the management of forestry for timber production. Small size has encouraged

multi-functionality; and the ability to make trade-offs. It has forced individual foresters to acquire far more skills than many of their counterparts in bigger countries.

This multi-purpose approach stems, perhaps, from the fact that Caribbean forests are not subject to big, single demands. Caribbean populations have a reasonably strong awareness that damage to even a small watershed can mean the difference between secure water supplies and flooding and drought, and there are traditional, or at least well-tried, systems of participation which can be employed not only in forest management, but also in the process of forestry policy formulation.

The keynote address was given by **Senator Vimala Tota-Maharaj, Parliamentary Secretary, Ministry of Agriculture, Land and Marine Resources of Trinidad and Tobago**. Senator Tota-Maharaj informed the gathering that Trinidad and Tobago has always placed much emphasis on forestry. Indeed, the Caribbean's first forestry reserve was declared in Tobago as early as 1765. It was in Trinidad and Tobago, also, that teak and Caribbean pine plantations were first established in the region in 1912 and 1946, respectively. Moreover, Trinidad and Tobago had introduced the Arena Tropical Shelterwood System and the Periodic Block System into this part of the world. In addition, the Eastern Caribbean Institute of Agriculture and Forestry (ECIAF) was located in this country.

The Parliamentary Secretary suggested that two principles should guide the Consultation. First, that while individual countries ought to be studied, it was imperative that the common problems and issues facing the region as a whole be considered. Second, throughout its deliberations, the experts should be conscious of the fact that forestry should no longer be viewed as a closed sector engaging the interests of foresters and forest industrialists alone. The world's forests are increasingly being recognized for their stabilizing effects on the globe's climate, as the major repository of its biodiversity, as an important destination for the growing ecotourism market, and as the main sink for greenhouse gases.

Multiple use and sustainable yield are imperatives for the future management and development of the forest resource. While conserving the gene pool and rare species, the productive sector must be managed for a complex mix of products and services, and forestry policies should reflect this complexity.

In all this, the roles of people cannot be understated. They are the reason for this exercise and stand as the ultimate beneficiaries of forestry policies and actions. The staff whose responsibility it would be to implement these new policies would require training. All people on whom these policies impact should also receive environmental education on a continuous basis. The vote of thanks was extended by **Mr. Devendra Duggal, Chief Technical Officer, Ministry of Agriculture Land and Marine Resources, Trinidad and Tobago**.

## EXPERT CONSULTATION DEVELOPMENT

The Expert Consultation on Forestry Policy in the Caribbean revolved around three interlinked activities:

- **Technical sessions** which were facilitated by panels of experts from the region. The topics for the four technical sessions were: (1) findings of the FAO/EC study on forestry policies in the Caribbean; (2) key forestry policy issues in the Caribbean; (3) the responses of countries to current changes and to key policy issues; and (4) options for forestry policy and directions for future actions at national and international levels.
- **Plenary discussions** followed each technical session. These discussions gave the participants an opportunity to express their points of view and to identify those matters which require more detailed examination. The plenary sessions also helped to prepare the agendas for the working group meetings which followed.
- **Working groups** were formed to analyze, in more detail, those matters which were considered to be of special importance to the participants. The discussions of the working groups resulted in a summary of the participants' recommendations and suggestions for further actions in the field of forestry policy in the Caribbean. The three working groups were asked to cluster and prioritize the forestry issues in the region; identify the response of countries to current changes and to key forestry policy issues; and to make suitable and relevant recommendations (the detailed agenda is presented as **Annex 2**).

## FIRST TECHNICAL SESSION - FORESTRY POLICIES IN THE CARIBBEAN

### Members of the Panel:

Mr. Manuel Paveri, FAO, Chief, Forestry Policy and Institution Branch  
Mr. Merilio Morell, FAO, Forestry Officer Institutions

This topic, which was essentially a presentation of the analysis and synthesis of the various studies of forestry policies in the Caribbean, was introduced by Mr. Manuel Paveri, Chief, Forest Policy and Institutions Branch, FAO and Mr. Merilio Morell, Forestry Officer (Institutions), Forestry Policy and Institutions Branch, FAO.

### The Conceptual Framework

The concept of forestry policy is envisaged to be a set of principles, decisions and plans that serve to guide governments in securing transparency and participation and in ensuring proper technical decisions and efficiency. Forestry policies are considered to be the fundamental instruments for ensuring the use and conservation of forest ecosystems and for optimizing the contribution of forestry to development.

Anguilla, Antigua and Barbuda, Barbados, Cayman Islands, British Virgin Islands, The Netherlands Antilles and Aruba, and Turks and Caicos do not have forestry policy statements in the same sense as countries richer in forest resources where the concept of "policy statement" is still the dominant paradigm, e.g. Suriname, Belize, Jamaica, Trinidad, Guyana and St. Vincent. In the less favoured countries, the concept of forestry policy is more influenced by the very close relationship of ecosystems derived from the small land areas of the countries, and the linkages between nature and the national economies.

Consequently, more attention has been given to matters relating to land use planning and to national economic development plans. Forestry policy is, thus, considered more as an instrument for guiding the physical planning and development of these countries. Such policies, in most instances, have been formalized through ordinances, acts and regulations regarding nature, and particularly trees.

The analysis of the country reports revealed the great impact of the conceptual framework on the results obtained in the area of forestry policies. Countries where the "Policy Statement" concept is predominant have established general written sets of principles for guiding the use and conservation of forest resources. However, implementation and goal achievement seem to be low. On the other hand, countries that operate under the concept of forestry policy as a guide for physical planning, show more commitment and result oriented actions.

### Policy Intention and Content

Paradoxically, the vital importance of the forest resource to the economic well-being of society, seems to be less evident in the group of countries more richly endowed with forests than in the smallest islands. In all countries, conservation, biodiversity, protection, and coastal erosion are equally relevant. The degradation of the resource is also receiving serious attention in the policies of many countries. Nevertheless, a major **expectation** of the forest-richer countries, and others with areas available for plantations, is to make forest production a meaningful contribution to economic development. Small countries, on the other hand, are more actively engaged in analyzing the linkages between economic development and nature.

Another main emphasis of policy intention is the creation of stronger institutions and the improvement of governmental control. Environmental policy is an emerging trend in some countries and, through it, general principles for guiding the sustainable use of forests and for the forestry sector itself, are also being established.

Policy intention in the small island states is focused on the strategic importance of "nature", both for the well-being of their societies and for its value as a production input to the economy. Emphasis is placed on ensuring harmony between economic development and nature conservation. The creation of national parks and protected areas is of major interest, as is the protection of water supplies.

Sustainability is considered equally important in both categories of countries.

Policy intention is generally expressed in qualitative, mainly biological, terms. Few of the policies provide clear indications of measurable economic goals, public investment, and the use of market incentives. The social dimensions are also not explicitly mentioned in most policies. Provisions for evaluation and government accountability are also conspicuously absent.

### Forestry Policy Issues

In all countries, there is a feeling that a general **land use policy and plan** is a necessary normative framework for the sustainable use of forests. Policies which secure the **participation of people** are also considered necessary for improving the rationality and equity in granting concessions and in allocating forest land uses.

**Sustainable forest management** is an important issue in all larger countries. The discussion centres on what are appropriate forest management systems, and the mechanisms for enforcing them. The restrictions on sustainable forest management include the lack of information on forests, undesirable selective extraction practices, and the use of inappropriate technology. One main discussion point is whether countries should wait until they have the necessary information, technology, human resources and institutional capacity for sustainable forest management, or whether they should exploit their forest now and, learning from experience, use the lessons learnt to perfect an adequate system. In any case, the low rate of forest production, under sustainable management, is seen as a major weakness and undesirable situation.

The pricing of the resource, and, in more general terms, forest valuation, securing the compliance of contractors with the terms of contracts, and the government's capacity for securing sustainable forest management, are among the specific problems raised in the treatment of the significant issue of **concession contracts**.

An important group of issues prevailing in those countries with relatively rich forest resources are the **linkages of national macro-policies with the forestry sector and public investment in the sector**. It is felt, for example, that national accounts do not fairly reflect the contribution of the forestry sector to economic development. Moreover, the inadequacy of investment funds for the sector is a major hindrance not only to forestry development, but also to the progress of the nation as a whole.

The need to ensure that governments, while promoting forestry development and conservation, duly protect the **rights of indigenous peoples** is an important issue in many countries which cries out for resolution.

The **loss of forest cover** is seen as one of the most negative results of the countries' lack of institutional capacities and appropriate policies, as is the **confrontation between conservationists and those espousing economic development**.

There is another group of issues which specifically affects small island states. These include the **availability and quality of water**, the incidence of **grazing** on the forest estate and **quarrying and mining**. In all these matters, the economic, social and environmental dimensions do not appear to have been clearly assessed. As a consequence, informed decisions have not yet been taken.

- Unfortunately, it is evident that most of the countries of the region possess neither the necessary data nor the capacity to analyze them in order to resolve the issues, and formulate sound policies. This is of special importance because the multidisciplinary character of the issues and problems demands a multidisciplinary approach, which would involve economists, sociologists, and experts in public administration, in addition to those knowledgeable in the relevant physical and biological sciences.

Finally, it is stressed that, to date, forestry policy has been reactive, analysis and action coming after issues or problems have reached a degree of crisis. There is an obvious need for a more proactive approach: creating a sense of urgency, mission, strategy design, policy formulation and evaluation.

### **The Process of Forestry Policy Formation**

There appear to be three main approaches to forest policy formation.

The first approach is to be found in those countries, such as Barbados, Curacao, Jamaica, and Netherlands Antilles in which the methodology is explicit, and in which there are clear and legitimate procedures that define the different stages with regard to inputs and responsibilities in the preparation, analysis and decision-making process of policy formation.

In countries such as, Anguilla, Antigua and Barbuda, British Virgin Islands, Cayman Islands, St. Kitts and Nevis and Turks and Caicos, the approach is characterized by the existence of a set of stages, which begins with the identification of issues and ends with option solution. However, the process appears to be less structured than in the first approach: procedures are less formal and are not always followed in a systematic way. Moreover, the stages are fewer.

The third approach is pursued by those countries which do not seem to possess a formal set of stages for policy analysis, at the technical level. When confronted with the need to act on issues, *ad hoc* procedures are used. Countries which appear to be utilizing this approach include Bahamas, Belize, Dominican Republic Guyana, Haiti, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

The analysis of the country reports revealed that important progress in implementation and the achievement of goals has been obtained both in countries with a highly structured process and in some without. This, at first glance, might suggest that having a clearly defined process is not a necessary condition for improving forestry development. However, what seems to have been the determining factor in those more successful cases, is the degree of political will. This political will is stimulated in large measure by the process of policy formulation which is, of necessity, linked to public investment and implementation.

In other words, a clear, objective process for policy formation is necessary to **maintain** the political will. In addition, of even greater importance, the process might be the essential ingredient for **creating** political will, where it does not exist, by providing sound evidence of the political and socio-economic implications of forestry-related issues. Not least, the process often forces governments to be more transparent and to present the rationality of decisions regarding their positions on forestry matters.

In countries with a less structured process, the low correlation between the existence of a policy and its implementation, and between the existence of a policy and public investment, seems to be associated with the poor quality of issue identification and description, as well as the fact that option analysis and selection are mostly presented in a descriptive way, providing very little quantitative evidence of the political, social and economic implications of the various options that have been considered.

Another reason seems to be a lack of clear understanding of the procedures of decision making at the political and legislative level. In fact, the reports from these countries showed the following characteristics:

- the methods and tools for objective analysis were seldom mentioned;
- the specific responsibilities for each stage of the process were not always clearly identified;
- the availability of information for sound analysis was mentioned as a serious restriction;
- the concept of a broad (as opposed to the one driven by issues and results) policy statement seems to prevail in many of those countries;
- the analysis seemed to be mainly based, and was much stronger, in aspects related to natural sciences and weaker in the social and economic dimension;
- the policy formation approaches seemed to be influenced by the conceptual framework that emphasizes the overall importance of an overarching forestry policy statement;

- creating capacity for policy analysis on a continuous basis, as a day-to-day duty; for addressing emerging issues and for the revision and improvement of defined policies was not perceived as a priority;
- inadequate attention was given to securing implementation; although the initial analysis of the issue was assigned mostly to the technical levels, in general, the political legitimizing component of the policy formation process seemed to be the most influential, resulting in the absence of adequate checks and balances;
- the expertise of disciplines, such as economics, political economy, public administration, sociology, to mention the most important, seemed to be playing a minor role at the technical level; there was little evidence that effective multidisciplinary capacities were being used.

In several countries, Antigua and Barbuda, Dominica, St. Kitts and Nevis and St. Vincent and the Grenadines among them, there was a perception that forestry policy formation exercises have been externally driven and have had a top-down approach. This was believed to be one of the causes of poor follow-up and implementation.

The information assembled in the country reports suggests that there is a need for comparative government systems research and training in the basic methods of policy analysis and formation. Such training should include both technical staff and staff at the political legitimization level. The new exercises for people's participation, now being undertaken in the Netherlands Antilles and Dominican Republic, should be thoroughly studied and if they prove valid and applicable, should be tried in other countries.

### Institutions and Forestry Policy Research

Most organizations which deal with forestry, are reported both to be under-funded and to be experiencing a chronic lack of personnel and equipment.

The **high number of agencies** with responsibilities in the forestry sector, is identified as a major constraint to the achievement of goals in the sector. As there is little or no coordination of the activities of these agencies, there is much overlapping and a waste of resources. The problem is compounded by the inadequacy of the legislation establishing these agencies.

It was also evident from the reports that the best qualified professionals were not always assigned permanently to the field work, and hence did not participate in the implementation of the policies. Most often, the **best prepared cadres were concentrated at headquarters**. With an almost universal lack of transportation, their capacity was not fully utilized.

Effective decentralization of forestry administration, accompanied by the assignment of clear and specific geographical responsibilities and delegation of authority, seems to result in an improvement of performance and management. There also appears to be a positive correlation between the decentralization of forestry administrations and the commitment and response from local communities. Such is the case in the Netherlands Antilles and Curacao, with its quasi autonomous system of government.

The institutional weaknesses of specific forestry agencies have, in some cases, been compensated by the delegation of responsibilities to a number of different governmental or quasi governmental agencies. In other instances, some branches of the specific forestry agencies have found extra-budgetary ways to be better staffed and financed.

The professional background of the staff of the forestry agencies is predominantly in the natural sciences.

**The function of policy analysis is almost totally absent in the structure of the forestry services.** Their organizations are mostly based on the functions required for forest management and operation. Policy analysis, especially when important resources are involved, remain with higher levels of the Ministry which hosts the forestry organizations or with central planning agencies. However, the creation of specific policy analysis agencies, or the creation of units within the forestry institutions, is an emerging trend.

Another emerging approach is the establishment of organizations responsible for the environment, and assigning to them the responsibility for policy analysis and formation.

Policy research which is being undertaken in the region is almost limited to studies for the making of specific decisions, especially those that are designed to solve specific technical issues and problems. Meta analysis and the study of the processes by which policies are formed, have been almost completely neglected.

### Opportunities for Action

Although common wisdom identifies the forestry sector as one, the performance of which leaves much to be desired, there is room for optimism. There is a great number of highly trained individuals across the region. There is also a network of national and regional organizations, some of them with many years of experience. They are generally well staffed and possess a good record in areas related to policy analysis or requiring analytical capacities. In all countries, the interest in nature, forestry and trees, and the understanding of the close connection and very special relevance to sustainable development are growing.

Moreover, in certain countries there is evidence of concrete and important achievements, as well as a background of experience and knowledge, in natural sciences. These attainments have been gained after years of dedicated work. Even the negative experience and failures of past policies and public intervention represent a valuable asset that could be used in avoiding errors in the future. In addition, a great number of professionals has been trained in forestry and environmental science in the last decades. With the worst of the economic crisis appearing to have been overcome, it seems that there will be more space for introducing nature, forestry and trees into the core of the countries' political agenda. In fact, some of them are already doing that. Societies are more alert, and the new information technologies have shrunk distances and times of communication. Governments are, more and more, positively responding to the monitoring of their constituencies and to international public opinion.

It is true that the problems, issues and, in general, the tasks ahead, are enormous. The resources have been severely degraded in many countries of the region and, in those that still have important forest resources, they are at risk due to social and economic pressures. The pace of

implementation and achievements in the forestry and nature-related issues are unacceptable in many countries and rhetoric is not always accompanied by action. In addition, the current trends and opportunities for developments, such as tourism, mining, and services, together with the increase in consumption power that they bring, provide additional threats to nature, and the sustainability of the well-being of societies. Equally, the free flow of capital and the opening up of the economies, have created intrinsic risks to the natural environment and to the people of the region. There are few options to escape this general situation. But countries cannot merely escape decision-making by just policing their natural resources or closing their boundaries to the global trends in economic development. Countries of the region will be better off if they face this situation through the creation of additional capacity for problem analysis and decision-making.

Because of the characteristics of the countries, and the strong demand for forestry policy analysis, additional capacity should be created within a framework of regional partnership. Such a partnership should embrace:

- the stimulation of a political consensus to enhance the capacities of countries in forestry policy analysis, in a way that includes all the dimensions and specialities connected with it, and that allows the use of the full range of specialities available in the countries;
- the complementing of that body of knowledge held by forestry experts by that developed in the discipline of public administration. Its sophisticated methods and tools are already in use, and should be put at the disposal of the forestry sector;
- the establishment of networks with the aim of utilizing information technology for development;
- undertaking policy research which should focus on :
  - ⇒ analyzing problem and issue definition in forestry policy;
  - ⇒ macro-economic implications of forestry sector development;
  - ⇒ demand quantification in forestry;
  - ⇒ getting Caribbean regional organizations to assist in policy analysis;
  - ⇒ developing ongoing forestry policy analysis mechanisms;
  - ⇒ preparing comparative government studies to improve forestry policy implementation;
  - ⇒ institutionalizing participatory methods in forestry policy analysis and their effectiveness;
  - ⇒ using privatization, opportunities and potential impact in forestry;
  - ⇒ global capital markets and the forestry sector;
  - ⇒ land use: analysis of its assumptions and expected results.

The Caribbean region is characterized by a high level of interaction and collaboration amongst its countries. However, it appears that, regarding forestry matters, there are many opportunities that have not been fully exploited. The knowledge in forest management, protected areas creation and administration, the use of training centres in forestry, and experience in fostering policy implementation are only a few areas in which the collective experience is not always fully exploited.

Existing regional institutions, such as the CDB and CARICOM, that have a proven analytical capacity could be brought in to help in the analysis of forestry policy. It is possible that the

immediate response to such suggestions from the forestry sector and from international organizations might be that they are not specialized in forestry. However, it is maintained in this analysis that if clear questions and expected results are defined, the analytical capacity of these institutions could effectively be put to work on forestry related areas. Together with the expertise of the forestry discipline of the region, such organizations could bring about a breakthrough in the analysis of issues and problem-solving for the forestry sector. The ways in which such collaboration could materialize is a worthwhile topic to explore.

### **Plenary Discussions and Recommendations**

The experts commended the Forestry Department of the Food and Agriculture Organization on its analysis and synthesis of the several country reports and the EC for its support to it, and expressed the view that it was a fair reflection of the countries various analyzes. They were of the opinion that:

- the preparation of land use plans should provide the basis for the formulation of forestry policies;
- there was an evident need for the continuous collection of information relevant to forest policy formation;
- there should be a multi-sectoral, multi-disciplinary approach to forest policy formation;
- priority should be given to the training of Caribbean nationals in policy analysis; and
- wherever possible, there should be a regional approach to forestry matters.

## SECOND TECHNICAL SESSION - KEY FORESTRY POLICY ISSUES

Members of the Panel:

Dr. Kenneth King of Guyana  
 Mr. Andre Van Schaik of Aruba  
 Ms Jacqueline Cramer Armony of St. Kitts  
 Mr. Ke-Seon Ng-A-Tham of Suriname  
 Dr. Rory Fraser of Guyana (Rapporteur)

The second technical session was designed to provide a better definition of the issues and problems of the sector; to identify possible partnerships with other disciplines; to assess the importance of utilizing the expertise and methodologies of these disciplines in the formulation of policies in the sector; and to suggest ways of forging and making use of these partnerships.

The panel consisted of one of the consultants who had worked on the preparation of the country reports, one specialist in planning and policy formation, one representative of a national forest service and one representative of the private sector. They were invited because of their particular experience and work in the region.

Members of the panel were not expected to talk as forestry experts, but to discuss the forestry experience from their own special perspectives. They were invited to consider the following:

- major public policy forestry issues in the region;
- the methods of work and analysis and identification of issues;
- differences with the issues identified by the forestry sector;
- perceptions of the analysis;
- opportunities and potential gains for achieving a more effective multi-disciplinary approach in the analysis of forestry problems;
- perceptions of the effectiveness of forestry policies;
- main reasons for the discrepancy between the rhetoric of forestry and effective action;
- main difficulties of senior planning officers and politicians in supporting public investments in the forestry sector.

### Dr. Kenneth King's Perspective

Dr. King identified seven major issues, and made recommendations for each of them.

#### **Issue 1**

Forestry policies are often not implemented because they are frequently externally driven, and developed by foreign experts. They are, therefore, not "owned" by the stakeholders. The absence of local initiatives is due to:

- the relatively high number of untrained persons in Caribbean Forestry Services;

- the relative inexperience of Caribbean Forestry Officers, even when they are adequately trained;
- the unavailability of specialized skills, such as those required in policy analysis and formulation.

Given these deficiencies, he recommended the training of more forestry professionals in the Caribbean; and the training of forestry policy analysts in a continuing series of short courses.

### **Issue 2**

Over the last ten years or so, there has been a proliferation of government agencies and institutions that are concerned with environmental and natural resource management. This has led to overlapping jurisdictions, policy and jurisdictional conflicts, and a waste of human and financial resources. Very few mechanisms have been established to coordinate these efforts. Where they do exist, they are often not effective: they do not meet each other, they do not cooperate with each other.

It was recommended that the entire natural resource/environment sector be rationalized in each country of the Caribbean. CARICOM should be the lead agency in this endeavour.

### **Issue 3**

Forestry policies are often created in a vacuum, without due regard to other land users, and other national policies. The expert recommended that forestry policies should be part and parcel of national land use plans; and that in formulating forestry policies, the importance of the explicit relationship between national macro-economic policies and forestry policies must be recognized.

### **Issue 4**

It is highly probable that countries with high incidences of poverty may be unable effectively to implement forestry policies. Often it is poverty which forces the populace to encroach on forest reserves; to cultivate steep, erodible hillsides; and to steal forest products.

Here, again, forestry policies ought to be formulated in a national socio-economic context. Put in another way, it is often important to make non-forestry provisions, in order to secure the implementation of forestry policies. These non-forestry provisions should, of course, be supported by the external agencies that are involved, and by relevant legislation.

### **Issue 5**

The agroforestry potential of many countries is not reflected in Caribbean forestry policies, even in those areas in which there are scarce land resources, high population pressure and an inadequate forest base. Forestry ought to be re-visited in such countries with the possibility of utilizing agroforestry systems in mind.

**Issue 6**

Although sustainable forest management is the overall consideration in most Caribbean forestry policies, this objective may be unattainable unless drastic measures are taken to:

- train and/or recruit a critical mass of professional forest specialists to identify problems and to formulate plans and policies to overcome them;
- provide the financial resources to implement the plans and policies;
- develop a strategy which is based on, or includes, the collection and analysis of relevant data, and the provision of an effective legal framework.

**Issue 7**

The absence of a cadre of environmental/forestry economists makes it difficult to present a logical, well-reasoned, quantified case for forestry to Finance Ministers, who are primarily impressed by economic and financial criteria in making decisions. Here, also, training is the key factor. More environmental and production economists should be employed in the forestry services of the region.

Mr. Andre Van Schaik's Perspective

Mr. Schaik discussed six issues.

**Issue 1**

Some problems and issues cannot be solved and tackled by small islands, because of their size and limited resources. He, therefore, recommended that these problems and issues be identified throughout the Caribbean and that there be a regional approach to their solution.

**Issue 2**

The Caribbean's capacity to solve many of its environmental problems is limited, to a great extent, by its geography and by its poor communications system. He urged that the region take advantage of advances in communications, such as the Internet and satellite TV, to assist in the development of solutions.

**Issue 3**

Tourism has grown significantly in the past ten years. This has had serious impact on traditional forestry, as it has increased demands on the environment and natural resources. Serious attempts should be made to reconcile the apparent conflict between the desire to earn foreign exchange from tourists and the necessity for conserving sometimes fragile ecosystems.

**Issue 4**

The financing of forestry, by both the private and public sectors, is most inadequate. Foresters must project the importance of forestry more effectively.

**Issue 5**

Differences in ecosystems may create problems in developing regional solutions. If a regional approach is to be followed, it ought to be preceded by a rigorous collection of data and careful analysis.

**Issue 6**

Where should national efforts be focused? On single species? On protected areas? These problems ought to be resolved before grandiose forestry policies are embarked upon.

Mr. Ke-Seon Ng-A-Tham's Perspective

Mr. Ng-A-Tham discussed three issues.

**Issue 1**

Historically, the focus in forestry has been on a single commodity (timber), to the exclusion of the other goods and services provided by forests. *A priori* this leads to the under-utilization of the forestry resource. Forestry policies should consciously emphasize the multiple use of forests. There is need for more data if informed decisions are to be made.

**Issue 2**

The many concerns of indigenous people and demands for tourism and biodiversity have increased the pressure on forest resources. This raises the question "Is it possible to have a forestry policy at the national or even the regional level?" The expert suggested that an assessment be made of the efficacy of more local forestry policies.

**Issue 3**

International processes, agreements, agencies and groups make it virtually impossible to develop good forestry policies because of the inherent conflicts among the concepts of sustainable forests, sustainable incomes, and poverty eradication.

The expert recommended that means be found to ensure sustainability and to protect biodiversity, while benefiting from resource use.

Miss Jacqueline Cramer-Armony's Perspective

Ms Cramer-Armony discussed five issues and made a number of recommendations.

**Issue 1**

In the context of small islands, such as St. Kitts, history, environment and culture dictate natural resource policies. Forestry policies should, therefore, be more broadly defined.

**Issue 2**

Timber production is peripheral to other land uses in the small islands. Recognized forestry benefits are water supply and folk medicine. These are the priority service/products of the forests.

**Issue 3**

Tourism has forced people to understand more about their forests and make them realise, also, that they could expand their knowledge. This knowledge is often ignored in the formulation of relevant policies and plans

**Issue 4**

In the absence of formal structures to coordinate the efforts of public agencies, the task has been facilitated by those NGOs that are involved in the decision-making process.

**Issue 5**

NGOs have generated information on biodiversity and folk medicine, for example, that was not readily available from official agencies.

Ms. Cramer-Armony made the following recommendations:

- educate agencies about land-use options;
- educate agencies to understand the need for coordinated natural resource/land use management;
- educate agencies on the requirements of a management framework e.g. laws, traditional arrangements, policy tools;
- educate NGOs so that they may become more effectively involved in participatory processes;
- develop job opportunities through training teachers and tour guides, for example, about the potential economic benefits of natural resource areas.

**Plenary Discussion on the Problems and Issues**

The following comments were made from the floor:

- Problems in the policy process are not unique to forestry. They are also evident in other sectors.
- Much has been made of the externally driven policy process, but this may be a necessary evil in small island states.
- There is need for integrated policy development in the Caribbean.
- User fees have resulted in a perception of the increased importance of parks, etc. by the public, in some countries. It may help forestry administrations if charges were imposed for some forestry services and if, in general, the link between economic activity and resources was made more explicit.

- Interagency conflict may be a result of competition for limited resources. This may be overcome by cooperation among agencies, NGOs and international organizations.
- Regional policies are not the panacea for all of forestry's ailments; some problems have to be solved locally. However, it is important for the countries to pool resources, to have common and complementary policies on such matters as education and trade, and to have common programmes on such matters as communication.
- There is a need to get Ministers responsible for forestry matters together, to focus only on forestry issues, as is done for agriculture.
- Training is a critical regional priority.
- It is an urgent requirement that the contributions of forestry to the nation's development and well-being be quantified.

### **THIRD TECHNICAL SESSION PANEL ON: COUNTRIES' RESPONSE TO KEY POLICY ISSUES: MEDIUM TERM SCENARIOS**

#### Members of the Panel

Dr. Kari Keipi from USA (Inter-American Development)  
 Ms Marilyn Headley from Jamaica  
 Ms Glenda Medina from Caribbean Conservation Association  
 Ms Sheriff Faizool from Trinidad (Forestry Consultant)  
 Mr. Tim Van den Brink (Rapporteur)

The third technical session was intended to identify emerging issues, needs and strategic guides for coordination of macro-policies; generate ideas on the context in which forestry policies will be formulated in the mid-term; and suggest the adaptation and modernization that would be required in the forestry sector in order to improve its contribution to society's well-being and secure the sustainable use of the resources.

The panel consisted of a forestry consultant, one representative from a national forestry sector, one representative from a regional non-governmental organization and one from an international organization. They were asked to give an exposition based on their own perception and points of view on the way in which countries have responded and are responding to the major forestry public issues, and to the pressures and demands for economic development in the region. They were also requested to express their opinions on the major changes which might occur in the region in the medium-term in relation to forestry.

The general topics which members of the panel were asked to consider were:

- present and future response to key public issues;
- mid-term trends and changes and their probable effects on forestry and nature conservation;
- constraints and opportunities; and
- strategies that have worked.

#### Dr. Kari Keipi's Perspective

The first intervention was made by Dr. Kari Keipi. He presented a paper entitled "Directions for Forest Policy and Financing in Latin America and the Caribbean". In this paper he contended that there had been three prevalent paradigms for forest development and conservation in the past 40 years. These were:

- industrial forestry as a tool in the economic take-off of developing countries during the 1960s;
- social forestry and rural development through small farmers in the 1970s; and
- preservation forestry, with emphasis on global and national ecological benefits, starting in the mid 1980s.

Each of these problems has had its own particularities and pitfalls, such as:

- top-down approaches, paying only nominal attention to the need for public participation in project preparation and execution;
- use of one-factor logic and quick-fix schemes;
- considering nature and trees to be more important than people;
- utopian ideas and grand goals dominated by rhetoric and abstractions;
- lack of clearly defined policies;
- lack of political will to execute policies; and
- north-south differences in international policy.

Dr. Keipi suggested that in coming to terms with these problems, we have learnt that there are nine essential non-forestry elements and limitations for successful forest policy implementation. These were:

- political stability;
- macro-economic stability;
- efficient institutional frameworks;
- adequate environmental policies;
- adequate agricultural and industrial policies;
- land tenure security;
- participation in decision making and equity;
- sub-regional integration;
- global agreements.

Some of the most important developments have been with respect to the deregulation and privatization of national forests, such as:

- deregulation in forest management, utilization and trade;
- choice between the public and private management of forests to protect non-market values;
- democratization processes which have established tools for a dialogue and enable consensus building;
- coalitions between rural inhabitants and the private sector;
- market-based incentives and regulatory mechanisms which strengthen management and conservation;
- negotiation capacities of traditional communities, especially of indigenous groups and women, are being strengthened in some cases;
- determining compliance with performance standards and enforcement actions through monitoring.

Other developments have occurred in the area of land-use, these are the recognition that:

- local land-use patterns are affected by the ability of landowners to obtain title to their property;
- increasing access to forest land titling or usufruct rights in established communities is increasing the interest in long-term, responsible, forest management;

- strengthening property rights in established agricultural lands decreases pressure on forests;
- land titling should be administered cautiously in open access forest frontiers;
- protected areas have been able to maintain their forest cover better than other categories of forest; and
- reserves with community titles to land for harvesting non-timber products represent non-invasive economic uses of primary and secondary forests.

Then there are developments in forest concessions on government lands, such as:

- concessions not only for timber but also for non-wood products and ecotourism;
- forest use contracts not only to private commercial timber companies, but also to local communities and NGO organizations for multiple uses;
- concessions that are subject to broad-based public bidding;
- matching the capacity of private entities to execute the requirements of the concession agreements with the public sector's ability to manage and enforce them;
- periodic audits which replace the pretence of continuous vigilance by public entities;
- simplified forest revenue systems using area taxes;
- establishments of set-aside protected areas that are exempt from area tax; and
- transferring the ownership of areas where concessionaires have shown good forest management under international certification.

Some of the lessons learnt about certification programmes for forest products have been:

- both domestic and international policy development needs to occur to support the expansion of certification;
- commercial compliance with certification has to be voluntary. Governments need to work with the private sector to develop effective and realistic incentives, regulations and best-practice guidelines.

These findings and developments suggest the following areas for future research:

- development of forest valuation methods and other ways of pricing traditionally non-market environmental benefits;
- designing effective regulatory frameworks under budgetary and capacity restraints of public forest administrations;
- making use of the ecological role of forests in and around urban areas;
- energy conservation to reduce the burden on forests as producers of fuelwood;
- establishing forest management criteria and indicators and green certification of products;
- globalization of industrial forestry and environmental risks; and
- instruments for paying for global environmental benefits, for example, the joint implementation through the Clean Development Mechanisms and others.

Domestic policies and international support is possible only if:

- lands are immediately subject to the laws and actions of the countries and people where they are located;

- international support does not conflict with local interests.

#### Ms. Marilyn Headley's Perspective

The second presentation came from Marilyn Headley, Jamaica's Conservator of Forests. Ms. Headley adumbrated a number of issues which had arisen, and decisions which had been made in Jamaica in recent times.

- Recognition of the lack of legislation has led to attempts to formulate new laws. However, the process is long drawn out because a number of factors come into play. For example: Who should address forest issues among the agencies with overlapping responsibilities? What should be done about legislation which conflicts with proposed forestry laws? How should inter-agency and legislative efforts be coordinated?
- The Government has recognized that new land-use and forestry policies should be developed and enabling legislation enacted. However, in a modern democracy, it is necessary to consider and understand the reasons for current practices. The Government is undertaking such assessments and analyzes, but they are time-consuming.
- Watershed management in Jamaica is particularly difficult, because a significant number of people live on fragile watersheds. Here again, public consultation and public awareness are essential. The problem is bedevilled by the lack of adequate funding from Government budgets. Many of the watershed projects have either been, or are still being, financed from external sources. When such projects are terminated, watershed management often collapses.

#### Ms. Glenda Medina's Perspective

Changes must be faced. NGOs can provoke and promote change. NGOs are the voice of the society.

People's participation is an absolute necessity in the formulation and implementation of forestry and conservation policies. NGOs facilitate participation. In addition, they operate efficiently and spend money responsibly. Participation is not as highly developed in the English-speaking Caribbean as it is in Spanish-speaking Latin America. For participation to be effective, structured channels must be established. The dissemination of information is most important.

There should be more inter-agency coordination.

Further attention should be paid to:

- information gathering and dissemination;
- capacity building of NGOs;
- the incorporation of civil society in the processing of policy formulation and implementation;
- education and public awareness and consumption patterns; and
- the complex role of forests in Caribbean countries.

### Mr. Sheriff Faizool's Perspective

The policies which are being formulated by Governments in response to key public issues tend to be reactive and *ad hoc*. Policies should be holistic and not produced in bits and pieces.

Many institutions are responsible for the utilization of a country's natural resources. Often, there are no means of ascertaining who is in charge of the formulation and implementation of natural resources policies. In addition, in many countries, the agencies responsible for land use and resource conservation are not aware of what global obligations their own governments have incurred.

There has been a rhetorical swing from the days when, in those countries that are richly endowed with forest resources, the emphasis was only on timber production to the current pre-occupation with the conservation of the environment. But the words are often not translated into action.

More personnel need to be trained in policy development, monitoring and evaluation. Greater attention ought to be paid to the linkages between macro-economic policies and the natural resource sector. Few politicians are aware of the natural resource problems which beset their countries.

It must be recognized that policy formation is a process - that the process is time-consuming; that it is important that experienced, knowledgeable nationals formulate the policies. Ownership is all.

### Dr. Carol James's Perspective

Forestry policies are often formulated from a single perspective. This is quite unrealistic. Forestry must formally and legally establish linkages with other sectors, and policies should be formulated which take all relevant aspects of the economy into account. It is essential, also, that in formulating policies, the International Agreements which have been entered into by governments be taken into consideration.

A major constraint to the development of forestry is the lack of understanding by both the public and government decision-makers of the intrinsic services which the forests provide. These services should be evaluated qualitatively economically.

Foresters should place themselves in the mainstream of decision-making. They should be in the public arena. They should be more actively involved in the climate change debate, and in informing the public about the importance of forests in siltation control, water production, and pharmaceutical production, for example.

Existing land-usage in the Caribbean has, in many instances, been the result not of scientific/economic assessments of land capacity, but of historical and imperial pressures. Current land-use is often, therefore, not the optimal use. It is, therefore, necessary to reconsider existing land-use patterns. Land classification and land-use planning are prerequisites for the conservation of national resources.

## FOURTH TECHNICAL SESSION - OPTIONS AND DIRECTIONS FOR NATIONAL AND INTERNATIONAL ACTIONS

### Members of the panel

Mr. Jose Martinez Guridy, Deputy Minister for Natural Resources, Dominican Republic  
 Dr. Ulric Trotz, UWICED, Barbados  
 Mr. Godfrey Marshall, Forestry Commission, Guyana  
 Mr. Oswaldo Sabido, Forestry Service, Belize  
 Dr. Claus Eckelmann, FAO, Barbados (Rapporteur)

The fourth technical session was aimed at identifying the regional potentialities for self-help; the advantages and implications of common actions; opportunities based on the countries' comparative advantages; areas in which results should be achieved; and at providing appropriate bases for discussing potential collaboration with the international community. The panel (four experts from forestry agencies, governmental economic and planning sectors, and regional agencies) was asked to present options for forestry policies and directions for national and international actions in support of the development of appropriate policies for sustainable development, forestry policy research in the Caribbean, and creating conditions for monitoring and future studies.

Some of the general topics they were asked to consider in this session were:

- actions and opportunities from investment for development and macro-economics/planning;
- human resources training and policy research, potential contributions from, and opportunities for, existing institutions and programmes in the region;
- intergovernmental actions, and use of existing regional institutions/mechanisms;
- changes and challenges faced by forestry in keeping abreast with trends and actions needed in the field of forestry policy formation and analysis;
- private sector (including NGOs) opportunities and strategies;
- information technology, new opportunities and challenges; and
- collaboration of/with the international community.

### Dr. Ulric Trotz's Perspective

It should be a conscious objective of all forestry administrations in the Caribbean region to establish strategic linkages with other relevant organizations. Forestry services should, for example, work more closely with the institution, recently established at the University of the West Indies, which deals with climate change. The mandate of the Caribbean Planning for the Adaptation to Global Climate Change (CPACC) is to promote the use of science and technology for development on climate change.

A *generic* regional policy should be formulated. This would provide the framework for more *specific* national policies, to be developed by the individual countries themselves. Both types of

policies should emphasize the relationships which forestry holds with other sectors of the economy, integrate the different uses of forests, and take into account new technologies.

There are some US\$6.6 million available for environment-oriented projects in the region. It is a challenge for the forestry sector to place forestry strategically in the suggested development plans so that the funds may be accessed. Forestry administrations should strive to utilize the available foreign financial aid resources more effectively.

Better use should be made of existing training institutions, such as the University of the West Indies which has the relevant expertise.

Guyana has dedicated almost a million acres (394 000 ha.) of pristine tropical rainforest to research on sustainable management. The research is undertaken, by law, by a specially established autonomous international organization. So far, no linkages have been established between the Iwokrama Rain Forest Project, as it is called, and any Caribbean Forest Service. This is surprising, to say the least.

#### Mr. Godfrey Marshall's Perspective

Many of the issues and problems being discussed at this workshop are germane to other sectors of the economy, and indeed to Caribbean nations, as a whole. They are larger than forestry. Means must be found for solving the specific problems of forestry within the context of national development.

Forestry should be integrated with other agencies. Others should be involved in the solution and management of the complex land-use policies which face professional foresters. This involvement is so essential that, if necessary, the scarce resources available to forestry should be shared with other agencies.

#### Mr. Jose Martinez Guridy's Perspective

An analysis of the issues and problems would reveal that most of them originate from a shortage of trained and skilled personnel, able to identify them; formulate policies for their solution; and implement these policies effectively. Moreover, many of the funding and investment problems of the sector are due to the fact that regional forestry administrations, as a general rule, lack the skill to quantify the benefits of forests and forestry, and to influence decision-makers. There must, therefore, be continuous training in forestry, at all levels, and in a wide range of disciplines. Human resources development is the single most important factor in the formation and implementation of forestry policies in the Caribbean. Regional universities, like UWI and the Universities of the Dominican Republic, should offer courses in policy analysis for natural resources management.

There is need for a common agenda on forestry policies which should include the private sector and the NGO community.

Forestry services should utilize all the opportunities for funding proffered by international and bi-lateral agencies in international treaties.

### Mr. Oswaldo Sabido's Perspective

Some regional bodies in Latin America have managed to arrange effective meetings among the professional foresters, and among Ministers responsible for forestry in their sub-regions. This was achieved by 'piggy-backing' on non-forestry meetings, although sometimes meetings devoted only to forestry matters were convened. The sub-regions found these meetings to be most useful, not only because of the exchange of valuable information, but also because of the publicity usually generated in the media at the time of the meetings. CARICOM should consider adopting this process.

Regional training institutions for forestry should be strengthened. Particular attention should be paid to the mounting of training courses on policy analysis.

In order to avoid the continual under-valuation of forest resources and its benefits to society, the forestry sector should establish strategic alliances with other disciplines.

If forestry is to occupy a stronger position in society, the general public should become involved in all questions concerning forestry.

### Plenary Discussions on the Third and Fourth Technical Sessions

Even though there might be a risk that forestry personnel, trained in such fields as policy analysis, might leave the Forestry Services, there is no alternative but to train them in these important areas in which there is such general weakness, i.e. policy analysis and public administration. These are pre-requisites for the development of a sound forestry policy.

There is an equally strong need to train foresters to implement the forestry policy, and to build-up institutional capacity to monitor the proper management and utilization of the forests.

It is important that training at community level be included in training programmes, especially for people affected by forestry policy decisions.

All stakeholders should be involved in the development of forestry policies.

Advances in forestry during the past years were achieved mainly in projects and programmes where the boundaries between institutions and departments were successfully removed. Forestry policies should encourage this kind of approach.

If returns on investment and land values are used as the only criteria for the allocation of land, the extent of forest land will be further depleted.

## WORKING GROUPS

### Methodology

The participants were divided into three groups, which were selected to maximize diversity. Accordingly, country representatives were dispersed amongst the groups. Each group contained one or more representatives of an international organization, NGOs, government agencies, continental states, large island states and small island states.

Each group was asked to identify the most important issues, classify the issues into generic themes and then prioritize the clusters of issues. They were also asked to identify and discuss what actions had been taken by specific countries on these issues and identify the constraints they faced when dealing with them. On the basis of the analysis, the groups were charged with presenting a set of recommendations on how the priority issues could be handled by governments, regional organizations, international organizations and NGOs.

After separate discussions, representatives of the three groups met in caucus and developed a draft resolution, based on the recommendations of the groups. The three groups' analyzes and findings were presented to the reassembled meeting and the draft resolution was debated in the assembly. Comments were made, suggestions proffered, and the final resolution was unanimously adopted.

A synthesis of the findings of the groups is presented below. It will be noted that some of the issues, because of their multi-dimensional nature, are classified into more than one category.

### Priority Issues

#### Political issues

- Land use planning
- Political will
- Indigenous and rural and forest-dwellers rights

#### Recommendation on political issues

In order to ensure the successful formulation and implementation of forestry policies, it is recommended that the findings of this consultation be placed on the agenda of the regional, national and local political leadership.

#### Socio Economic issues

- Land use planning
- Economics in forest policy formulation
- Public awareness, social perception and conservation issues
- Poverty and food security and their impacts on forest policy implementation

- Community participation (stakeholders, private sector, NGOs)
- Indigenous, rural and forest dwellers rights
- Land tenure and land security
- Fiscal policy
- Commitment to international agreements
- Increasing impact of tourism on economic development and on political decision-making
- Intellectual property rights (indigenous and national)

#### Recommendations on socio-economic issues

Forest policies must not be dealt with in a vacuum but must be based on sound national land use plans and economic criteria explicitly utilized in the process.

Given that the conditions of poverty and food security are considered among the causes of deforestation and forest degradation, it is recommended that governments pay special attention to the alleviation of poverty, the improvement of food security, and the provision of the basic needs of rural people in the formulation of forestry policies, plans and strategies.

For the effective implementation of forest policy, it is recommended that, in the process of forestry policy formulation, all stakeholders actively participate in the process. It is also recommended that special effort be made to keep the public aware, informed, and apprised, of the results of each step in the process of policy formulation, as well as the benefits of forests and conservation.

It is further recommended that governments recognize the rights of indigenous people, forest dwellers and other rural inhabitants by providing security of land tenure as a contribution to the sustainable use of forests.

#### Institutional issues

- Land use planning and regulation
- Intersectoral coordination to minimize the problems arising from the multiplicity of institutions, jurisdictional problems and national agencies' jealousies.
- Postgraduate training and education in policy formulation, analysis and development, and the values of non-traditional resources. These should be underpinned by basic forest education
- Institutional capacity to formulate and implement policy
- Rationalize and update legislation and regulations
- Research and Development
- Data monitoring and validation, information storage and dissemination, etc.
- Decentralized management
- Commitment to international agreements
- Coordination of international and regional agencies.

### Recommendations on institutional issues

In enacting national legislation for forest policy implementation, consideration should be given both to the rationalizing and updating of existing legislation and regulations and to the legal implications of international agreements.

The growth of multiple institutions related to forestry and natural resource management and the consequent overlapping of jurisdictions is noted with alarm. This has resulted, at all levels, in waste of capacity and duplication of functions. It is, therefore, recommended that mechanisms to rationalize the organizations and their functions, while promoting their efficiency and effectiveness, be developed.

It has been noted that the improvement in technical skills in forestry in the region, while providing basic knowledge, has not been accompanied by enhanced skills and capacity to focus on the priority issues of forest policy research, formulation and analysis. It is, therefore, recommended that training and education be provided in these areas, and that the institutional capacity to formulate and implement policy be improved.

The establishment of a regional mechanism for facilitating, monitoring and implementing forestry policy, within the context of existing regional organizations or programmes, along the lines of the Comision Centro-Americana para el Ambiente y Desarrollo (CCAD) and the Consejo Centro-Americano De Bosques y Areas Protejidas (CCAB/AP) is also recommended.

### Concrete Actions

#### Political Issues

Implement a public awareness campaign on the values and benefits of forests in relation to forestry policy analysis and formulation.

#### Socio-economic Issues

Provide capacity to develop the data and information necessary to develop plans and policy.

Develop a methodology incorporating land-use planning, macro-economics, stakeholder participation and basic rights and needs of rural and indigenous people in forestry policy formulation.

Develop capacity at the regional, national and local levels to implement the methodology.

#### Institutional Issues

Implement mechanisms to rationalize organizations and functions to promote efficiency and effectiveness.

Analyze existing institutions to identify the regional capacity to provide training and education to develop institutional capacity.

Provide education and training to increase capacity and research related to forest policy analysis and formulation.

### General

Seek financial resources for the implementation of these matters.

### Responses Already Made by Countries

New multi-stakeholder policies are beginning to be formulated and implemented in various countries of the region.

- Coordinating mechanisms are being established in a few countries to rectify inappropriate institutional arrangements.
- Effective land-use policies have been drawn up in some countries, and others are being planned in a significant number of states. Effective legislation has also been promulgated.
- External consultants have been utilized to counter the deficiency in institutional capacity to articulate and promote forestry goals.
- Governments are increasingly recognizing that policy processes do not reflect and adequately balance stakeholder values. In response, some have changed their approach from "top to bottom" to "bottom to top", and have established broadbased groups/agencies for coordination.
- In response to the prevailing poverty which exists in many of the countries of the region, some governments have 'turned a blind eye' to the commitment of land-use offences, and have 'softened-up' their policy enforcement practices. In others, new agencies have been established to regularize land tenure and distribution. A few have evolved appropriate co-management arrangements.
- Environmental issues are being placed higher on the agenda.
- In many countries the quality of the data base, as it relates to forestry, land-use, and national resources management, is being enhanced.

### Constraints in Dealing with Issues

- Political culture
- Political apathy
- Lack of experience
- Inadequate funding
- Flawed institutional structures and arrangements
- Absence of economic skills in forestry administration
- Insufficient information
- Inadequate local counterpart involvement
- Lack of appreciation of local environment
- Lack of sustainability of expertise in local institutions
- Lack of appropriate technology

- Inadequate knowledge of processes
- Disparity of goals in land-use policies
- Establishment of goals which cannot be attained
- Complexity of legal mechanisms

## OVERVIEW AND ASSESSMENT

During the closing session of the meeting, participants commended the Forestry Policy and Institutions Branch of the Forestry Department, Food and Agriculture Organization, and the European Commission for organizing the consultation.

The experts noted that this was the first occasion in which a comprehensive review had been made, not only of the current forestry policies of the region, but also of the processes which were followed in formulating these policies.

They were also of the opinion that the Consultation was in another sense unique, for it had brought together representatives of the various stakeholders of the region to comment on the policies from their own distinctive perspectives.

The experts felt sorry that, important as the Consultation was, it was merely one stage in the process of enabling the region to manage its forests in a sustainable manner. They therefore urged that a follow-up programme be formulated and implemented which would give effect to the most important findings of the meeting.

They, therefore, suggested that international assistance be provided for, *inter alia*, the mounting of training courses in policy analysis and forestry policy formulation; the application of the techniques and methodologies of public administration to the administration of forestry departments; the preparation of land-use plans; the sustainable management of the region's forestry resources; the rationalization of the national agencies responsible for the resource conservation and management, and the preparation of a regional forestry policy agenda.

# **Part II**

## **Forestry Policies in the Caribbean: Analysis and Synthesis of Country Reports**

**Prepared by**

**Merilio G. Morell**

## CHAPTER I: ANTECEDENTS

### 1.1 Background and objectives

Country capacity for public policy analysis has been recognized both by FAO and the European Commission as the main essential condition for the achievement of national goals in the sustainable management and conservation of forest resources. FAO's commitment to furthering the development of such capacity is supported by its Forestry Programme 1998-99, aimed at the promotion of "enhanced national and regional institutional capabilities for strategic planning and monitoring for sustainable forest resource use through: the collection, processing and dissemination of information, data and sector related statistics; the analysis of the demand and supply of forest products; and support to countries in forest policy analysis, elaboration of national forest development action plans and institutional strengthening".

The EC develops its activities under the over-all objectives of the Title XVII on development cooperation of the EU Treaty, in terms of sustainable economic and social development, integration into the world economy, fight against poverty and support for democracy and the rule of law. It's main goal is the promotion of sustainable forest management of all types of forests in developing countries, by supporting their efforts in finding and implementing appropriate policies and methods for sustainable management of their forest resources. To achieve this goal the following areas of action have been identified deserving major attention: enabling policy and legislation; institutional reform and strengthening of capacity; stakeholder involvement; information and research; and sustainable trade. The EC has also recognized that such actions require the support of the international community in helping developing countries achieve their goals of sustainable management.

At regional level, the countries have also recognized the key role of national capacity for public policy analysis. Significant activities have been carried out through the Secretariat of the Caribbean Community and Common Market (CARICOM). Although CARICOM has no specific activities in forestry policy, it has within its structure an outstanding Committee of Ministers responsible for Energy, Mines and Natural Resources. CARICOM ministerial committees are "empowered to formulate policies and perform such functions that are necessary for the achievement of the community's objectives". Guided by this concern in 1975, CARICOM established the Caribbean Centre for Development Administration (CARICAD) "with a mission to provide a central organization to assist member countries in the Commonwealth Caribbean to improve their managerial performance and strengthening their systems of public administration" in support of the current social economic development thrust within the Region. The mission of this body was reviewed and reconfirmed in 1988. (Review of Regional Programmes and Organizations of the Caribbean Community, CARICOM 1990).

More recently, most of the member countries of CARICOM, by endorsing the principles of UNCED and the main international conventions, have clearly indicated that the sustainable management of natural resources is one key objective of the community. It seems

unavoidable that sustainable development would be in due time explicitly recognized by the regional organizations working in the socio-economic areas.

Based on this coincidence of perception, programme priorities and the recognition of the overall relevance of public policy analysis by the Caribbean countries, in March 1997, FAO and the EC agreed to share financial resources and to carry out the Project "Forestry Policy Study in the Caribbean Countries". The objectives of the Study are: to contribute to understanding the ways and mechanisms through which forestry policies are formulated and implemented; to describe their general effectiveness and to identify the needs and opportunities for strengthening the Caribbean countries' capacity in forestry formation and analysis.

The countries to be covered by the joint financial resources of FAO and EC under this agreement were the following: Antigua and Barbuda; Bahamas; Barbados; Belize; Eastern Caribbean Small Islands, Dominica; Dominican Republic; Grenada; Guyana; Haiti; Jamaica; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname, and Trinidad and Tobago. The following overseas countries and territories of EU Member States were also included in the agreement: (Netherlands) Aruba, Netherlands Antilles (Bonaire, Curacao, Saba, Saint Eustatius, Saint Martin); (United Kingdom) Anguilla; Cayman Islands; Monserrat, Turks and Caicos Islands; British Virgin Islands.

FAO specifically included Saint Lucia, Guadeloupe, Martinique and Grenada as well as Cuba in order to obtain a general overview of the regional situation. The study, and all other costs incurred with respect to Cuba, were financed exclusively from FAO's Regular Programme resources.

All the country studies were carried out under the technical supervision of the Policy and Planning Division of the Forestry Department of FAO, with the exception of those for Haiti and Suriname. The studies for these two countries were prepared respectively by GOPA and the University of Louvain, under independent projects financed by EC DGVIII.

## 1.2 Project development

The development of the project included three main phases. First, the preparation of a forestry policy report for each of the countries, territories and departments mentioned above. This first phase also included a meeting with the consultants recruited for the preparation of the country reports. This meeting was considered necessary in order to secure uniformity in the preparation of the reports and in the approach for the gathering of information, and to discuss the conceptual framework of research as an additional means of building capacity in the field of forestry policy. The outline proposed in that meeting for the preparation of the reports and the list of regional consultants are given in Annexes I and II, respectively.

The second phase consisted of the analysis and synthesis of the information gathered through the country reports. The results of that analysis are presented in this report.

The third phase was to be the holding of a workshop from 25 to 28 May 1998 in Trinidad and Tobago to discuss with a selected group of experts, the findings of the research and to obtain their inputs for the preparation of the final publication.

The methodology by which this project was developed ensured that it focused mainly on forestry policy. The information provided in the country studies represents a rich database for further analysis, identification of key topics for forestry policy research, and exchange of experiences by other organizations and independent researchers. It should be kept in mind that these documents do not represent a complete picture of countries' forestry sector but of the main issues and situations related to forestry policy.

## CHAPTER II: CURRENT FORESTRY POLICY SITUATION IN THE REGION

### 2.1 The conceptual framework

Achievements in the forestry sector are determined largely by the assumptions made, paradigms provided and values held by its most influential stockholders. Therefore, a clear understanding of the contextual framework for forestry policy, is a necessary condition for designing appropriate activities for country capacity building and for promoting better effectiveness of policy implementation.

A main and currently held concept among forestry specialist and stockholders in the region is the one regarding "National Forestry Policy". It is envisaged to be a set of written overarching principles, decisions and plans that serve to guide governments in securing transparency, participation, proper technical decisions and efficiency. It is also held to be a definitive, or at least long-lasting, set of rules.

Policy analysts, government officers from the forestry sector, NGO staff and forestry experts, in general, assign an inordinate importance to the existence of a "national forestry policy". The slow pace of progress towards acceptable forest management and the state of forest degradation, is frequently attributed to the lack of "a" national forestry policy or to its weak design and implementation. A "national forestry policy" is considered to be a fundamental tool for securing proper management and conservation of forests and for ensuring the full potential contribution of forestry to development.

The study identified many instances of the validity of this concept in the region and how it has been a determinant of what countries have achieved in the forestry sector. The emphasis on having a "national forestry policy" is predominant in the largest countries with more extensive forest resources, such as Belize, Cuba, Guyana, Jamaica, Suriname, Trinidad and Tobago. This view was also held by countries, such as Haiti and the Dominican Republic, where forest resources were important before the degradation of their forest resources in the preceding decades. The concept is also used in the small countries with relatively important forest resources, such as the Bahamas, Dominica and Saint Vincent. Table 1 shows that, over a substantial period of time and following this conceptual approach, many countries have prepared and legitimized written general statements known as "national forestry policy".

**Table 1: Status of forestry policy statements in countries with important forest resources (Source: Forestry Policy Country Reports, FAO 1998)**

Country	Forestry policy	Date	Forestry Law	Environmental policy
Dominica	No		1975	
Haiti	No			
Dominican Republic	No		1962, 1967, 1982	
Suriname	No		1947, 1992	
Bahamas	Yes	1953, 1996		
Belize	Yes	1997		
Cuba	Yes	1959		
Guyana	Yes	1954		Yes, 1997
Jamaica	Yes	1886, 1935, 1945, 1984, 1996		
St. Vincent	Yes	1989		
Trinidad & Tobago	Yes	1942, 1981		Yes, 1997

The Netherlands Antilles and Aruba, Barbados, Cayman Islands, British Virgin Islands, Turks and Caicos, Anguilla, Antigua and Barbuda do not have forestry policy statements in the same sense that the countries richer in forest resources have (Belize, Guyana, Jamaica, St. Vincent, Suriname and Trinidad). In these less favoured countries the concept of forestry policy is more influenced by the obvious connection of ecosystems derived from their small area and the clear relation between nature and the main economic sectors, particularly tourism. Consequently more attention has been given to matters related to land use planning and countries' economic development plans. Forestry policy is, thus, considered more as an instrument for guiding the physical planning and development of these countries, such policy having been formalized through ordinances, acts and regulations regarding nature, in particular, trees.

Although a common criticism of forestry specialists and analysts is that one major weakness is the lack of policies, this analysis shows that the majority of the countries that are richer in forests have developed and adopted their policy statements a long time ago. In the smaller countries, where the resource is physically less important, ordinances, acts and regulations have also been in place for periods going back for several decades in most cases. Table 2 shows the dates of enactment of laws and regulations on forest and trees in several small countries in the Caribbean.

**Table 2: Laws and regulations on nature, trees, management and conservation in the small countries in the Caribbean (Source: Forestry Policy Country Reports, FAO 1998)**

Country	Legal instrument dealing with trees and nature
Anguilla	1904, 1972*
Antigua and Barbuda	1941, 1952
Barbados	1951, 1972, 1981
British Virgin Islands	1954
Dominica	1953, 1959, 1978
Guadeloupe	1922, 1924, 1946, 1986
Netherlands Antilles and Aruba	1991
Saint Lucia	1946, 1957, 1983
St. Kitts and Nevis	1904, 1924, 1927, 1940

The evidence gathered by the study strongly suggests that the low performance in the forestry sector is not due to the lack of national forestry policies but, first, to the inadequate current conceptual framework and understanding of what public policy is; second, the lack of skill in analysis, decision making and evaluation; and, third, absence of the necessary complementary action programmes for policy implementation. Forestry policy needs to be understood as a dynamic process driven by social demands and emerging issues with a need continuously to carry out analysis and make decisions. Emphasis has to shift from the present one, placed on obtaining a written legal document, to one dominated by the achievement of physical goals and targets. Declaration of grand and noble intentions should be complemented by the definition of measurable objectives and mechanisms to secure government and country accountability and performance. To face these challenges successfully, government decision makers and forestry technicians need to be provided with the skills of analysis and trained in the methods of policy formulation and evaluation.

## **2.2 Policy intention and content**

A major expectation of the countries with larger forest resources (Belize, Cuba, Guyana and Suriname) and others with a sufficient area for plantations (Dominican Republic, Jamaica) is to make forest production a meaningful contributor to economic development. The degradation of resources and the intention to arrest it, especially deforestation, is also an area receiving major attention in individual country policies. Conservation, biodiversity protection, coastal concern and erosion are equally relevant. Another main emphasis of policy intention in these countries is the creation of stronger institutions and improvement of government control. These country policies are also more specifically addressed to forests, instead of the whole territory, as is the case in the small countries. Environmental policy is an emerging trend in some countries of the region and, through it, general principles for the use of forests and for the forestry sector are also being established. Table 3 summarizes (from the country reports) the major focus of forestry policy in Bahamas, Belize, Cuba, Guyana, Jamaica,

Suriname and Trinidad and Tobago. Table 3 also shows, for some of the countries, the main originators of the policy and the major outputs achieved through policy implementation. In this table, the language and terms used in the country policy documents have been quoted literally in order to reflect the style and practice in the definition of objectives and goals within the forestry sector.

**Table 3: Main Policy intention of Forestry in larger countries: Bahamas, Belize, Cuba, Guyana, Jamaica, Suriname and Trinidad and Tobago (Source: Forestry Policy Country Reports, FAO 1998)**

Country	Main policy intention
Bahamas	<p>The Government of the Commonwealth of the Bahamas recognizes the importance of forestry as a vital facet of land use and gives its fullest support to forest conservation, management and development in the national interest.</p> <ul style="list-style-type: none"> <li>• establish a legally constituted forest estate to increase the yields of sawlogs and other forest products on a sustained basis;</li> <li>• manage the designated forest estate to increase the yields of sawlogs and other forest products on a sustained basis;</li> <li>• provide fire protection and develop management systems compatible with the conservation and protection of fresh groundwater resources;</li> <li>• develop sustained wood resources for the promotion of local forest industries;</li> <li>• manage designated forest conservation areas for amenities, recreation or protection of rare, fragile or threatened ecological associations.</li> <li>• encourage tree planting or forest development on suitable private lands;</li> <li>• manage and sustain a comprehensive forest research programme to provide a sound technical base to improve management and development, and in particular identify silvicultural data directed towards improving the financial yields of species important to the national economy; and</li> <li>• ensure that the Government derives a reasonable return for licensed rights.</li> </ul> <p>ORIGIN</p> <p>The originators of the policy statement included the senior technical level of the DLS (Forestry Section). In concert with the policy makers within the Ministry of National Security (the Ministry in which the forestry institution resided in 1986), along with a Senior Forestry Adviser from FAO.</p> <p>OUTPUT</p> <p>National Forestry Development Programme (NFP) 1997-2000 and allocation of a fund of B\$85,000.</p>
Belize	<ul style="list-style-type: none"> <li>• create, maintain on a permanent basis, and develop a national forest estate, with recognition of the needs for agricultural development, forest products (both industrial/commercial and local), the protection of the natural environment and of special nature reserves;</li> <li>• improve the forest through regeneration techniques; and increase production from the forest;</li> <li>• improve the quality of exported products to achieve assured markets;</li> <li>• promote good forestry practices on private forest land;</li> <li>• manage public lands outside the forest estate not yet used for agriculture;</li> <li>• promote public awareness of the importance of forests;</li> <li>• maintain an adequately staffed and financed Forest Department to carry out the objectives of the forestry policy.</li> </ul>

Country	Main policy intention
	<p>OUTPUT</p> <ul style="list-style-type: none"> <li>• creation of national parks and forest reserves covering approximately 37% of the country;</li> <li>• silvicultural practices towards sustainable forest management being applied in a few selected forest reserves;</li> <li>• NGO involvement in promoting public awareness, introducing forestry practices on private land, managing private land outside the forest state;</li> <li>• sharing of responsibilities for the management of some of the country's national parks.</li> </ul>
Cuba	<ul style="list-style-type: none"> <li>• sustainable management, use and development of forest resources;</li> <li>• achieve 27% of forest cover by 2015 through the plantation of an additional 500 000 hectares;</li> <li>• supply the country's timber demand;</li> <li>• modernization of the forestry industry;</li> <li>• higher aggregate products.</li> </ul> <p>OUTPUT</p> <ul style="list-style-type: none"> <li>• increase forest cover from 13.4% in 1959 to 21% in 1996;</li> <li>• 450 000 hectares of forest plantations;</li> <li>• preparation and approval (1997) of the Forestry Development Programme;</li> <li>• more than 1 000 forestry engineers graduated between 1970 and 1997.</li> </ul>
Guyana	<p>In the interest of present and future generations, to protect and make rational use of lands, mineral, flora, fauna and water resources.</p> <ul style="list-style-type: none"> <li>• conservation protection, management and utilization of forest resources while ensuring that the productive capacity of the forests for both goods and services is maintained and enhanced;</li> <li>• conserve and improve the environment;</li> <li>• promote sustainable forest activities, utilizing a broad range of forest resources and contributing to national development, while allowing fair returns to investors;</li> <li>• ensure watershed protection, from all types of forests, including those now on State lands, except that forests privately held or allocated to Amerindian communities shall be designated State forests.</li> </ul>
Jamaica	<ul style="list-style-type: none"> <li>• the establishment of adequate areas of forest reserves under public ownership and their management on the basis of conservation and development for multiple use (protective, productive, scenic, recreational and wildlife);</li> <li>• the encouragement of sound forest management on private lands;</li> <li>• the development of the use of native timbers and other forest products to provide the highest possible proportion of the island's requirements;</li> <li>• to give priority to conservation and protection of forests, management of forested watersheds, management of forest lands, promotion and regulation of forest industries, forest research, public awareness and environmental education, forestry education and training.</li> </ul>
Suriname	<ul style="list-style-type: none"> <li>• to yield in perpetuity the maximum benefit for the community;</li> <li>• the achievement of sustainable forest management by conserving permanent and provisionally maintained forests and ensuring sustainable production from production forests;</li> <li>• conservation of wildlife;</li> <li>• maximizing the benefits to the nation</li> <li>• promotion of forest industry to enable the supply of forest products, the</li> </ul>

Country	Main policy intention
	<p>generation of foreign exchange, increase employment and diversification of national production.</p> <p>OUTPUT</p> <ul style="list-style-type: none"> <li>• plantation of about 12 000 hectares;</li> <li>• two million hectares under concession and incidental cutting licences with little or no control of forest management;</li> <li>• a total of 30 nature reserves covering 800 000 hectares (5% of the country) including tropical forestry ecosystems and coastal formations;</li> <li>• management plans developed for 15 protected areas, due to lack of personnel and financial resources management plans not being implemented.</li> </ul>
Trinidad and Tobago	<ul style="list-style-type: none"> <li>• to allocate an adequate area of land in strategic places for forestry purposes;</li> <li>• to manage these resources for optimum combinations of their productive, protective, recreational, aesthetic, scientific and educational capabilities to:             <ol style="list-style-type: none"> <li>i. contribute to sound overall land usage;</li> <li>ii. provide the required forest goods and services;</li> <li>iii. contribute meaningfully to the overall socio-economic development of the country;</li> <li>iv. conserve sufficient representative areas of natural ecosystems to ensure their perpetuity;</li> <li>v. ensure that the public is made aware of the importance and management of forests and forest resources;</li> <li>vi. improve the quality of life for citizens.</li> </ol> </li> </ul> <p>OUTPUT</p> <ul style="list-style-type: none"> <li>• 43 government forest reserves;</li> <li>• 13 government sanctuaries;</li> <li>• 42% of the country as State-owned;</li> <li>• 15 254 hectares of plantations.</li> </ul>

Policy intention in the small island states stresses the strategic importance of “nature” for the well-being of their societies and for its value as production input to the economy. The policies of these countries are focused on the essential role of nature for economic development. The emphasis is not on the forest as a potential producer of timber products but on nature and trees as a key strategic component for the countries’ social and economic stability. Accordingly, policies are aimed at the management of the entire natural and physical environment.

Emphasis is placed on ensuring harmony between economic development and nature conservation. The creation of national parks and protected areas appear as a major area of interest. The policy intentions cover marine and terrestrial ecosystems, through explicit mandates for the protection of vegetation and marine coastal areas. Attention is given to major activities related to construction and infrastructure development, such as quarrying, mining, landfills and waste disposal. The protection of water supply receives special attention in the policy documents, especially in those islands where it is scarce. An emerging guideline is the requirement of EIA for major development projects. [Table 4](#) shows the main policy intention for some of the countries of this group.

**Table 4: Policy intentions in small countries (Source: Forestry Policy Reports, FAO 1998)**

Country	Main policy intention
Antigua and Barbuda	<ul style="list-style-type: none"> <li>• administer and promote conservation of forests, protection and management of wildlife;</li> <li>• to provide forests for public recreation;</li> <li>• monitoring and controlling fuelwood extraction;</li> <li>• protection of wildlife, soil and water resources;</li> <li>• promoting research, training and education in forestry and wildlife systems.</li> </ul>
Barbados	<ul style="list-style-type: none"> <li>• tree preservation, town and country planning, soil conservation, output tax refunds for tree planting (not fruits).</li> </ul>
British Virgin Islands	<ul style="list-style-type: none"> <li>• ensure the integration of physical development, such as tourism, with the conservation of protected areas;</li> <li>• ensure development in harmony with natural environment; create national parks;</li> <li>• conservation of vegetation, marine coastal areas, protection and enhancement of scenic quality, protected areas conservation, regulation of quarrying.</li> </ul>
Netherlands Antilles	<ul style="list-style-type: none"> <li>• sustainable development; biodiversity conservation; well-being of citizens; environmental protection; sustainable tourism; nature conservation; public awareness of environment.</li> </ul>
St. Kitts and Nevis	<ul style="list-style-type: none"> <li>• protect natural and man-made environment;</li> <li>• protect water catchment;</li> <li>• maintain environmental stability through preservation and, where necessary, restoration of the ecological balance that has been adversely affected by depletion of the island's forests;</li> <li>• check soil and beach erosion;</li> <li>• increase forest cover;</li> <li>• satisfy the country's requirements for fuelwood, fodder and minor forest products.</li> </ul>

Sustainability is considered equally important in both categories of countries. Many of the countries of the region have become members of international conventions and agreements. In several cases, the requirements of these international instruments have been an important factor in defining the intentions of the policies and the enactment of laws. [Table 5](#) shows the membership of individual countries in international conventions and agreements.

Table 5: Membership of countries in international conventions and agreements (see annex III) (Source: Forestry Policy Country Reports, FAO 1998)

	Anguilla	Antigua	Barbados	Bahamas	Belize	British Virgin Islands	Cayman Islands	Cuba	Dominica	Dominican Republic	Grenada	Guadeloupe	Guyana	Haiti	Jamaica	Martinique	Saint Lucia	Saint Vincent	Suriname	Trinidad & Tobago	Turks and Caicos	Netherlands Antilles
CITES	na	na	x	x	na	x	x	na	x	x	na	na		na	na	na	na	na	x		x	x
Ramsar						x	x			x									x		x	x
Biodiversity			x	x		x				x		x							x		x	x
Barbados Declaration																						x
Climate change				x						x		x							x			
Nat Protection Western Hemisphere																			x			
ACT																			x			
SPAW (Cartagena)						x	x			x											x	x
Maipol							x			x									x			
Bonn convention							x															
Desertification			x							x												
London Dumping																						
Vienna convention Ozone										x									x			
Basle conv (waste hazard)										x									x			

na - not available

### 2.3 Conclusions

Forestry professionals, policy analysts and major stakeholders in the Caribbean Region considered that an official approved national forestry policy is an essential prerequisite for forestry development and sustainable resource management. Such a perception has been more deeply ingrained in countries which have more land resources and larger areas of forests in the region. The analysis shows that most countries of the region have developed and officially adopted such an instrument, some of them a long time ago. In the smaller countries, where this need is felt less strongly, various forms of legislation have been enacted for the use and conservation of nature and trees. In general, the principles for the use of resources contained in this body of regulations provide the principles and a strong mandate to countries regarding the sustainable use of forests and trees.

Even those countries which reported that they did not have a policy statement, such as Dominican Republic, the principles for sustainability exist either in their constitutions or in the laws regarding forest use. In other cases, like Bahamas, policy statements, although not officially adopted, have to some extent oriented the sector's development.

It seems that sustainability is a principle deeply rooted in government bureaucracies responsible for policy formation. More recently, these principles have started to appear in the programmes of the political parties. This fact might be evidence that politicians are responding to an increasing public interest in forestry and environmental issues.

The reports also reveal that most of the countries have complemented their policy statements with a number of specific policies, such as forest management, forest industries, research, human resources and forest administration. It shows that the meaning and role assigned to policy statements might be hiding the important ongoing activities of analysis and evaluation that should be carried out on a day-to-day basis in regard to specific issues and problems.

Notable progress has been achieved in countries with a formally adopted policy statement, such as Belize, Cuba and Trinidad and Tobago. But it is not evident that the situation of the forestry sector is in general better in countries with policy statements when compared with those that do not have them. For example, the situation of the forestry sector in Jamaica, a country with a national forestry policy, has many similarities with the situation in the Dominican Republic and Suriname - two countries which have reported that they do not have official forestry policies.

The general endorsement by countries of international conventions and agreements on the conservation and sustainable management of resources, suggests the perception that principles for sustainable use and biodiversity conservation are deep rooted in government statements and political practice. These conventions, in turn, have brought about the adoption of additional legislation and rules regarding forests and nature.

Policy intention is generally expressed in qualitative, mainly biological, terms and driven by a clear interest that the use of resources responds to guidelines of the forestry discipline. The emphasis on the fact that the use of the resources should be guided by biological rules that

secure conservation and health of the resources is quite clear in the policies of the larger and forest-rich countries. The State is seen as a major guarantor of the perpetuity and good use of forests; this fact is evident in the proposals for the creation of a forest estate in some countries, such as the Bahamas and Belize. Special emphasis is given to securing adequate management, creation of a stronger administration and technical skills. In the small countries, there is less emphasis on the creation of a forest estate; however, the intention of the policies is equally ingrained in biological guidelines.

Although it is implicit that the forestry policies be aimed at the well-being of society and its future generations, few of the policies provide clear indications of economic goals, public investment, and the use of market incentives. The social dimensions are also other aspects not explicitly mentioned in most of the policies. The provisions for evaluation and government accountability through the reporting of progress in the achievement of policy goals are lacking in many of the country policies.

In general, analysts of the sector appear to have the feeling that there is a gap between the quality and comprehensiveness of the principles sustained by the body of policy statements and legislation and the programmes and achievements in the sector. It would seem that policies are not effectively translated into actions. This is reflected in the widespread dissatisfaction among technicians and public opinion with the situation of the forestry sector's economic contribution to development, biodiversity conservation, the health and degradation of the resources and the pace of progress in addressing its problems.

However, positive signals exist regarding the implementation of forestry policies. An important number of protected areas have been created throughout the region; some countries, such as Belize and Trinidad and Tobago, have put under forest or protected areas a substantial proportion of their national territory. In other countries, such as Cuba, important areas of reforestation have been established and it is reported that the forestry area has increased from 13.4% to 21% of its territory. Guyana has provided facilities for research to the international community and some progress in securing better forest management in the forests, under concessions, is reported. In other countries, mid-term national forestry programmes have been prepared, although it seems that implementation has not always followed. These achievements are in line with the biological orientation and governmental leadership under which the forestry policies in the region have been formulated.

## CHAPTER III: FORESTRY POLICY ISSUES IN THE CARIBBEAN

The country reports provided an extensive list of the main issues and problems being discussed and addressed in the region. Although the reports' level of detail on issues is not uniform, they provide a fair picture of the policy areas on which attention and efforts are centred. In order to facilitate the understanding of the situation in the region, an attempt was made to classify the issues and problems under general categories. As in the case of the conceptual framework and policy content with respect to issues, some difference were found between the big countries in the region and the small island states. The major categories of issues in countries richer in forest resources and the small Island States are summarized below.

### **3.1 Forestry Policy issues in larger countries: Belize, Dominican Republic, Guyana, Haiti, Jamaica, Suriname, Trinidad and Tobago**

#### *Land use*

There is the feeling that a general "land use" policy and plan are two indispensable conditions for the sustainable management of forests. In some of the countries, the national land use plan is considered as a prerequisite for forestry policy effectiveness. Such reasoning gives to land use planning policy the category of a macro policy. It is felt that such an instrument will serve as a reference guideline for decision-making in forest land; will ease decision-making for assigning forest land to competitive uses, such as agriculture and mining; and will secure an optimal allocation in environmental and socio-economic terms. The assumption of forestry specialists and decision makers in the region seems to be that by having such a policy, the allocation of land resources to production and conservation will be made under rational terms and that optimal outputs for society will be obtained. This issue is one in which the countries of the region assign an overall priority and should receive special attention in any follow-up activities on forestry policy in the Caribbean.

#### *People's participation*

Policies securing people's participation are considered necessary for improving the rationality and equity in granting concessions and in allocating forest land use. Several of the countries under this category (Belize, Dominican Republic, Guyana) report a number of mechanisms for securing people's participation in the current planning and resolution of conflicts over forest lands. Some of the processes reported are *ad hoc* procedures varying from seminars with communities to the recruitment of national experts and NGOs. Structured and already proven social research methods, such as surveys, sampling, and techniques like questionnaire construction, that could make people's participation more objective, were not reported as having been used. Some of the efforts reported, although commendable, seem cumbersome and not designed in such a way as to get the point of view of the stakeholders.

### *Sustainable Forest Management*

This is an issue found in all larger countries. The general discussion is about appropriate forest management systems and the mechanisms for enforcing their use by private operators, be they individuals or corporations. Some of the restrictions on having sustainable forest management are said to be the lack of information on the forests, inappropriate selective extraction, the use of inappropriate technology, low efficiency and difficulties in control posed by technologies, such as mobile sawmills and chainsaws, and lack of capacity on disease management and forest fires control. One main discussion point is the decision regarding whether countries should wait until they have the necessary information, technology, human resources, and institutional capacity for sustainable forest management, or if they should start now with the utilization of the forests, learning in the process, and then using the lessons learnt to move steadily towards a sustainable forest management situation. In any case, the low percentage of forest under sustainable management is seen as a major weakness and an undesirable situation.

### *Concession contracts*

For the countries with large forest resources the granting of forest concession contracts to private national and international firms is a common strategy. Main discussion in that respect is about the need for appropriately pricing the resource, securing contractors' compliance with the terms of contracts, governments' capacity for securing sustainable forest management and the potential negative environmental and socio-economic impacts of large-scale operations. On the other hand, the countries in this category are concerned about the imbalance between the large size of their forest resources and their low contribution to economic development. International NGOs and the media have actively participated in the discussion, expressing their concern about the potential negative impacts of this approach to forest resources.

### *Indigenous people and local community rights*

That governments duly ensure the rights of indigenous peoples and communities while promoting forestry development and conservation, is a live topic of discussion reaching political dimensions in several countries. In some cases, this issue is closely related to the granting of concession contracts. The issue arises both when forests are assigned to foreign or national corporations for utilization and when protected areas are created. The discussion involves topics in equity, as well as the right to preserve cultural values. It is felt that sometimes the rights, knowledge and approaches of local people to forest management are not considered when decisions are taken for developing forest resources.

### *Linkages of macro-policies for economic development with the forestry sector*

It is felt that national accounts, a major instrument in the selection of countries' options for economic development strategies and formulation of macro-policies, do not reflect fairly the potentialities and the effective contribution of the forestry sector. Such a situation is thought to be a major cause for the low budget allocation by governments to the organizations responsible for orienting the use and conservation of the forestry sector and to forestry programmes. It is considered that the underestimation of the potential of the forestry sector,

prevents proper linkages and synergy of national economic development macro-policies with the forestry sector.

#### Public investment in the forestry sector

Higher availability of investment sources and funds are considered necessary for accelerating the development of the sector. Finding ways for making these funds available is considered a major need. There is currently a discussion about the means to secure the flow of such capital to the forestry sector. Some countries are considering whether to achieve a financial autonomy of their forestry sector from the income of royalties and taxes from forest operations. Others are discussing options, such as forestry funds and financial incentives. There are arguments suggesting that activities based on forest resources should receive preferential financial treatment due to specificities, such as long-term maturation and low return to investment. A major concern exists as to how to secure required capital for strengthening institutions, sustainable forest management and plantations for re-greening countries.

#### Economic, financial and fiscal analysis

Public administrations and governments, in general, are considered not efficient enough in securing equity in the distribution of the benefits derived from the use of forest resources, especially in relation to local communities and indigenous people. Another aspect of inefficiency is attributed to governments' lack of capacity for collecting taxes and royalties generated from forestry activities. Additionally, the system of taxes, determination of the proper levels and collection are judged as being too complicated to be put in practice.

#### Government administrative efficiency

A major failure of government administration is considered the lack of control and the poor enforcement of sustainable forest management. The cause of this situation has its origins in poorly defined institutional responsibility among government agencies, and the great number of legal acts not always complementary and updated. Forestry institutions are in general described as under-funded, understaffed, not properly structured, without the necessary equipment to operate, and lacking the necessary vehicles and communication systems.

#### Policy implementation, monitoring and evaluation

It is considered that not enough attention is given to the analysis and documentation of the evaluation of how well the current policy allows for the achievement of the country's objectives. In some cases, it is felt that some development policies might be contributing to the degradation and loss of forest resources. In some countries, there is the perception that forestry problems and issues have been analyzed sufficiently, that sound proposals exist and that what is lacking is the political will to implement such recommendations.

#### Deforestation

The loss of forest cover is seen as one of the most negative results of the countries' lack of institutional capacities and appropriate policies. A major discussion is taking place regarding

the methods to be used to stop the rate of deforestation and degradation of forests and start re-greening the country's territory. In many cases, agricultural development and mining activities are identified as major causes of deforestation. Large-scale forest plantation is the most common envisaged option for balancing or reverting the present rates of deforestation.

### Conservation versus resource use

An important confrontation between conservationists and those advocating economic development occurs regarding the amount of land that should be put under protected areas. In those cases in which protected areas or forest reserves have been created, the discussion concerns the use of protected areas for economic purposes and the opportunity costs to communities. Regulations for use of buffer zones is emerging as another important issue. Table 6 shows the main issues by categories for a selected number of large countries (Belize, Bahamas, Cuba, Dominican Republic, Guyana, Haiti, Jamaica, Suriname Trinidad and Tobago).

## **3.2 Forestry policy issues in small islands**

In small island states, the issues regarding the connection between economic development and its dependence on nature is a clear point of concern. Other issues are related to the countries' particular physical and economic characteristics. The most important type of issue derived from the analysis of the cases of Antigua and Barbuda, British Virgin Islands, Cayman Islands, Netherlands Antilles and Curaçao St. Kitts and Nevis, and Turks and Caicos are listed below.

### Land use and development

In this group of countries, the discussion on land use concerns the need for a national plan embracing all types of activities. Topics, such as carrying capacity, urban settlement locations, extent of agricultural areas, are considered as part of this issue. Land use is considered in the framework of country master plans for development. The financial implications for the preparation and implementation of these plans have not been assessed. It is felt that the countries do not have all the required capacity for the preparation of such plans.

### Tourism development

This activity is a major source of economic development in many countries of the region and especially for some small islands. However, it could also represent a major threat to the sustainability of these countries. Without proper care, this activity can bring serious degradation to the ecosystems and features that are the main attraction to visitors and on which it depends. It is a matter of concern in many small island states that an economic boom, due to tourism in the medium term, is followed by a drastic recession. Such a situation, implies high social and negative impact on people's well-being. The degree to which the very limited vegetation resources, space and natural ecosystem should be set aside for development of tourism is a major current issue in these countries.

**Table 6: Major forestry issues in Bahamas, Belize, Cuba, Dominican Republic, Guyana, Haiti, Jamaica, Suriname, Trinidad and Tobago**  
 (Source: Forestry Country Policy Reports, FAO 1998)

	Land use	People's participation	Sust. forest management	Concession Contracts	Indigenous people	Linkages macro-policies	public investment	economic and financial analysis	Government efficiency	policy implementation	deforestation	conservation vs. resource use
Bahamas			X	X		X	X		X		X	
Belize	X	X	X	X	X		X		X	X	X	X
Cuba			X				X					
Dominican republic	X	X	X			X	X	X	X	X	X	X
Guyana			X	X	X		X	X	X			
Haiti							X		X		X	
Jamaica			X	X			X		X	X	X	
Suriname	X	X	X	X	X		X	X	X			X
Trinidad & Tobago	X		X				X	X	X		X	X

### People's sensitivity to environmental health

The lack of a widespread understanding of the value and services derived from trees, vegetation cover and of the environment, in general, is felt as one reason for the destruction of these resources. It is considered that a strong public education campaign is necessary for guiding the countries' development in such a way as to be more nature friendly.

### Creation of protected areas (considering private ownership)

The creation of protected areas is considered a main policy option for ensuring nature conservation in this group of countries. In contrast to the largest countries, where the creation of protected areas affects mostly public lands in the small states, this action will affect lands and property rights of private citizens. Hence, decisions will bring new regulations and restrictions to community activities. Policy formulation regarding this issue requires special country capacities and skills in people's participation, negotiation, dispute resolution and in policy analysis in general.

### Water resources

Water availability, quality, disposal of liquid waste and run-off are major concerns in most of the small island states. In spite of the awareness of the importance of this resource, the economic and social dimensions and the implications of degrading its potentiality has not been defined in many countries of the region.

### Extensive grazing

Extensive grazing is an activity practised in many of the small islands. There is a clear understanding that it has negative effects on the vegetation cover and on other economic activities such as agriculture. It originates mainly from livestock, but special cases, like monkeys in St. Kitts and Nevis, are also reported. There are valid reasons for defending extensive grazing, such as the economic dependence of a certain sector of the population on this activity. However, the social, economic and environmental costs do not seem to be defined and consequently informed decisions are not being taken in this regard.

### Quarrying, mining and land fill

The demand for construction material, roads, and the need of land for hotel and urban development constitute another factor of forest cover and vegetation losses. Such activities frequently have negative impacts on fauna and water resources. The discussion centres around its importance to the major economic activities of the countries and the long-term sustainability of the islands' ecosystems.

Other issues in this group of countries are the destruction of mangroves, the need for trees in urban settings, and management of plant pests. Tables 7 summarizes the major categories of issues in the small island states

**Table 7: Major issues and problems in small islands (Source: Forestry Policy Reports, FAO 1998)**

	Land use	People sensitivity to environment	Trees in urban setting	Mangrove destruction	Water resources	Plant pests	Quarrying and sand mining	Protected area creation	Extensive grazing	Tourism development
Antigua and Barbuda	x	x	x	x	x	x	x		x	x
Anguila	x				x		x			
Barbados	x	x			x				x	
Cayman Islands	x			x	x		x			
British Virgin Islands	x				x		x	x	x	x
St. Kitts & Nevis	x								x	x
Nether-lands and Curaçao	x				x	x			x	x
Turks and Caicos	x	x			x				x	

### **3.3 Conclusions**

The issues listed above were identified through the preparation of the country reports for each of the countries included in this study. They are subjects of intense debates in many of the small island states, and several of them were on the political agendas of these countries while this study was under way. As a response, various countries have created special commissions and *ad hoc* technical groups for the analysis of some of the issues and for the identification of viable policy options. These sets of issues represent societies' main concern, and areas in which forestry policy intervention is most required. Therefore, opportunities exist for partnerships within countries and with the international aid community interested in forestry policy. The situation described should not be taken as presenting a negative picture of the forestry sector in the region. It represents evidence collected objectively on matters of most concern to the people in the region that consequently constitute the areas in which policy analysis and policy formation is required.

Tables 6 and 7 strongly suggest that the priorities for forestry policy intervention in the region are: land use planning, deforestation, sustainable forest management, people's participation, indigenous people and local communities rights, macro-policies and the forestry sector, public investment in forestry, governance of the forestry sector and institutions, policy evaluation, water resources and forestry, extensive grazing, quarrying, creation of protected areas, public awareness of environment and development of tourism.

Most of the issues identified still need to be analyzed more fully before decisions can be made at economic and political levels. Convincing and objective responses have to be given to such questions as: Will more financial resources to institutions (for monitoring and law enforcement capability) change things in a fundamental way? Is the complete control proposed in some countries physically and financially feasible? Is the lack of institutional resources a major cause of the present resource situation, and if yes how much resources are necessary and how will they affect public finance? How can these resources be provided in a

ssustainable way? How important are the current benefits received by communities from uncontrolled grazing? If all uncontrolled grazing is eliminated, how will the economy of countries taking this decision be affected, who will benefit and who will lose, and what are the magnitudes of such transactions? Considering the variety and diversity of the issues, it is understandable that this is a huge task which, in many of the cases, demand an analysis capacity greater than that available at individual country level.

Even in the cases in which the capacity might exist, the nature and characteristic of many of the issues are such that they will not disappear just by being properly analyzed. Creating an enabling environment, accompanying policy implementation and monitoring, requires a continuous capacity and actions at regional and country levels. Furthermore, new issues and problems will arise calling also for decision makers' attention and analysis. This should not discourage those interested in solving such problems. Continuous policy analysis is a demand of the countries' social life and one main duty of public servants. However, this reality calls for the development of capacity for continuous analysis, information search and storage, and institutional memory. Forestry Policy analysis should become an integral part of Forestry Administrations and Governments' day-to-day activities.

The country reports revealed that forestry issues are of a multidisciplinary character. Many of them touch on matters that are beyond the realm of natural sciences. The need for analysis based on a multidisciplinary approach was evidenced. The tools and the methods of economics, sociology, public administration, to mention just the most relevant, should play an important role in the search for options for confronting forestry issues. Other reasons for a multidisciplinary approach are the close relationship between sources of economic development (tourism, mining, services) and trees, forests and vegetation in the region and the need to ensure financially and politically feasible forestry policies.

The magnitude of the task and the multidisciplinary capacity required when compared to the countries' means -- human resources, size of the economy and administrative capacities-- strongly suggest that a regional response is one alternative that should receive serious consideration. The combination of regional institutions, national expertise, universities, and research centres, plus the use of information technology, could create a synergy and develop potentialities commensurate with the task to be faced.

It should be said that although clear differences were found in the main issues between the two groups of countries, many similarities and overlaps do exist between them in areas, such as land use, governmental administrative capacity, legislation and public investment. It is felt that the differences found do not exclude the opportunities of joint action by the small and large countries.

Finally, it is stressed that, to date, forestry policy has been reactive; analysis and action coming just after issues or problems have reached a certain degree of crisis. There is a need for a more proactive approach with more attention being paid to monitoring, performance assessment and scenario preparation, that will allow for a greater degree of early detection of emerging trends and issues and the planning and identification of actions before crisis dimensions are reached.

## CHAPTER IV: THE PROCESS OF FORESTRY POLICY FORMATION

The Forestry Policy Reports showed that in the region the processes for forestry policy formation fall under three main approaches. The first one corresponds to countries having an explicit forestry policy formation, with clear and legitimized procedures that define the different stages regarding inputs and responsibilities for preparation of analysis and decision-making. A balance between the technical and political levels seems to exist or at least the technical side seems to have some degree of recognition and power. The countries following this approach are Barbados, Jamaica and Netherlands Antilles and Curacao.

The second approach is characterized by situations in which a set of stages from issue identification to option selection exists. However, the various stages are fewer, less structured and defined than in the first approach mentioned above. The procedures for action on issues seem to be less formal and they are not always followed in a systematic way. The process seems to be dominated by the stages corresponding to the political decision and legitimization, with a great part of the analysis conducted through the debates for the preparation of law. Anguilla, Antigua and Barbuda, British Virgin Islands, Cayman Islands, Dominica, St. Kitts and Nevis, and Turks and Caicos were found to follow this approach.

The third approach is in place in those countries that do not have an explicit set of stages for policy analysis at the technical level. When confronted with the need to act on issues, *ad hoc* procedures, such as the recruitment of consultants and the creation of commissions, are used. Countries that appear to be using this approach are Bahamas, Belize, Dominican Republic, Guyana, Haiti, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago. Some details regarding specific countries follow.

### 4.1 Countries with an explicit process for policy formation

#### Barbados

The process is made up of two main levels of analysis and decision-making, the technical and the political legitimization. At the technical level, the main steps of rational policy analysis are considered: issue definition, option identification, option selection and decision-making (identifying action or selecting preferred action or actions) and an important step for policy implementation is identified: the preparation of a programme. The second level is the political and legitimization one, carried out by the Office of the Attorney General, the Minister concerned, the Parliament, the Senate and the Head of State.

The country report did not provide information on the methods and tools of analysis used at the technical level. There is no mention of the type of procedures and changes and whose points of view prevail when discrepancies arise between the technical and political levels.

### Jamaica

Jamaica's country report identified a formal model by which the high political level, the Cabinet or the Minister of Government, in response to a technical study or public enquiry, develops its policies. The technical input is shown as following a well-known model developed by the Government Management Institute for National Development. It comprises issue search, deciding role responsibilities, problems and issues definition, setting objectives and priorities, policy implementation and evaluation.

A second model is defined as characterized by responding to the recognition of persistent problems by international agencies or foreign organizations.

### Netherlands Antilles and Curacao

The policy report for the Netherlands Antilles and Curacao described a quite complete model for the process of policy formation as being in place in the Netherlands Antilles. This model is applied to two main areas: Strategic Development Plans and Nature Policies. The model includes the following steps: issue search and agenda setting, deciding how to decide, issues definition, forecasting, setting objectives and priorities, option analysis, implementation, monitoring, control, evaluation and impact on policy. Mechanisms for people's participation and reaching consensus were also indicated. Although there are no details on the part of the process by which the policies are legitimized, evidence is given regarding the fact that implementation follows policy formation in the Netherlands Antilles at a degree higher than in the other countries analyzed.

## 4.2 Countries with legislative-centred processes

### Antigua and Barbuda, Dominica and St. Kitts and Nevis

It is reported that a formal model including issue search, agenda setting, decision-making and action taking (implementation) is used.

For these countries, international and regional forestry and related environmental initiatives, such as the "Forestry Principles", and international conventions are judged to have had a great deal of influence on the setting of the agenda for policy analysis and on the policies drafted afterwards.

The country study underlined that in these three countries information was not found on: how issues and problems were identified and included in the government agenda; what were the tools for option identification and selection, forecasting, objectives setting, and mechanisms for implementation of policy. Limited information, lack of local analytical capacity and no implementation are other weaknesses attributed to the policy process in these countries. It was reported that there exists a perception amongst the persons interviewed that although important for the country, the policy processes have been externally driven and top down.

Anguilla, British Virgin Islands, Cayman Islands, and Turks and Caicos

These countries present a very similar picture amongst them. The identification and decision to take action on issues of national relevance occur either at the executive level based on analysis made by governmental technical staff or identified out of communities' demands. Analysis and option selection is made at both the administrative (technical) level and the executive (legitimization decision-making) level. However, decisions are taken at the executive level. In those cases in which consensus is not achieved, a committee is created and charged to prepare a discussion paper.

Issues of sectoral relevance are handled by the ministries concerned. The process often involves the creation of committees for analysis and consultation with stakeholders, action and implementation remaining within the administrative realm.

### **4.3 Countries without structured processes**

Bahamas, Belize, Dominican Republic, Haiti, Suriname

These countries seem to have no structured process for forestry policy formation on the technical side. The drafting of laws and their enactment and reaction to key incidents (the political-legitimization component) seems to prevail in all of them as a procedure to policy formation. The Dominican Republic is placing a major emphasis on consensus agreement from the population and a process known as "National Dialogue". This process relies on the participation of the syndicates, civil organizations and Christian church; through the celebration of provincial assemblies, the issues are analyzed and national priorities for action set.

Guyana

In the preparation of its current forestry policy statement, the procedure consisted of the recruitment by the Government of Guyana of an external consultant working under very general terms of reference ("to give special attention to Guyana's economic situation and to environmental aspects of forestry"). The consultant was responsible for the preparation of a report identifying the main issues and problems. This phase was followed by the preparation of position papers on the identified issues by the staff of the Forestry Commission and national consultants. The position papers were presented to selected stakeholders. Finally, the forestry policy statement was drafted by a team formed by a group of specialists in the following discipline: land use planning, biology, forest industry and marketing, anthropology and forestry. Representatives of an NGO and of the indigenous people were included in the team. The Forestry Commission is responsible for the implementation, and is reported to have already put in place the mechanism for accomplishing this task.

St. Vincent and the Grenadines

This country followed a process very similar to that adopted in Guyana. With the collaboration and in accordance with the requirement of CIDA, reports were prepared by international consultants. They were then discussed with NGOs, representatives from the

private sector, the Government and, in particular, with the Forestry Division. Priorities and objectives to be achieved were then set. The reports were submitted to the Minister of Agriculture who in turn submitted them to the Cabinet for approval. To accomplish implementation, the necessary legislation has been enacted and the strengthening of the Forestry Division is in progress. No mechanism was considered for policy evaluation and review.

#### Trinidad and Tobago

For the review of its forestry policy, Trinidad and Tobago has adopted a procedure including the following stages: acknowledge the Government's policies on forestry, the environment and other related topics; recognize existing international conventions and agreements; identify and analyze key issues and problems relating to the forestry sector; consider possible outcomes; define sector objectives and priorities; develop strategies for meeting objectives; create, manage and maintain systems for policy implementation, monitoring and control; evaluation and review through approved methodologies; and make policy changes as required.

#### Cuba

The process of policy formation in Cuba was not described in sufficient detail. There appears to be a high political commitment. The important achievements in forest protection and plantation establishment are evidence of such commitment.

### 4.4 Conclusions

The highest degree of correlation between policy formation and implementation occurred in the Netherlands Antilles where the forestry policy is a precondition in the preparation of the Strategic Development Plan; Cuba and Trinidad and Tobago, in which notable achievements in conservation, forest management, human resources creation, and public investment have been achieved; and Barbados, where the influence of the technical units seems to be stronger than in other countries, due precisely to the clear definition of roles and responsibilities.

The fact that important progress in implementation and achievement of goals has been obtained in countries with a high structured process, as well as countries without, might suggest that having a clearly defined process is not a necessary condition for improving forestry development. However, what seems to have been the determining factor in those more successful cases, is the degree of political will and the effective integration of forestry goals into the national economic development plan. In the Netherlands Antilles, the mandate of policy formation has emanated from the Government. Such mandate has been given largely due to the fact that the preparation of development, nature and financial plans is a prerequisite for receiving from the Netherlands the agreed development aid. In this case, financial interests have been translated into political will for the process of policy formation that is automatically linked to public investment and implementation. These same requirements have ensured monitoring and evaluation of the implementation of the policies. Cuba, although not acting under the pressure of external pre-conditions on financial matters, has counted with a continuous political support to reforestation programmes. The case of Barbados seems to

answer the important political implications of responding to public opinion and old tradition in abiding by institutional procedures. Trinidad and Tobago, with a less structured process, seems also to have counted with the political will of its governments for conservation matters.

In view of the above evidence, the need for an explicit structured process of policy formation does not lose its importance. A clear, objective process for policy formation is necessary to maintain the political will and, even more, it may be an important instrument in obtaining political will, when it does not exist, by providing sound evidence of the political and socio-economic implication of the forestry related issues, as well as forcing government transparency and accountability. Although a well structured process might not be a sufficient condition for forestry development, the evidence strongly suggests that it is an important and necessary one.

In the countries with a less structured process, the low relation of policy with implementation and adequate public investment seems to be associated with the low quality of issue identification and description, as well as to the fact that option analysis and selection is mostly presented in a descriptive way, providing little quantitative evidence of political, social and economic implications. Another reason seems to be a lack of clear understanding of the procedures of decision-making at the political and legislative levels. In fact, the reports from these countries show the following characteristics:

- the methods and tools for objective analysis are seldom mentioned;
- the specific responsibilities for each stage of the process are not always clearly identified;
- the availability of information for sound analysis is mentioned as a serious restriction;
- the concept of a holistic policy seems to prevail in many of those countries;
- the analysis seems to be mainly based on , and much stronger in, the aspects related to natural sciences;
- the policy formation approaches seem to be influenced by the conceptual understanding of the overall importance of overarching forestry policy statement;
- creating capacity for policy analysis on a continuous basis is not perceived as a priority;
- inadequate attention is given to securing forestry policy implementation; although the initial analysis of the issues is assigned mostly to the technical levels in general the political legitimizing component of the policy formation process seems to be the most influential, resulting in the absence of adequate checks and balances;
- the expertise of disciplines like economics, political economy, public administration, sociology, just to mention the most important, seems to be playing a minor role at the technical level; there is little evidence that effective multidisciplinary capacities are being used;
- there is no provision for continued day-to-day policy analysis, decision-making and creation of capacity in this area.

In several countries, Antigua and Barbuda, Dominica, St. Kitts and Nevis and St. Vincent and the Grenadines among them, it was found that there is the perception that main forestry policy formation exercises have been externally driven and have had a top down approach. Such a fact is mentioned as one of the causes for scant follow up and implementation.

The processes described in the reports are an incomplete picture of what is happening in the countries. All countries have well established procedures and experience in the formation of

policies through their legislative bodies. However, this information suggests that there is a need for comparative government research and training in the basic methods of policy analysis and formation. Such training should include both the technical staff as well - and equally important - as the staff of the political-legitimization level. The new exercises used to ensure people's participation, for example in Netherlands Antilles and the Dominican Republic, could be thoroughly studied, and if they prove valid, such experience could be of value to other countries in the region.

## CHAPTER V: INSTITUTIONS AND FORESTRY POLICY RESEARCH

Forestry organizations, with few exceptions, are described as having inadequate organizational structures, insufficient budgets, a chronic lack of personnel and equipment, low influence in the countries' economic development plans and with scarce political support. This situation is felt to be one important factor contributing to the lack of sustainable forest management in the region.

Regarding the organizational structure, it was found that some institutions are currently carrying out a process of reform and capacity building. Some others are analyzing the possibilities of new forms of organizational arrangements. A particular example is the creation of parastatal bodies like the Foundations being considered in Suriname and Trinidad. This approach implies the delegation of functions that until now have been fundamental to governments, such as the collection of royalties, control of forestry activities and monitoring.

The high number of agencies with responsibilities in the forestry sector, which creates much overlapping, poor coordination and inadequate legislation, was identified as a major constraint to the achievement of goals in the sector. An additional common constraint is said to be the lack of political will to support the correction of this situation.

The creation of organizations responsible for the environment and the assigning to them of responsibility for policy analysis and formation is an emerging trend in the region. Turks and Caicos have a Ministry of Natural Resources; in Guyana the Environmental Protection Agency is responsible for formulating policies on all aspects of the environment including forests; in Trinidad, the Environmental Management Authority, created in 1995, is responsible for environmental policy and coordination.

The processes of decentralization being carried out in several countries are also affecting the existing forestry organizations. Effective decentralization of forestry administrations, accompanied by the assignment of clear and specific geographical responsibilities and delegation of authority, seems to result in an improvement of performance and management. It also seems to be getting more commitment and response from local communities. Such is the case of the Netherlands Antilles and Curaçao with its quasi-autonomous government system.

It was found that the function of policy analysis is almost absent in the structure of the forestry services. The organizational structures are mostly based on the functions required for forest management and control. Policy analysis, especially when important resources are involved, is the responsibility of higher echelons within the ministry, where the forestry organizations are located or with central planning agencies. The creation of specific policy analysis agencies, or creation of units within the forestry institutions, is an emerging trend. In Guyana, the Forestry Commission has a Policy and Planning Division. In the Cayman Islands, the Department of Planning oversees and monitors all national developmental activities and sets broad guideline policies for other governmental institutions. In the Dominican Republic, the National Technical Forestry Commission (CONATEF) was created as an independent

forestry agency with the special mandate of policy analysis and formation. In small countries with very few staff, this approach might not be adopted in the medium term.

In some countries, the institutional weakness of the specific forestry agencies has partially been compensated by the delegation of responsibilities to a number of different governmental or quasi-governmental agencies. In other cases, some branches of the specific forestry agencies have found ways to be better staffed and financed. Such a situation is more evident in regard to protected areas. In Suriname, where the forestry service has almost disappeared for lack of means, the Nature Conservation Division, under the same service, has managed to maintain a higher level of performance and better public opinion acceptance. It has also managed to get some additional funding from international sources. In the Dominican Republic, the National Park Direction has also managed to maintain a level of work which attracts funding more effectively than the National Forestry Direction. These organizations also have personnel with a higher commitment to their work. In Saint Vincent and the Grenadines, the electricity service has been authorized to intervene in watershed management when considered necessary. In several of the small island states, the National Trust plays an important role in nature and protected areas management. In the case of the Netherlands Antilles, forestry functions are completely carried out by a network of organizations instead of the traditional main forestry agency of countries richer in forests.

Regarding personnel, although achievements in the formation of forestry professionals has occurred at regional level, many forestry agencies were reported to be understaffed. The professionals working in the forestry agencies graduated mostly in natural sciences. On the other hand, officers interviewed during the preparation of the country reports considered that the best qualified professionals were not always assigned permanently to the field, and hence not participating in the implementation of the policies and directly leading field activities. Most often the best prepared cadres are concentrated in the headquarters offices. Due to lack of transportation, their capacity is not fully utilized.

Policy research being carried out in the region is almost limited to studies for decision-making, especially to the study of technical issues and problems. The attention to meta analysis and to the study of the process, by which policies are formed, has been almost completely neglected.

## CHAPTER VI: OPPORTUNITIES FOR ACTION

A common understanding of experts and stakeholders is that in the Caribbean region forest resources are diminishing and that the full potential contribution of the sector to societal well-being is not being achieved. However, the reports on forestry policy prepared in the course of this study, covering 28 countries and territories, provide evidence of opportunities for effectively reverting this situation.

The region has well trained and experienced human resources, a network of regional organizations, a tradition of inter-governmental collaboration and an increasing awareness of the importance of forests and vegetation to its development. The potential of the region's human resources has been proven in the development of tourism, public infrastructure construction, trade and industry. On the other hand, a great number of professionals have been trained in forestry and environmental science in the last decades. With such experience already in place, it should be relatively easy to provide local professionals with the skills and methods of forestry policy analysis.

There is a network of national and regional organizations, some of them with many years of experience, well staffed and with a good record in areas related to policy analysis or requiring analytical capacities. The University of the West Indies (UWI), the Caribbean Community and common Market (CARICOM), the Caribbean Centre for Development Administration (CARICAD), and the Caribbean Conservation Association (CCA) are only a few examples of regional organizations that attest to the region's tradition of approaching development challenges in a collaborative way. These organizations have gathered an important amount of information and knowledge of the region of great value to future work on forestry policy analysis and research. At the same time, these organizations with their knowledge of people and of the country situation represent a logical starting platform for promoting forestry policy in the region.

The interest in nature, forestry and trees and the understanding of the close connection with and the very special relevance to sustainable development is growing. In certain countries, there is evidence of concrete and important achievements, as well as a background of experience and knowledge in natural sciences gained after years of dedicated work. With the worst of the economic crisis overcome, it seems that there will be more room for introducing nature, forestry and trees into the core of the countries' political agenda. In fact, some of them are already doing that. Societies are more alert and the new information technologies have shrunk distances and times of communication. Governments are feeling the active monitoring of their constituencies and international public opinion and responding positively to it.

Due to the characteristics of the countries and the pattern of demand for forestry policy analysis the response to improve forestry analysis in the region has more probability to be effective if carried out within a framework of regional partnership. Partnership is understood as a joint regional action at many levels and in a number of strategic areas, oriented by well-defined national and regional goals. There are two major prerequisites for action under the partnership approach. First, the forestry specialists should accept the need to open the forestry field to the analysis by specialists from other disciplines and objectively consider the

new interpretations and points of view that will arise. Second, the regional scarce resources should be focused on strategic policy and institutional matters. Several areas of action for promoting capacity for forestry policy analysis under the partnership approach are mentioned in the following sections.

### **6.1 Political agendas**

Leaders and senior officers are normally busy and overburdened with work. They are a target group difficult to reach especially if the purpose is to train them. However, there are several important reasons that make this group a strategic target for increasing their knowledge and interest in forestry policy. First, the country studies revealed the importance of political will in forestry policy implementation and in the performance of the sector. Second, political leaders and senior decision makers are key factors in securing the appropriate linkages between macro-economic policies and forestry policy. Third, they play a key role in securing the appropriate inclusion of forestry in national development plans and allocation of public investment. A series of regional meetings of top senior government decision makers and political leaders to discuss ways of coordinating and collaborating in the field of forestry policy, is a major follow up action to this project. A complementary action to be taken with this target group is a series of seminars designed to train public officers in recent developments in public administration and policy analysis more related to the sustainable management of forest resources. These seminars will also provide opportunities to discuss with the region's leaders specific emerging issues, such as gender analysis, people's participation, carbon sequestration, etc. This action is an important step towards bringing forestry policy to the same level of quality achieved in other sectors, such as education, health and public building.

### **6.2 Public administration**

The body of knowledge of forestry experts should be complemented with the methods and theories of Public Administration discipline. Its sophisticated methods and tools already in use should be put at the disposal of the forestry sector. It is not expected that by doing that a miraculous solution will be found. However, it will help considerably in providing forestry experts with the capacity to present the case for forestry in a more convincing way. The emerging generation of political leaders and public servants is another key target group that should be exposed to the methods and theoretical background of Public Administration discipline.

Partnerships with forestry faculties, forestry governmental agencies and training centres for political leaders, aimed at introducing public administration in their curricula is a strategy that could have important positive effects in the forestry sector in the medium term. Formal courses in the universities, distance learning programmes, national short courses, institutional strengthening workshops, exchange of staff between countries of the region and with countries from other regions, internship in international and regional organizations, special programmes and projects for the advancement of public administration related to forestry and policy analysis and creation of think-tanks, are some of the means to achieve this goal.

### **6.3 Networks and information technology development**

The state of the art in information technology provides the opportunity for putting together a massive amount of data, technical material and almost free technical expertise. Common protocols and standardization of communications, data storage, indexing, acquisition of compatible equipment are a few of the specific areas through which better policy analysis and implementation can be promoted. Networks and discussion groups on specific problems, specialized databases, monitoring of issues and problems, assessment of progress and keeping up-to-date with technical developments, are other potentialities for helping the region to pool together the resources now scattered because of its particular geographical determinants.

### **6.4 Policy research**

The country reports, especially the information derived from the identification of current issues presented in Chapter III, constitute in themselves an agenda for forestry research in the region. However, given the great number of issues identified, a serious effort of strategic planning should be made to set priorities for research. Some specific topics for policy analysis and research are listed below as examples:

- land use: analysis of its assumptions and expected results
- identification and definition of problems and policy issues
- macro-economic implications of forestry sector development prospects
- demand quantification on forestry: mid-term outlook
- Caribbean regional organizations: agenda for action in policy analysis
- developing ongoing forestry policy analysis mechanisms
- comparative government studies: improving forestry policy implementation
- participation methods in forestry policy analysis and its effectiveness
- privatization in forestry: opportunities and potential impacts
- global capital markets and the forestry sector

### **6.5 Bilateral and multinational commercial and conservation partnership**

The Caribbean region is characterized by a high level of interaction and collaboration amongst its countries. However, it appears that in forestry matters, there are many opportunities that have not yet been fully exploited. Knowledge of sustainable forest management, creation of protected areas and administration, use of the facilities of forestry training centres, sharing of experience in fostering policy implementation are only a few areas in which the collective experience and capacity are important but are not being fully used.

In commercial terms, some of the islands have particular handicraft skills and technology knowledge regarding timber products, such as for example, boat construction, but have scarce raw material to develop such comparative advantages. At the same time, there are countries rich in forest resources that are under-utilized because of lack of financially viable opportunities. Commercial partnership based on technology and availability of forest

resources, developed within the principles of sustainable development, is an opportunity for profiting from the comparative advantages of some countries for the production of high added-value products. The analysis of regional demand for wood products and the implications of market liberalization is another area that deserves attention.

#### **6.6 Using the existing regional organizations**

Existing regional institutions, like the Caribbean Development Bank and CARICOM, have a proven analytical capacity that could be applied to the analysis of forestry policy. However, establishing effective collaboration with those organizations requires, in turn, decision makers and forestry specialists able to formulate clear questions and expected results. The combination of the expertise of the regional organizations above mentioned, with the one of the forestry discipline, could bring about a break-through in the identification of policy options for the forestry sector.

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## ANNEX 2 - AGENDA

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### DAY 1 (Monday 25 May)

Arrival of participants

14.00 - 18.00 Registration and arrangements for the panels responsible for the technical presentations

19.00 - 21.30 Reception

### Day 2 (Tuesday 26 May)

09.00 - 09.45 Opening Ceremony

09.45 - 10.00 Coffee Break

10.00 - 10.45 Review of the Expert Consultation's working arrangements: objectives, expected results, procedures, formation of working groups, identification of rapporteurs and setting the agenda (securing participation and introduction of relevant aspects and subjects.). Proposals for and amendments to the format of the Consultation by participants

10.45 - 11.45 First technical session: Presentation of the analysis and synthesis of the study of forestry policies in the Caribbean, methodology of analysis, assumptions, constraints and main findings

#### Presenters

- Mr. Manuel Paveri, Chief, FONP, FAO

- Mr. Merilio Morell, Forestry Officer (Institutions), Forestry Policy and Institutions Branch (FONP), FAO

11.45 - 13.00 Plenary discussion and recommendations on the analysis and synthesis

13.00 - 14.30 Lunch Break

14.30 - 15.00 Second technical session: Panel on key forestry policy issues in the Caribbean - to be formed by one of the consultants who worked on the preparation of the country reports, one specialist on planning and policy, one representative of a national forest service and one representative of the private sector

15.00 - 16.00 Plenary discussion and agenda setting for the working group on key forestry policy issues

- 16.00 - 16.15 Coffee Break
- 16.15 - 17.00 Planning for the working groups on the first and second technical sessions;  
Development and preparation of agendas of work

DAY 3 (Wednesday 27 May)

- 08.30 - 09.30 Third technical session: Panel on countries' responses to key policy issues, medium term scenarios - to be formed by one representative from a government central planning level, one from a national forestry sector, one representative from a regional development organization and one from an international organization
- 09.30 - 10.30 Plenary discussion and agenda setting for the working group on countries' responses to key policy issues

- 10.30 - 10.45 Coffee Break

- 10.45 - 11.45 Fourth technical session: Panel on options for forestry policies and directions for national and international actions in support of the development of appropriate policies for sustainable development, forestry policy research in the Caribbean; and creating conditions for monitoring and future studies - to be formed by four experts from forestry agencies, governmental economic and planning sectors, international funding agencies and FAO

- 11.45 - 12.30 Plenary discussion and agenda setting for the working group on actions and recommendations

- 12.30 - 14.00 Lunch Break

- 14.00 - 16.00 Working group sessions and preparation of reports

- 16.00 - 16.15 Coffee Break

- 16.15 - 17.30 Continuation of working group sessions and preparation of reports

DAY 4 (Thursday 28 May)

- 08.30 - 10.3 Continuation of working group sessions and preparation of reports

- 10.30 - 10.45 Coffee Break

- 10.45 - 12.30 Continuation of working group sessions and preparation of reports

- 12.30 - 14.00 Lunch Break

### ANNEX 3 - PROFILE OF PANELLISTS IN TECHNICAL SESSIONS

#### MR. ANDRE VAN SCHAİK

Mr. Van Schaik works at the Department of Agriculture, Animal husbandry and Fisheries, Aruba. From 1994 to 1997, he coordinated a research project on land-use planning and nature conservation at this Department. Since 1997, Andre has been Head of the new Nature Management Division of the Agricultural Department, concerned with national park initiatives, conservation issues and research. He also participated in vegetation surveys and native flora research on Aruba.

#### DR. KENNETH KING

Dr. King holds a Bachelor of Laws degree from the University of London; a Bachelor degree with first-class honours in forestry from the University of Wales; and a Doctorate of Philosophy in land-use planning and land economics from the University of Oxford. He has been awarded the Doctorate of Science from the University of Wales for his work on the economics of rural development.

He has been Assistant Director-General of the Food and Agriculture Organization of the United Nations (FAO) and Head of its Forestry Department.

He has been the first Director-General of the International Centre for Research in Agro-forestry.

Dr. King has been Minister of Economic Development and Minister for Privatization in his home country, Guyana.

#### MR. KE-SOEN ALFRED NG-A-THAM

Mr. Ng-A-Tham graduated from the University of Delft (Holland) with a Civil Engineering degree in 1966. From 1977 to 1975, he was Head of hydropower Bureau in Suriname. He was Permanent Secretary of the Ministry of Natural Resources from 1983 to 1986. Since 1987, he has been Advisor to the Minister of Natural Resources in Suriname; he has acted as Chairman of the Negotiation Commission for large-scale concessions in forestry and is Co-Counterpart Coordinator of the FAO Technical Cooperation Project, GCP/SUR/001/NET "Forestry Advisory Assistance to the Ministry of Natural Resources in Suriname".

#### DR. KARI KEIPI

Dr. Keipi is the Senior Forester of the Inter-American Development Bank; he has been working with forestry issues in Latin America and Caribbean for the past 18 years. His areas of responsibility include forestry, biodiversity and related climatic issues at the Bank in Washington D.C.

He has a PhD degree from Oregon State University, USA and from PhD degree in Agriculture and Forestry from Helsinki University in his native country, Finland

### MRS. JACQUELINE CRAMER-ARMONY

Mrs. Armony is Executive Director of the St. Christopher Heritage Society, a Non-Governmental Organization of St. Kitts. She has held this position since 1995. Ms. Armony has been associated with the Society since its inception in 1989 and served as its first President for three years.

Born in Trinidad and Tobago, she received her formative education in Trinidad and Tobago, St. Kitts and Barbados. She obtained her BA degree, majoring in French, from McGill University, in 1971, following which she returned to St. Kitts and entered the teaching profession. She taught at the secondary school for 24 years before taking up her current position.

Together with her husband, she operates a small sheep farm and honey business.

### DR. RORY FRASER

Dr. Fraser, a national of Guyana, presently lectures on Forest Policy, Economics and Global Forestry at the West Virginia University, USA. He has worked in Jamaica and the USA.

His formal training was received (B.Sc. Forestry) at the University of New Brunswick, Canada and (M.Sc. and Ph.D.) at the Pennsylvania State University in the USA.

### MS. MARILYN HEADLEY

Ms. Headley is Conservator of Forests in the Forestry Department, Ministry of Agriculture, Jamaica, a position she has held since November 1996.

A past student of the St. Augustine (Trinidad and Tobago) Campus of the University of the West Indies, she graduated with a BSc (Hons.) degree in Agriculture. She obtained a Certificate in Forestry Research and Silvicultural Practises from the University of Oxford, England.

Her experience in forestry spans 22 years. She has worked with the Jamaica Promotions Corporation of the USA. She has also worked as a Consultant on Forestry and Agriculture Management

### MS. GLENDA MEDINA

Ms. Medina is the Executive Director of the Caribbean Conservation Association, a regional membership Non-Governmental Organization (NGO), which has been devoted, since 1967 to the conservation of the natural, historical and cultural heritage in the wider Caribbean.

A zoologist by profession, Ms. Medina graduated with a degree in Ornithology.

Her career spans work in management of protected areas, recovery programmes of endangered species, community and civil participation, wildlife inventories and NGO development.

#### MR. SHERIFF FAIZOOL

Mr. Faizool is currently the Acting Director of Forestry in the Ministry of Agriculture Land and Marine Resources. He has over 31 years experience in forestry. He has been mainly stationed at the Forestry Division of the Ministry.

He is National Coordinator for the Tropical Forestry Action Programme for Trinidad and Tobago. He has conducted various FAO consultancies in the regional — Belize, Grenada, and Trinidad and Tobago. He has a BSc degree in Forestry from the University of New Brunswick, Canada and an MSc degree in Parks and Recreation from Michigan State University, USA.

#### DR. CAROL JAMES

Dr. James graduated from the University of the West Indies with a BSc First Class Honours Degree in Natural Sciences and a PhD degree in Zoology. She established and headed for 10 years the Wildlife Section, Forestry Division of the Government of Trinidad and Tobago. She then joined UNDP, spent two years in Barbados before assuming her present responsibilities in the Port of Spain Office. She now has responsibility for providing technical advice and assistance on implementing activities related to the environment and development in 24 Caribbean countries.

#### MR. TIM VAN DEN BRINK

Mr. Van den Brink has been working as a Consultant for Eco Vision in Curaçao since 1993. He also works as a Consultant for the Antillean and Island Governments (federal and island level) on policy preparation in the field of nature management. He is an active member of a number of Antillean Non-Governmental Organizations (environment).

He is a biologist by profession, having graduated from the University of Groningen. He has a degree in Environmental/Administrative Law.

#### MR. JOSE MARTINEZ

Mr. Martinez is a national of the Dominican Republic. He obtained a BSc in Agriculture, majoring in Soil Science (1986) and in Forestry (1988). He began his professional career in the Ministry of Agriculture and was responsible for natural resources inventory and evaluation, from 1987 to 1992. He was Executive Director of PRONATURA, the National Environmental Fund, from 1992 to 1996. He was appointed Deputy Minister for Natural Resources, Ministry of Agriculture in 1996; he currently holds that position.

## MR. GODFREY MARSHALL

Mr. Marshall joined the Guyana Forestry Commission (GFC), Guyana, in December 1972. He currently holds the position of Senior Assistant Commissioner of Forests. During the past three years, he has been Head of the Forest Resources Management Division of the GFC. He is a graduate of the Eastern Caribbean Institute of Agriculture and Forestry (Trinidad and Tobago) and of the Escola Superior de Agricultura de Laurus (Minas Gerais, Brazil).

## DR. ULRIC TROTZ

Dr. Trotz is currently the Project Manager of the Caribbean Planning for Adaptation to Climate Change (CPACC) project at the UWICED (University of the West Indies Centre for Environment and Development), Cave Hill Campus, UWI, a position he has held since December 1997. Before joining UWICED, DR. Trotz held various positions, namely:

- 1991 - 1997 Director, Science and Technology Division, Commonwealth Secretariat, London
- 1981 - 1991 Director, Institute of Applied Science and Technology, University Campus, Guyana
- 1975 - 1981 Head, Department of Chemistry, University of Guyana
- 1976 - 1981 Dean, Faculty of Natural Sciences, University of Guyana
- 1984 - 1991 Adviser to the Government of Guyana, on Science and Technology

Dr. Trotz' research interests, include: natural products chemistry, ethnobotany, biodiversity, science and technology, policy, technology transfer.

He has a BSc (Hons.) degree in Chemistry from the University of Edinburgh and a PhD (Organic Chemistry) from the University of Toronto.

## MR. OSWALDO SABIDO

Mr. Sabido is Deputy to the Chief Forest Officer, Belize Forest Department, Ministry of Natural Resources of Belize. His forestry experience spans 22 years. His work focus is in forest management. Mr. Sabido received his forestry education in Mexico, Trinidad and Tobago, the United Kingdom and the USA.

## DR. CLAUS-MARTIN ECKELMANN

Dr. Eckelmann is the Forestry Officer of the Subregional Office for the Caribbean, Food and Agriculture Organization of the United Nations (FAO), in Barbados. His responsibilities cover forestry issues for the insular Caribbean, as well as Belize, Guyana and Suriname.

Dr. Eckelmann is not new to the region; he was FAO Forestry Officer at its Representation in Trinidad and Tobago, from 1993 to 1996. During his tenure, he provided technical assistance to the Caribbean Technical Cooperation Network on Forestry and Related Environmental Matters; he will continue as Coordinator of the Network under his new assignment. He studied forestry in Germany and in Mexico. He has a PhD in Forestry.

#### **ANNEX 4 - REGIONAL ORGANIZATIONS PARTICIPATING IN THE CONSULTATION**

Within the region there are a number of existing organizations that contribute to the forestry sector. These include the following:

- FAO
- Caribbean Community Secretariat
- Caribbean Conservation Association
- Caribbean Forest Conservation Association
- Caribbean Natural Resources Institute
- Eastern Caribbean Institute of Agriculture and Forestry
- University of the West Indies

There are a number of international agencies and groups that are active in the region or bilaterally. They include the following:

- The World Bank
- United Nations Development Programme
- International Institute for Environment and Development
- Inter-American Development Bank
- International Institute of Tropical Forestry

## ANNEX 5 – NATIONAL AND INTERNATIONAL EXPERTS

### Consultants responsible for the preparation of the country reports

<u>Country</u>	<u>Consultant</u>
Anguilla	S. Faizool
Antigua and Barbuda	R. Fraser
Bahamas	C. Russell
Barbados	R. Farnum
Belize	E.D. Green
British Virgin Islands	S. Faizool
Cayman Islands	S. Faizool
Cuba	E.G. Linares
Dominica	R. Fraser
Dominican Republic	C. Casanova
Grenada	Y. Renard
Guadeloupe	Y. Renard
Guyana	K. King
Haiti	University of Louvain
Jamaica	K. Hall
Martinique	Y. Renard
Netherlands Antilles and Curacao	T. Van den Brink
St. Kitts and Nevis	R. Fraser
St. Lucia	Y. Renard
St. Vincent and the Grenadines	K. King
Suriname	Gesellschaft fuer Organisation, Planung un Ausbildung (GOPA-Consultants)
Trinidad and Tobago	A. Ramnarine
Turks and Caicos	S. Faizool

## **ANNEX 6 - INTERNATIONAL CONVENTIONS SUBSCRIBED TO BY COUNTRIES OF THE CARIBBEAN REGION**

### **1940 Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (Western Hemisphere)**

The Convention seeks to preserve all species and genera of native American fauna and flora from extinction, and to preserve areas of extraordinary beauty, striking geological formations of aesthetic, historic or scientific value.

### **1971 Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar)**

The Convention aims to stem the progressive encroachment on and loss of wetlands, recognizing their fundamental ecological functions and their economic, cultural, scientific and recreational value. Parties are to designate at least one national wetland for inclusion in a List of Wetlands of International Importance, cooperate in the exchange of information and train personnel for wetland management.

### **1972 Convention for the Protection of the World Cultural and Natural Heritage**

The Convention calls on State Parties to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory.

### **1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention)**

The Convention's purpose is to control pollution of the sea by dumping, and to encourage regional agreements supplementary to the Convention. It covers all seas, and all deliberate disposal of wastes other than that incidental to the normal operation of ships, aircraft, etc.

### **1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**

The Convention aims to protect certain endangered species, including animals and plants whether dead or alive, and any recognisable parts or derivatives thereof, from over-exploitation by means of a system of import/export permits.

### **1973 International Convention for the Prevention of Pollution from Ship (Marpol)**

The Convention aims to preserve the marine environment by achieving the complete elimination of international pollution by oil and other harmful substances and the minimization of accidental discharge of such substances.

### **1978 Treaty for Amazonian Cooperation**

The Treaty aims to promote the harmonious development of the Amazon region and permit equitable distribution of the benefits of such development among the contracting Parties. The treaty provides for, among others, harmonious development with a view to the preservation of the environment and the conservation and rational utilization of natural resources.

**1979 Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)**

The Convention seeks to protect those species of wild animals that migrate across or outside national boundaries. It includes two annexes, which list endangered migratory species and migratory species, respectively.

**1985 Vienna Convention for the Protection of the Ozone Layer**

The Convention aims to protect human health and the environment against adverse effects resulting from modifications of the ozone layer. Parties agree, among other things, to control activities that cause adverse effects through modification of the ozone layer, to cooperate in research concerning substances and processes that modify the ozone layer on human health and environmental effects of such modifications, on alternative substances and technologies, and on systematic observation of the State of the ozone layer.

**1987 Montreal Protocol on Substances that Deplete the Ozone Layer**

The Protocol's purpose is to protect the ozone layer by taking precautionary measures to control global emissions of substances that deplete it. The Parties agree to control annual consumption and production of predefined substances; most developing countries may delay compliance by ten years.

**1989 Basle Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal**

The Convention sets up obligations for State Parties with a view to reducing transboundary movements of wastes to a minimum consistent with the environmentally sound and efficient management of such wastes, minimizing the amount and toxicity of hazardous wastes generated and ensuring their environmentally sound management, and assisting developing countries in environmentally sound management of the hazardous and other wastes they generate.

**1990 Protocol Concerning Specially Protected Areas and Wildlife (SPA) to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)**

The Protocol's purpose is to encourage Parties to establish protected areas of coastal and marine areas of the Wider Caribbean region and to ensure the protection of endangered species of wild fauna and flora in the region.

**1992 Convention on Biological Diversity**

The Convention seeks to conserve biological diversity, promote the sustainable use of its components, and encourage equitable sharing of the benefits arising out of the utilization of genetic resources. Such equitable sharing includes appropriate access to genetic resources, as well as appropriate transfer of technology, taking into account existing rights over such resources and such technology.

**1992 United Nations Framework Convention on Climate Change**

The Convention's purpose is to regulate levels of greenhouse gas concentration in the atmosphere, so as to avoid the occurrence of climate change on a level that would impede sustainable economic development, or compromise initiatives in food production.

**1994 Barbados Declaration issued at the Global Conference on the Sustainable Development of Small Island Developing States**

The Declaration adds political impetus to the 15-chapter draft Action Programme for the Sustainable Development of Small Island Developing States.

**1994 United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa**

The objective of this Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas.

FAO TECHNICAL PAPERS

FAO FORESTRY PAPERS

1	Forest utilization contracts on public land, 1977 (E F S)	32	Classification and definitions of forest products, 1982. (Ar/E/F/S)
2	Planning forest roads and harvesting systems, 1977 (E F S)	33	Logging of mountain forests, 1982 (E F S)
3	World list of forestry schools, 1977 (E/F/S)	34	Fruit-bearing forest trees, 1982 (E F S)
3 Rev.1	World list of forestry schools, 1981 (E/F/S)	35	Forestry in China, 1982 (C E)
3 Rev.2	World list of forestry schools, 1986 (E/F/S)	36	Basic technology in forest operations, 1982 (E F S)
4/1	World pulp and paper demand, supply and trade 1- Vol. 1, 1977 (E F S)	37	Conservation and development of tropical forest resources, 1982 (E F S)
4/2	World pulp and paper demand, supply and trade - Vol. 2, 1977 (E F S)	38	Forest products prices 1962-1981, 1982 (E/F/S)
5	The marketing of tropical wood in South America, 1976 (E S)	39	Frame saw manual, 1982 (E)
6	National parks planning, 1976 (E F S**)	40	Circular saw manual, 1983 (E)
7	Forestry for local community development, 1978 (Ar E F S)	41	Simple technologies for charcoal making, 1983 (E F S)
8	Establishment techniques for forest plantations, 1978 (Ar C E* F S)	42	Firewood supplies in the developing countries, 1983 (Ar E F S)
9	Wood chips - production, handling, transport, 1976 (C E S)	43	Forest revenue systems in developing countries, 1983 (E F S)
10/1	Assessment of logging costs from forest inventories in the tropics - 1. Principles and methodology, 1978 (E F S)	44/1	Food and fruit-bearing forest species - 1. Examples from eastern Africa, 1983 (E F S)
10/2	Assessment of logging costs from forest inventories in the tropics - 2. Data collection and calculations, 1978 (E F S)	44/2	Food and fruit-bearing forest species - 2. Examples from southeastern Asia, 1984 (E F S)
11	Savanna afforestation in Africa, 1977 (E F)	44/3	Food and fruit-bearing forest species - 3. Examples from Latin America, 1986 (E S)
12	China: forestry support for agriculture, 1978 (E)	45	Establishing pulp and paper mills, 1983 (E)
13	Forest products prices 1960-1977, 1979 (E/F/S)	46	Forest products prices 1963-1982, 1983 (E/F/S)
14	Mountain forest roads and harvesting, 1979 (E)	47	Technical forestry education - design and implementation, 1984 (E F S)
14 Rev.1	Logging and transport in steep terrain, 1985 (E)	48	Land evaluation for forestry, 1984 (C E F S)
15	AGRIS forestry - world catalogue of information and documentation services, 1979 (E/F/S)	49	Wood extraction with oxen and agricultural tractors, 1986 (E F S)
16	China: integrated wood processing industries, 1979 (E F S)	50	Changes in shifting cultivation in Africa, 1984 (E F)
17	Economic analysis of forestry projects, 1979 (E F S)	50/1	Changes in shifting cultivation in Africa - seven case-studies, 1985 (E)
17 Sup.1	Economic analysis of forestry projects: case studies, 1979 (E S)	51/1	Studies on the volume and yield of tropical forest stands - 1. Dry forest formations, 1989 (E F)
17 Sup.2	Economic analysis of forestry projects: readings, 1980 (C E)	52/1	Cost estimating in sawmilling industries: guidelines, 1984 (E)
18	Forest products prices 1960-1978, 1980 (E/F/S)	52/2	Field manual on cost estimation in sawmilling industries, 1985 (E)
19/1	Pulping and paper-making properties of fast-growing plantation wood species - Vol. 1, 1980 (E)	53	Intensive multiple-use forest management in Kerala, 1984 (E F S)
19/2	Pulping and paper-making properties of fast-growing plantation wood species - Vol. 2, 1980 (E)	54	Planificación del desarrollo forestal, 1984 (S)
20	Forest tree improvement, 1985 (C E F S)	55	Intensive multiple-use forest management in the tropics, 1985 (E F S)
20/2	A guide to forest seed handling, 1985 (E S)	56	Breeding poplars for disease resistance, 1985 (E)
21	Impact on soils of fast-growing species in lowland humid tropics, 1980 (E F S)	57	Coconut wood - Processing and use, 1985 (E S)
22/1	Forest volume estimation and yield prediction - Vol. 1. Volume estimation, 1980 (C E F S)	58	Sawdoctoring manual, 1985 (E S)
22/2	Forest volume estimation and yield prediction - Vol. 2. Yield prediction, 1980 (C E F S)	59	The ecological effects of eucalyptus, 1985 (C E F S)
23	Forest products prices 1961-1980, 1981 (E/F/S)	60	Monitoring and evaluation of participatory forestry projects, 1985 (E F S)
24	Cable logging systems, 1981 (C E)	61	Forest products prices 1965-1984, 1985 (E/F/S)
25	Public forestry administrations in Latin America, 1981 (E)	62	World list of institutions engaged in forestry and forest products research, 1985 (E/F/S)
26	Forestry and rural development, 1981 (E F S)	63	Industrial charcoal making, 1985 (E)
27	Manual of forest inventory, 1981 (E F)	64	Tree growing by rural people, 1985 (Ar E F S)
28	Small and medium sawmills in developing countries, 1981 (E S)	65	Forest legislation in selected African countries, 1986 (E F)
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