

Forest Resource Management in Sierra Leone:
A Critique of Policy Formulation and
Implementation

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ABSTRACT

This research identified the two principal reasons for unsustainable forest management in Sierra Leone as inadequate forest policies and policy implementation. There has been a consistent disparity between the government's stated forest policies, published in 1912, 1946 and 1988 with goals of protection and sustainable management, and its actual policies which since 1922 have mainly promoted unsustainable exploitation. Reliance on out-of-date policies created ambiguity that allowed the government to pursue this hidden agenda. Changes in policy were analysed with a balance of policy pressures model that assessed changes in the influence of major policy actors and stresses on them. The dominant actors since 1912 have been the Executive and the Bureaucracy, subject to pressures from the British government (until Independence in 1961) and timber traders. Stated policy changed in 1912 and 1946 in response to their concern about the threat posed by deforestation to timber supplies. But actual policy was soon relaxed, to increase self-sufficiency and contribute to the allied war effort (1939-1945), and benefit the country's Business Elite, particularly after 1969 when patronage and corruption proliferated. Stated policy changed in 1988 under pressure from foreign donor organisations concerned about environmental impacts of forest depletion. But local NGOs and other protectionist groups were still too weak to force a change in actual policy.

Poor forest policy implementation by the state's Forestry Division between 1961 and 1984 was explained by institutional constraints, shown by an organisation theory model to involve poor organisational strength, an organisational structure with a clear chain of command but long reporting lines, a high level of discretion allowed to senior staff, and external conditioning of policy down the chain of command. The new structure introduced in 1984 to facilitate more decentralised forest management made lines of communication more indirect and continuing use of old reporting lines led to confusion and dual allegiance. A questionnaire and interview survey of Forestry Division staff found that poor staff compliance with policy is influenced by lack of freedom to express opinions, dilapidated working conditions, limited equipment, low salaries, lack of opportunities for training and promotion, and lack of participation in policy formulation. The government's inability to control peripheral areas has been further limited since 1991 by a rebel insurgency which forced forestry staff to withdraw from most forested areas. While still politically weak, NGOs have complemented the role of the government by undertaking their own afforestation projects. A survey of NGO staff showed that their morale, effectiveness and resource availability were all much higher than that of the Forestry Division.

The results of this first comprehensive forest policy analysis for Sierra Leone raise queries about assumptions by environmentalist groups that management of tropical forests generally will become more sustainable simply if governments introduce improved policies, as they are committed to do as signatories to the 2nd International Tropical Timber Agreement. Actual policy will remain exploitative if protectionist groups inside a country remain weak, and implementation will continue to be constrained by institutional factors.

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CHAPTER 1

INTRODUCTION

1.1 STATEMENT OF PROBLEM

Over the last few decades the world has witnessed a plethora of natural resource problems, of which tropical deforestation is undeniably one of the most important. The underlying causes of deforestation are a complex array of social, economic and political forces, deeply rooted in past development patterns, that drive the expansion of agriculture and settlement at the expense of forests. But why are the forests not managed sustainably so they are protected from these forces? Answering this question is the main goal of this thesis.

Very often the answer to concerns about the rapid depletion of forests and other natural resources has been to recommend the introduction of better management. The issues appeared quite simple and the remedies self-evident. But the widespread failure of programmes funded by large amounts of overseas financial aid with the aim of improving resource management has led to a fundamental change in how management is viewed.

According to Leach and Mearns (1988): “One expensive disappointment has led to another. Simple certainties have begun to evaporate. Important lessons are now to be learnt, since most basic assumptions have proved highly misleading”.

There is a great need to step back from technical aspects of management and to look instead at the government policies which determine how resources are managed, and the mechanisms by which those policies are implemented. If suitable policies are lacking or inadequate, and/or the means to implement these policies are insufficient, it is unlikely that management will be sustainable, even though the most perfect management techniques have been identified. One of the disturbing features found in developing countries is that in many of them the government lacks an up-to-date forest policy, and in even those countries that do have one there is a great disparity between the fine goals of the policy and what actually happens in the forests (Poore, 1989).

The basic hypothesis to be tested in this thesis is that poor forest management can be attributed to two interwoven problems: (1) a lack of policy resulting in an ambiguous policy situation that can be abused by the most powerful actors to exploit forest resources; (2) poor policy implementation caused by internal and external conditioning of policy as it is channelled through the bureaucratic hierarchy within weak forestry institutions. The hypothesis will be tested by a case study in Sierra Leone.

1.2 DEFINITIONS

1.2.1 Resource Management

Resource management was defined by Mitchell (1989) as the actual decisions concerning policy or practice regarding how resources are allocated and under what conditions or arrangements they may be developed.

1.2.2 Policy

A government's policy on any topic states its current and future intentions on that topic. The Concise Oxford English Dictionary defines it as "a course of action adopted by government". Forest policies typically state how forests are to be managed, who will benefit from this, and who will bear the costs (Cubbage *et al.*, 1993).

1.2.3 Stated and Actual Policies

The *stated policy* of a government or other organisation is that contained in a written policy document. This can form part of a piece of legislation, although strictly speaking a law consists of a set of rules intended to implement a given policy (Aucoin, 1970).

The *actual policy* of a government or other organisation on a given topic is its attitude towards that topic at a given time. It may differ from the stated policy because the latter

was published a long time ago, or because it is more convenient for the government to hide its true policy, or a combination of the two.

When the actual policy of the government is different from its stated policy, the actual policy is referred to as a *hidden policy agenda* (Rees, 1990).

1.2.4 Institutions

The term *institution* is often regarded as synonymous with an organisation, but it is more accurately defined as a group and the set of relationships within that group (based on Blondel, 1995). It is a subset of the broader term of institutional arrangements, defined by Mitchell (1989) as comprising the interaction of (1) legislation and regulations, (2) policies and guidelines, (3) administrative structures, (4) economic and financial arrangements, (5) political structures and processes, (6) historical and traditional customs and values, and (7) key participants or actors.

1.2.5 Chain of Command

The *chain of command* of an organisation links the centre of the organisation, where policy is formulated, to the level in the organisation where the policy is physically implemented (Dessler, 1992). The chain of command of a government forestry department, for example, links the chief executive of that department with the personnel physically responsible for managing forests on a day to day basis.

1.2.6 Forest

The word *forest* has many meanings but could be used to refer to an association of plants and animals in which trees are dominant (Worrel, 1970). Forests are considered to be *closed* if the trees cover most of the ground, and *open* if they are more scattered. They are considered to be *in use* if *exploited* or *managed* , and *not in use* if *virgin* or *abandoned*. Small areas of forests are commonly referred to as woodland.

1.2.7 Forestry

Forestry is the management and use for human benefit of the natural resources that occur on or in association with forest lands and other lands managed wholly or in part for similar purposes (James, 1981).

1.2.8 Sustainable Forestry Development

Sustainable forestry development refers to any set of interventions geared towards settling the priorities and the right balance between long term and short term forestry development objectives and between measures to satisfy local rural needs of wood for fuel and other domestic use on the one hand, and producing wood for industry and primarily urban use or export on the other hand (Hummel, 1984).

1.3 FOREST POLICY FORMULATION AND IMPLEMENTATION

Research into forest policy formulation and implementation is important because it relates to, and assesses the totality of forces operating to create current forest resource management trends, and aids an understanding of the processes involved. The analysis of policy offers a number of returns. The study of the origin, processes, and consequences of forest resource management, allows us to understand the manner in which these resources are allocated in space, time, and to whom. A knowledge of the variables that shape policy can enable researchers to predict future policies, and suggest how current policies can be improved. By describing, accounting for, and predicting institutional arrangements, it is possible to suggest how existing situations could be improved, and/or how future arrangements could be designed to take advantage of observed strengths, whilst avoiding identified weaknesses.

Research into forest policy formulation and implementation is still at an early stage of development (Ellefson and Kaiser, 1991; CIFOR, 1995). The first textbook to show how modern political science approaches could be applied to the forest sector was not published until 1993 (Cubbage *et al.*, 1993). Until recently, what little forest policy analysis was undertaken was descriptive rather than analytical, rational rather than behavioural in approach, geared to supporting forest management as a technical practice, showing the wider social background against which forestry must operate (Johnston *et al.*, 1967; Hummel, 1984), or concerned with suggesting new policies (Nemetz, 1992), rather than investigating the social, economic and political reasons for the choice of

previous policies, or the organisational failings which caused those to be poorly implemented.

Since policy analysis in general, and natural resource policy analysis in particular, are more developed than forest policy analysis, this thesis applies to the forest sector appropriate techniques developed in other fields. Nevertheless, while a wide variety of models have been proposed for use in policy analysis, each has conceptual and practical limitations. A rigorous theoretical framework is lacking and no overall schema or model has emerged (Mitchell, 1989).

It is widely recognised that institutional problems are at the heart of all resource management problems (O'Riordan, 1971; Fernie and Pitkethly, 1985), but there has been relatively little study of institutional aspects of resource management and resource policy implementation, e.g. how institutional arrangements are formed, how they evolve in response to changing circumstances and needs and the existence of internal and external stresses, and how they may constrain policy implementation. By treating the analysis of institutional arrangements as a means to an end, rather than an end in itself, new insights can be gained about human-environment relationships in general, and forest resource management in particular.

This thesis uses methods from political science and resource policy analysis to study in a comprehensive manner the factors influencing the formulation of forest policies, and organisation theory methods to study how effectively those policies were implemented.

1.4 SIERRA LEONE

The West African country of Sierra Leone provides an ideal subject for a case study of this problem. As far as is known, a comprehensive forest policy analysis has never been undertaken for the country. It merited just one line in a major review of the forest policy and the sustainability of forest management in Africa by Rietbergen (1989) and just one line in a table in a review of forest policies in West Africa by Gillis (1988).

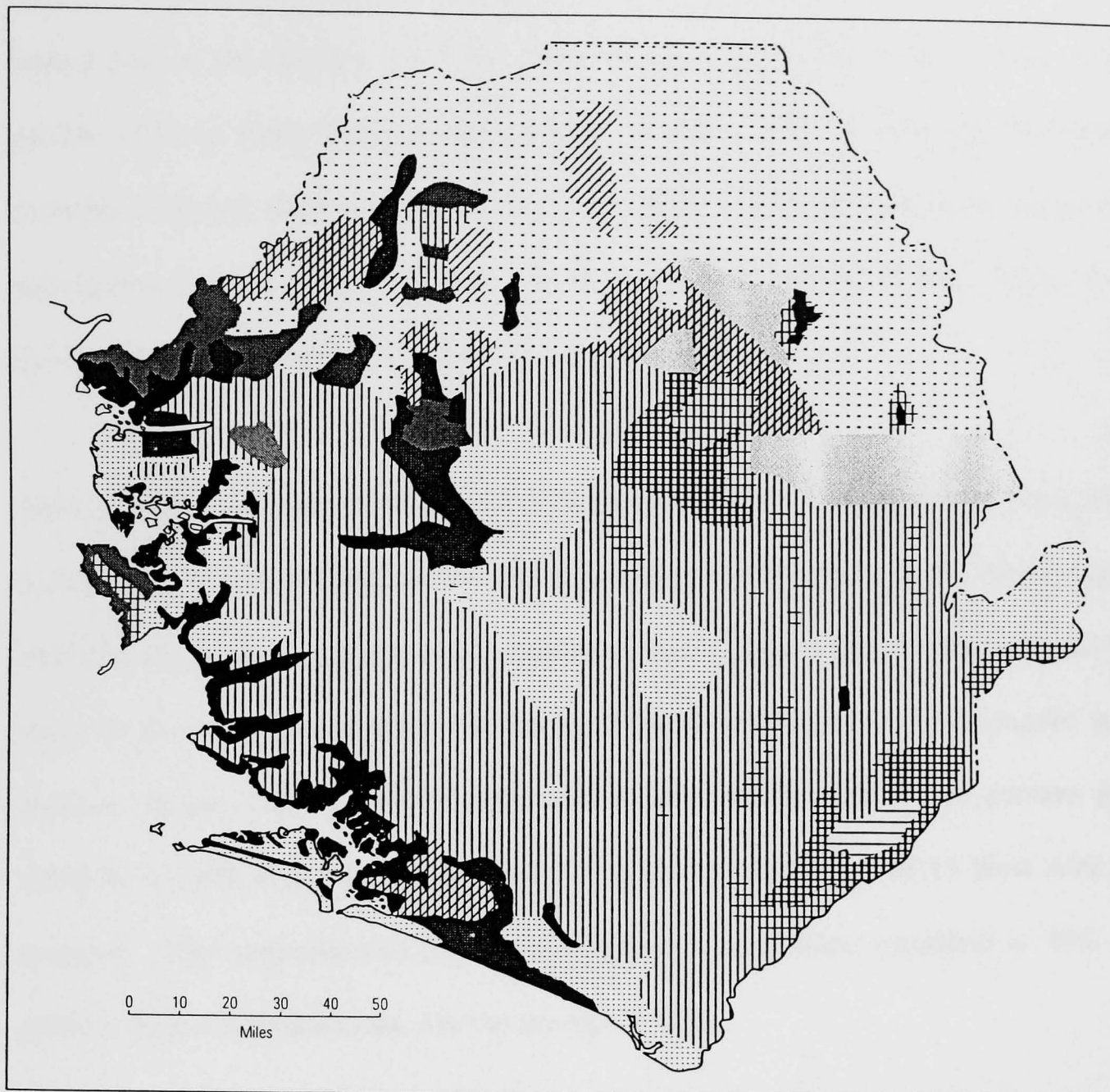
Of all tropical regions, West Africa has suffered the most drastic forest loss, with current forest cover being only one third of the original climax area (Sommer, 1978). Direct overseas exploitation of forest resources in the region dates back to 1823 when shipbuilders in Liverpool imported African oak in sizeable quantities (Adeyoku, 1976), but smaller cargoes of wood had been shipped by European traders for a long time before that.

In the eighteenth century, at the height of the transatlantic slave trade, some parts of present day Sierra Leone may have been as well known for their timber and camwood (dye wood) exports as for their slave cargoes (Richards, 1996). By the nineteenth century, European merchants were attempting to monopolise the export trade in forest products by collusively fixing prices and imposing production quotas on primary producers, and excluding African traders from the European market (Freudenberger, 1992). Even as recently as 1962, before the rapid rise in Asian exports, West Africa still held a 30% share of tropical timber exports because of its proximity to Europe.

Sierra Leone is a typical example of the severe forest depletion found in this region. Even though part of it lies within the tropical rainforest zone of West Africa, very little is left of the natural vegetation that once existed (Fig. 1.1). Its forests have suffered from extensive cutting, clearing, burning and logging for wood, farming, timber, and other indirect uses, and so very few undisturbed areas remain. In large areas, primary forests have been reduced to secondary thickenings as a result of the above practices.

According to FAO, by 1980 only 740,000 ha of closed forest remained in the country and it was being cleared at a rate of 5,800 ha per annum (Lanly, 1981). However, according to the original 1976 aerial photographic survey on which this estimate was based, only half of this area consisted of undegraded closed forest. By 1990, FAO (1993) gave a higher estimate of 756,000 ha for the area of tropical rain forest in the country, and said that the annual deforestation rate had fallen to 4,920 ha per annum. But this set of estimates generally suffered from major problems, and in the case of Sierra Leone the estimate was actually based on the 1976 survey (Grainger, 1996).

However, an independent survey in 1987 using low resolution AVHRR (Advanced Very High Resolution Radiometer) satellite imagery estimated that closed forest cover, excluding mangroves, had fallen to 400,600 ha in 1987 (Paivinen and Witt, 1989; Sayer *et al.*, 1992). The major limitation of AVHRR satellite imagery is that, unlike other high resolution imagery systems like the American Landsat system which can divide the land to even less than 80m by 80m square and so can detect objects of that size, AVHRR can only register features that are 1km by 1km square. The implication is that parcels of forest land below 1km by 1km square cannot be detected by AVHRR and so are not



- | | | | |
|-------|--------------------|-----|------------------------------------|
| — | Forest | /// | Farm Bush & Savanna |
| | Farm Bush | ■ | Forest, Farm Bush & Savanna |
| ■ | Grass | ■ | Farm Bush, Grass & Savanna |
| ... | Savanna | | Lophira Savanna |
| | Forest & Farm Bush | ■ | Savanna & Lophira Savanna |
| | Farm Bush & Grass | ■ | Mangrove Swamp & Swamp Cultivation |

Figure 1.1: Vegetation Map of Sierra Leone

Source: Clarke, 1969

included in the estimates of forest cover, which could result in underestimation of forest cover. Since the map (reproduced in Sayer *et al*, 1992) shows no forest in the west-central part of the country, the low resolution sensor could have led to many small patches of forest fallow being wrongly classed as cleared land. In balancing this highly probable oversight, there is a tendency for such imagery to overestimate forest areas by aggregating forest and farmland in more highly forested parts of the country. Thus, most estimates of forest areas in the tropics are very inaccurate.

While a large proportion of its forests have been cleared, or at best reduced to secondary formations, through shifting cultivation, fuelwood collection and grazing, surprisingly little research has been carried out to explain how this happened. Research has tended to focus on the symptoms of forest scarcity, ignoring its underlying social, economic and political causes. Sierra Leone's population density, though high at 580 persons per 1,000 ha in 1990, is not exceptional, and is only the six highest out of 15 West African countries. The proportion of population engaged in agriculture, estimated at 70% in 1980, is almost identical to the African average of 69%.

By 1980, closed forest area per capita had fallen to just 0.22 ha, the fourth lowest in the African humid tropics, after Uganda, Nigeria and Ghana. According to Grainger (1995), once forest area per capita begins to approach a critical limit of 0.1 ha, the need to supply domestic wood needs and conserve what is left of the natural environment should force governments to intervene to halt deforestation if it has not previously been brought under control by market forces. The factors determining the formulation and

implementation of forest policy are therefore very important in this wider land use change context.

The lack of a detailed assessment of forest policies in Sierra Leone is therefore very surprising given that, advertently or otherwise, they have greatly aggravated forest resource depletion. Such policies, even though adopted for worthy objectives, e.g. industrial growth, increased agricultural production, job creation, poverty alleviation, regional development, to name but a few, are mostly not realised. Forest policies have become synonymous with the terms by which potential users can exploit forests. They are biased against the judicious use of forests, and toward their exploitation or conversion to other land uses that are intrinsically uneconomic. The government has typically sold timber too cheaply, thereby sacrificing public revenue and undervaluing the value of non-timber products, whilst encouraging rapid, exploitative and wasteful logging. This has led to conflicts between groups and individuals, and between social and private interests.

So the problem of forest depletion in Sierra Leone is as much a policy and institutional problem as a resource problem. Although the situation is serious it is still not too late to tackle it, but until there is some improvement in its forest policies and their implementation, the country's environment will continue to be degraded and its development will remain unsustainable. Research into policy formulation and implementation in Sierra Leone is therefore an urgent necessity if solutions are to be found. The results will aid forest policy planning and implementation not only in Sierra Leone but throughout the developing world.

1.5 AIMS

A major reason why tropical forest management is currently unsustainable is the disparity between fine-sounding government forestry policies and what actually happens in the forests. This project will investigate the causes of this problem in Sierra Leone by:

1. Evaluating the evolution of stated and actual forest policies, and identifying disparities and hidden agendas.

2. Explaining the content of forest policies, and changes in them, by reference to the pressures exerted on policy makers.

3. Analysing institutional constraints that impede implementation of forest policies.

4. Making recommendations for how to improve the situation and make forest management in Sierra Leone more sustainable.

1.6 STRUCTURE OF THE THESIS

The thesis has seven chapters. Chapter 1 provides an introduction to the problem and the study area, justifies the subject of the thesis, and provides some key definitions. Chapter 2 provides more detailed background information on Sierra Leone. Chapter 3 is a review of the salient literature on policy modelling and institutional analysis, identifying

some of the gaps in the literature which this thesis will help to fill, and the most appropriate methods to use for this research.

Chapter 4 describes the methodologies employed in this project and the types and sources of data collected for it. Chapter 5 describes and discusses the results of the research into policy formulation, and Chapter 6 the results of the research into policy implementation. Chapter 7 contains a synthetic discussion, a list of conclusions, and a series of recommendations for future research and practical action.

CHAPTER 2

BACKGROUND TO THE STUDY AREA

2.1 HISTORY

The name, Sierra Leone, derives from the Portuguese word "Sierra Lyoa" meaning lion mountains, or an isolated range of mountains. The country takes its name from the mountains of the Freetown peninsula peaks, unique among the low-lying sand bars, mangrove swamps and broad estuaries of the West African coastline. This 32 km range of mountains rises abruptly to nearly 1000 m above the long white beaches of the coastline. Pedro de Sintra, a Portuguese navigator awed by the roaring and growling of tropical thunder among the steep-sided peaks gave the country this name before British colonisation. As the name suggests, the country has a hilly and mountainous terrain.

Sierra Leone, which has been known to voyagers and historians for many centuries, first became a British settlement in the latter part of the eighteenth century. The settlement was established after the formation of the Society for the Abolition of Slavery from which sprang the Sierra Leone Company, to make provision for a large number of slaves

living in poverty in England after the American war of 1782, and also for such slaves as were captured by British ships operating against the slavers (GOSL, 1938). The first colonists were landed on a strip of land acquired on the north of the Sierra Leone peninsula in May, 1787. This was followed by other consignments of freed African slaves and Maroons from Jamaica who were brought to Sierra Leone and allotted lands. These freed slaves suffered deprivation and disease during the first few years, coupled with several attacks by other tribes in Sierra Leone and by the French squadron.

On 1st January, 1808, this settlement became a Crown Colony. The Colony, which was about 663 square kilometres, comprised virtually all of the peninsula of Freetown, the adjacent Tasso and Banana Islands, the town of Bonthe in Sherbro Island, Turtle Islands and York Island. The Protectorate, which was declared in 1896, consisted of the remaining hinterland of Sierra Leone with a total area of about 71.663 square kilometres.

2.2 LOCATION

Sierra Leone is situated on the west coast of Africa, between latitudes 6 degrees 55 minutes and 10 degrees north, and longitudes 10 degrees and 13 degrees west. It has a total area of about 72,326 sq. km (27,699 sq. miles). Sierra Leone is a compact country, about 346 km from north to south and from east to west. Its immediate neighbours are Guinea, with whom she shares a 652 km boundary to the north and north-east, and Liberia along a 306 km frontier to the south-east (World Bank, 1991). It is bordered on the south-west by the Atlantic ocean. It has a coastline extending to about 402 km along the Atlantic, with a territorial sea of 200 km. The principal port is the capital Freetown.

2.3 CLIMATE

The climate of Sierra Leone is largely determined by its geographical location, which results in a high net radiation due to the elevation of the sun at its zenith all year round; a high air temperature (absolute minimum not below 18 degrees centigrade, a mean monthly temperature of about 26 degrees centigrade); and a situation where neither temperature nor light are limiting crop production.

The inter-tropical convergence zone or the inter-tropical discontinuity (ITD) divides the distribution of rainfall into marked wet and dry seasons. Due to maritime modifications, seasonal variations in humidity and temperature are small and the seasons are defined as a rainy season from April to October; and a dry season, often with harmattan winds, from November to April.

The climate is generally hot and can become unpleasantly humid. March, April and May are the most humid and oppressive months. This is the beginning of the rains, with thunderstorms and tornadoes occurring frequently. At the end of the rains, the stormy weather returns. By December, the humidity is lower and the dry season is heralded by the dust-laden harmattan winds blowing from the north-east.

Air temperatures are severely affected by rain. Peak temperatures are reached during March to April. As the Sahara heats up, a low pressure area is created and the monsoons are strengthened and drawn to the Sahara. This results in moist air being blown from over the sea toward the whole of West Africa in May to October. The

resultant heavy rains and cloud cover have a cooling effect, such that July to August are the coldest months. During the winter season, the reverse is true. The Sahara is relatively cooler and dry wind blows from the Sahara to the warmer West African coast. Mean seasonal temperatures are generally above 25 degrees centigrade.

Rainfall varies considerably from year to year and can deviate by up to 450mm in any one month. The wettest part of Sierra Leone is the coastal belt, and the climate becomes progressively drier inland. The Western Area peninsula is the wettest region, receiving up to 1400mm of rainfall in any one month and up to 5000mm annually. The rains fall steadily in the wet season and are heaviest in July and August (Bomah, 1988).

The heavy rains and high temperatures, plus a maritime influence, create a high, sustained humidity that rises to 93% in the wet season. Humidity increases inland and declines with rainfall, reaching a low of 47%. Mildew and other plant diseases are rampant during periods of high humidity and can lead to serious reduction of yield and loss of stored products.

There is little variation in day length due to the low latitude, but sunshine hours are affected during the wet season. Cloud build-up peaks in August and there is a corresponding decline in sunshine hours. The resultant influence on photosynthesis is likely to considerably reduce plant growth over this period.

Violent storms occur at the start and end of the rainy season. They are caused by the meeting of the harmattan and monsoon winds and are accompanied by strong winds,

torrential rains, thunder and lightning. The result can be very damaging to crop production.

2.4 RELIEF

There are four main physical regions in Sierra Leone: coastal plains; interior plains; plateaux; and hills and mountains (Figure 2.1). Each of these have several sub-regions.

The coastal plains to the west of the country have four distinct sub-regions: coastal terraces; estuarine swamps subject to tidal flooding; alluvial plains subject to freshwater flooding during the rainy season; and beach ridges which fringe the alluvial plains on the seaward side.

The interior plains are the largest of the four regions, covering 43% of the total land area. They rise gently from the coastal terraces to elevations of 200 metres in the east, where they are separated from the plateau by distinct escarpments (Clarke, 1969).

The plateaux region lies in the north-east and south-east of the country, and ranges from 300 to 700 metres in altitude. It covers 22% of the land area and is almost exclusively granitic. The region is divided into two - the higher lying plains, similar in morphology to the interior plains but at higher elevations with occasional low hills; and the rolling hills and plains. The eastern parts comprise dissected hills. In the south, they are covered with a thick layer of alluvial ironstone gravel, but in the north, the weathering gravel is shallower and outcrops are more common.

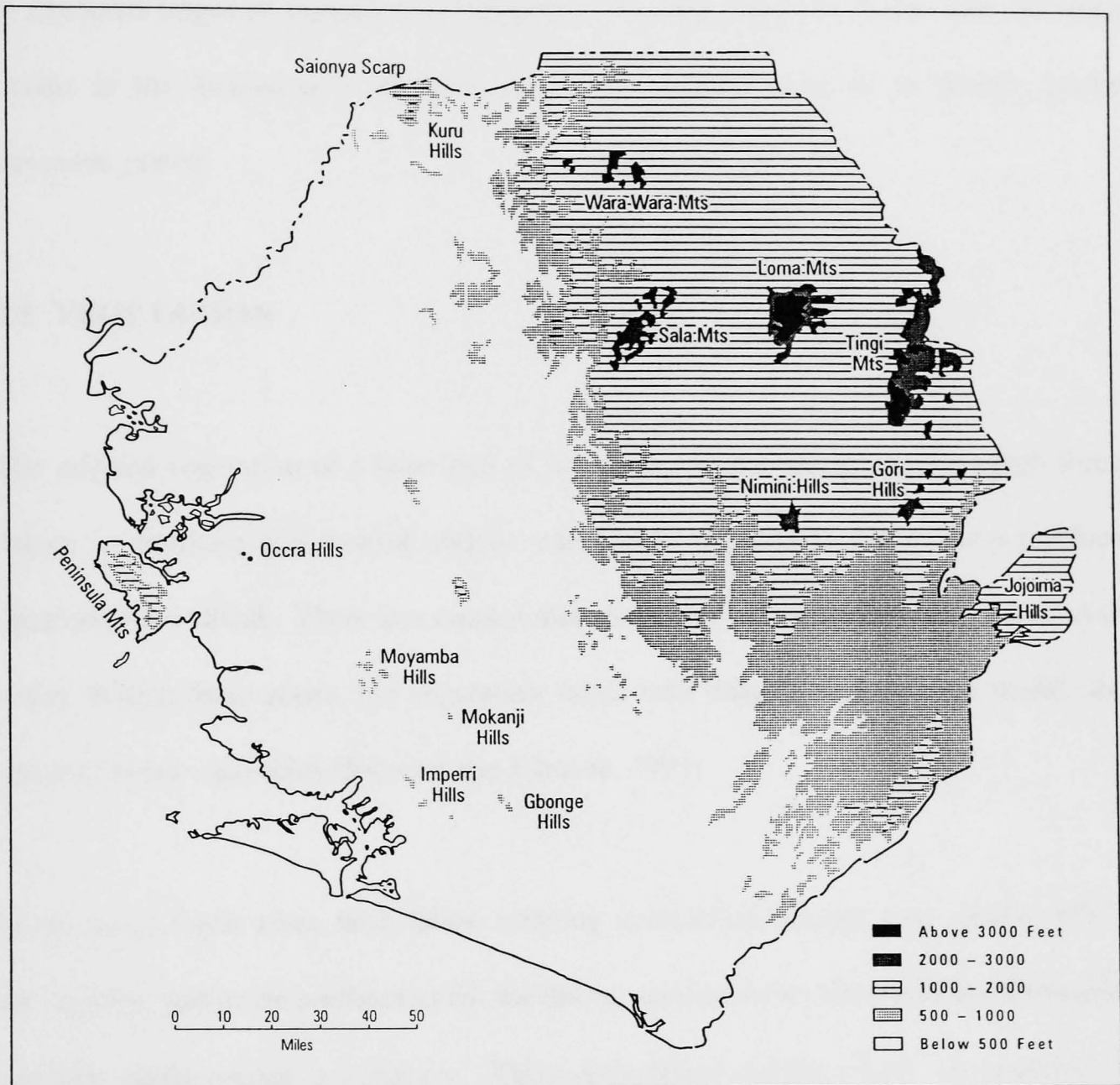


Figure 2.1: Map of Sierra Leone Showing Relief Areas

Source: Clarke (1969)

The hill and mountain region consists mainly of acid rock in the north and east of the country. The highest peak, Bintumani (1945 metres) is dolerite capped and found in the Loma Mountains. The other sub-region consists of isolated hills formed on basic rock, the largest being the Freetown Peninsula. These rocks are resistant to erosion, resulting in dissected ridges of moderate to high relief. The high content of iron and aluminium results in the formation of laterites, either as a surface crust or as densely packed ironstone gravel.

2.5 VEGETATION

The original vegetation of a large part of Sierra Leone was probably moist high forest, except in northern and central regions where drier conditions would have produced deciduous woodland. There is a coastal mangrove zone of variable width except in the south. Within these zones, the vegetation varies with edaphic changes, but mainly as a result of human activities (Johnson and Johnson, 1991).

In the moist forest zone, bush fallow (shifting cultivation) extends over almost 60% of the country, and in the northern moist deciduous savanna zones (Bombali and Koinadugu districts) cattle rearing is common. These agricultural activities have so modified the vegetation pattern that closed forests only survive as remnant forests over about 5% of the country. In the north, grazing and uncontrolled burning are steadily degrading the forest types from moist deciduous to savanna, and gradually towards predominantly open grassy savannas (figure 2.2).

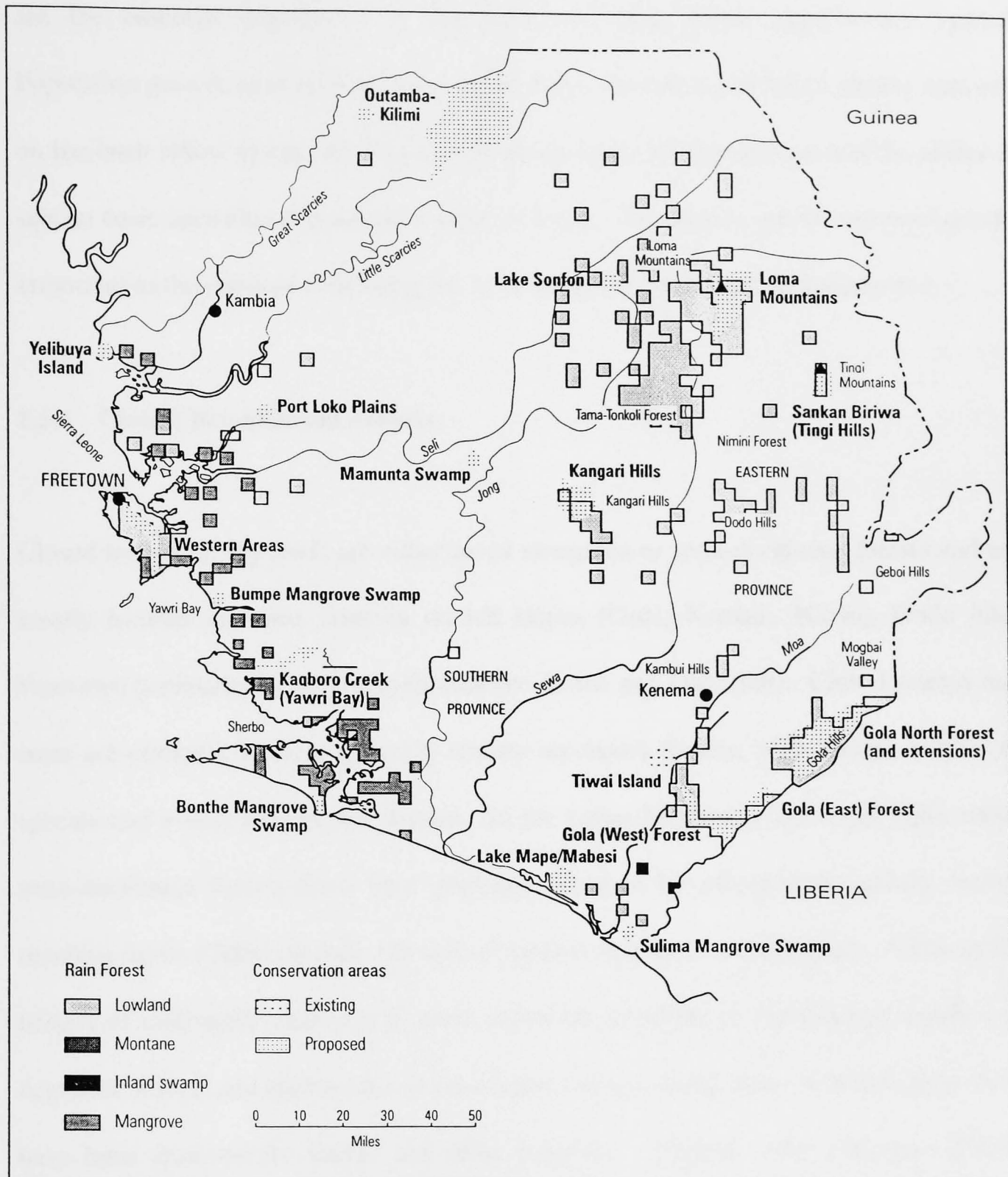


Figure 2.2: Map of Sierra Leone Showing Rainforest and Conservation Areas

Source: Sayer et al (1992)

The population have enjoyed a long traditional association with forests which supplied good medicines, building materials and fuel. The forests and the bush fallow regrowths are the essential ingredients of the traditional bush fallow agroforestry system. Population growth increased pressure on the forest resources and led to greater demands on the bush fallow system which put both the retention of forest cover and the ability to sustain basic agricultural production at serious risk. The forests are far too ecologically important to the national well-being not to be adequately managed and conserved.

2.5.1 Closed Broadleaved Forests

Closed forests on dry lands are either moist evergreen or semi-deciduous forests and are mostly located in forest reserves on hill slopes (Gola, Kambui, Nimini, Dodo hills, Freetown peninsula, Tama Tonkolili, Kasewe, Loma and Tingi hills). Closed canopy and trees are common in these generally mature secondary forests, with a large number of species and a very uneven distribution. In the Loma Mountains and Tingi Hills, moist semi-deciduous forests have been gradually replaced by sub-montane gallery forests reaching up to 1700m altitude. In such situations, epiphytes are abundant. Often in the fringes of cultivated areas and in more accessible locations in forest areas, patches of degraded forests and undercrops of cocoa and coffee occupy areas in which large trees have been removed for timber and other purposes. Typical moist evergreen forests include: *Lophira alata*, *Heritiera utilis*, *Klaine-doxa gabonensis*, *Uapaca guineensis*, *Oldfieldia africana*, *Erythrophleum ivorensis*, *Brachystegia leonensis* and *Piptadeniastrum africanum*. The most common semi-deciduous trees include: *Daniellia thurifera*, *Terminalia ivorensis*, *T. superba*, *Parkia bicolor* and *Anthonotha flagrans*

which are associated with evergreen trees such as *Parinari excelsa*, *Bridelia grandis*, *Treculia africana* and *Pycnanthus angolensis*. However, there are practically no untouched forests left owing to logging which has been going on for decades (Mahmoud, 1992).

Young secondary forests, which are the result of former agricultural clearing, are found mainly on hill slopes in the south-eastern part of the country, with closed canopy and tree heights from 10 to 30m. The majority of trees are fast-growing, even-aged and have distinctive small crowns. As the forest matures, these are replaced by slow-growing typical high forest species. Tree crop species and few large forest trees left standing after farming are also common. Secondary forest trees in the lower stratum include: *Musunga cecropioides*, *Carapa procera*, *Macaranga Barteri*, *Anthocleista nobilis*, *Bridelia micrantha*, *Myrianthus arboreus*, *Phyllanthus discoideus* and *Sterculia tragacantha*. These are overtopped by typical forest species such as *Azalia africana*, *Albizia zygia*, *Uapaca guineensis*, *Daniellia thurifera*, *Terminalia superba*, *Parkia bicolor* and *Entandrophragma utile*. Associated tree-crop species are *Mangifera indica*, *Elias guineensis* and *Cola nitida*. Secondary forests are locally exploited for timber and firewood. They also provide a suitable habitat for undercropping of cocoa and coffee near villages.

Fringing swamp forests are mainly present along valley bottoms, shallow drainage ways and lake margins in the northern part of the coastal area. They usually have a closed canopy with trees up to 30m high. Stilt roots and buttresses are common features in this area. These forests are subject to seasonal flooding and the ground is muddy during the dry season. The canopy is more open and the trees often fewer along the edges of large

shallow lakes. Typical species are *Perocarpus santalinoides*, *Newtonia elliotii*, *Myrianthus arboreus*, *Plagiosiphon emarginatus*, *Uapaca heudelotii*, *Napoleana vogelii*, *Cynometrra vogelii* and *Placodiscus riparius*, with trunks covered by pneumatophores at the flood level. Paddy rice is cultivated in this region to a limited extent.

Within moist forests and savanna zones, *Raphia sp.* occurs in valley bottoms with closed canopy and trees measuring up to 20m. A process of colluvial sedimentation prevails under conditions of seasonal flooding in the freshwater environment of swamps. *Raphia* palms (*R. vinifera*) are dominant and often constitute a regrowth stage, together with climbing rattan palms of *Ancistrophyllum secundiflorum*, *Eremospatha hookeri* and *Calamus decratus*. The most common swamp tree species are *Nauclea diderrichii* and *Mitragyna stipulosa*. The undergrowth consists of ferns and other *monocotyledons*. Some *Raphia* swamp forests are cleared by farmers for dry season cultivation.

Mangrove swamps are usually established on tidal flats at the mouth of rivers in the coastal area. Stilted shrubs and trees are also frequent in this area with heights of up to 20m. The larger trees and denser forests create a “gallery forest effect” along the creeks. The mud flats between creeks have a low and less dense mangrove cover. The main tree species are: *Rhizophora racemosa*, *R. mangle* and *R. harrisonii*, the latter species are dominant upstream at the tidal limits, with *Avicennia nitida*, *Conocarpus erectus* and *Laguncularia racemosa*. On the littoral fringe of the mangrove, grasses occur together with ferns and halophytes. The accessible areas of mangrove cover are mainly low regrowth with few trees of any size. These features and bare mud flats are characteristic

of the Freetown delta, which has been subject to indiscriminate clearing for poles and fuelwood in the past. Paddy rice cultivation is common in other mangrove areas.

A large central block part of the country (about 37.744 square kilometres), which was originally closed high forest, is occupied by forest regrowth. Various stages of regrowth from newly abandoned farm bush to young secondary forest are represented in this vegetation pattern. When left standing for longer than 8 to 10 years, it develops into secondary forest. In many areas, however, the bush fallow cycle is being shortened and the thicket burnt long before the secondary forest stage is reached. Trees up to 10m high compete with shrubs resulting in the formation of thickets with numerous woody climbers. During clearing operations, scattered large forest and tree crop are sometimes left standing. Typical thicket species are: *Lantana camara*, *Cissus afzelli*, *Manniophytum fulvum*, *Abrus precatorius*, *Smilax Krausiana*, *Discorea bulbifera*, *Clematin grandiflora*, *Adenia lobata* and *scieria bovinii*. Pioneer secondary forest trees, such as: *Dichrostachys glomerata*, *Harungana madagascariensis*, *Nauclea latifolia*, *Alchornea cordifolia* and *Trema guineensis* succeed farm bush and thicket, if the area is no longer subject to the agricultural cycle.

2.5.2 Open Broadleaved Forests

Savanna woodlands occur on hill slopes and undulating terrain in the northern part of the plateau region. The crown cover is generally between 20 and 50%, but increases to some 50 to 80% in a few small sites. Trees reach 15m and an undergrowth of tall grasses of up to 3m is practically always present, except when burnt during the dry

season (Millington, (1987). The trees are often misshapen, deciduous and fire-resistant, commonly with thick bark. Suckers and coppice shoots are common after burning. Typical species are *Pterocarpus erinaceus*, *Hymenocardia acida*, *Daniellia oliveri*, *Parkia biglobosa*, *Cussonia barteri*, *Piliostigma thonningii*, *Phyllanthus discoideus* and *Cassia sieberiana*. Savanna woodlands are used extensively for grazing after burning and are also cleared in some areas for mixed cropping rice and cassava.

Coastal woodlands, characterised by relatively closed canopy of savanna trees and secondary forest trees not higher than 30m, are found on inland beach ridges in the south western coastal area. The trees are often stunted with an undergrowth of low thicket and creepers. The soil is sandy. There is also limited dry season burning. Coastal woodlands contain stunted specimens of *Cassia mimosoides* and *Hymenocardia acida*, coastal tree savanna species including *Parinari microphylla* and *Chysotalanus ellepticus* and among forest regrowth species *Anthostema senegalensis*. The undergrowth is characterised by various farm bush species of *Dissotis*, *Borreria* and *Leguminosae* as well as *Habropetalum dawei* and *Triphyphyllum pinnatum*.

Mixed tree savanna occurs on hill slopes and undulating plains in the drier northern and north-eastern parts. Grasses up to 3m are predominant with scattered trees. Its characteristics are similar to savanna woodland, but crown cover varies between 2 and 20% only.

Lophira tree savannas are found mainly in the north-west of the country on lateritic pans and undulating plains associated with shallow soils over lateritic layers subject to grazing

and dry season burning. Other characteristics include misshapen and stunted shrubs or trees of up to 12m. After burning, bright green suckers or coppice shoots develop and *Lophira lanceolata* predominates associated with *Pterocarpus erinaceus* with savanna grasses of up to 3m. This type of tree savanna is used exclusively for grazing. Patches of forest fallow occur locally.

Coastal tree savannas occur on beach ridges and swales in several areas along the coast, but mainly in the south of Bonthe Island and Turner's Peninsula. The freely drained sands cause drought conditions in the dry season and the vegetation is exposed to salty sea winds and occasional fires. Among medium height grasses of up to 1.5m, scattered shrubs or trees of 15m maximum occur with *Parinari macrophylla* dominating. They are often gnarled and have xeromorphic characteristics. Coppicing is common.

2.5.3 Shrub Formations

Mixed montane thicket and grassland occur between 900 and 1900m altitude on the Loma mountains and the Tingi Hills in the north-east, where the average temperature is the lowest in the country. The slopes and plateaux are subject to annual burning. Typical shrubs like *Kotachya ochreats*, *Dissotis fruiticosa*, *Monechma depauparatum* and *Droogmansia scaettaiana* of up to 5m are scattered in a medium 1.3m height of grass cover, but are not found above 1700m. Although these areas have a potential for grazing, they have been largely abandoned.

2.6 SOILS

The soils of Sierra Leone are referred to as ferralitic, implying that they are formed under humid tropical conditions and excessive leaching. The soils reflect the final stages of weathering and leaching, wherein only the least mobile and weatherable constituents remain. Ironstone gravel at the surface and in the profile is common, and the influence of parent material and slope on the soil profile is pronounced (Bomah and Sama, 1990).

In upland soils, drainage is good and the clay content (consisting of kaolinitic and iron and aluminium oxides) increases gradually with depth. The cation exchange capacity (CEC) of the clay fraction is generally within the range 3-15 mEq/100g, and maintenance of even a moderate level of available nutrients is dependent on retaining organic matter in the top soil and returning of nutrients through crop residues or forest litter. Under arable farming, the more sandy members of this soil type are among the poorest soils in Africa, often with less than 1 mEq/100g total exchangeable bases in the top soil. The major problems under cultivation are control of soil erosion, leaching of nutrients and maintenance of soil organic matter. For these reasons, farming on upland soils, even on non-sloping land and in lower rainfall areas, will always meet with difficulties relating to land management, soils and crops. The soils are best suited to the production of perennial crops, such as plantation crops which provide a canopy and litter protection against surface run-off and soil erosion and contribute to the efficient cycling of carbon and nutrients. Hence a large proportion of the country with steep slopes and shallow, often gravelly, soils should be reserved for reforestation rather than farming, particularly for the controlled production of valuable hardwoods.

In addition to upland ferralitic soils, Sierra Leone has quite extensive and economically important hydromorphic soils occurring in valley bottoms and river plains, which are usually extensively farmed under arable crops, particularly rice. Both rainfed and irrigated crops are grown during the dry season. Although they vary in their physical and chemical properties, these soils are relatively fertile and must be regarded as a valuable economic asset, justifying proper development. Their main problem is related to drainage and water control. Not enough detail is known about their chemical and physical properties, but it is known that these are quite variable and can sustain continuous cropping over prolonged periods of time.

2.7 DEMOGRAPHIC CHARACTERISTICS

The first national census in April, 1963 revealed a population of 2.18 million, with Freetown the major growth centre with 128,000 inhabitants. A UN Food and Agricultural Organisation (FAO) mission (1988) projected the 1985 census figures to 1989 based on growth rates over the decade to 1985 as shown in Table 2.1.

Between 1963 and 1989, the total population increased by 78%, while that of Freetown expanded almost 3.4 times. The Freetown expansion is partially due to urban drift encouraged by the promise of greater economic opportunity in the capital. The 1989 projection indicated a population density of 52.99 person per kilometre square.

According to the most recent 1990 estimates, Sierra Leone has a population of about 4.2 million. With a current population growth rate of 2.49%, this figure is projected to rise

to about 5.4 million by the year 2000, and to 9 million by the year 2020 (WRI, 1993). The average population density is 150 persons per sq. mile. However, the population of Sierra Leone is largely rural, with only about 28% of the population living in the urban areas.

Table 2.1 Projected Population For 1989

REGION	DISTRICT	TOTAL POP.	%	URBAN	GROWTH %+
Western Area	Freetown	569917	100	569917	4.95
	(Rural)	111549	24.3	26102	7.02
Northern	Bombali	354561	17.4	61694	2.78
	Koinadugu	193157	11.0	21247	1.32
North-western	Kambia	198908	18.8	37395	1.66
	Portloko	343940	14.6	50215	1.09
North-central	Kono	414383	38.1	157880	1.55
	Tonkolili	253120	13.2	33412	1.02
Eastern	Kailahun	257008	25.8	66308	2.39
	Kenema	366990	29.7	108996	2.15
Southern	Bo	309451	30.4	94703	1.93
	Pujehun	122912	7.3	8972	1.20
South-western	Moyamba	277710	9.1	25272	2.61
	Bonthe	112199	16.3	18288	1.67
SIERRA LEONE		3885805	32.9	1279771	2.31

Notes: + growth rates revealed by 1985 census as annual rates over the period 1974-85 (last column).

Source: FAO; 1988

The mean population growth rate of 2.49% per annum for 1985-1990 is actually below the African average of 2.99 (World Resources Institute, 1992). Trends in population growth between 1950 and 1990 reveal a steady increase in population (Table 2.2).

Table 2.2 Trends In Population

YEAR	POPULATION (millions)
1950	1.94
1970	2.65
1975	2.93
1980	3.26
1985	3.67
1990	4.15

Source: FAO, 1992

Sierra Leone had a crude birth rate of 46.2 per 1000 population per annum in 1990-95, ranking 17th out of all African countries. One really exceptional thing about Sierra Leone is that it has the lowest life expectancy of any country in the world - 43 years in 1990-95. Sierra Leone also has the highest death rate (21.6 per 1000 population per annum) in 1990-95, and the third highest infant mortality (143 deaths per 1000 live births per annum, 1990-95), after Afghanistan (162) and Mali (159). Another exceptional feature of Sierra Leone population is that it has the second lowest adult literacy rate (20.7%) after Burkina Faso (18.2%) (Economist, 1994).

2.8 POLITICAL AND ADMINISTRATIVE STRUCTURE

Sierra Leone gained her independence on 27th April, 1961, ending over 150 years of British colonial rule, initially by company rule, and later by a tiny crown colony founded in 1808, and a much larger Protectorate established in 1896. The colony, which had an area of about 663 Sq. Km, included only the Freetown Peninsula, Tasso Island, the

Banana Islands, York Island and Bonthe, whereas the remainder of Sierra Leone, about 71663 Sq. Km, fell under the protectorate.

Independence brought a more unified administration and more equal opportunities to the whole country (Clarke, 1969). Most of the old colony became the Western Area while the Protectorate became collectively known as the Provinces. One consequence has been the inevitable reduction in the predominance of the former colony, as the peoples of the provinces gained political power through universal suffrage. Sierra Leone enjoyed unruffled political calm and parliamentary democracy until March, 1967 when the Army took power with a National Reformation Council. This Military regime was overthrown thirteen months later in April, 1968, and a representative government was restored. Sierra Leone became a Republican State in 1971. It is a member of the Organisation of African Unity (OAU); Economic Community of West African States (ECOWAS); Mano River Union (MRU); and used to be the 100th member of the Commonwealth, before its suspension following the latest Military take-over in May 25, 1997.

The government of Sierra Leone is centralised in Freetown, where the central administration, legislature and judiciary are located, along with the Central Bank. Freetown is the core of commercial, medical, educational, cultural and social facilities. The degree of centralisation could be attributed to the small scale of urbanisation elsewhere in Sierra Leone and the poor communication network.

For the purpose of local government, the country is divided into three provinces - northern, eastern, and southern, and the western area (Figure 2.3). The former coinciding

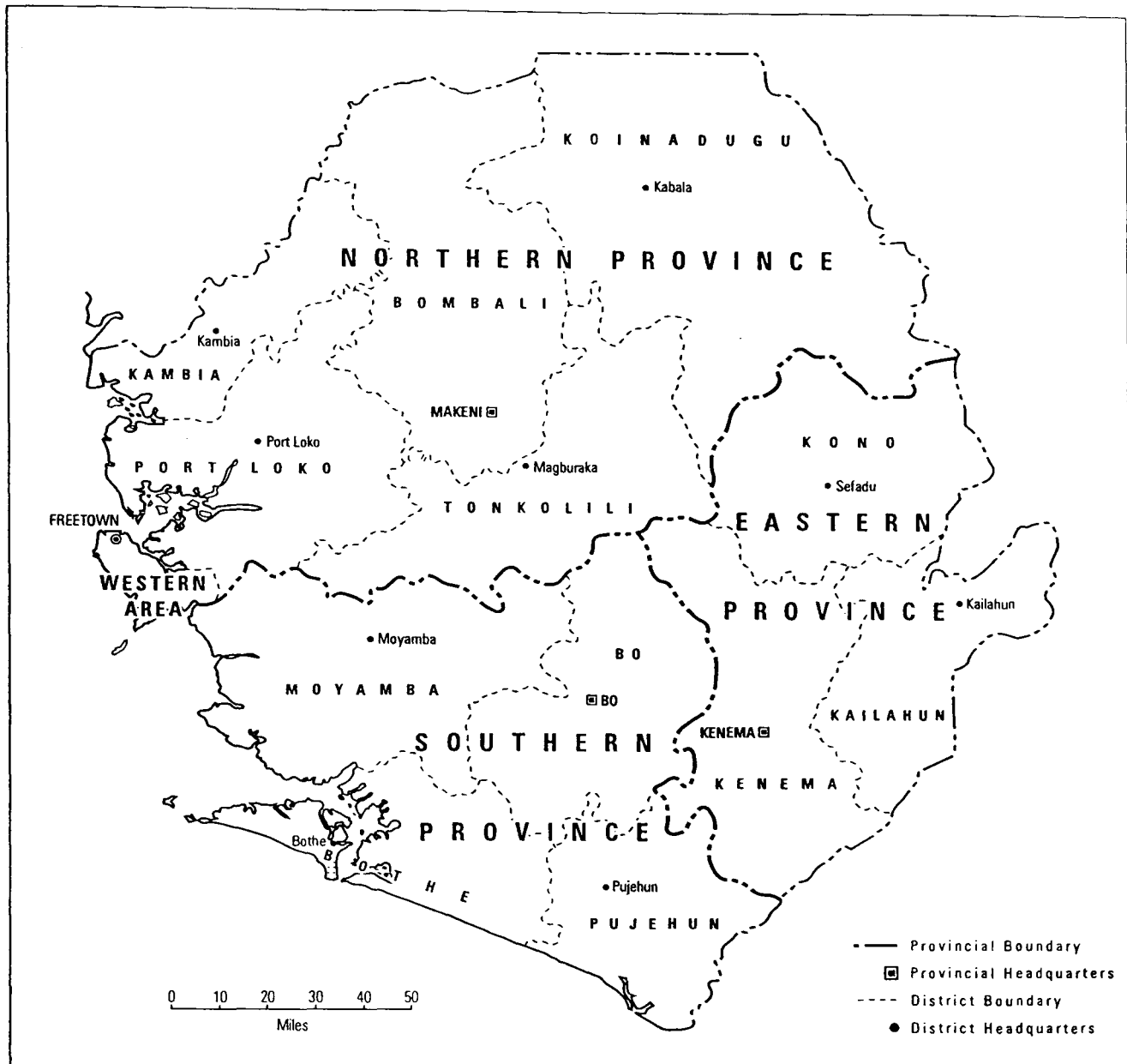


Figure 2.3: Map of Sierra Leone Showing Administrative Areas

Source: Clarke (1969)

with the old Protectorate and the latter with most of the old Colony. Before the Military coup d'etat, the provinces were controlled by Provincial Secretaries appointed by the central government. The provinces are sub-divided into 12 districts controlled by District Officers and District Councils. The districts are further sub-divided into 148 chiefdoms ruled by Paramount Chiefs who usually reside in the chiefdom headquarters from where they oversee the local administration.

Before the Military take-over on 29th April, 1992, Sierra Leone used to enjoy a multi-party democracy and later a one-party state Parliamentary democracy. The political climate was relatively stable before the rebel war broke out in 1991. This claimed the lives of thousands and left millions displaced and dispossessed. The Military junta that took over in 1992 formed the National Provisional Ruling Council (NPRC) and ruled for four years before conducting democratic elections by proportional representation and handing over power in March, 1996. The new President was also overthrown by another Military regime known as the AFRC. An air of uncertainty and unpredictability clouds the current civil unrest in the country.

2.9 ECONOMY

Despite the good rainfall and an abundance of primary resources (both mineral and agricultural), Sierra Leone has been classified by the United Nations (UN) as a least developed country, with GDP per capita at US\$350 in 1985/86, the average income figure disguising considerable inequity. The economy has continued to deteriorate steadily over the last few years, and the International Monetary Fund (IMF) formally

announced arrears of US\$55 million in April, 1988. The World Bank followed the IMF by suspending further disbursements at the end of that year.

Sierra Leone is now ranked as one of the poorest countries in the world. In 1989, it had a GNP of US\$813 million, and a GNP per capita of US\$200 - the seventh lowest in Africa after Mozambique (80), Ethiopia (120), Tanzania (120), Somalia (170), Guinea Bissau (180) and Chad (190). In spite of the fact that the country exported cocoa, coffee, diamonds, gold, Rutile, Bauxite, etc. its long-term public foreign debt was 58% of GNP in 1989, while in 1984, debt service was 22% of total exports (World Resources Institute, 1992).

Government revenue as a proportion of GDP has sunk to 5.2% due to indirect taxes and import duties. Income taxes have been reduced, with the highest rate at 45%, plus 10% surtax. Government expenditure was concentrated on physical infrastructure such as roads, education and agriculture only accounted for 13% of total spending with little local authority (Chieftdom) revenue. The budget deficit in 1988 was 38% more than that of 1987 and is still largely funded by commercial banks, although non-bank holding of treasury bills has increased slightly. For a large proportion of the population, the marginal propensity to save is probably zero. The development budget of 1988/89 was largely funded by grants and loans.

As part of the policy package to enable people to deal with the effects of the devaluation of the Leone, Civil Service salaries were increased in 1988. However, the benefits of such increases were lessened by salary payments being three to five months in arrears.

Such minimum wages are generally insufficient to purchase the basic family food requirement. In these circumstances, the daily task ceases to have any tangible connection with the wage paid - a situation which essentially breaks down the employment system. The situation has caused the outflow of the better qualified and experienced to the private sector, and subsequent promotion of the less qualified and experienced into vacant positions.

Some progress was made against consumer price inflation (CPI) which fell from 170% to 60% between 1987 and 1988. However, it should be noted that the CPI reflects official prices which to a large extent are less than actual selling prices. Sierra Leone suffers from a balance of payment deficit, reflecting adverse movements in the capital account situation. The country suffers from an ever increasing foreign exchange starvation of the official market.

The Structural Adjustment Loan from the World Bank and the associated Agricultural Sector Support Programme (ASSP) (FAO, 1984) were casualties of the inability of Sierra Leone to service her external debts. These could have ameliorated a proportion of the stabilisation policies induced by the IMF, only some of which were introduced. Selective introduction has forced most of the impact onto vulnerable groups, since they affect the price and availability of major consumption items to low income households, the level of government spending in the social sector and employment patterns. These effects, in turn, have downstream consequences, e.g. the high infant mortality rate, low life expectancy and low adult literacy rate. Poor nutrition and education are

economically inefficient and the shortage of consumer goods deprive people of incentives.

2.10 LAND USE

The population of Sierra Leone is basically rural. A large proportion of the population are involved in subsistence farming (Table 2.3). Rice, being the staple food, is the chief crop grown in most areas.

Table 2.3 Percent Of Labour Force In Agriculture

YEAR	PERCENTAGE
1975	72.6
1980	69.6
1985	66.0
1990	62.3

Source: World Resources Institute, 1992

In some areas, especially towards the eastern and southern extremes of the country, plantation agriculture is practised, the major crops being cocoa, coffee, oil palm, raffia palm etc. Backyard gardens are largely restricted to the urban areas where competition for land is greater. Table 2.4 gives a clear picture of the amount of land apportioned to various human activities. Nomadic pastoralism is also extensively practiced in the savanna region of northern Sierra Leone.

Table 2.4 Land Area Allocated To Various Uses (Thousand ha)

Land Use Type	1975	1980	1985	1990
Land Area	7162	7162	7162	7162
Arable and Permanent crops	555	585	615	650
Permanent Pasture	2204	2204	2204	2204
Forest and Woodland	2140	2113	2090	2060
Other Land	2263	2260	2253	2248

Source: World Resources Institute, 1992

The method of cultivation employed in most cases is basically traditional. It usually involves the cutting, burning, and clearing of vegetation. Because of the high poverty level resulting in the inability to procure artificial fertilizers, cultivators are compelled to shift from one plot of land to the other, leaving the already cultivated land to fallow. The free range method practiced by nomads, especially during the dries, contributes to widespread destruction of vegetation. These practices have collectively led to the clearing of vast expanses of vegetation on arable land for agricultural purposes. This exposes the top soil, subsequently leading to an increase in the rate of detachment and transport of soil materials, leaching of nutrients, soil infertility, and a reduction in the ability of the soil to produce quantitatively and/or qualitatively goods or services.

2.11 LAND TENURE

There is a complex pattern of land tenure in Sierra Leone. In the Western Area, formerly the colony, there is freehold tenure and the legal intricacies of land tenure are few. However, in the Provinces (the former Protectorate), ownership of land is vested in the

Chieftdom, but few Chieftdom authorities retain the practical power to use and allocate such land. A common pattern involved the extended family groups gradually acquiring for practical purpose permanent rights of use of land allocated to them by the community. Land can be transferred or re-allocated within the family or community unit, but such re-allocation are not usual, as long as an individual or family are using the land. Individual rights have further application relating to economic trees like oil palm, kola, coffee, cocoa where the planter is accepted as the owner in the fullest sense, whether or not the particular land is held by him. Even where farms of individual tenure have become widely established, such areas as sacred bush or virgin forest are seen as being for the use of the community.

Apart from the forest estate in the Western Area which is officially protected, all other forest land - even in the forest reserves - is communally owned. The traditional land use rights are determined by the traditional law of the involved ethnic group. In effect, the members of a tribe, who are recognised as having claim to a particular area, whether forested or not, also possess the right of land use (Turay, 1980). These rights usually concern hunting, collection of plant and animal products, collection of fuelwood and building timbers, rotational cultivation as part of agricultural use and grazing rights.

The individual pattern of land tenure, combined with increasing population and growing land pressure, would make it difficult to establish any new forest estates using reserve settlement procedures. Instead, there would have to be recognition that a real transfer takes place when a reserve is constituted and requisite compensation paid for the transfer. Compensation is not inconsistent with the preservation of compatible local

uses. Such compensation could serve the purpose of increasing the acceptance of forestry among the local population, enhance the possibility of multiple forest use and involve local communities in enjoying some benefit and in maintaining the forest estate.

The spread of individual holdings at the local level could make it difficult to preserve an essential minimum of land for community use and needs - including forestry. It may be necessary to consider zoning, land use controls or the setting up of community forests/plantations to meet local needs.

2.12 ETHNIC GROUPS

After the population of Sierra Leone by waves of migrants from the north, east, north-eastern and south, the tribal groups became distinct and lived in almost exclusive tribal communities for fear of war, suspicion of other tribes and problems of social cohesion. This militated against ethnic diffusion.

As trade increased, and government and Missionary activities resulted in the spread of education and medical facilities, and the improvement of communication networks, the resulting increase in population mobility led to better intermingling of tribes. Thus, representatives of all tribes could now be found in most areas. Notwithstanding these later developments, some ethnic groups like the Creoles in the western area, the Mendes in the south and east, the Temnes in the north, still have their nucleus areas.

The whole population is made up of 20 tribes, with a large proportion speaking Krio (the current *lingua franca*, which originally served as the language of the resettled ex-slave population of the Freetown area) (Table 2.5) . Even though available data on the composition of each tribe in relation to the total population dates back to 1963, it still gives a fair picture of the ratio of each tribe to the total population. English is the official language to date, but its regular use is limited to the literate minority.

Table 2.5 Ethnic Composition Of The Population, 1963

TRIBE	PERCENT	TRIBE	PERCENT
Creole	1.9	Loko	2.9
Fula	3.1	Madingo	2.3
Gallinas	0.1	Mende	30.9
Gola	0.2	Sherbro	3.4
Kissi	2.3	Susu	3.1
Kono	4.8	Temne	29.8
Koranko	3.7	Vai	0.3
Krim	0.4	Yalunka	0.7
Kru	0.2	No tribe	1.3
Limba	8.4	Others	0.2

Source: Clarke, 1969

The heterogeneity of the country's population is made even more complex by the Lebanese, who are found in many large towns, especially along the main routes. Indians and Europeans are more localised, but mainly congregate in the capital, where the Creole community is also centred. The effect of these ethnic admixtures has been to break down tribal traditions, leading to a growing sense of brotherhood and sisterhood in the country as a whole. The feeling of being a Sierra Leonean, not a Mende, Temne or Loko is slowly growing.

2.13 FOREST SECTOR

Forestry has been one of the most neglected sectors in Sierra Leone resulting in a total disregard of the important role it plays in agricultural and economic development. Forests constitute an essential resource base for sustainable economic and social development, providing a variety of wood and non-wood products and services. Proper forest management, especially in an agrarian economy like Sierra Leone's, contributes substantially to rural development in the broadest sense and in particular to expanding agricultural production. Forests also play a vital role in the protection of soils, water and the environment and are an indispensable element of biodiversity and landscape. They also serve social, cultural, religious and sentimental importance to many societies. Studies between 1978 and 1988 in Sierra Leone revealed the forestry division as a grossly ill-maintained sector with little or no resources to face the multifarious threats imposed on a resource that has life-supporting significance (Atlanta, 1979; Atlanta, 1980a; FAO, 1982; GOSL, 1982; GOSL, 1986; Tsoukers, 1987; FAO, 1988).

2.13.1 Forest Resources

2.13.1.1 Natural Forests

Because of the infrequency of national forest surveys, estimates of the area of forest in Sierra Leone have tended to be confusing and inaccurate. According to Persson (1974) and Myers (1980) there were only 290,000 ha of closed tropical moist forest left in the country. A detailed aerial photographic survey in 1975-76 by Gordon *et al.* (1979),

however, arrived at an estimate of 365,000 ha, with another 261,000 ha of secondary forest. Lanly (1981) used this last survey, together with additional information, to come up with a much higher figure of 740,000 ha of closed forest in 1980. In the absence of more recent data FAO (1993) later adjusted this to give an estimate of 756,000 ha for 1990. However, in 1987 a survey using low resolution (NOAA AVHRR) satellite imagery led to an estimate of 401,000 ha. Because of the limitations of AVHRR imagery, it is likely that this did not differentiate between mature and secondary closed forest, and might also have missed small patches of closed forest too, but it seemed more consistent with the estimates of Gordon et al which is 626,000 ha for 1976 than with Lanly's higher estimate. The corresponding deforestation rate of 20,400 ha per annum was four times higher than that estimated by FAO (1993) for the 1980s, but is by no means impossible.

2.13.1.2 Plantations

Planting of indigenous timber species was tried on an experimental basis up to 1929. Nursery and plantation techniques were then developed between 1930 and 1940 with *Gmelia arborea*, *Tectona grandis*, *Cassia siamea*, *Terminalia sup.*, *Tarrieta utilis*, *Entandrophragma spp.* and *Nauclea didderichii*.

The first plantations employing the taungya system were established in 1931. The trees were either planted in groups, lines or regular mixtures. From 1935 onwards, the common practice has been planting *Gmelina* and local species in alternate lines. Some species have been planted on an experimental basis, including various pines and *Eucalyptus*. The usual taungya food crop is rice, and only one crop is grown. Few man-

made forests have been established in savanna areas (Table 2.6). About 40 ha of all plantations are privately owned, with the rest belonging to the government or local communities.

There are conflicting estimates of the total of man-made forests in Sierra Leone. FAO (1988) estimated that 4000 ha of plantation remain out of 8000 ha planted. The planting consisted mainly of *Gmelina arborea* and *Terminalia ivorensis* planted during 1936 to 1941 and various *Eucalyptus spp.* and *Cassia siamea* planted during the 1970s. Kingston (1986) and UNDP/WB reported a total plantation area of 10000 ha, but mentioned that many areas have been harvested and some lost to urban development and agricultural use. Kernan (1980) estimated the productive plantation area to be 4910 ha. According to FAO (1993), the areas of forest plantations in Sierra Leone in 1980 and 1990 were 5810 ha and 8000 ha respectively.

Table 2.6 Estimates Of Closed And Open Forest Areas In Sierra Leone 1980 and 1990 (Thousand ha)

Type	1980	1990
Closed Forest	740	756
Open woodland	1315	1133
Total forest	2055	1889

Source: FAO, 1993

Plantations of export crops such as rubber, gum, oil palm and cola were established by the government and taken over by the forestry department in 1911. Some 1800 ha of rubber plantations (*Hevea braziliensis*) was established by the forestry division between

1964 and 1966 in the southern and eastern regions. There are also 400 to 600 ha of privately owned rubber plantations. These have not been tapped for latex production to any great extent and more than half the productive life has been lost. The plantations have been excluded from forest tabulations since their aim is primarily for latex production.

2.13.2 Forest Estate

The national forest estate of 331100 ha is made up of three categories of land: (a) Gazetted Forest Reserves (285300 ha) under legislative control of the Forestry Division (Figure 2.4); (b) proposed Reserves (3400 ha) under the control of the Forestry Division but not yet legally gazetted; and (c) Protected forests situated on Chieftom lands (11800 ha), and administered by the Forestry Division (Table 2.7).

Table 2.7 National Forest Estate

FOREST ESTATE	AREA (ha)
Gazetted forest reserves	285300
Proposed reserves	34000
Protection forest	11800
Total forest estate	331100

Source: FAO, 1988

While the stocked reserves contain predominantly natural forest, some of the smaller reserves also include plantations and several of these in the Western area consist mainly of plantations.

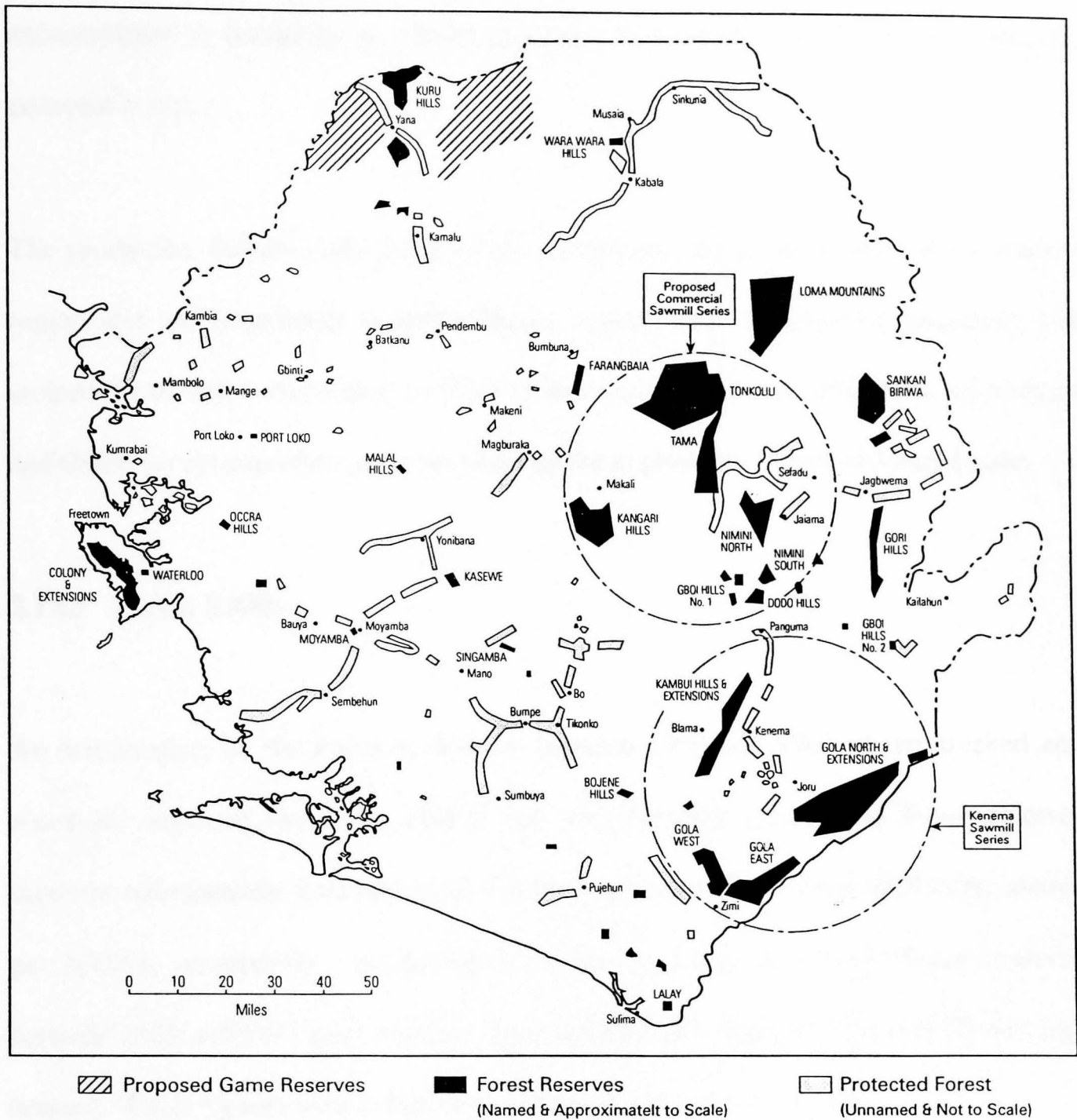


Figure 2.4: The Forest Estate of Sierra Leone

Source: Clarke, 1969

Half of the forest estate in the northern region is actually savanna with only sparse tree coverage; half of the western region is a protection reserve; forest reserves in the Western Area and Southern Province are relatively small (average size 726 ha) and encroachment is occurring so rapidly that very little closed high forest of productive potential is left.

The productive forests under government control are almost all located in the eastern region and are constituted in larger blocks, making their exploitation financially and technically feasible. According to FAO (1988) estimates, about 100000 ha of reserves and 65000 ha outside of the reserves make up the exploitable forests of Sierra Leone.

2.13.3 Forest Yields

An enumeration by the Forestry Division between 1959 and 1963 of the stocked and accessible areas of the Tama (10522 ha) and Tonkolili (15377 ha) forest reserves reported merchantable volumes of 42.1 cubic meters per hectare and 40.0 cubic metres per hectare, respectively. An inventory of the Gola East and North forest reserves between 1969 and 1972 gave a similar mean merchantable volume of 46 cubic meters per hectare. These figures were subject to a sampling error of 6.2 - 15.4%.

Past data are botanically sound but converting such data to timber volumes requires knowledge of the timber market. The botanical and physical heterogeneity of the forest estate and a low proportion of species with high commercial value are the most negative factors affecting timber harvesting and commercialisation. Over 200 species occur in the

mixed high forests in Sierra Leone. However, only some 30 species were harvested and processed by the forest industry (FAO, 1982). The World Bank (1984) downgraded these estimates of the average standing commercial volume to 33.4 cubic meters per ha in the reserves and 21.3 cubic meters per ha outside reserves, with an overall average of 28.7 cubic meters per ha, noting however that, the volume actually available in the exploited forest which has been creamed of its readily marketable species, is unknown.

2.13.4 Trends in Wood Production

Industrial roundwood production was only 4% of total roundwood production in 1993, much lower than the African average of 11% (Table 2.8). According to Cline-Cole

Table 2.8 Wood Production In Sierra Leone 1965 - 1993 (Thousand cubic metres)

Year	All Roundwood	Industrial Roundwood	Sawnwood	Fuelwood
1965	2682	126	10	2549
1970	2695	141	13	2554
1975	2637	138	16	2500
1978	2410	182	23	2228
1979	2450	185	23	2265
1980	2460	157	24	2303
1985	2745	143	14	2602
1990	3086	138	11	2948
1993	3308	120	9	3188

Source: FAO, 1993

(1993), the fuelwood in Sierra Leone comes both from open woodlands and from the forest reserves. Even though the price of fuelwood is low, the very high dependence on fuelwood creates consumer vulnerability to price increases. Thus, producing fuelwood

and charcoal is big business in Sierra Leone. This domain is usually exclusive of the timber business.

It is clear that Sierra Leone has been a net importer of forest products since Independence, and probably before that as well (Table 2.9). It has been a heavy importer of sawnwood until the 1980s, when it started to export it again. It has also had to import wood panels and paper because of lack of domestic production. Incidentally, the large exports of forest products in 1993 were due to a large quantity of paper being imported and then most of it subsequently being smuggled out of the country again to neighbouring states.

Table 2.9 Forest Products Trade for Sierra Leone (Thousand US\$)

Year	Sawnwood (exp.)	Sawnwood (imp)	Wood Panels (imp)	Wood Panels (exp.)	Paper (imp)	Paper (exp.)	Forest Products (deficit)
1963	-	834	414	155	1403	-	1403
1965	-	282	669	239	1190	-	1190
1970	-	31	570	346	1051	-	1051
1975	-	430	754	40	1224	-	1224
1980	-	412	562	156	1130	-	1130
1985	177	0	215	770	985	177	808
1990	52	0	688	851	1539	52	1487
1993	131	48	57	1154	1268	1248	20

Source: FAO Forest Products Yearbooks, 1995.

2.14 CONCLUSIONS

The background information on Sierra Leone points to the fact that in spite of its favourable natural conditions, in terms of location, soils, climate, relief and a population growth rate of 2.49% which is below the Africa average of 2.99%, the vegetation of Sierra Leone has suffered serious exploitation. Most of its once widespread moist high forests have been reduced to forest regrowths and secondary formations.

Even though agriculture constitutes the mainstay of the economy, the low level of mechanisation and crude agricultural practices through wasteful bush fallow and shifting cultivation systems have resulted in the clearing of vast expanses of arable land and vegetal cover without a significant increase in the level of agricultural production. The complex land tenure system and communal land rights make it difficult for the government to expand the protected forest estate and reserves without the consent of local communities. Such drawn out negotiations for land rights usually require significant financial input which can hardly be met by the government.

The centralised system of government in Sierra Leone, which closely approximates the British colonial style, poses a serious impediment to control of peripheral areas. Even though the country is divided into smaller administrative units, such as, provinces, districts and chiefdoms with administrative powers vested in appointed leaders to man the affairs of the various administrative units, the funds to administer the units were largely centralised and grossly inadequate. The recent autocratic rule by the Military

even resulted in more centralisation as Officials were required to rule by decree or directives from the Military high command.

Sierra Leone also falls in the category of the poorest and least developed countries in the world, with a low GDP and per capita income. The state suffers from inadequate funds to provide physical infrastructure, social amenities, education medical facilities, etc. This has resulted in a low adult literacy level, high infant mortality, low life expectancy, high inflation, and general poverty and depravity. These social problems have made it difficult for a neglected and underfunded forestry department to protect the forests from desperate poachers, striving to make a living.

CHAPTER 3

REVIEW OF RELATED LITERATURE

3.1 INTRODUCTION

This chapter reviews the state of the art theories of policy modelling and institutional analysis and identifies some of the gaps in the literature which this thesis will help to fill. It also identifies the most appropriate methods to use in this research and justifies their choice.

3.2 THEORIES AND MODELS OF POLICY FORMULATION

Policy analysts have been likened to builders. That is to say, they need to perceive some sort of pattern in the world based on which they interpret events. Policy analysts create reality rather than observe it. They carry around bundles of basic frames of references in terms of which they ask questions such as: What happened? Why did it happen? and What will happen next? (Allison, 1971). Such descriptive, explanatory and prescriptive models are the conceptual lenses through which analysts view the world and try to make

use of it. Thus, practical men like politicians and administrators are as much prisoners of theory as academic social scientists (Anderson, 1975).

Even though many typologies of policy models have been developed, they could be classified into two broad groups - prescriptive or normative models, and descriptive models (Mitchell, 1989). Prescriptive policy models seek to demonstrate how policy formulation should occur according to pre-established standards, while descriptive policy models document the way in which policy making actually occurs.

Geographers have often used prescriptive and descriptive models in trying to investigate how an imperfect policy process could be improved to more closely approximate the ideal (Hamill, 1968; Sewell, 1973). In spite of the fact that a good number of these models have attempted to do justice to explaining the policy formulation process, they can hardly be wholly adapted to suit all local contexts. This could largely be explained by the deviations which occur during the actual practice of formulating and implementing policies in the real world, especially in the light of the pressures from various sectors. To provide a basis for a critical examination of these issues, a brief discussion of these theories/models is presented below.

3.2.1 Prescriptive Models

Prescriptive policy models aim to provide explanations of the ideal towards which the policy formulation process should strive. These models are often considered as being comprehensive and rational, and suggest that the policy formulation process involves a

series of interconnected steps among which there is continuous feedback (Mitchell, 1989). The policy formulation process starts with the identification and definition of a problem, leading to the development of objectives. A range of criteria are then developed for analysing the objectives in the light of the existing constraints in order to enhance the selection of the best alternative strategy that maximise net expectation. Action programmes are then developed with their estimated consequences to serve as a basis for the development of a plan of operation to prescribe the direction of implementation. Taking into consideration the impact on other organisations, performance evaluation is then carried out resulting in a feedback mechanism (Fig. 3.1)

Purely rational policy making is in fact impossible (Dror, 1968). The ideal model provides for the systematic identification and ranking of objectives, and the consistent choice of the best alternative development strategy by 'economic man', while giving no consideration to the unavailability of the requisite data and resources which usually happen in the real world. There are also a variety of other pressures and intangibles which tend to bear on the policy formulation process for which no provision is made.

In the real world, the policy maker often finds him/herself faced with strings of causes and effects instead of clearly defined problems, often resulting in the treatment of symptoms rather than underlying causes (Timberlake, 1985). Also, maximisation of economic benefits does not always seem to be the major factor influencing decisions in policy making, and other non-economic parameters (like environmental or social impact) also have equally important influences on the policy processes. The number of assumptions associated with "economic man" creates problems for the attainment of

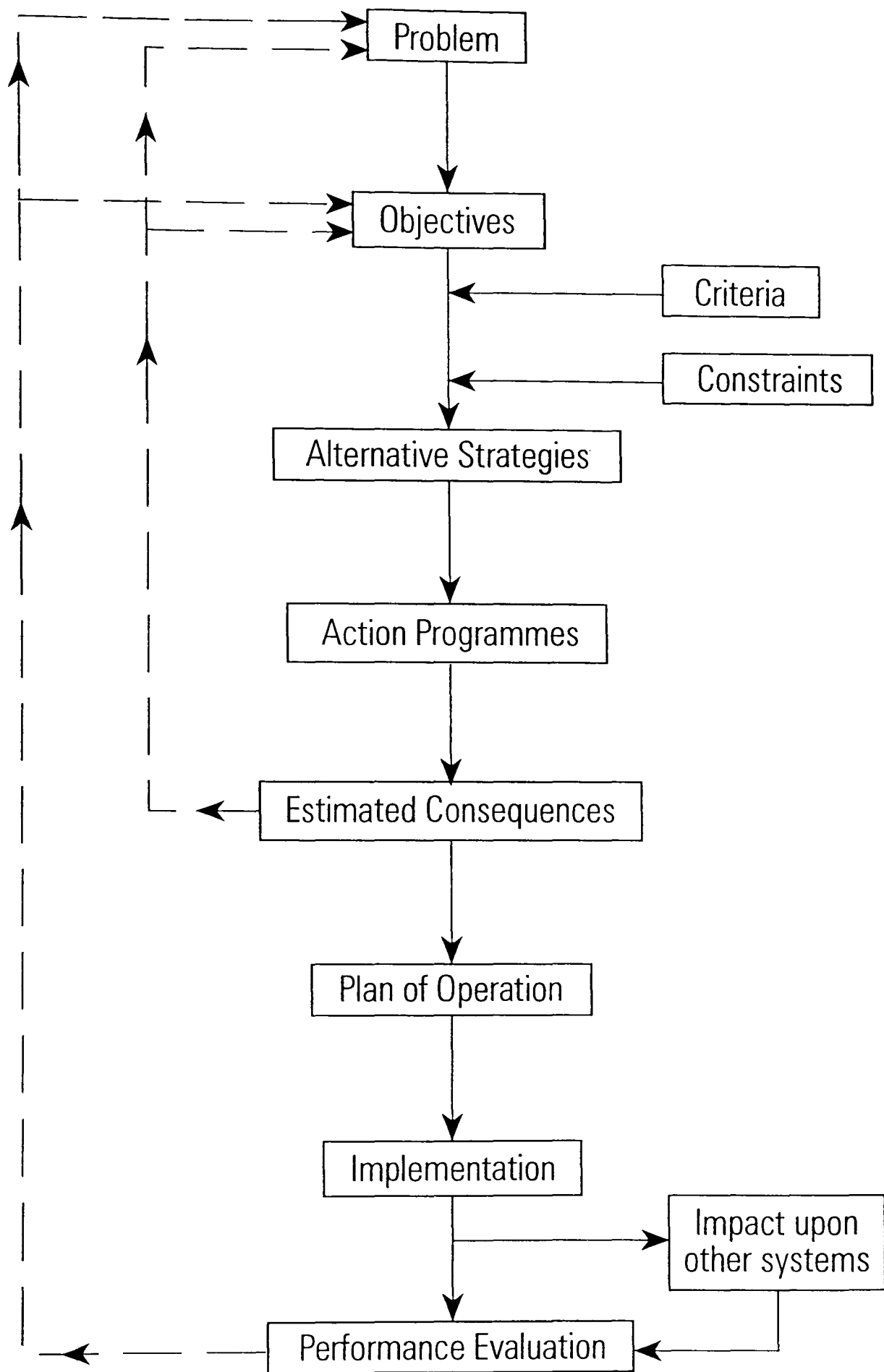


Figure 3.1: A general model for policy formulation and decision making

Source: Mitchell, 1989

conditions prescribed by these models. Notwithstanding these lapses, the model provides an ideal framework against which actual policy formulation may be compared.

3.2.2 Descriptive Models

Descriptive models of policy making are based on realistic courses of action geared towards the achievement of specified goals amidst the confusion that characterises the real world. They reject the concept of the comprehensive, rational, and emotionally detached "economic man", and rely on the idea of the "boundedly rational" person who "satisfices" rather than maximises (Simon, 1959). Descriptive models provide explanations to the adaptive behaviour of administrative man in his/her attempt to solve the multifarious problems associated with the achievement of goals (White, 1972). They also make provision for the pressures policy makers usually have to respond to in the decision making process. Descriptive models could be classified into three main types - disjointed incrementalism, mixed scanning, and output models.

3.2.2.1 Disjointed Incrementalism

This type of descriptive model, which is also known as "muddling through" was conceived by Lindblom (1959). The theory assumes a situation in which there is no clearly defined problem, goals and objectives may be in conflict, only a few alternatives are considered which do not significantly differ from existing ones, a restricted number of consequences are identified, the problems are continually redefined with no correct solution, such that, the policy process never terminates. Because of the inconclusive

nature of such a policy process, the policy maker has to stretch his/her analytical capacity, experience and resourcefulness in solving incremental problems. A wide range of options need to be left open to provide for the pursuit of an alternative strategy if the first fails.

While demonstrating an accurate approximation to the policy process, this model is not without weaknesses. It does not account for abrupt or radical changes. Since the model assumes the selection of alternatives that do not significantly differ from existing ones, it does not explain or predict fundamental changes. This is a serious weakness especially when a model is expected to have predictive capacity. The model also focuses on the short-term, thereby neglecting long-term implications. Since the model only reacts to existing imperfections in the policy process rather than indicating future goals, it is therefore considered to be basically remedial. Nonetheless, the model provides some insight into the policy process in the real world.

3.2.2.2 *Mixed Scanning*

This model proposed by Etzioni (1967) represents a compromise for investigators who reject the rational model of "economic man", and find Lindblom's disjointed incrementalism unattractive, especially with regards to its inability to account for fundamental changes. The model recognises the need for fundamental or contextual policies as well as incremental or bit policies. It is based on the premise that incremental decisions lead to fundamental decisions, and that the cumulative effect of incremental decisions is influenced by fundamental decisions.

The model suggests that, in the policy formulation process, the policy maker does not only make incremental decisions but also scans a limited range of alternatives which deviate significantly from the existing approaches. Since only a few alternatives receive more than a passing appraisal, the selection of which alternative is to receive in-depth or cursory scanning is based on the ordering of priorities. This model is more systematic than the incremental model and, unlike the rationalist model, does not have the maximisation of net gains as a primary criterion.

This model is conceptually attractive in that it is more comprehensive than the rational or incremental models. It points to the fact that different processes of policy making may occur depending on the nature and magnitude of the problems to be addressed. Its major inadequacy is reflected in its apparent lack of guidance as to how empirical distinctions could be made between fundamental and incremental policies. It does, however, alert policy analysts as to the different processes in policy making, thereby bringing to light the weaknesses of the incremental and rational models.

3.2.2.3 *Discussion*

However, all these models have limitations. The idea of perfect knowledge in the rationality model is unacceptable to many (Drury, 1975). It requires the decision-maker to follow rational processes, but does not guarantee rational outcomes. The prescriptive models are also largely dependent on values. The big question is: how can value judgements be made on anything other than a personal, intuitive, or subjective basis. The models do not make any reference to the nature of the inputs that shape the outputs

or resulting outcomes. The idea of the emotionally detached “economic man” hardly provides for policy making in the real world in which policy makers sometimes have to respond to a number of overlapping constituencies. Policies are sometimes the outcomes of external stresses that are transformed into pressures and exerted on policy makers (Caldwell, 1990). Policy therefore reflects the ability of policy makers to respond to specific and concrete emergencies in order to ensure positive outcomes.

While the prescriptive models suggest a detached and comprehensively rational atmosphere for policy making, the descriptive models attempt to fill this gap by providing for policy making in a pluralist society in which competing groups struggle for power over scarce resources (Truman, 1951; Latham, 1952). However, descriptive models are basically of two types - those that specifically deal with inputs to the policy process and those that deal with outputs to the policy process. The two approaches have rarely been merged in analysing the policy making process. The incremental model does not account for abrupt or radical changes as it considers policy making as a continuous series of incremental or bit decisions that never terminate. The model assumes that problems are not significantly different from preceding ones and, therefore, cannot predict fundamental changes. It focuses on the short-term and neglects long-term social innovations. It is therefore basically remedial. Mixed scanning tends to be more appealing in that it provides for fundamental and incremental policies, but does not draw any empirical distinctions between the two in order to determine the limited range of fundamental alternatives to scan.

3.2.2.4 *Output Models*

Most of the models (both prescriptive and descriptive) reviewed so far concentrate on *inputs* to the policy process. Another group of models known as *output models* take a different approach. They concentrate on *outputs* of the policy process, in the belief that different outputs reflect different policy processes. The output models proposed by Lowi (1964) are of three types - distributive, regulatory, and redistributive.

3.2.2.4.1 Distributive Models

Distributive models deal with situations in which governments allocate resources and services on an individual basis. It involves coalition building by groups through bargaining and accommodation at the local level without directly competing with other groups (Mann, 1975). This approach eliminates conflict and enhances the probability of both the government and local groups achieving their desired objectives without much interference. This situation is often referred to as "logrolling", "consensual politics", or "mutual non-interference". Since governmental actions are based on specific local demands, little by way of policy emerges as decisions are based on the exigency of the need and the bargaining power. There is also little or no room for external inputs to the decision making process.

3.2.2.4.2 Regulatory Models

Regulatory models propose a different scenario. They assume the existence of various interest groups with different wants, each group competing with the others for its wants to be met. Since all wants cannot be met, the needs of one group are usually satisfied at the expense of the others, resulting in overt conflicts reflecting the pluralist school of thought. The interests are often sectoral (e.g. economic and environmental), rather than local, and are represented by national organisations concerned with public policy and specific projects or programmes. The conflicts in this model are more visible than in the distributive model, with obvious winners and losers. This approach usually results in a policy which defines the winners and losers and provides a departure point for future decisions.

3.2.2.4.3 Redistributive Models

Redistributive models deal with conflicts over significant class interests rather than sectoral interests. The central issue usually involves an attempt to alter the distribution of benefits and costs in society, especially in relation to levels and rates of taxation, levels of public spending, and subsidies. The conflict in this model is usually between the "elite" or ruling class and the "counter-elites" or outsiders. The major participants are usually large organisations, bureaucracies, business associations, political parties, corporations, etc.

The output models discussed so far basically deal with policy outputs in the belief that policy outputs reflect different policy processes. Since inputs are inextricably linked to outputs, the failure of the output models to consider in detail the mechanisms of inputs to the policy process justifies a thorough re-examination of policy modelling. The distributive output models stress on coalition building by groups through collective bargaining without any visible conflicts as outputs of the policy process. The regulatory models make reference to various interest groups with conflicting interests, but hardly stress on how these conflicts are transformed into pressures and exerted on policy makers. The regulatory models go on to talk about winners and losers determined by the policy outcomes. The redistributive models stress on class rather than sectoral interests and an attempt to alter the distribution of benefits as outputs of policy. These models make little or no mention of the inputs that shape the outputs of policy, and the mechanisms by which policy is formed are also less defined.

Malayang's balance of policy pressures will be used to bridge these major gaps in analysing forest policy formulation in Sierra Leone. Like the regulatory output models, this model identifies and acknowledges the existence of various interest groups with conflicting interests, but goes further to discuss these conflicts in terms of pressures on policy makers which could be considered as inputs. The output, according to Malayang's models, is the policy which reflects the balance of pressures on policy makers.

3.2.2.5 *Malayang's Balance of Policy Pressures Model*

Malayang (1996) proposed a model to explain the changes that led to government intervention to protect forests in the Philippines. This model, which was based on the group theory, states that laws reflect the balance of power between different interest groups. Latham (1952) applied this theory to the legislative process by stating that “the legislative vote on any issue represents their composition of strength, that is, the balance of power among contending groups at the moment of voting. Public policy constitutes the equilibrium reached in this struggle at any given moment. The model portrayed legislators as passive arbiters of conflicting pressures. Bentley (1967) stated that the balance of group pressure is the existing state of society, that is to say, policy is the balance of power between different social groups.

Malayang identified two broad groups - exploitative and protective, depending on whether they promote or support exploitation or protection of forests. According to him, government policy changes when there is a change in the balance of pressures on policy makers. A state will intervene to control deforestation when the power of groups favouring protection become more equivalent to the power of those favouring exploitation.

The model does not make provision for collective bargaining among groups and, therefore, cannot account for the policy process in all circumstances, but it can be appropriate when forests become very much depleted in a country and state intervention is crucial. The model can be applied to policy making in a pluralist society with many

groups, but can also be applied to an elitist society with a restricted range of groups influencing policy makers.

However, in the light of the powerful class and sectoral interests of the business elite in the forest resources and policy process in Sierra Leone, the application of Malayang's model in a regulatory output sense will help to better explain the general pressures and specific business influences on policy makers. This double-barrelled approach will also bring out the strong ties between the business elite, the executive and forest resources and the resulting patronage that has had a devastating effect on the allocative process and untold misery as renegades strive to exert control over natural resources.

In the light of the top-down nature of the forest policy process, especially in the Third World, and the multifarious forces that policy makers are obliged to respond to, not all groups can be satisfied at the same time. Little wonder then that some groups are usually satisfied at the expense of others - usually the groups with aspirations that are more closely related to the interests at the top benefit the most. The latter culminating in conflicts between winners and losers at all levels. Therefore, the use of the Malayang model in a regulatory output sense will help explain the policy formulation process in Sierra Leone and, perhaps, provide some alternative explanation for the ongoing war in Sierra Leone.

The application of the Malayang model in a regulatory output sense will also provide for the treatment of policy making both in terms of the inputs to the policy process in terms of the pressures on policy makers, and outputs of policy in terms of the balance of

pressures (the policy) and the satisfaction of specific interests at the expense of others and probably the general good.

3.3 ORGANISATIONAL THEORIES AND MODELS

Studies of the management of organisations have broadly taken two forms - a micro perspective which focuses on the behaviour of human beings within the organisation (otherwise known as organisational behaviour), and a macro perspective which looks at why organisations take the forms they do, how external pressures on organisations affect their members, and the types of alternatives available for designing, managing, and administering organisations (Jackson, 1986). According to Jackson, behaviour is a function of an interaction between variables in the individual and variables in the environment within which the individual works (i.e. $B = f(I, E)$), and therefore can hardly be dissociated from each other. Jackson further strengthened this view by stating that:

"The complexity of formal organisations poses problems in their study. First, it is not valid to fractionate an organisation and then reify the parts. The whole is more than the sum of the parts. It is the interaction of the parts with each other and with the complex of which they are a part that constitutes organisation. In short, an organisation is a dynamic field. It should be studied as a whole gestalt. It will not yield to simple cause and effect reasoning. To change one part is to change interaction among other parts and to change the whole. One cannot comprehend the whole by dealing with the parts in isolation"

Nonetheless, research into organisational issues has been largely based on the micro dimension, with hardly any comprehensive macro-perspective studies (Bruce and Maasland, 1968; O'Riordan, 1971). In spite of the attraction of micro-perspective studies, they cannot adequately account for the complex processes that constitute organisations. Piecemeal analysis of individual aspects of organisations as components of organisational management can never serve as a surrogate for comprehensive macro-perspective studies. Therefore the current trend should be towards a more comprehensive treatment of organisations as interdependent hierarchical interacting institutions, rather than clinging to individual behavioural aspects which can never account for the whole.

Micro-perspective thinking has also largely influenced the analysis of organisations in the light of the fact that most of the earlier studies on organisational relations tended to be centred on intraorganisational relationships, as if organisations were isolated and independent closed systems with individuals interacting within. The fact that individual behaviour (which constitutes the core of micro-perspective thinking in organisational theory) is a function of both an individual's physiological and psychological state and environmental variables seems to be disregarded. So too is the fact that the word 'environment' comprises both internal and external influences. However, relatively recent studies have taken organisational interdependence into consideration. Such studies essentially conceive the organisation as an entity that needs inputs and provides outputs, linking together a number of organisations via their mechanisms of exchanges or transactions.

Notwithstanding the relatively recent recognition of the interdependence of organisations, it is rare to find studies that deeply penetrate both dimensions of organisational relations. The real need is for an in-depth treatment of intra-organisational and inter-organisational relations as inseparable components of organisational management, and the avoidance of any piecemeal analytical approach. This is inevitable if a rational explanation is to be given for organisational relationships in terms of structure, processes, and outputs; and if a sound theoretical base is to be provided for future research.

Based on these two different perspectives of organisations, various theories/models of organisational analysis have emerged. These are now critically discussed in the light of their potential significance and applicability to the analysis of organisational management systems in the real world.

3.3.1 The Functional Model of Organisational Analysis

The functional model serves as an important model for the analysis of natural systems. It was first postulated by Fayol (1949) and considers the organisation as a social unit with requirements that need to be satisfied if it is to be sustainable. This analytical approach stresses the need to first consider the degree of transparency of organisational policy formulators in setting out functional prerequisites before the analysis of the specific structures that constitute the organisation in terms of the needs they meet, and the functions they perform to ensure the survival of the system. It also considers the analysis of both internal and external communication systems, the functions an organisation

performs, and the consequences of such actions, rather than making reference to its origin. Even though it emphasises final causes over efficient causes, this analytical model concedes to the fact that structural elements are interdependent, and that variations in one reflect on the other.

However, the application of this model to the analysis of social systems poses a few difficulties. First, there is the difficulty of specifying essential needs (i.e. real as opposed to felt needs). There is also the difficulty of specifying what is meant by the survival of the system depending on the size, type, and level of the organisation in question. Organisational forms are also not as interdependent as biological systems. There might be a need for more emphasis on the origin of an organisation to enable the researcher unravel the extent to which it has evolved over time. Otherwise, this could serve as rational analytical framework for the analysis of institutions.

3.3.2 Weber's Ideal-type Model of Organisational Analysis

Weber's (1952) model consists of conceptual methods by which the actual performance of an organisation can be studied in comparison with an idealised model in order to note differences in actual and optimal performance. It makes specific prescriptions as to how hierarchies of control can be developed such that one group could, in effect, dominate other groups. According to Weber, the bureaucratic structure is superior to any other form of organisation in terms of its precision, stability, stringency of discipline, and reliability.

This model compares to other models as does a machine to non-mechanical modes of production. It suggests that in order to maximise benefits from implementation design, all of an organisation's tasks must be divided into highly specialised jobs to ensure performance effectiveness. Each task must be performed according to a system of rules to assure uniformity and co-ordination of different tasks, and to ward off uncertainty in task performance. Each member or office of an organisation should be accountable for job performance to one, and only one, manager above him or her. Each employee of an organisation relates to other employees and clients in an impersonal, formalistic manner, maintaining a social distance with subordinates and clients so that favouritism does not interfere with organisational effectiveness. Employment in the bureaucratic organisation should be based on technical qualifications, and is protected against arbitrary dismissal. Promotion should be based on seniority and achievement.

The model identifies activities to be corrected if organisational performance shows substantial deviation from the criteria set out in the ideal type. For example, if there is a co-ordination problem, there will then be need to look at the centralisation of authority. If there is a problem with efficiency, then there will be need to look at the personnel programme in terms of selection and placement. According to Weber, bureaucracy is the most rational system of organisation available to enhance efficiency and optimal organisational performance.

The bureaucracy model is limited in scope in that it provides a one-sided prescription for organisational design - intra-organisational. In like manner, models which address inter-organisational relations hardly make provision for intra-organisational issues. Thus, the

need is for the addition of an inter-organisational treatment in order to increase its scope. The ideals of the model presuppose a routine organisational system in which strict adherence to rules constitutes the life of the organisation. This model reflects the ideals of the drab, colourless and routine organisation man with highly idealistic bureaucratic standards and with little or no provision for bureaucratic disfunctions. Unlike machines however, human beings have a natural tendency to establish interpersonal relationships, which directly or indirectly influence the types of networks within organisations and the organisational structure as a whole.

Given that an individual's behaviour is a function of his physiological and psychological make-up and the influence of the environment in which he finds himself, it follows therefore that extra-organisational influences within the environment also influence organisational processes. Organisations can hardly solely subsist on vertical relationships, and employees formally or informally establish horizontal relationships. The rational organisation man has to respond to a variety of overlapping constituencies which might inhibit appropriate action even when deviations from ideal organisational prescriptions are evident. The model makes no provision for this. Its ideals give no consideration to the availability of other inputs like resources, demands and support from extra-organisational sectors. However, since intra-organisational structures and processes largely determine inter-organisational linkages, this model could serve as a basis for analysing institutional structures and processes in relation to external linkages.

3.3.3 Urwick's Technique Model of Organisational Analysis

Urwick's (1929) model stresses the study of human experience of organisations which should govern the arrangements for human association of any kind. This principle can be studied as a technical question, irrespective of the purpose of the enterprise, the personnel comprising it, and the political, constitutional or social theory underlying its creation. The model focuses on the method of subdividing and allocating to individuals the various activities, duties and responsibilities essential to the purpose contemplated, the correlation of these activities, and the continuous control of the work of individuals so as to secure the most economical and effective realisation of purpose.

The model belongs to the school of classical organisational theory. It recognises rationality and efficiency of organisational goals, and contains three essential elements of bureaucratic theory - specialisation, co-ordination, and rational assignment of duties. It also incorporates span of control, line-staff relationships and functionalism into organisational studies. The real message of this model is improved techniques for the application of rational principles of organisation to ongoing enterprises. This model is, however, silent on inter-organisational issues.

3.3.4 Models of Assessing Organisational Effectiveness

These models stress the setting of standards (normative not descriptive statements) against which effectiveness will be measured. It comprises explicit guidelines for assessing effectiveness. These include the selection of indicators, determination of

outcomes, identification of processes, structures, and samples to enhance the assessment, before considering participants, constituents and measures (Scott, 1987).

Gibson (1985) carried out a study of organisational behaviour, structures, and processes, and came up with three perspectives of effectiveness - individual, group, and organisational. In assessing individual effectiveness, the task performance of specific employees was assessed through performance evaluation processes. Group effectiveness was obtained by measuring the sum total of the contributions of all employees. Organisational effectiveness was considered as the function of individual and group effectiveness. However, it should be more than that because an organisation can obtain higher levels of performance than the sum of the performance of its parts. Gibson further identified three approaches to the analysis of institutional effectiveness: goal approach, systems-resource approach, and time dimension approach. The goal approach measures effectiveness as the degree to which objectives are accomplished. There is however need to look at purposefulness, rationality, and achievement. The systems-resource approach considers internal and external linkages of organisational behaviour. While the time dimension model considers the entire life span of the input-output cycle. Gibson also developed four criteria for effectiveness: production (quality and quantity), efficiency (ratio of outputs to inputs (input-process-output process cycle), satisfaction (benefits/extent to which organisations meet needs), and adaptation (response to internal and external changes).

The criteria for evaluating organisational performance/effectiveness cannot be produced by some objective, apolitical process. Like other theoretical models of organisational

analysis, they are often controversial and varied. Indicators could be chosen from several possible types, and data from several sample frames. Measures are usually based on outcomes, processes and structural features of organisations. Even though this model cannot be universal, adaptation can be achieved in many ways.

3.3.5 Systems Model of Organisational Analysis

The systems model of organisational relations, according to Lockett and Spear (1980), considers organisations as open systems which, of necessity, engage in various modes of exchange with their environment. The model identifies input elements, process elements, output elements, and feedback effects. The theory assumes the existence of a focal organisation and postulates its interaction with a complement of organisations in its environment known as organisational sets. An input organisational set provides resources to the focal organisation. An output organisational set receives the goods and/or services including organisational decisions generated by the focal organisation. The systems model also requires that feedback effects are traced from the output organisation set to the focal organisation, and thence to the input organisation set; or directly from the output to the input organisational set. These feedback effects can be positive or negative, as well as anticipated or unanticipated. The four components of the model - focal organisations, input organisational set, output organisational set, and feedback effects may jointly be conceived as comprising an interorganisational system.

Three dimensions have significant consequences for the focal organisation: the (a) size, (b) diversity of the input and output organisational sets, and (c) network configuration.

The size of the organisational sets refer to the number of input and output organisations with which the focal organisation interacts. Diversity of the organisational sets refers to the number of organisations in the input and output sets differing in gross manifest functions such as legislatures, community organisations, professional associations, etc. The network configuration refers to the formal properties of interaction among the members of the input and output organisational sets. The latter are of four types: (a) dyad network (in which focal organisation A interacts with B); (b) wheel network (in which the focal organisation interacts with more than one organisation of a particular type, but with no mutual interactions among the members of the set); (c) all channel network (in which all members of the set interact with each other and each interacts with the focal organisation); and (d) chain network (in which the members of the set are linked in a series with the focal organisation which has only direct interaction with the first link in the chain).

The systems model also focuses on the interrelationships between, at least, three levels of analysis - the subsystem of an organisation, the organisational system in its entirety, and the suprasystem. The subsystem analysis entails the study of the interaction patterns of various subunits within an organisation. The analysis of the entire organisation involves an examination of the cultural components of an organisation in terms of its values and goals, and the structural component which comprises the various relationships among the subunits, and the technological component. The suprasystem level of analysis involves an enquiry into the network of interactions or linkages of a given organisation with other organisations in its environment.

The analysis of formal properties of organisational sets points to an intriguing question concerning the relationship between the formal properties of an organisation, and models of interaction between focal organisations and members of the input and output organisational sets. For example, under what conditions would a researcher find both co-operation and conflict in a network because of the pressures arising from the constrained pattern of interdependence? The mode of interaction also has consequences for the internal structure and processes of the focal organisation, such as the formation of new subunits, the development of new organisational norms, and the articulation of new goals.

Even though the model serves as a positive as well as a normative theory of organisational change, it also has its shortfalls. A closer look at the proposed interactions between the focal organisation and members of its organisational set with the aid of the various dimensions discussed presents serious limitations. As if influenced by the 'black box' approach to organisational analysis, the level of aggregation of the organisations in the system model reveals not only the danger of hypostatizing organisations, i.e. treating them as disembodied entities, but also of leaving sight of intervening mechanisms that contribute to the various modes of interaction. The model reveals an ideal streamlined approach to the study of organisational structures and linkages.

The model does not also pay much attention to the need for a thorough assessment of the potential efficacy of interactions between role partners in organisations comprising input and output organisational sets. The proposition of fixed dimensions of interaction

also places a limiting factor on the direction of interaction between organisations. Since individuals in various organisations interact both formally and informally, one can hardly pinpoint a streamlined one-dimensional approach to social interaction. Variations almost always occur in reality depending on the disposition of the role players in the various organisational sets. Hence the need to pay much more attention to the individuals within the organisations. Input organisation sets could also indirectly qualify as output organisational sets if they benefit or heavily rely on the goods and services provided by the focal organisation, which could modify the mode of interaction.

There is therefore a need to redesign the interaction network in the input and output organisational sets, with a view to increasing organisational effectiveness. Innovative ideas designed to alter the original ecology of the focal organisation may include proposals for co-operation, co-optation, bargaining, coalition formation, consortia formation, amalgamation, etc. with members of the input and output organisational sets.

Thus, an organisational theory model of Grainger (1996) which bears some similarities with the systems model in terms of importance of size, diversity and network interactions of the various input and output organisations, shall be discussed and applied to the Sierra Leone forest management context. The organisational theory model is, however, more detailed in scope as it takes into consideration other factors like the strength and structure of an organisation, its internal and external conditioning and its relationship with the external linkages environment. The model provides for the analysis of both intra and inter-organisational relationships.

3.3.6 Grainger's Organisational Theory/Model

In this model, Grainger (1996) started with the premise that the inability of a state to control deforestation is symptomatic of a wider problem in which governments of developing countries often cannot properly control their peripheral areas. According to Dessler (1992), explaining why state institutions are unable to channel sufficient power from core to periphery is an appropriate application of organisation theory, especially in relation to organisational outputs. Grainger therefore argues that how policy is implemented by an organisation's hierarchy is influenced by the structure and strength of an organisation; the internal and external conditioning of its behaviour; and its relationship with its external social environment, in terms of relations between the culture of an organisation and that of its operating environment, and adaptability to changes in its environment.

The diagnostic elements of this model span nearly the entire spectrum of organisational features needed to assess institutional constraints on public policy implementation in Sierra Leone. The application of Grainger's organisational theory model to the Sierra Leone context bridges a major gap in knowledge by providing for the thorough analysis of the internal and external conditioning of policy implementing institutions in Sierra Leone.

3.3.7 Social Class Model

The social class model, otherwise known as the Marxist model, could be identified with Pfeffer (1992). It points to the fact that the linkages among dominant organisational actors have social as well as economic roots. Linkages between organisations, foundations, policy making groups, government agencies, etc. have more to do with ensuring the continued dominance of capitalist interests than with helping the resource needs of organisational actors. The central focus of the theory is on institutional sectors and not on the social organisation of the economy.

The social class model is based on a broad and hasty generalisation that organisational linkages are highly capitalistic in nature, which poses a problem of applying it to real life settings especially in the Third World. However, it stimulates thought as to the possibility of the existence of a hidden agenda within the top management of an organisation geared towards the realisation of personal gains rather than organisational interests. A researcher would therefore need to establish whether in fact there is a hidden agenda, and to identify the causes or reasons behind its existence, and its impact on organisational networks. It also necessitates the addition of a political component to organisational analysis.

3.3.8 Institutional Framework Model

The institutional framework model was developed by Zucker (1977) and is based on the premise that organisations do not have a free reign to pursue resources, but rather must

behave in accordance with the laws and traditions of the societies in which they are found. As cultural systems become more complex, and the powers of the state and dominant subcultures permeate the boundaries of the organisation, decision makers are forced to adapt accordingly, even if this runs contrary to their resource needs and interests. It identifies the network among individuals as an important element in explaining organisational behaviour.

The institutional framework model demonstrates that organisations do not shape themselves, but rather tend to shape up to the demands of society. The implication is that organisational policies and implementation strategies are a reflection of the interplay of internal and external factors. Hence the need to establish the nature and strength of the external forces that bear so much influence on internal organisational processes. It also builds on the fact that the more complex an organisation becomes in terms of activities and linkages, the more the external pressures it has to respond to. It lays emphasis on the role of individuals in influencing organisational outcomes, thus portraying a stronger intra-organisational component than the preceding theories. However, like the other models, it does not address critical intra-organisational issues like organisational structures and individual behaviour in terms of power, functions, potentials, fears, hopes, constraints, etc., and how they relate to organisational performance, goals, communication networks, effectiveness and efficiency. The model however makes adequate reference to the pressures/overlapping constituencies which organisations respond to. The latter is invaluable in accounting for the potential conflicts between policy makers, policy implementers, and interest groups.

3.3.9 Resource Dependence Model

The resource dependence model of Aldrich and Pfeffer (1976) considers organisations as operating in turbulent and uncertain environments over which they try to gain control. Because critical resources are often controlled by other organisations, organisations must find ways to ensure a smooth and predictable flow of resources from other organisations. This could be done through co-option, or establishment of ties to leverage resources from other organisations. Once an organisational strategy is pursued, a network of relations is created that may constrain the subsequent behaviour of actors. The original focus of this theory was on individual organisations as a unit of analysis, but later resource dependence theorists conceptualised the organisation/environment interface in inter-organisational network terms.

The premise of the resource dependence model that organisations operate in difficult situations is not far from reality, especially in the developing world. But there has always been a goal towards which all organisations strive. Hence the need to inquire as to why and how these goals are developed amidst all the uncertainty - who are the major actors in the process, what are their functions, hopes, needs, constraints, fears, potentials, etc. One also needs to find out about the pressures organisations receive from various interest groups and persons, and perhaps the resulting conflicts, since they can hardly satisfy everybody due to inadequate resources. Organisations naturally establish contacts with each other whether they have adequate resources or not. A researcher therefore needs to know why and how organisational links are established in the first instance, before delving into the nature of the links, that is, whether they are strong or weak, and

in either case be in a position to discover why. One can then consider the impact of the networks on individual behaviour in terms of performance, information sharing, efficiency, degree of compliance etc. . Thus the model needs further modification to provide for the inclusion of all the issues raised.

3.3.10 Discussion

Despite the differences in the last three models, they tend to overlap with regard to certain issues. They are at one concerning the existence of networks between organisations, and cultural, professional and governmental agencies in an effort to influence the conditions under which organisations operate. Resource dependence and social class perspectives could be viewed within the institutional framework as examples of how organisations seek to co-opt political actors who represent generalised belief systems.

Even though the resource-dependence, social class, and institutional models make reference to the two-way influence between organisational networks and individual behaviour (which is largely intra-organisational), they tend to deviate from enhancing an in-depth understanding of intra-organisational issues, and instead concentrate wholly on inter-organisational networks. However, in the light of the importance of internal organisational structures and individual behaviour on inter-organisational relations, control of power, organisational performance, participation levels in organisational activities, organisational effectiveness and efficiency, and communication flows, the failure of these models to adequately treat intra-organisational issues is a major gap that

needs filling. Researchers cannot afford to care less about treating intra and inter-organisational issues as inseparable entities in organisational analysis. Thus, instead of a shift from the analysis of intra-organisational issues to the study of inter-organisational relationships, the current need is to merge the two approaches in order to develop a more comprehensive framework for the analysis of both internal and external organisational networks, thereby serving as a basis for organisational analysis and organisational theory in general.

3.4 CONCLUSIONS

The foregoing discussions point to the fact that inasmuch as individual theories contribute to the understanding of certain principles and practices, they do not always prove completely exhaustive on the subject matter to be analysed. Thus, policy analysts have to learn the art of combining the approaches of various schools of thought in order to develop a comprehensive analytical framework to suit individual demands.

The prescriptive models of policy making are too rational and idealistic to be real. They preclude considerations that have to do with policy making in a realistic and complex world with different internal and external stresses and pressures from various interest groups. No provision is also made for the multifarious problems faced by policy makers in the policy process. The descriptive models attempt to bridge this gap by introducing the concept of the boundedly rational decision maker who satisfices rather than maximises. The descriptive models tend to bring policy making closer to the real world, but they are largely limited in scope as they either address inputs to the policy process or policy outputs, but hardly address both. Since policy outputs usually reflect the inputs to

the policy process in the real world (Hogwood and Gunn, 1990), it is important that both the inputs and outputs of policy making are critically analysed in order to enhance a better understanding of the policy process, especially in terms of the various pressures policy makers have to respond to and how this is reflected in the policy decision making process.

Malayang's model provides a general framework for the analysis of pressures on policy makers and how a balance is achieved - which is the policy itself. The development of a double-barrelled approach by applying Malayang's model in a regulatory output sense provides for special emphasis on the role of conflicting groups and individual interests in policy formulation in Sierra Leone. It also bridges a major gap in the earlier approaches by treating both the inputs and outputs of policy. The inputs being the pressures on policy makers, and the outputs being the balance of pressures (policy) and resulting conflicts between winners and losers.

Even though organisational theories/models can be divided into two broad groups - micro-perspective and macro-perspective - most of the organisational models have tended to concentrate on the micro-perspective model of organisational analyses which focuses on intra-organisational issues, with little or no reference to inter-organisational issues. Another major limitation has to do with the fact most of the micro-perspective models discussed earlier fail to give an exhaustive analysis of internal institutional arrangements. The organisational models that attempt to incorporate macro-perspective thinking, like the systems model, do not pay much attention to the assessment of the potential efficacy of interactions between input and output organisational sets. This is a

major handicap because individuals interact both formally and informally and hardly tune mode of interaction to the streamlined one-dimensional approach suggested by the systems model. The social class and institutional models which deal with inter-organisational relations also fail to consider intra-organisational issues.

The need, therefore, is for a macro perspective model of organisational analysis that will fill this gap. This is what the author aims to achieve by applying Grainger's organisational theory model to the analysis of institutional constraints to forest management in Sierra Leone. Grainger's model provides for the analysis of organisation strength, structure, and the internal and external conditioning of organisational behaviour in relation to the sustainable management of forest resources.

CHAPTER 4

MATERIALS AND METHODS

4.1 INTRODUCTION

This chapter describes the methodologies used to analyse forest policy formulation and implementation processes in Sierra Leone and the sources of data used for this analysis. It is in two main parts. The first part describes in turn the assumptions and principles of the models of forest policy formulation and implementation, the hypotheses tested in the course of the project, and the types of data required for this. The second part describes the data collected during the project, the sources from where they were obtained, and the design of the questionnaire and interview methods used to collect primary data.

4.2 METHODOLOGIES

This research was carried out using specific methodological frameworks to structure the analysis of policy formulation and implementation. Each methodology is now described in turn, together with the assumptions on which it is based and the data required to apply

it to the study of past and current experience in Sierra Leone. The formulation and implementation of forest policy form two sub-systems of an integrated forest policy system (Fig. 4.1).

4.2.1 Policy Analysis

4.2.1.1 Model Assumptions

This research takes a descriptive approach to the analysis of policy formulation. It assumes, based on the model of Malayang (1996) which was in turn based on political science theory (Latham, 1952; Bentley, 1967), that: (a) the forest policy process in Sierra Leone, like most developing countries, is largely centralised with policy formulated at the top by political leaders (the Executive) and senior officials (the Bureaucracy); (b) policy makers are subject to constant pressures from various individual and group actors with varying and sometimes conflicting interests, depending on whether their concerns about forest management are economic (exploitative) or environmental (protectionist); (c) the actual policy of the government at a given time corresponds to its true intentions but may not necessarily be identical to the last stated policy; (d) where no other information is available, the actual policy of the government can be inferred from events on the ground which the government makes no attempt to change, i.e. policy as done (Aucoin, 1971).

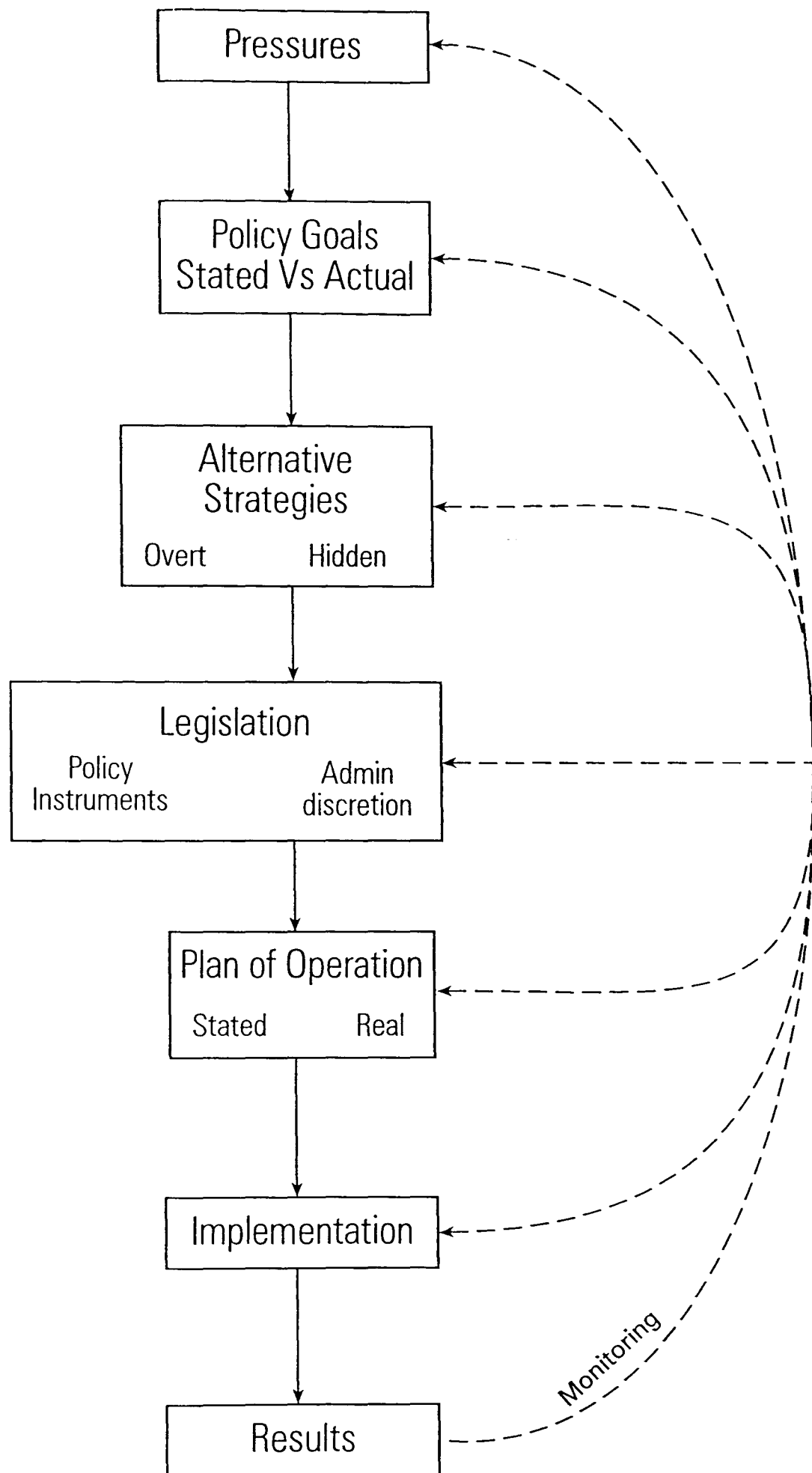


Figure 4.1: Policy Pressures Model
(Based on Malayang, 1996)

4.2.1.2 *Model Principles*

The basic principles of the model are: (a) the dominant goal of a government's actual policy at any time, i.e. exploitation or protection/sustainable management, is determined by the interests of the most powerful actors; (b) the strength of pressures received by policy makers from different actors is determined by both their social power and also their ease of access to policy makers and the efficiency of transmission of these pressures; (c) policy changes when the balance of policy pressures changes; (d) this in turn is related to changes in the relative powers of the actors involved, and to any stresses (social, economic, political or environmental) which impinge on actors and change their views.

4.2.1.3 *Data Requirements*

To study these factors it was therefore necessary to determine: (a) when forest policies and other directives or plans had been published in Sierra Leone and what their contents were (e.g. general goals and specific details); (b) the changes that occurred between successive policies; (c) who was involved in formulating forest policy; (d) how the policy was formulated; (e) the major actors influencing policy formulation; (f) changes in the relative power of each actor over time; (g) the pressures on policy makers, the actors from which pressures came, and the pressures which policy makers had to respond to; and (h) gaps between stated and perceived actual policies.

4.2.1.4 Hypotheses

Major hypotheses arising from the model were: (a) there was a gap between the stated and actual forest policies of the government, which revealed a hidden policy agenda; (b) policy changed when the balance of policy pressures changed; (c) this was linked to a change in the relative power of major actors and to stresses on them.

4.2.2 Institutional Analysis

4.2.2.1 Model Assumptions

This research took the view that government policy is implemented by one or more organisations, of which the most important is the Forestry Division of the Ministry of Agriculture, Forestry and Natural Resources (or the Forestry Department in the colonial era). It used organisation theory (Dessler, 1992) to model the transmission of policy through the organisation from core to periphery, and assumed that: (a) organisations are the means by which power and authority is structured to promote realisation of an organisation's goals; (b) the organisation of forest management consists of a hierarchy of functional units, i.e. at national, regional and local level; (c) organisational outputs are a function of organisational structures, behaviour, processes, and both internal and external linkages; (d) organisations shape their policies and activities in conformity with government policy and local demands; (e) the larger the organisation, the more complex it becomes, the more linkages it establishes, and the more pressures to which it has to respond.

4.2.2.2 *Model Principles*

An organisation theory model (Grainger, 1996) was used to explain why organisational behaviour deviated from its ideal (rational) behaviour and resulted in the policy as implemented differing from the policy as originally formulated.

The capacity to condition policy as implemented away from policy as formulated is determined by the structure of the implementing organisation, its overall strength (as measured by personnel numbers, financial resources, material resources etc.), and how the latter influences, through their working conditions, the functioning of the staff of the organisation.

As policy is transmitted from the top of the organisation to the grassroots, it passes through various levels of the organisational hierarchy, i.e. national, regional and local. At each level are groups of actors who constitute the linkages along the chain of command and have varying degrees of discretionary powers to determine the course of implementation. Each actor has the potential to distort policy, according to his or her own particular needs, and pressures exerted by external actors. The accumulation of distortions along the chain causes policy as implemented to be different from policy as formulated.

The degree of compliance by actors with policies transmitted to them from the top of the organisation is influenced by: (a) their degree of participation in policy formulation; (b) their overall morale, which depends on level of commitment to the organisation, salary,

training, information sharing, team spirit etc.; (c) their degree of discretion in interpreting policy; (d) the degree of supervision of their work by headquarters, and the strength of their relationship with it, both of which may be a function of the distance from the centre of the organisation; (e) pressures exerted on them by external actors; (f) conflicts between the culture of the organisation and that of the environment in which it operates at grassroots level.

4.2.2.3 Data Requirements

Data were required on: (a) the evolution of the structure of the Forestry Division and the former Forestry Department; (b) its strength; (c) the physical, social, and political infrastructure available for the execution of functions, e.g. in terms of offices, equipment, finance, personnel, and an established hierarchy of control/authority; (d) the effect on individual behaviour of the education, qualifications, and experience of the employees; (e) the degree of commitment and compliance to the goals of the organisation at different levels of the chain of command ; (f) the effect of staff morale on the effectiveness and efficiency of the organisation; (g) internal organisational processes, concerned with decision making, information sharing, and delegation of responsibility; (h) which organisations the Forestry Division was in communication with; (i) the nature and strength of these linkages; (j) the impact of these links on internal organisational networks and organisational performance in general; (k) the types of pressures received from external organisations; (l) conflicts resulting from the inability to satisfy the needs of certain groups owing to lack of resources.

4.2.2.4 *Hypotheses*

Major hypotheses arising from the model were: (a) distortion of policy was a result of internal institutional behaviour, or external institutional linkages, or a combination of both; (b) effectiveness of implementation was a function of organisational strength; (c) compliance with stated policy by different actors within an organisation was a function of (i) the strength of the organisation and its influence on staff morale, (ii) the geographical or social distance from the centre or capital, and (iii) pressures from within and outside the organisation to modify policy at particular levels.

4.3 DATA COLLECTION

4.3.1 Data Sources

Four main data sources were used: official documents, the academic literature, and original data collected by informal interviews and formal questionnaires.

Administrative records were examined in the Forestry Division of the Ministry of Agriculture and Forestry in Freetown, Sierra Leone, and in appropriate non-government organisations and Multilateral donor organisations, to identify and obtain formal policy documents, and key directives and plans relating to the period 1912 to the present day (Table 4.1). Other documents consulted included consultancy reports on agroforestry projects and afforestation programmes in Sierra Leone; policy-related reports undertaken by individuals and/or groups in Sierra Leone, the Sierra Leone Gazette; and the National

Development Plan. The establishment of a National Documentation Centre (NADOC) at the Ministry of Development and Economic Planning made it relatively easier to access what other data were available - though that was really not much. Other archival material of the Forestry Department and Forestry Division was consulted at the library of the Oxford Forestry Institute, University of Oxford. Academic literature on forestry in Sierra Leone was obtained there and from other sources.

Table 4.1 List Of Multilateral And Bilateral Donor Organisations, And NGOs Consulted In Sierra Leone During The Field Study

TYPE OF ORGANISATION	NAMES OF ORGANISATIONS
Multilateral and Bilateral Donor Organisations	United Nations Development Programme/ Food and Agricultural Organisation of the United Nations (UN/FAO) German Technical Cooperation (GTZ) Overseas Development Administration (ODA)
International Non-governmental Organisations	PLAN International CARE Sierra Leone Royal Society for the Protection of Birds/ International Council for Bird Preservation (RSPB/ICBP) World Wild Fund for Nature (WWF) Wildlife Conservation International National Science Foundation
Other Non-governmental Organisations	Conservation Society of Sierra Leone (CSSL) Commonwealth Human Ecology Council Sierra Leone (CHECSIL) Organisation for Research and Extension of Intermediate Technologies (ORIENT) Project Green Scenery Future in Our Hands Friends of the Earth Council of Churches of Sierra Leone (CCSL) Rokel Leaf Tobacco Development Company Limited (RLTDC).

Analysis of administrative records provided information on the location, characteristics, and size of the forest reserves and ranger districts. It also provided data on the various Forestry Division Offices and Non-Governmental Organisations involved in forest management in Sierra Leone. For both the Forestry Division (FD) and NGOs, information was collected from their regional and local offices as well as their national headquarters. The Regional Forestry Offices in Freetown, Bo, Moyamba, Portloko, Mile 91, Kenema, Kambia, and Makeni were also visited.

Because of the limited amount of information available in official records, it was necessary to complement this by a questionnaire survey and interviews. Officials involved in policy making within the Forestry Division and NGOs were interviewed for their views on why policy changes occurred, who was responsible for formulating forest policy, who was consulted in the process, and what pressures they responded to (Table 4.2). Questionnaires were administered to forestry staff at all levels of the organisational hierarchy to ascertain their level of involvement in the policy formulation process, their awareness of the existence of policy documents and the extent to which they guide their activities, and the functioning of organisations.

4.3.2 Questionnaire Design

The research design used in this project was arguably more comprehensive than in earlier researches. Various designs and sampling procedures were adopted in the past for the

Table 4.2 List of Questionnaire Questions

<p>SECTION A: THE POLICY DOCUMENT</p> <ol style="list-style-type: none"> 1. Is there a policy document that guides your operation? (Y/N/DK) 2. For how long has this policy been in existence? (>10y/<10y/DK) 3. Are the purposes/goals of this policy clear to you? (Y/P/N) 4. Are you required to follow strictly the policies in this document? (Y/N/DK) 5. Does this policy identify broad goals? (Y/N/DK) 6. Does the policy define specific objectives? (Y/N/DK) 7. Has the policy document undergone any changes since it was first developed? (Y/N/DK); If yes, please specify. 8. What in your opinion is the reason for the change(s); Please state reasons. <p>SECTION B: THE POLICY FORMULATION PROCESS</p> <ol style="list-style-type: none"> 9. Was the policy document developed by the central/national government only? (Y/N/DK) 10. Does your organisation develop its own forest policy? (Y/N/DK) 11. Is your policy developed in agreement with government policy? (Y/N/DK) 12. At what level (s) are officers involved in policy formulation? (N/D/L/NAA/DK) Please state in your opinion what is responsible for this? 13. Are local community groups involved in policy formulation? (Y/N/DK). If yes, why? If no, why? 14. At what level(s) are consultative meetings held for policy forest formulation? (Na/D/Lo/DK). Please state why? 15. Do outside groups or individuals (donor organisations, interest groups, constituency representatives, etc.) influence policy formulation ? (Y/N/DK) If yes, please state the various groups or individuals? If yes, in what ways? 16. How often do policy makers accept conditions set by these outside groups and individuals on policy formulation? (A/S/No) <p>SECTION C: INSTITUTIONAL LINKAGES</p> <ol style="list-style-type: none"> 17. Does your organisation have sole responsibility for implementing forest policy? (Y/N/DK) 18. Does your organisation work closely with other GOs in implementing forest policy? (Y/N/DK). If yes, please specify which GOs? 19. Does your organisation work closely with other NGOs in implementing forest policy? (Y/N/DK). If yes, please specify which NGOs? 20. What is the level of information sharing between your organisation and other organisations? (AL/S/No) 21. Does your organisation share equipment with other organisations? (Y/N/DK). If yes, please specify which equipment and what organisation? 22. Does your organisation share personnel or offer expert services to other organisations? (Y/N/DK). If yes, please state how this happens? 23. How strong are your links with other organisations? (VS/S/Av/W/No) Please in your opinion what is responsible for this? 24. What is the level of information sharing within your organisation? (H/L/No). 25. Are you encouraged to express your opinion to other workers? (Y/Se/N) If yes, please specify?
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26. Do you get on well with other workers in your organisation? (Y/Se/N)
Please state reasons for your answer?

SECTION D: COMPLIANCE POLICY GOALS AND OBJECTIVES

27. To what extent are forest policies successfully implemented? (A/Se/No)
28. Is the institutional arrangement of your organisation good enough for the successful implementation of forest policy? (Y/N/DK). Please give reasons for your answer?
29. Based on your experience within the organisation, does the rate of success rate of forest policy implementation increase with nearness to the centre/national level (Y/N/DK).
Please give reasons for your answer?
30. Is the success rate of forest policy implementation based on the frequency of contact with the centre/national level? (Y/N/DK). Please give reasons for your answer?
31. Is the degree to which an organisation successfully implements forest policy related to the extent to which the organisation participates in the policy formulation process? (Y/N/DK)
32. Is the degree to which your organisation successfully implements forest policy related to the amount of external pressures on the organisation during the implementation process? (Y/N/DK).
If yes, please give examples?

SECTION E: INSTITUTIONAL STRENGTH

33. What level of equipment and resources are available to help you successfully carry out your work? (H/L/No)
34. What training did you receive for your present job? (F/P/No)
35. Are you satisfied with the training you received? (Y/P/N)
36. Are your job duties related to what you expected to do? (Y/Se/N)
37. Are you satisfied with your working conditions (Y/P/N). Please state reason for your answer?
38. What level of freedom is given your organisation in implementing forest policy? (H/L./N)
39. Is the level of freedom granted your organisation in implementing policy related to the financial, material and human resources of your organisation? (Y/N/DK). Please give reasons for your answer?
40. Does your job allow you to make major decisions that affect your work? (Y/Se/N)
41. Are meetings held at regular intervals to plan and evaluate progress? (Y/Se/N)
42. Does your organisation have a promotion system that lets the best qualified person rise to the top? (Y/N/DK).
43. Do you want more opportunities in your job to assume more important responsibilities? (Y/N/DK)
44. Is your organisation better run under the NPRC than under past governments? (Y/N/DK)
45. Are there criticisms by employees about your organisation? (Y/Fe/N)
If yes, please state the criticisms?
46. Have you ever been transferred from one job or area to another? (Y/N). If yes, please state number of times?
47. What in your opinion was the reason for your transfer?
48. What do you think about transfers? (G/B/Ne)

Notes:

Y=Yes, N=No, DK=Don't Know, No=None, S=Some, AL=A lot, Se=Seldom, VS=Very Strong, S=Strong, Av=Average, W=Weak, H=High, L=Low, F=Full, P=Partially, Fe=Few, G=Good, B=Bad, Ne=Neutral, Na=National, D=District, Lo=Local.

analysis of policy and institutional settings, e.g. one-shot case studies, *ad hoc* sample surveys, and analysis of administrative records (Robson, 1997). But rarely has a synthesis of two or more approaches or research designs been employed. Analysis of institutional settings has largely been largely restricted to analysing internal institutional arrangements with little or no reference to vital external linkages with other institutions which heavily bear on internal structures (Doktor and Lie, 1991). This author would argue that a complete analysis of policy and institutional arrangements requires a multi-directional approach.

The use of a questionnaire was based on the assumption that respondents were both willing and able to give truthful answers. Serious thought was given to the extent to which respondents were be willing to rummage around in file cabinets to find requested data. Thus, the questions were made as simple and understandable as possible. The author also undertook to administer the questionnaire in person in order to reduce the possibility of misinformation. Gibson and Hawkins (1968) stated that each study using questionnaires is unique and must be tailored to fit the individual circumstances of the study.

Moser and Kalton (1971) noted that a questionnaire is not just a list of questions or a form to be filled out. It is essentially a scientific instrument for measurement and collection of particular kinds of data. Like all such instruments, it has to be specifically designed according to particular specifications and with specific aims in mind. Thus, the author did not only administer questionnaires but resorted to unstructured interviews and observation techniques in situations in which administering questionnaires proved

problematic. Even when questionnaires were administered, unstructured follow-up questions were sometimes asked to elicit the required information (Berger and Sullivan, 1970).

4.3.2 Survey Design and Implementation

The sample survey design used a structured questionnaire administered to a sample of 156 employees of the Forestry Division and Non-governmental Organisations (NGOs) involved in forest resource management at headquarters, regional, and local levels in Sierra Leone. In comparison with previous research, which often concentrated on a certain cadre of bureaucrats referred to as "policy makers" disregarding the "underdogs" and "beneficiaries" at the grassroots, this sample was designed to be as representative as possible.

Structured and unstructured interviews and observations were also conducted to elicit information from barely literate and/or illiterate forestry-related personnel, and from an additional 44 representatives of local target groups, such as chiefdom elders, local tribal heads, and community representatives in selected areas with representative forest reserves. Several visits were paid to forest communities at Gola North reserves, Kangari Hills, Dodo, Gwala, Nimini, Sankan Biriwa, Loma, Tama (Tonkolili), and around the Western Area. Government officials in other Ministries like Development and Economic Planning; Interior and Rural Development; Lands, Housing and the Environment and Agriculture were also interviewed in order to establish the linkages between other government Ministries and Departments, and the Forestry Division. Rose (1976) stated

that even though observing behaviour is a useful enquiry technique, the interview is a flexible and adaptable short-cut to seeking answers to research questions. The use of human language in unstructured interviews opens a window to both the behaviour of the respondent and what lies behind his/her actions. Interviews also offer the possibility of modifying a researchers line of enquiry as thought provoking responses are received. The questionnaires were largely self-administered.

A proportionate stratification sampling procedure was employed to determine the composition of this sample of 200 persons. Identification of the sample of 156 forestry officials at the national, regional and local levels of both the Forestry Division and NGOs started with preliminary visits to the various units in the different administrative levels (national, regional, local) of the organisations. During these visits, officials within each unit of the various administrative levels were placed into distinct groups or strata based on their levels in the management hierarchy (i.e. senior, junior, casual). A list of all employees was then reconstructed into a matrix based on these stratification factors, and separate samples selected from each stratum for the purpose of administering questionnaires or conducting interviews. The sample sizes were proportionate to the population within each stratum. The selection of correct proportions from each stratum was expected to reduce the sampling error of survey variables to which the grouping is related. This approach ensured that various viewpoints were gathered from different administrative units without having to work with an extremely large sample size.

Whether a questionnaire or an oral interview was used depended on the literacy of individual employees. Because of the low literacy level among casual forestry personnel,

they were largely subjected to oral interviews. These were recorded on micro-cassette tape to create a more relaxed atmosphere which holding papers might have militated against, and to ensure accurate reproduction at a later stage. By so doing the researcher was able to elicit information on the functions, potentials, fears, conflicts, strengths, weaknesses, internal linkages within the institutions, and external linkages between institutions in their quest for sustainable forest management.

The sample of 44 representatives of local communities and other government Ministries were determined through consultative meetings with local communities and employees of the Forestry Division. The sample size was proportionate to the number of reserves in each province. The author guided the selection process to ensure that the sample was representative of people from various works of life, and of various ages such as chieftom elders, local tribal heads, youth leagues, teachers, students, and both senior and junior employees of other government departments. The interviews were also recorded on tape.

Informal visits (site observations) were also paid to samples of local communities within forest reserves to gain first-hand personal information, e.g. on the current status of the forests, the attitudes of the local communities to forest management and the reasons for this, their reactions to conflicts with central government in forest management, and ways by which their participation in the forest management process could be improved. The visits were very informal to enhance close interaction with the various target groups, and individuals within the local communities.

4.3.3 Data Analysis

These data were analysed qualitatively and quantitatively. Quantitative data were coded, summarised and presented in tables and analysed using simple percentages. The tables were then subjected to simple T-tests to analyse the significance of variations between responses. Qualitative data and existing documents were subjected to various forms of content analysis, some of them using numerical techniques. Some of the data collected were reproduced verbatim and other data were summarised.

CHAPTER 5

THE FORMULATION OF FOREST POLICY IN SIERRA LEONE

5.1 INTRODUCTION

Fifteen years ago, the Government of Sierra Leone acknowledged that forests in the country were poorly managed, claiming that the seeming current lack of policy on forestry has been responsible for the neglect of this sector in recent years (GOSL, 1982). But is there really a lack of policy, or merely a lack of an up-to-date stated policy, and is this the only cause of the problem? Could poor policy implementation also be to blame, or perhaps a combination of both? The aim of this chapter and the next is to find answers to these questions.

Sierra Leone is not unique in having problems of this kind. Many developing countries have no written forest policy at all, and in those that do the policy is decades old and consists of a list of general praiseworthy goals that have little to do with guiding present forest management activities (Poore, 1989). But lack of attention to formal policy does not mean that a government has no interest in its country's forests or no policy on them.

Aucoin (1970) distinguished between policies as stated, implied, perceived, or done. Stated forest policies are often all things to all men, so as to disguise a hidden policy agenda (Rees, 1990), such as forest exploitation, or conflicts between policies for different sectors, e.g. forestry and agriculture. All governments must surely have a policy on the forests in their countries, though they may not want to turn this actual policy into a formal stated policy. If the latter does exist it may not correspond to the actual policy.

The chapter is in two main parts. The first part traces the evolution of forest policy in Sierra Leone since colonial times, assessing whether the stated policy at each stage was equivalent to the actual policy, and if not what the latter was. Where there is an ambiguous forest policy situation, it is customary to assume that, whatever the stated policy, how the forest is treated conforms with the government's actual policy, i.e. policy as done. The degree of success in implementing these policies is evaluated in Chapter 6.

Another crucial question concerns what determines a government's policy and what causes it to change. Actual policies are rather fluid phenomena representing, in Malayang's (1996) model, the balance of pressures on policy makers at a given time. If the model is correct, then policy changes should occur when the balance of pressures changes, which is related to changes in the relative power of different groups, and their ability to transmit pressures, which depends in turn on the degree of democracy and pluralism in the country.

The second part of the chapter tackles this question by identifying the major groups that have influenced forest policy in Sierra Leone in the last hundred years. It assesses the changes in their relative power as the country moved from colonial rule to independence, and links between these changes and changes in forest policy.

An important assumption in Malayang's model, which is retained in this chapter, is that changes in central government policy can be fully implemented so as to have the desired effect in peripheral forested ranges. This assumption is relaxed in Chapter 6, which assesses the extent to which poor forest management is also caused by poor implementation of existing policy, as a result of institutional constraints.

5.2 THE EVOLUTION OF STATED AND ACTUAL POLICIES

5.2.1 Colonial Era

5.2.1.1 1808-1912

For more than a hundred years after the Crown Colony was established in 1808, Sierra Leone had no stated forest policy. Intensive exploitation of timber from Sierra Leone's forests began in 1816 when John McCormack began exporting timber from the Bullom Shores, Scarcies and Portloko areas (MacGregor, 1942). Former slave trade depots were soon flourishing as timber depots. By 1840 forests near the coast had been depleted and exploitation moved inland, but while exports declined after 1860 because of supply limitations, no organised attempt was made at conservation or reforestation until

1911, when the colonial administration appointed Lane Poole to assess the status of the country's forest (Ribot and Cline-Cole, 1997). It therefore appears that the actual policy until then was to promote unrestrained exploitation, for the benefit of timber trade entrepreneurs.

In his report, Lane Poole (1911) stated that 99% of the rain forests of Sierra Leone had been destroyed by local people through wasteful and reckless methods of shifting cultivation, and that the peace and prosperity that followed the end of the tribal wars had led to an increase in the farming population and a reduction in fallow periods. He made no mention of uncontrolled logging by European traders which actually also contributed to forest depletion and proposed no plans to counteract this. A wrong diagnosis of the problem therefore led to solutions that were unworkable in practice, further extending the actual policy of exploitation.

5.2.1.2 The Forest Act of 1912

However, Lane Poole's report did lead to the formulation of the country's first Forest Act and to the establishment of the Forestry Department in 1912. He served as the first Conservator of Forests (Cole, 1968). Acts of Parliament, and other legislation are not policies in themselves, but in as much as they are intended to provide a set of rules to implement the policy, they say a lot about the policy.

The Forest Act of 1912 generally emphasised the protection of forests. It included legal procedures for establishing forest reserves, especially on hill tops, and along river banks

and railway lines. It also sought to protect rubber trees, vines and gum copal. On land designated as forest reserves jurisdiction was transferred from local people to the central government. Any form of harvesting by local people in the reserves was strictly forbidden and punishable by law. The Act emphasised the need to promote the well being of the country as its primary goal, and to preserve climatic and physical stability, but contained nothing to guide the practical management and exploitation of the forest reserves (GOSL, 1912). This is not a unique problem. For example, in the USA, the Forest Reserves Act of 1890 gave the President authority to designate areas of public lands as forest reserves but did not specify how or if the forests should be managed. The problem was not resolved until the Forest Management Act in 1897 gave the Secretary of the Interior authority to regulate how forest reserves were used (Williams, 1989).

5.2.1.3 Amalgamation of the Forestry and Agriculture Departments

In 1922, the Agriculture and Forestry Departments were amalgamated under the Commissioner of Lands and Forests. The reason given publicly for this was to improve efficiency, but it would appear that the actual motive was to cut costs - little revenue was being received by the government at this time from the forest reserves (Buttoud, 1995; Fairhead & Leach, 1996) - and to promote timber exports (MacGregor, 1942).

5.2.1.4 The 1929 Directive: From Conservation to Exploitation

A major change in actual policy occurred in 1929, when the Agriculture and Forestry Departments were made separate entities again. Although the 1912 Forest Act still

remained in force, the colonial administration issued a new Directive announcing that it was abandoning forest reservation and concentrating on timber exploitation and the rehabilitation of small areas of degraded farmland which had been designated forest reserves (GOSL, 1930). The Forestry Department was expected to become financially self-sustaining and higher timber production was expected to help it achieve that. Even though this new directive was not a formal policy document, it was a public statement of a change in actual policy towards a more exploitative approach.

One result of this new approach was the establishment of the first pit-sawing plant at Kenema, with the aim of making the country self-sufficient in sawn timber. All forestry operations, i.e. logging, processing and marketing, were now carried out by the Forest Industries Branch of the Forestry Department, using specially recruited technical officers.

With the outbreak of World War II in 1939, further emphasis was given to implementing this actual (and stated) policy, to increase timber production to levels not achieved hitherto, for in 1939 the country was only 17% self-sufficient in sawn timber, (Cline-Cole, 1993). By 1944, sawn timber production peaked at 15,576 cubic metres per annum, compared with less than 5,664 cubic metres before 1939. There was a sharp rise in firewood production too (Fig. 5.1). The increase in production to supply both domestic and war needs, e.g. wood for bridge and railway construction (Killingray, 1982; Dummett, 1985; Evans, 1944), was achieved by the Royal Engineers Forestry Company, which established and operated two large sawmills at No. 2 River and Kasewe in 1942. Two other mills - a small lumber mill and a mangrove firewood mill - were established and operated by the Forestry Department, which also supplied rubber. wild

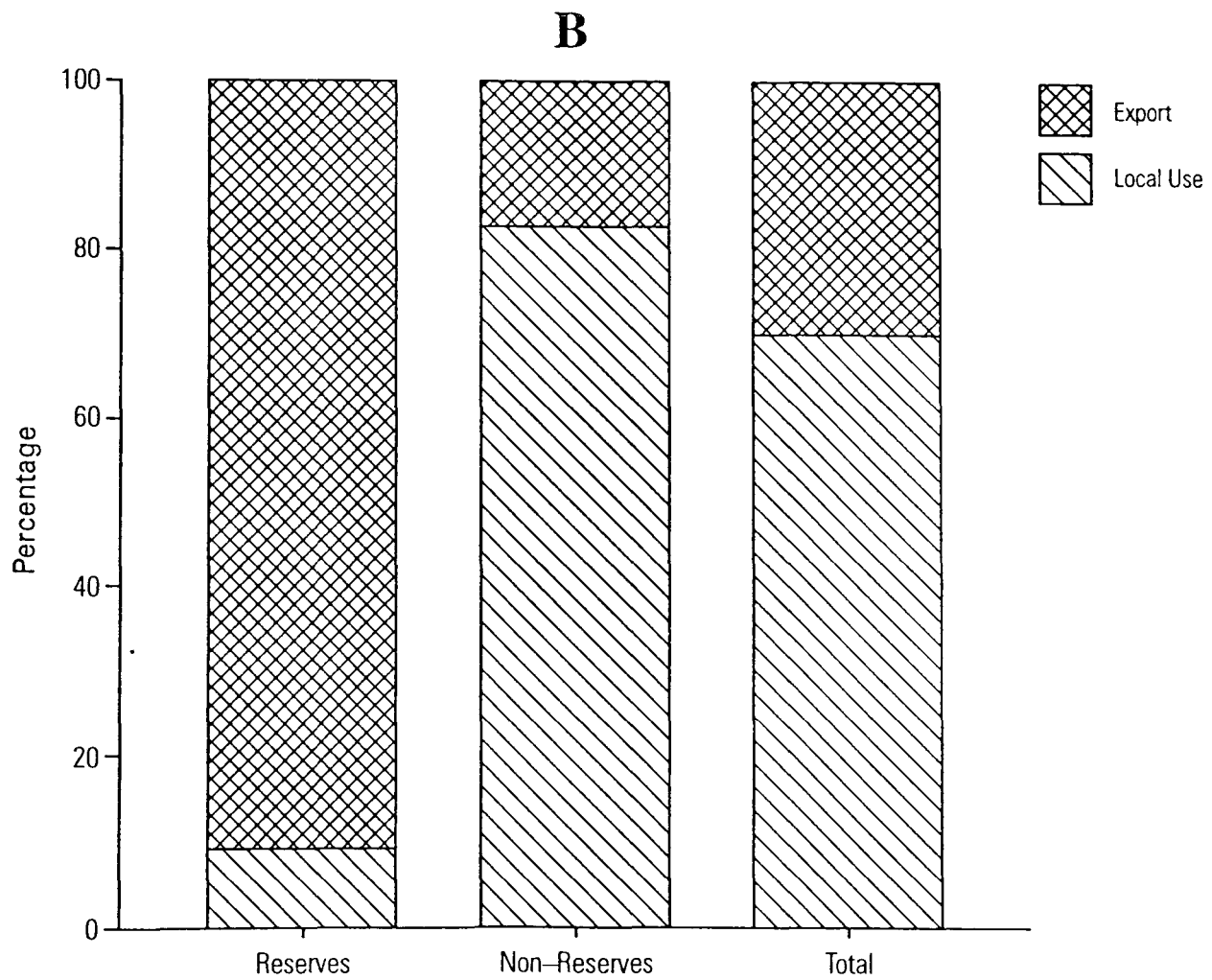
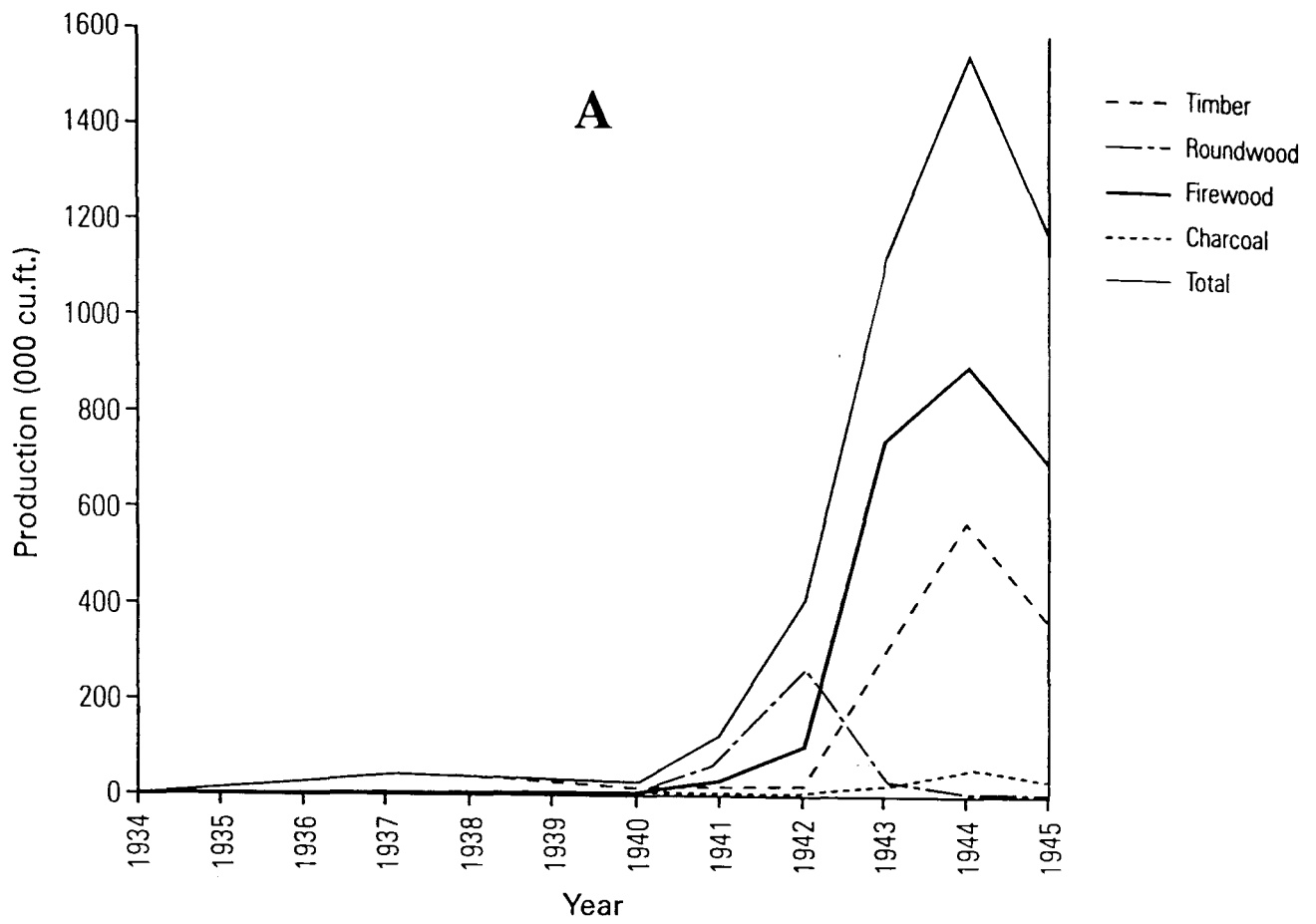


Figure 5.1 : Forestry Production in Sierra Leone, 1934 – 45
 (Source: Cline – Cole , 1993)

silk, shea nuts and shea nut butter for export. Forest products were probably the country's most important export commodity at this time (Cline-Cole, 1993). Britain appointed a Resident Minister to co-ordinate West Africa's contribution to the allied war effort (Allison, 1946; Olusanya, 1973; Njoku, 1981).

The colonial administration's actual policy of self-sufficiency and export promotion was successfully implemented under wartime conditions, but at a cost. First, low pay and poor working conditions reduced the morale of forestry staff, who were often reassigned to non-forestry duties that were even more essential to the war effort (Blood, 1941). Second, the high degree of intervention by the colonial administration distorted market prices, because it now controlled the marketing and export of all timber. Third, intensive logging badly depleted timber reserves. The first sawmill closed in 1945, and the second was shut in 1949 when log supplies in the vicinity were exhausted. The equipment from these mills was then transferred to Kenema, which continued to produce wood only for domestic needs. Even this sawmill closed later when local enterprises were unable to continue operating it.

Export demand for timber from Sierra Leone declined, owing to the lack of markets for the wide mix of species being processed by the mills (Blandford, 1942), and complaints from importers about the excessive hardness of local timber and need for pre-boring before nailing. These difficulties were compounded by ignorance about the true mechanical strength of the timber, and the high transport costs caused by long distances and poor road links between forested areas and the ports (Kamara, 1994).

5.2.1.5 *The Forest Policy of 1946*

In view of these problems, and the general depletion of forests caused by 15 years of intensive exploitation, in 1946 the Conservator of Forests proposed a limited programme of forest conservation and afforestation in the form of a new Forest Policy which was accepted by the Colonial Administration as Sessional Paper No. 2 of 1946 (GOSL, 1946). This provided for the protection and development of natural vegetation when this was essential for climatic stability, soil and water conservation for agriculture, and ensuring an adequate supply of forest products. It also included provision for an organised forest administration on a territorial basis, the systematic training of field staff, development of a decentralised indigenous forestry administration, ecological and silvicultural research, an economic approach to management, exploitation of the forest estate for the benefit of the people without impairing its protective functions, and building public awareness so as to develop a universal forest sense by demonstration and education.

Although the main goal of the new policy was to achieve a balance between forest reservation and economic development, involving the judicious utilisation of forest products without depleting the resource base, in practice it seemed to be geared towards implementing a hidden agenda of preventing local people - for whose supposed benefit the policy was enacted - from harvesting forest products. Subsequently, no new protected forests were constituted, and traditional rulers even made requests for the dereservation of parts of the roadside forest reserves, primarily to allow villages and towns to expand.

The 1946 policy therefore lacked practical appeal to the people of Sierra Leone, and seemed to be just another example of saying one thing and doing another. When the colonial administration did make several attempts to promote the protective functions of forests they were received politely by the populace, but deforestation continued. This was due to the fact that forest communities were never actually consulted before and during the forest policy formulation process, neither were they provided with an alternative means of securing their livelihoods which would have reduced their dependence on forest products.

5.2.1.6 Pre-Independence White Paper

In 1960 the colonial administration issued a White Paper on natural resources, including agriculture, livestock and fisheries, as well as forestry. The aim was to give advice to the forthcoming government of independent Sierra Leone. It emphasised improving productivity through the use of more up-to-date farming methods, better crop storage and marketing, the improvement of living standards, and the conservation of land for future generations. On forestry, it stressed the need to patrol and protect the forest estate, undertake forest surveys and research, manage forests on a sustained yield basis, promote natural regeneration and forest maintenance, and only undertake new planting when proper protection and management had been achieved (GOSL, 1960/61; Cole, 1968).

5.2.1.7 *Conclusions*

The colonial administration and its commercial associates exploited Sierra Leone's forests widely, and while some effort was put into enhancing forest management, it was not as effective and sustainable as expected. The first Colony was established in 1808 but the colonial administration did not have full control over the country until 1896, when their dominion was extended to include the rest of Sierra Leone, which became known as the Protectorate. This might explain the apparent delay in developing the first Forest Act of 1912.

The Governor and his officials also had to act under instructions from the Secretary of State for the Colonies and probably found it difficult to introduce new ideas into Sierra Leone without seeking approval from London. Later events were to prove that the belief that over-exploitation of forests in African countries was a function of the colonial system, and would change after Independence, was sadly misconceived. What happened after 1961 showed that stark deviations between fine-sounding government policies and what actually happens on the ground are not confined to colonial regimes.

5.2.2 Policy after Independence

5.2.2.1 *The First Twenty Years*

The stated Forest Policy of 1946 remained in place after Independence in 1961, although there was a shift from the former protectionist view to one that placed more emphasis on

forestry as a business, as forestry activity expanded to meet the growth in demand for sawn timber for construction, furniture and joinery. This change of outlook greatly helped to arouse public awareness of the value of forests and forestry (GOSL, 1974).

The Forestry and Agriculture Departments were again amalgamated under the Ministry of Agriculture, Natural Resources and Forestry in 1962 with the aim of enhancing a closer working relationship between the two (GOSL, 1963/64), and a comprehensive Ten-Year Development Plan was prepared in 1964 by the new Ministry of Agriculture, Natural Resources and Forestry (MANR&F) (GOSL, 1964/65). This was more of a short-term strategy to implement the 1946 Forest Policy, rather than a new policy statement in its own right, although it did contain a few additions. It was geared towards managing forests for both protective and productive purposes. The latter included minor forest products, which provided an important intermediate yield before timber trees matured.

Forest protection was also promoted by the Bush Fires Act, which prohibited burning on upland farms in the dry season without seeking the assistance of five other people, though since the Act did not require these to be adults, often children were used and this led to many problems (Allieu, 1992).

Ambiguity about forest policy continued. For example, in 1969 a mass film campaign was launched to create public awareness about the benefits of forestry, but a few years later this was followed by a government initiative to increase the rate of exploitation to substitute for imports of forest products, which had more than doubled in 1973 (Kamara,

1994). World Forestry Day was first observed in Sierra Leone on 21 March, 1974, and there was a new drive to promote the establishment of forest plantations on farms, e.g. by holding Agricultural Shows in the provinces and incorporating forestry into Integrated Agricultural Development Projects. However, the planting rate was slower than expected, and by 1974 plantations only covered 52 square kilometres, or 3% of total forest area (GOSL, 1974).

The lack of a substantive and up-to-date forest policy to guide forest management provided a conducive atmosphere for those in high places to capitalise on obsolete clauses in the 1946 Forest Policy, e.g. those dealing with harvesting levies, so as to allow forests to be exploited with hardly any return to the government and with no regard to the environmental implications. Much of the legislation was very broad and had no specific provisions for forest preservation and sustainable management. Some of the penal provisions were no longer taken seriously by potential offenders. Dubious deals and contracts were made, leading to the uncontrolled exploitation of forests for the benefit of a select group of individuals and organisations. Also contributing to deforestation was an increase in mining, shifting cultivation and fuelwood cutting.

5.2.2.2 The 1982 Forest Sector Review

The 1946 policy remained in place for 42 years. By 1980, the government had recognised that it was obsolete and therefore requested the United Nations Food and Agriculture Organisation (UN/FAO) to undertake a comprehensive Forest Sector Review. FAO's report drew attention to the high rate of deforestation and gave high

priority to the need for afforestation programmes for soil conservation purposes. It also made proposals for a new Forest Act that would include strict penalties for violators (FAO, 1982).

However, the government did not implement these proposals. Many top officials benefited directly or indirectly from the ambiguous policy situation and wanted it to stay that way. For example, politicians within this period felt a bit more secure in their jobs after the introduction of the one party system of government and individually undertook a number of construction and farming projects on both state and privately owned land with readily available timber and forest lands to satisfy their desires at hardly any cost to them. Many private houses were built at Hill Station in Freetown on government land formerly occupied by forests. What the government did do, however, was to give a high priority to agricultural expansion, which would convert even more forest lands to farming. The lack of protection and inadequate reforestation inevitably led to high levels of illegal felling and encroachment on remaining forest reserves.

The government promoted agricultural development by establishing a Green Revolution Programme in 1986. This recognised forestry as an important component of land use and agricultural development. Its main goals were to conserve and develop forestry areas to protect soil and water resources in order to maintain climatic stability, to promote forest regeneration to replenish soil fertility on abandoned agricultural lands, and to increase significantly the production of non-timber forest products which contributed directly to the food supply. Priority was also given to the development of fuelwood plantations and agroforestry schemes. However, despite funding from

international agencies and the extensive publicity given to ceremonial tree planting schemes, the programme did not achieve any of its desired objectives and the total area of new plantations established was insignificant (FAO, 1988). Yet again, the hidden agenda of the government was made plain by its actions - or rather the lack of them. The hidden agenda here being the government's inherent interest in financial gain by faking commitment to the national tree planting programme and undertaking massive publicity to satisfy the interests of international donor organisations that had already committed large sums to the programme or were thinking of supporting the programme. Such funds were never accounted for when the programme was considered as closed. Such pranks by people in very high offices creates the need for a thorough re-examination of foreign investment especially in agroforestry programmes and projects in the developing World. The huge sums invested in forestry development by donor organisations seem to have very little effect on the ground as evidenced by the above. For until and unless the root causes of forest depletion and mismanagement are actually addressed, foreign aid will simply serve the purpose of treating leprosy with skin cream which will only pretend to heal the surface without actually addressing the core problem. This invariably results in a vicious cycle of foreign investment, misuse, poor forest resource management, forest depletion, degradation, and further requests for development aid.

5.2.2.3 *The Forest Act of 1988*

By the 1980s, what Gleave (1992) referred to as "the heady optimism of the independence years" had begun to evaporate giving rise to widespread international concerns about faltering development processes especially in the developing world.

Sierra Leone was no exception to this state of affairs. Following the government's lack of action in the 1980s, donors were reluctant to commit themselves to providing any more funding for forestry activities (FAO, 1988). This, and probably also pressures from them behind the scenes, gave the government a strong incentive to implement the proposals of the FAO Forest Sector Review of 1982, converting them into the Forest Act of 1988 with hardly a phrase changed.

The new Act contained provisions for reforestation programmes, concession agreements, land acquisition, stumpage rates and forest protection and development. There was also an afforestation fund so the Forestry Division had money to spend on tree planting. The Minister of Agriculture, Natural Resources and Forestry was empowered to declare any area a protected area for the conservation of soil, water, flora or fauna, and declare any type of tree protected too. The cutting, burning, uprooting or destruction of protected trees or trees in protected areas was forbidden. However, the Chief Conservator of Forests could grant a licence to authorise any person to fell trees in protected areas, and authorise any Forest Officer to issue a licence for the felling and extraction of a protected tree. This gave room for abuses that could defeat the objective of setting up protected areas. The Act also provided for competitive bidding on logging concessions of significant size, but did not specify what this should be.

The 1988 Act seemed to be a step forward, but in practice it was used by government officials to maintain their control over forest resources, and it led to an increase in the illegal invasion of protected forest reserves for personal benefit (GOSL, 1989).

The government's lack of commitment was apparent when subsequent programmes funded by international agencies also achieved poor results. For example, a fuelwood project initiated in 1988 with funds from FAO and the United Nations Development Programme (UNDP) to supply Freetown with fuelwood, and similar projects undertaken by PLAN International and the Rokel Leaf Tobacco Development Company in the provinces did not yield any positive results. The government also signed an agreement with FAO and UNDP in 1990 to adopt a national Tropical Forestry Action Plan (TFAP) for the country. FAO was mandated to look for other donor agencies to fund specific projects to implement this Plan, which contained wide ranging proposals to: address the role of forestry in land use through agroforestry, watershed management and forest development; support forest-based industries development by undertaking an inventory of forest areas; develop fuelwood plantations for domestic and commercial energy use; conserve forests for ecological purposes; and strengthen the Forestry Division. However, the long-term success of the TFAP programme was prejudiced because most of the ideas and funding came from overseas.

5.2.2.4 The National Environmental Policy of 1992

When a military regime took over power from the All Peoples Congress (APC) government in 1992, it established a new Ministry of Lands, Housing and the Environment (MLHE) which shared responsibilities with the Forestry Division in respect of environmental conservation. To meet conditions laid down by the World Bank for providing financial assistance the government also formulated an all-encompassing National Environmental Policy (MLHE, 1992), with the aim of achieving sustainable

development through sound environmental management, conserving renewable resources for the benefit of present and future generations, and promoting a better understanding of the essential linkages between environment and development.

In contrast to its fine-sounding stated policies, the actual priority of the military junta was to make its presence felt. For example, forestry department equipment, such as vehicles, which was already grossly inadequate for their normal role, was impounded and used for national security purposes. Stringent decrees were put in place to discourage the illegal harvesting of forest resources, but these simply left most of the forests at the mercy of the military so it could exploit them for construction and other purposes. So in contrast to its stated protectionist policy, the military's hidden agenda was to make forests available to those who considered themselves above the law.

5.2.2.5 Forest Policy Since 1996

In 1996, following a bloodless palace coup in February in which the Chairman of the National Provisional Ruling Council (NPRC) and Head of State, Captain Valentine Strasser, was overthrown by his deputy, Julius Maada Bio, elections were held six weeks later and the military government handed over power to a democratically elected government. In his inaugural speech, the new President, Ahmed Tejan Kabba, pledged to promote self-sufficiency and sustainability through proper management of the country's resources. No new forest policy was proposed, but it would have been redundant anyway, since the main problem now was not the lack of an up-to-date policy but the inability to implement a perfectly satisfactory one. Part of the reason for this

failure, however, was that forests became no-go areas during the five years of rebel war that preceded the return to democratic rule, with the government losing control of peripheral areas to the rebels.

Barely a year after the new democratic government took office, it was overthrown in May, 1997 by another coup by a military junta known as the Armed Forces Revolutionary Council (AFRC), which collaborated closely with the rebels of the Revolutionary United Front (RUF). Law and order broke down, the Central Bank and National Treasury were destroyed and other government offices (including those of the Forestry Division) were looted, making it impossible for government employees to return to work effectively or be paid for it. The rule of law has been suspended and replaced by decrees. Employee morale is at an all time low and hardly any forest management is now taking place.

5.2.2.6 Conclusions

It appears from this discussion that there has been a gulf between the government's stated forest policy and its actual policy since colonial times. The use of archaic and inadequate forest laws, coupled with inadequate funding, created an ambiguous policy situation on which political leaders and officials could capitalise to satisfy their personal vested interests. The level of discretionary powers granted to the Chief Conservator of Forests and his associates, with no up-to-date policy guidelines against which to compare their actions, enabled them to satisfy the needs of powerful groups whose aims might have been quite contrary to those of the stated policy of sustainable forest management.

Changes in actual policy have largely corresponded to changes in stated policy, but not always. For example, there were a number of instances of changes in actual policy between 1961 and 1981, even though the stated policy remained that of 1946. The continuous depletion of forest resources during the period of ambiguity between 1946 and 1988 was a clear manifestation of the operation of an actual policy of forest exploitation.

Reference is often made to policy failures that occur when a government intervenes to distort the rational management of the economy and the environment. But another type of failure occurs when it should intervene for the collective good and fails to do so. The history of forest policy formulation and implementation in Sierra Leone over the last hundred years is a prime example of this latter type of policy failure.

5.3 THE ROLE OF MAJOR GROUPS IN FOREST POLICY FORMULATION

5.3.1 Assessing the Balance of Pressures on Policy Makers

This part of the chapter analyses the processes that lead to the formulation of the actual and stated policies described in the first part of the chapter. Policy formulation and implementation processes in Sierra Leone can be represented by a single system, based on Mitchell (1989) (Fig. 5.2). The forest policy process in Sierra Leone, like most developing countries, is largely centralised, with policy formulated at the top by the Head of State and Cabinet, from where it is expected to trickle down to the grassroots for implementation. Forest policy makers in Sierra Leone are usually subjected to pressures

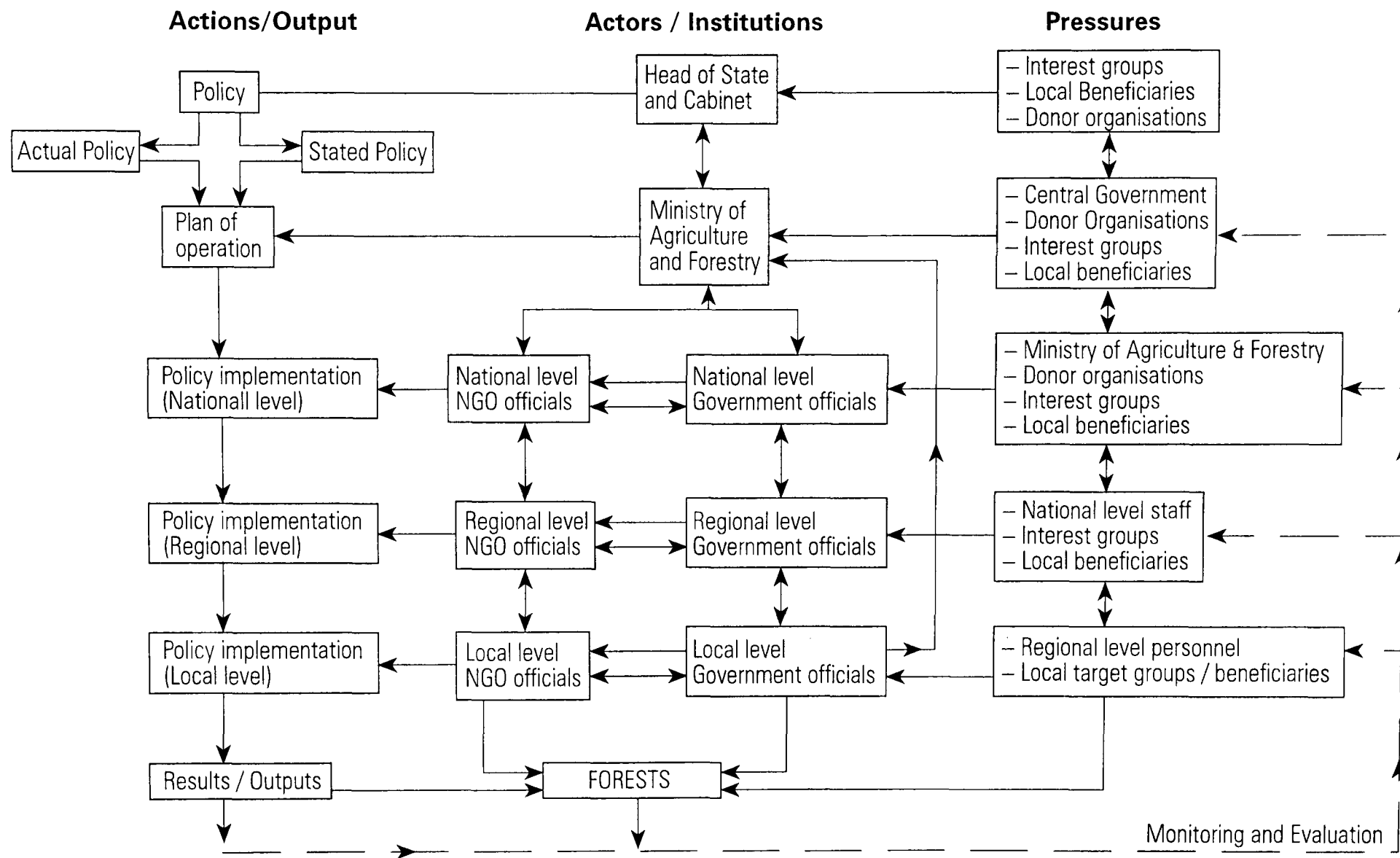


Figure 5.2 : The forest policy formulation and implementation system in Sierra Leone

(Based on Mitchell, 1989)

from various individuals and groups with varying and sometimes conflicting interests, which may be broadly defined as either economic (exploitative) or environmental (protectionist). In Malayang's model, described in Chapter 4, changes in government forest policy are associated with a change in the balance of pressures on policy makers, corresponding to changes in the relative power of interest groups. This can apply to both stated policy and actual policy.

The changes in stated and actual policy over the last hundred years are now interpreted in terms of changes in the relative power of ten main interest groups: (a) Executive; (b) Traditional rulers; (c) Bureaucracy; (d) Business elite; (e) Legislature; (f) External Actors ; (g) NGOs; (h) Church; (i) Media; (j) Military. For convenience the discussion is divided into two parts: (a) the Colonial Era, from 1808 to 1961; (b) the Post-Colonial era, from 1961 to the present.

5.3.2 Colonial Era

5.3.2.1 Executive

Forest policy formulation in the colonial era was largely centralised in the hands of the Governor. But while he had ultimate local responsibility for declaring areas as forest reserves and determining concessions, harvesting fees and royalties, his actions were always subject to approval by the Secretary of State for the Colonies, in London. Between 1808 and 1896, the power of the colonial administration was confined to the Crown Colony, which consisted of the Freetown Peninsula. It had little or no control

over forests in the rest of what is now Sierra Leone until 1896, when the Protectorate was declared.

5.3.2.2 *Traditional Rulers*

Traditional rulers are locally elected and appointed heads of local administrative units such as chiefdoms (Paramount Chiefs), villages (village heads) and tribes (tribal heads). Paramount Chiefs convey the aspirations and expectations of their chiefdom to policy makers whenever consulted. When serious problems arise they summon meetings to discuss them and determine the general view.

Even before the first proper survey of Sierra Leone's forests and the appointment of the first Conservator of Forests, steps were taken to appoint a Reserves Settlement Officer, whose main duty was to negotiate with tribal authorities to ascertain the legality and acceptability of the conversion of forest lands to forest reserves. The Paramount Chiefs played an important role in such consultations, because they had the final say in land allocation. Local inhabitants also had the right to appeal against such decisions.

Because of their deep-seated cultural attachment to land, local inhabitants, especially those within the Protectorate, refused to hand control over the land to the colonial administration. Instead they only gave the Forestry Department the right to remove timber from it. Thus, the 1912 Forest Act was wholly geared to establishing forest reserves but was highly problematic, owing to the lack of mutual trust between the negotiating parties. Local people were mainly concerned with short-term benefits from

the forests and tended to be protective of the land. They were never fully informed of the dangers of forest depletion, and so were not happy with the prohibitive rules that strictly forbade them to harvest produce within the forest reserves.

Once reserves were established, traditional rulers co-operated with the colonial administration in enforcing the rules and even developed local by-laws at the chiefdom level against the abuse of resources within the reserves. As a compromise, probably to avoid a revolt, no control was extended to forests outside the reserves, but this did not prevent local communities from imitating the government and overseas companies by exploiting the forest reserves. Some critics believe that the Forest Policy of 1912 was only a ploy to keep local communities away from the forest reserves, and that the consultations were a diplomatic means of gaining access to more forest reserves and justifying the legality of penal restrictions imposed on forest communities by the Crown. However, in retrospect, Paramount Chiefs probably were more powerful in the Colonial Era than they were afterwards.

The involvement of local communities at the negotiating table ended with the declaration of the reserves and penal restrictions. They were not involved in the daily management of reserves. The Reserves Settlement Officer was only consulted when there was a need to establish more reserves. Operational decisions were taken unilaterally by the Chief Conservator of Forests, subject to the approval of the Governor and the Secretary of State for the Colonies.

5.3.3 Post-Colonial Era

5.3.3.1 *Executive*

When Sierra Leone became independent in 1961, the country was ruled by an Executive consisting of a President and a Cabinet appointed by him and taken from elected Members of Parliament. The government decided to retain the centralised system of forest management established in the colonial era. No attempt was made to change the existing Forest Policy of 1946 or the Pre-Independence White Paper. Some of the colonial forestry staff were retained to help with the training of local foresters and forest management. However, there was a change in actual policy towards a more exploitative approach, under pressure from local and foreign businesses, as described below.

The Executive tried to manipulate actual policy to improve its own popularity and secure political advantage over other parties. For example, when it was in power, the Sierra Leone Peoples Party (SLPP) responded to protectionist pressures from the Media and the Church by establishing oil palm plantations. This gave the appearance of afforestation, provided income for the government and individual politicians, and promoted the SLPP itself, since its symbol was a palm tree. But when the All Peoples Congress (APC) came to power in 1967, it tried to undo this work by destroying large areas of palm plantations, especially in the north of the country where it had majority support.

Patronage and corruption increased markedly during the 1970s under the APC government and the link between the Executive and the Business Elite became ever closer. The APC introduced one-party government in 1978, using its powers as the Executive to further promote forest exploitation. This approach was continued by the Military when it overthrew the APC in 1992 and governed by decree instead of the rule of law.

Before the Military take-over in 1992, Cabinet Ministers were appointed by the President largely from among Parliamentary representatives, so ministers were under an obligation to their electorate and would try to influence policy formulation in ways that benefited the people in their constituencies. In the first eight years of the APC government, Cabinet Ministers had a reputation for being poorly educated and under the control of the President, but the Cabinet that served from 1977 to 1981 included doctors, university professors and other highly educated professionals, and these did make some notable innovations, such as inviting FAO to undertake a review of the forest sector.

5.3.3.2 Bureaucracy

Sierra Leone lacks a career bureaucracy. Leading civil servants are politically appointed, creating scope for the patrimonialism which is deep seated in the country. The highly politicised bureaucracy is compliant to the political will of the Executive, and also limited in its ability to control the activities of private entrepreneurs that usually implement the government's actual policy of forest exploitation. Though the bureaucracy is sometimes well represented at regional and local levels, the most powerful bureaucrats are those in

headquarters offices where actual policy decisions are made, following either brief or no consultations with officials and organisations outside the capital.

The role of civil servants in policy formulation is variable. They usually take care of most of the paper work relating to the production of forest policy documents, under instruction from Ministers. They are sometimes covertly used as instruments to create room for the actual policies of government by including vague clauses that give ill-defined responsibilities to leading officials. These could be used to circumvent the restrictions supposedly included in the stated policy. For example, the Forestry Act of 1988 gave the Chief Conservator of Forests unlimited powers to declare forest areas as protected or unprotected and to assign logging licences to whoever he/she deemed fit. This could be used to promote the interests of those responsible for appointing the Chief Conservator.

The bureaucracy had considerable influence in the colonial era when it was closely linked with the Executive. Its influence continued in the first seven years of independent rule, when the remaining colonial administrators were highly respected. However, its power decreased in the 1970s as patronage became more extensive under the APC government and the Business Elite became more powerful.

5.3.3.3 *Business Elite*

The power of the Business Elite in Sierra Leone has increased steadily over the last three decades, taking over more of the role played by the European expatriate business elite in

colonial times. This group is largely of Lebanese and Syrian origin, though it also comprises Fullahs from Guinea and Sierra Leone, and is based in Freetown and the major regional towns. Its main influence has been to promote forest exploitation, as did its colonial counterpart.

When the country became independent, local and overseas business interests exerted pressure on the government to make its actual policy even more exploitative than in the past, in order to expand timber production for construction, furniture and joinery. The official explanation was the need to increase self sufficiency for sawn timber. The actual reason was to make money for local business interests. However, the government received very little income from this exploitation which could be reinvested in forest management.

Through their close links with the Executive and the Bureaucracy they have been able to exert pressures to ensure that forest policy is business oriented, and royalties and licensing fees are fixed at rates satisfactory to them (though they are hardly ever paid). Officials are given bribes to facilitate the selection of logging licences. The commercialisation of the forest management process influenced the inclusion of open ended clauses into policy documents which could be used to meet the specific demands of this group, made even more powerful by the formation of consortia. The government has occasionally forced companies to divert from their profit-at-all-cost approach and operate in more environmentally-friendly ways. However, a combination of self interest and altruism is leading to a belated rise in business environmentalism.

5.3.3.4 *The Legislature*

In most developing countries the Legislature is dominated by the Executive (Blondel, 1995) and Sierra Leone is no exception. Even during the multi-party era, elected Members of Parliament had relatively little power, though they could play a significant role in delaying legislation and the views of influential members were heeded by the President. There was not much sharing of power between the Executive and the Legislature, so reformist legislation that threatened the interests of influential elites and their political representatives was delayed and/or heavily diluted by the time it became law. The Executive used its discretionary powers whenever possible to determine policy. After the transition to one-party rule in 1978 the power of the Legislature declined even further. In the March 1996 elections, Members of Parliament were not directly elected but appointed by proportional representation from party lists, since the electorate now voted only for the President and Party of their choice. This removed the problem of dual allegiance of political parties to both the electorate and the State.

5.3.3.5 *Traditional Rulers*

Paramount Chiefs used to be widely respected but became highly politicised during the APC era, some of them becoming involved in facilitating over-exploitation of forests by corrupt politicians. It became difficult for forest officers to bring to justice those responsible for illegal logging as this would mean going against the full force of their political backers - the local rulers. They therefore found it difficult to operate effectively for fear of losing their jobs and facing personal harm. The central government therefore

gave a *de facto* role to traditional rulers in local forest management. But this, and the fact that some were appointed by the government in contravention of long-standing electoral procedure, caused them to lose authority as the mouthpieces of the peasants they were supposed to serve, and paved the way for the abuse of forests by local inhabitants and the business elite. Despite a concerted attempt by the NPRC regime to restore their pride and integrity this will take considerable time.

5.3.3.6 *Donor Organisations*

After it became independent in 1961, Sierra Leone continued to receive bilateral aid from the British government, negotiated as part of the independence settlement and channelled to it through the Foreign and Commonwealth Office, most recently through the latter's Overseas Development Administration (ODA). It also received bilateral aid from other governments, such as West Germany, through German Technical Co-operation (GTZ), and multilateral aid from such agencies as FAO, UNDP and the World Bank.

Such donor organisations have mainly influenced forest management in the country by funding specific projects and programmes. But in the late 1980s, they actually exerted sufficient pressures on the government to change its forest policy. At that time, the stated forest policy of the government was still the Forest Policy of 1946, despite the wide-ranging forest sector review undertaken by FAO in 1981. Politicians, senior bureaucrats and the business elite had opposed FAO's proposals because they would have an adverse effect on their income. It was not until strong pressures were exerted by bilateral and multilateral donor organisations that the government published the new Forest Policy of

1988, corresponding almost verbatim to the recommendations of the FAO review. They were able to do this by threatening not to fund any new projects and missions until this was done. The government had to accede to their demands because it badly needed overseas aid to fund the Forestry Division.

Following the publication of the new policy, the government agreed to sign up to the Tropical Forestry Action Plan (TFAP). FAO co-ordinated preparation of a national TFAP for Sierra Leone and its implementation by individual projects supported by different agencies. For example, GTZ focused on the protection and rehabilitation of the Gola Forest Reserve; ODA on Forest Ranger certificate training, forestry research, forest inventory in the eastern region; the World Bank on supporting a national multi-purpose forest inventory and, together with UNDP, conservation programmes (GOSL, 1988).

5.3.3.7 *The Military*

The serious influence of the Military on the policy process in Sierra Leone dates back to March, 1967 when Military rule was established in Sierra Leone by the National Reformation Council (NRC), and the former ministries were replaced by eight departments additional to the National Reformation Council Secretariat, which was responsible for economic development and planning. The Freetown City Council was suspended and replaced by a Management Committee. The District Officers were also reverted to their pre-independence title of District Commissioners. The NRC suspended the constitution and wielded state power by a number of decrees which had to be

adhered to at all costs. The NRC was put down by another coup d'état thirteen months later, and a democratic government was restored.

The Military again became a dominant power in Sierra Leone after a group of junior Army officers brought down the one-party APC government in a coup d'état in April 1992, in frustration after the APC had cut soldiers salaries and ended their rice allowances. It was always an important arm of state power, but used to be largely autonomous and focused on national security and sovereignty, rather than politics, though there were a number of short-lived coups in the thirty years after Independence. Only when it took the reins of government in 1992 did it actually get directly involved in public policy making. After handing over briefly to a democratically elected government in March 1996, it took power again in June 1997, clearly feeling that it had a right to give political leadership.

When the new military regime came to power in 1992 it was warmly welcomed by many people in Sierra Leone, who were impatient for change after more than two decades of moral decadence and administrative neglect. It was also under immense pressure to prove itself to the international community, and to environmentalist groups within Sierra Leone. It made a good start by establishing a new Ministry of Lands, Housing and the Environment, and appointing technical and professional experts in various fields to advise it and develop national programmes for sustainable development. This resulted in a comprehensive National Environmental Policy in 1992, geared towards achieving sustainable development in Sierra Leone through sound environmental management. It

encompassed the activities of the Forestry Division even though the latter was in a different ministry.

But while the Military has publicly taken a protectionist stance on forests, it has in practice generally promoted forest exploitation. Its young leaders used rule by decree to obtain free timber for house construction and to gain huge sums of money for themselves from timber sales. Its stringent forest policy was simply a device to dissuade the public from interfering with the actions of a ruthless and greedy regime. The regime also alienated a lot of people by resorting to autocratic action to protect the environment. Minor mistakes and irregularities by staff of the Forestry Division were misinterpreted as being against the Revolution, resulting in gross violations of human rights that were frequently reported in the Media. This, and the secret logging contracts signed with local business interests, eroded the Military's credibility as environmentalists.

5.3.4 Less Influential Groups

5.3.4.1 Non-Governmental Organisations

The capacity and activities of non-governmental organisations (NGOs) have risen greatly in Sierra Leone in recent decades but are still not sufficient for them to exert a major influence on government policy. NGOs include all organisations that are not government or quasi-government agencies, e.g. charities, private voluntary organisations, church social welfare organisations, grassroots organisations etc. Their merits and limitations in comparison with government have been reviewed by Gordon-Drabek (1987) and various

strategies proposed to improve their relations with government (Korten, 1990; Edwards and Hulme, 1992; Farrington *et al.*, 1993). NGOs were divided by Farrington and Bebbington (1995) into (a) functional NGOs which actively deliver services in the fields of health, rural development etc. and (b) non-functional NGOs that include pressure groups campaigning on particular issues, and think-tanks concerned with policy studies. Farrington *et al.* (1993) distinguished between NGOs in terms of their scales of operation (grassroots versus larger scale), ownership (membership versus non-membership) and approach (enlightened top-down, partial participatory or fully participatory (empowering)).

NGOs only started to become active in environmental campaigning in Sierra Leone in the 1980s. Since then, both individually or collectively, have successfully influenced forestry programmes on a number of occasions. For example, it was the concerted efforts and commitment of NGOs and donor organisations to the afforestation programme that culminated in the government's declaration of a national tree planting drive in 1986. Sometimes their role has been to try to change government policy, and sometimes to promote or implement it (see Chapter 6). Several of the newer NGOs, like ORIENT (the Organisation for Research and Extension of Intermediate Technologies) and CHECSIL (the Commonwealth Human Ecology Council of Sierra Leone) focus on policy and regulatory change advocacy, questioning certain government forest management practices and the illegal harvesting of timber to which the government turns a blind eye. Others, like CSSL (the Conservation Society of Sierra Leone), play an important role in building environmental awareness among the general public. Relatively small NGOs enhance their overall impact on the government, and on national affairs generally, by

forming regional and local coalitions and national consortia. But even small but well established NGOs can provide a powerful representation at regional and national level for spontaneous grassroots organisations set up to protest about specific problems.

5.3.4.2 The Church

There is no established Church in Sierra Leone, though most of the country's Prime Ministers and Presidents have been nominal members of one of the many denominations in the country. The most powerful actors among these churches are the Council of Churches of Sierra Leone and the Roman Catholic Church. For a long time the attitude of the churches towards forests was broadly exploitative, but this changed in recent decades and is now fairly neutral, though some radical denominations take a more protective approach and the church voices its concerns about the environment and corruption through the media, in the pulpit and through other public forums.

5.3.4.3 The Media

The power of the Media has grown consistently over the last three decades. It has always held a very strategic position in the policy formulation process, being used by both politicians and interest groups to transmit pressures to policy makers. It promotes a rational debate on important issues by informing and seeking realistic and rational comments from them in return. Journalists in Sierra Leone sometimes argue against government policies at great cost to their personal welfare and that of their families through physical assault and imprisonment. The Media has played a vital role in

campaigning against abuses of forest management regulations and bringing to light alleged irregularities in the operation of the Forestry Division, It was also prominent in publicising the destructive mining activities of the Sierra Rutile and Sieromco companies, which were then forced by the government to undertake afforestation programmes. It also upholds the rights of grassroots communities and has successfully thwarted several attempts by the Forestry Division to violate these.

5.3.4.4 The Extent of Grassroots Consultation

Increasing popular participation in forest management was an integral part of the new Forest Act of 1988. This represented a major shift from the traditional approach in which rural people were regarded as ignorant and in need of guidance from the government on how to halt deforestation and undertake afforestation. After it seized power in 1992, the NPRC recognised the value of grassroots organisations by establishing a national network of Local Mobilisation Squads to articulate grassroots concerns to national government, on the one hand, and diffuse innovation and build awareness, on the other. However, in some areas, these local mobilisation squads usurped the role of local vigilantes/militia and levied untold misery and grief on grassroots communities. Local inhabitants were unreasonably fined and physical manhandled for minor breaches of forest laws and by-laws of which they might hardly be aware. Such draconian measures only succeeded in alienating local communities from the forests which invariably affects forest management.

Although government documents show that there has been progress in making the transition from the old centralised approach to forest management to a more decentralised one, a survey of government forestry personnel revealed that a majority felt that there is still little consultation at local level, and that consultations prior to forest policy formulation are concentrated in the hands of a few elites comprising politicians and professional forestry staff (Table 5.1). Reasons put forward to explain this ranged from lack of logistical support and finances for holding grassroots consultative meetings, to the inaccessibility of forest communities, and the belief among professional forestry staff that they know what local people think and so do not need inputs from them. The interviews revealed that forest communities now tend to accept this inferior role and do not even expect to be consulted by government officials, but rather carry out activities to ensure their personal livelihoods regardless of the implications for effective forest management.

Interviews at grassroots level suggested that people there were only consulted when a policy had been decided and was about to be implemented, e.g. by exploiting timber in nearby forests. Interviewees believed that forest policy formulation was the province of people in the capital city and had nothing to do with them, revealing a level of alienation that most residents of forest communities have come to accept as normal. Some of the people interviewed said they were only interested in managing a resource if they derived some benefit from it. As they were not consulted they thought there was no reason to get involved in forest management and so felt quite relaxed about illegal forest exploitation. When asked about grassroots consultations by senior forest staff at headquarters, a Forest Ranger confessed that all he was only interested in bringing up his children

because they will have to take care of him in his old age, and that he was not interested in forest management because it benefited only a few at the top. Such statements reveal a bleak future for sustainable forest management in Sierra Leone.

Table 5.1 The Opinions Of Employees Of The FD And NGOs About The Levels At Which Consultations Are Held For Forest Policy Formulation Expressed In Percentages

Organisations	National		District		Local		All Levels		Don't know		Total Responses
	#	%	#	%	#	%	#	%	#	%	
FD	81	78	10	9	3	3	6	6	4	4	104
NGOs	8	15	0	0	0	0	44	85	0	0	52
Total responses	89		10		3		50		4		156

Consultations with local people was regarded as entirely normal by a vast majority of NGO personnel, who involve representatives from national, district and local levels in their decision making processes through periodic meetings, workshops, brainstorming exercises etc.

5.3.4.5 *Changes in Power and Democratisation*

Experience in other countries (Malayang, 1996) suggests that if the government's actual forest policy is to become more protectionist then the power of groups favouring forest protection must increase. In practice, this also requires an increase in the level of democracy and pluralism so such groups are free to exert pressure and develop the necessary strength and influence to transmit this effectively.

Although it can be argued that the stated policy of the government of Sierra Leone on forestry has become more protectionist and less exploitative since 1961, it is clear that the actual policy has not changed very much. Moreover, while Sierra Leone was considered to be a democratic state before 1992, the real extent of democracy and pluralism was at a low ebb during the APC regime that preceded the military coup of 1992, because in 1978 the APC abolished the representative multi-party democracy that had been in operation since Independence, in favour of a one-party state.

The voices of ordinary people were hardly ever heard in the process of policy formulation. Decision making basically rested with self-seeking demagogues at the top of the political hierarchy. When the Military took over government in 1992 they attempted to reverse this process but their heavy-handed autocratic actions scared people from taking part in consultative exercises.

The reintroduction of multi-party democracy in 1996 again allowed credible opposition parties to act as checks and balances on the governing party, but this did not affect things very much in practice, as the government had such a large majority in Parliament. The Leader of the Opposition was actually suspended from Parliament for making subversive remarks to the effect that there was no real democracy in the country. In the year before the next coup the government's attention was focused on trying to end the five-year rebel war that had been raging in the countryside, and it made no further changes to forest policy.

5.5 CONCLUSIONS

The foregoing analysis of the policy formulation process in Sierra Leone has revealed a number of interesting findings that support the hypothesis that poor policy development is a major reason for poor forest management in Sierra Leone. The analysis reveals that even though forest management in Sierra Leone has been guided by some sort of policy over the century, there has been a consistent lack of an up-to-date forest policy to guide effective forest management. The lack of an up-to-date forest policy results in the use of archaic and inadequate forest laws, and this coupled with inadequate funding, creates an ambiguous policy situation which policy makers in Sierra Leone have capitalised upon over the years to practice their hidden agenda of satisfying their personal vested interests.

The lack of an adequate forest policy does not, however, imply a lack of attention to or interest in the country's forest resources on the part of the government. Even though they may not formally state them, all governments have policies towards the management of forest resources. Where stated policies do not exist, the government's policy usually correspond to its actual policy. The analysis of the evolution of forest policy in Sierra Leone revealed that for much of the last hundred years the actual policies of the government did not correspond to its actual policy. Even though the stated policies of the government (1912, 1946, 1988) have been protectionist over the years, government directives in 1922 and 1969, and its actual policies have consistently been exploitative, especially since 1922.

Consistent with Malayang's balance of pressures model, which was applied in a regulatory output sense to account for the reasons for changes in policy, actual policies in Sierra Leone reflect the balance of pressures on policy makers, resulting in ultimate winners and losers. Policy changes when the balance of pressures changes relative to the relative power of exploitative and protectionist groups. The dominant actors since the colonial era have been the Executive and the Bureaucracy, subject to varying degrees of leverage from the Business Elite, Traditional Rulers and later on the Military. The Traditional Rulers, who used to command massive land rights during the Colonial era, were major actors in determining whether land was converted to reserves or not. The interests of the Executive and the Business Elite became closely intertwined after independence and following the change of government in 1969, resulting in varying degrees of patronage, corruption and forest exploitation.

Even though the need for a new policy was recognised in 1981/82, it was not until 1988 that the government published a new policy, due to protectionist pressures from international donor organisations. However, due to the relatively late emergence of NGOs and other interest groups in the 1980s, they are still relatively weak and lack enough momentum and strength to counter the massive influence of exploitative groups. Thus, actual policy in Sierra Leone is still exploitative. Even though changes in actual policy sometimes correspond to changes in stated policy, this is not always the case. For example, between 1946 and 1988, there was no change in the official stated forest policy of the government of Sierra Leone, which was basically protectionist, but exploitation of forest resources continued to increase.

On the whole, two types of policy failures generally exist. The first type occurs when government intervenes to distort the rational and effective management of forests, and the second occurs when the government does not intervene when it should have done for the common good. Both types of policy failures could be exemplified in the Sierra Leone forest management situation in which a hidden agenda (actual policy) has always been adopted, in contravention of the stated policy. Sometimes obsolete policies have been used to guide forest management over a protracted period in order to create room for ambiguity which could be used to exploit forests.

CHAPTER 6

FOREST POLICY IMPLEMENTATION IN SIERRA LEONE

6.1 INTRODUCTION

Poor forest management may result from poor policy implementation as well as inadequate policies. Without effective institutions the stated policy goal of sustainable forest management can never be achieved. In most developing countries, and Sierra Leone is no exception, the state has difficulty in properly transmitting its policy from the centre to the grassroots, owing to weak linkages over the large physical, cultural and social distances separating the core from the periphery. Factors contributing to this include a lack of financial, material and human resources; a centralised hierarchical organisational structure; policy distortions at various levels of the organisational hierarchy, and differences in perception between high-level government officials and rural populations at the grassroots.

The aim of this chapter is to evaluate the institutional constraints on policy implementation in Sierra Leone. It uses an organisation theory model to compare ideal

implementation procedures with what actually happens in practice, and examine the structure and strength of forest management institutions, the institutional linkages for policy implementation, and the roles of the various actors involved, paying particular attention to the degree of compliance and relative efficiency of governmental and non-governmental organisations.

The first part of the chapter provides an overview of the degree of success in implementing stated and actual forest policies described in Chapter 5. The Forestry division's organisational structure and strength are assessed in parts two and three respectively. Part four assesses the influence of internal organisational linkages on the transmission of policy down the chain of command in both the Forestry Division and NGOs. Part five discusses the sharing of forest policy implementation between state organisations and NGOs in Sierra Leone. Part six evaluates the degree to which policy is conditioned by external actors. Comparisons between organisational features of the Forestry Division and NGOs are supported by the results of questionnaire surveys and informal interviews.

6.2 THE IMPLEMENTATION RECORD

The record of forest policy implementation in Sierra Leone is not a good one. Admittedly, operations had been brought to a virtual standstill during World War I (GOSL, 1946). But seventeen years after the Forest Department was established, and seven years after an attempt to improve its performance by combining it with the Agriculture Department, a government evaluation stated that it had not been able to fulfil

its goal of combating forest destruction with any appreciable degree of success (GOSL, 1930). Deforestation continued as before. The only forest safe from clearance was that in inaccessible areas.

A change towards a more exploitative actual policy occurred in 1929 with the aim of achieving national self sufficiency in sawn timber production and making the Forestry Department pay for itself. To implement this the first sawmill was established at Kenema and all operations (logging, processing and marketing) were run by the Forest Industries Branch of the Forestry Department. However, by 1939, only 17% of Sierra Leone's annual consumption of sawn timber came from domestic sources.

Forestry activities peaked in Sierra Leone during World War II, when the Forestry Department opened a mangrove firewood mill and developed furniture and joinery industries and the British Army built and operated two large sawmills. Military involvement and strict government control over the timber trade enabled the country to meet the previous policy goal of self sufficiency and the new goal of contributing to the allied war effort (Evans, 1944; Cline-Cole, 1993).

Full advantage was not taken of the possibility for a fresh start provided by the 1946 Forest Policy. Deforestation continued, there was logging outside forest reserves, and no new forests were planted. New camps were established, supposedly to allow forest guards and rangers to keep a better eye on the forest reserves, but this did little to prevent exploitation. In the late 1950s, as Independence approached, forest management was hampered by rapid staff turnover and the breaks in continuity which this caused.

Despite the fine ideals in the Pre-Independence White Paper on Natural Resources produced by the colonial administration deforestation continued after Independence in 1961, as did logging outside forest reserves. A loan and credit scheme was started in 1961 to support the establishment of plantations and other agricultural developments. But this merely resulted in the conversion of more forest land to agricultural uses. It was later phased out after having benefited only a select few.

On the other hand, some of the former colonial forestry staff stayed on to help with forest management and training of local foresters. The Forestry Department became the Forestry Division of the new Ministry of Agriculture, Forestry and Natural Resources. A new forest reserve was established at Gola North, and other reserves in the Moyamba District completed preliminary reservation procedures. Groups of Liberian squatters who were hunting, burning and farming illegally in forest reserves were successfully removed. This was one of the first instances of insurgency affecting forests in Sierra Leone.

One of the difficulties in assessing the effectiveness of implementation between 1912 and 1970 was the general lack of attention paid to surveying forests in Sierra Leone, which has been commented on by various authors (Lanly, 1981; Sayer et al, 1992). In the colonial era forest inventories were confined to appraising the timber content of forest reserves that were reasonably accessible, rather than surveying the forest resources of the whole country, so it was difficult to make reliable estimates of the rate of deforestation, or of how much afforestation was needed to supply future needs for forest products. A map of the forest estate was produced in 1961 (DOS, nd), followed later by an FAO

survey of forest resources (Smithussen, 1977). The latest (and probably the first) definitive national forest survey seems to be that carried out for FAO using 1976 aerial photographs at 1:70,000 scale). An assessment was also carried out by the UN Environment Programme in 1989 as part of a survey of forest in the whole of West Africa but it used low resolution (AVHRR) satellite imagery (Paivinen and Witt, 1989). However, the 1976 survey was chosen by FAO as the most reliable baseline for making its most recent estimate (FAO, 1993).

The quality of forest management deteriorated in the 1970s when the election of the APC Government led to an even greater emphasis on forest exploitation than before. The number of sawmills rose in the 1970s and was accompanied by an expansion of logging activities by contractors employed by the sawmill companies. An Italian company, with government participation, was granted a concession to exploit the Gola East and Gola West reserves without any restrictions (GOSL, 1974), resulting in overlogging and the use of improper logging practices. These reserves were also exploited by the SILETI Company, whose logging practices had the worst reputation of all. At the same time the Panguma sawmills were logging the Nimini Hills reserves, and the Forest Industries Corporation was logging the Kambui and Gola North reserves. By 1978, total roundwood production in Sierra Leone had reached 182,000 cubic metres.

NGOs became an increasingly important group of actors in implementing forest policy in the 1980s, in a response to the inability of the Forestry Division to control the continuing deterioration in forest cover. They focused on afforestation rather than the protection and management of existing forests. For example, NGOs like CSSL played a significant

role in the nation-wide tree planting campaign in 1986. Besides its extensive agricultural and rural development programmes, the Wesleyan Church of Sierra Leone also established a number of tree crop nurseries. NGOs became important intermediaries to transmit grassroots concerns to the government. Although progress was made toward decentralising forest management, as called for in the 1988 Forest Act, popular participation was still limited, owing to the Forestry division's lack of financial and material resources, and later the disorder created in rural areas by the rebel insurgency.

6.3 ORGANIZATIONAL STRUCTURE OF THE FORESTRY DIVISION

6.3.1 The Bureaucratic Model

An organisation's structure plays a key role in conditioning its behaviour. It influences communication between various parts of the organisation and the morale of its members. It may be considered unsatisfactory if it does not allow programmes to be executed as planned. The organisational structures of forestry departments in most tropical countries closely approximate to the ideal bureaucratic model of Weber (1952). This is a rational organisation with a hierarchical structure and formal rules, functioning by the actions of impersonal expert administrators who exercise authority so the wishes of those at the top are carried out by those at the bottom. Such a structure not only offers continuity but, according to Downs (1967) is essential for co-ordinating and managing large-scale activities. Other pluralist theorists believe that employees generally tend to resist the demands of their superiors in bureaucracies, which are therefore always at risk of dysfunctionality.

A major problem afflicting bureaucratic organisations is a tendency to be overcentralised, with professionals, administrators and funds concentrated at the top, leaving the lower levels understaffed and underfunded. Another has to do with the potential for intra-organisational conflict created by increasing differentiation as an organisation grows in size and as departments with incompatible goals strive to maximise their individual shares of a common pool of resources, or engage in disputes over territory. Every part of an organisation is in ecological competition for more human, financial and material resources (Dunleavy, 1985). Organisations also compete among themselves. Different government departments often compete with each other for funds, territory and influence. For example, the Department of Agriculture and Department of Forestry may each want to use a particular area of land, but for a different purpose. So an appraisal of the effectiveness of an organisation should examine its structure, strength, linkages and ability to comply with stated policies and implementation procedures.

6.3.2 The Forest Policy Implementation Process in Sierra Leone

The institutional arrangements for forest policy implementation in Sierra Leone are hierarchical, comprising national level, regional level, and local level, and form a subset of the forest policy system described in Chapter 5 (Fig. 5.2). The implementation process starts with the development of a plan of operation by the Ministry of Agriculture and Forestry. Although it is nominally the responsibility of the Minister of Agriculture and Forestry to provide the mode of direction for action, the normal procedure is for the Minister to delegate that responsibility to technical forestry personnel at headquarters. In

developing the plan of operation, officials usually come under pressure from various interest groups both within and outside the country.

6.3.3 Structure of the Forestry Division

6.3.3.1 1912-1962

Formal forest management in Sierra Leone began in 1912 with the establishment of the Department of Forestry as an independent government department under Lane-Poole. It initially divided the country into two regions, the Colony and the Protectorate, for administrative purposes.

In 1922 the Department of Forestry was amalgamated with the Department of Agriculture, ostensibly to increase efficiency but actually in order to cut costs. Foresters were forced to focus on agricultural work, such as establishing oil palm plantations, instead of protecting forests. This, and the differences in culture between the two former departments, created a good deal of antipathy between the agriculturalists and foresters. So the merger did not prove successful and the two departments became separate entities again in 1929.

After 1930 the Forest Industries Branch of the Forestry Department became increasingly important. The first sawmill was established at Kenema and the Branch was responsible for all operations (logging, processing and marketing). After the outbreak of World War II it opened a mangrove firewood mill and developed furniture and joinery industries. The Royal Engineers Forestry Company built and operated two large sawmills. These

were closed down when the war ended but all the equipment was moved to Kenema where timber processing was consolidated. One third of the entire forest estate at that time (891 square kilometres) was allocated to the Kenema Sawmill.

In 1960 the sawmill became a separate government department and the Forestry Department no longer had control over how it exploited forests. The Colonial Administration also established another sawmill at Kasewe, but limits were imposed on its activities (GOSL, 1962/63).

6.3.3.2 1962-1984

In 1962, a year after Independence, the Department of Forestry became the Forestry Division of the new Ministry of Agriculture, Natural Resources and Forestry, though it retained a large measure of autonomy. The Chief Conservator of Forests remained the executive head of the Division, which was also made responsible for rubber development and wildlife conservation (GOSL, 1962/63).

Between 1962 and 1984, the organisation of the Forestry Division was structured in such a way that the Chief Conservator of Forests and his headquarters staff were directly responsible for the overall direction and control of forestry staff in each of the four regions into which the country was divided. Most forestry activities were, like remaining productive forests in the country, concentrated in the eastern region. Each region was under the direction of a Regional Forester. Separate units were devoted to forestry research, training and utilisation (Fig. 6.1).

Once the plan of operation has been agreed, responsibility for implementing it is in the hands of national officials, such as the Chief Conservator of Forests and his staff, who have considerable discretionary powers. They give directives to Regional Forest Officers, who come under pressure from interest groups and local beneficiaries. The physical management of forest then takes place at the local chiefdom or village levels under the control of District Forestry Officers, who themselves come under pressure from other appointed or elected district level officials of government and NGOs, local target groups/beneficiaries, and local leaders such as Paramount Chiefs. In this structure the lines of responsibility, control and reporting were relatively clear cut, but somewhat long. Decision making was said to be slowed down by the length of the reporting chain (Atlanta, 1980). Another problem was the high degree of centralisation, so that everything revolved around the Chief Conservator, threatening a complete breakdown of authority in his absence.

6.3.3.3 Post-1984

In 1984, the structure of the Ministry underwent major changes. In the new structure the field staff of each division (Forestry, Agriculture, Livestock, Fisheries, and Land and Water Development) now reported to the Chief Regional Officer in each of the newly created seven regions. The Chief Regional Officers reported in turn not to Division

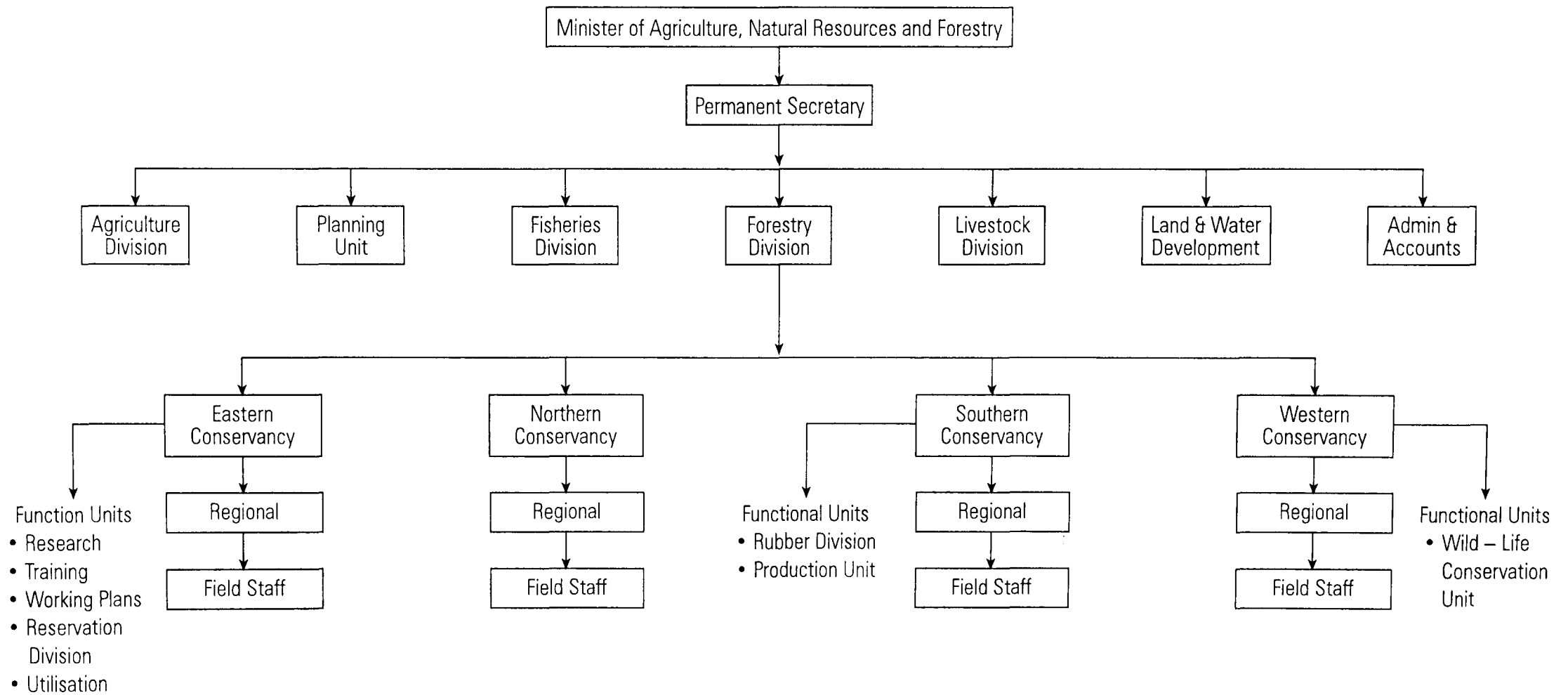


Figure 6.1 : Prior Organisation of the Forestry Division within the Ministry of Agriculture, National Resources & Forestry (1962 – 1984)
 (Source: FAO, 1988)

Directors (like the Chief Conservator of Forests), but to the Director General of the Ministry, a newly created professional position below the Permanent Secretary (Fig. 6.2).

The new, more decentralised, structure was a response to the recommendations made in the 1981/82 FAO Forestry Review for achieving better forest management, conservation and afforestation, through more community participation and institutional strengthening. It could also be considered as a pretence on the part of the government to implement the FAO recommendations of 1981/82 when, in reality, they were not committed to the implementation the recommendations. The restructuring was a ploy to appease other donor organisations that were committed to restructuring and revitalising the forest Division.

Although the new structure shortened lines of communication between field staff and their immediate superiors, it also made communication between Division Directors and field staff more indirect - through the Director General and then the Chief Regional Officers. Moreover, the head of the Forestry Division (and those of the other divisions too) no longer had direct authority over his field staff, even though they came under his divisional budgets. So coordination was more difficult than in the past.

Communication up the organisational hierarchy was officially the reverse of the above, and equally slow and awkward. For the sake of expediency, regional staff of each Division therefore continued to follow the old lines of communication, reporting directly to their Division directors, e.g. the Chief Conservator of Forests. With two channels of communication now operating there was great potential for confusion and conflicts, e.g.

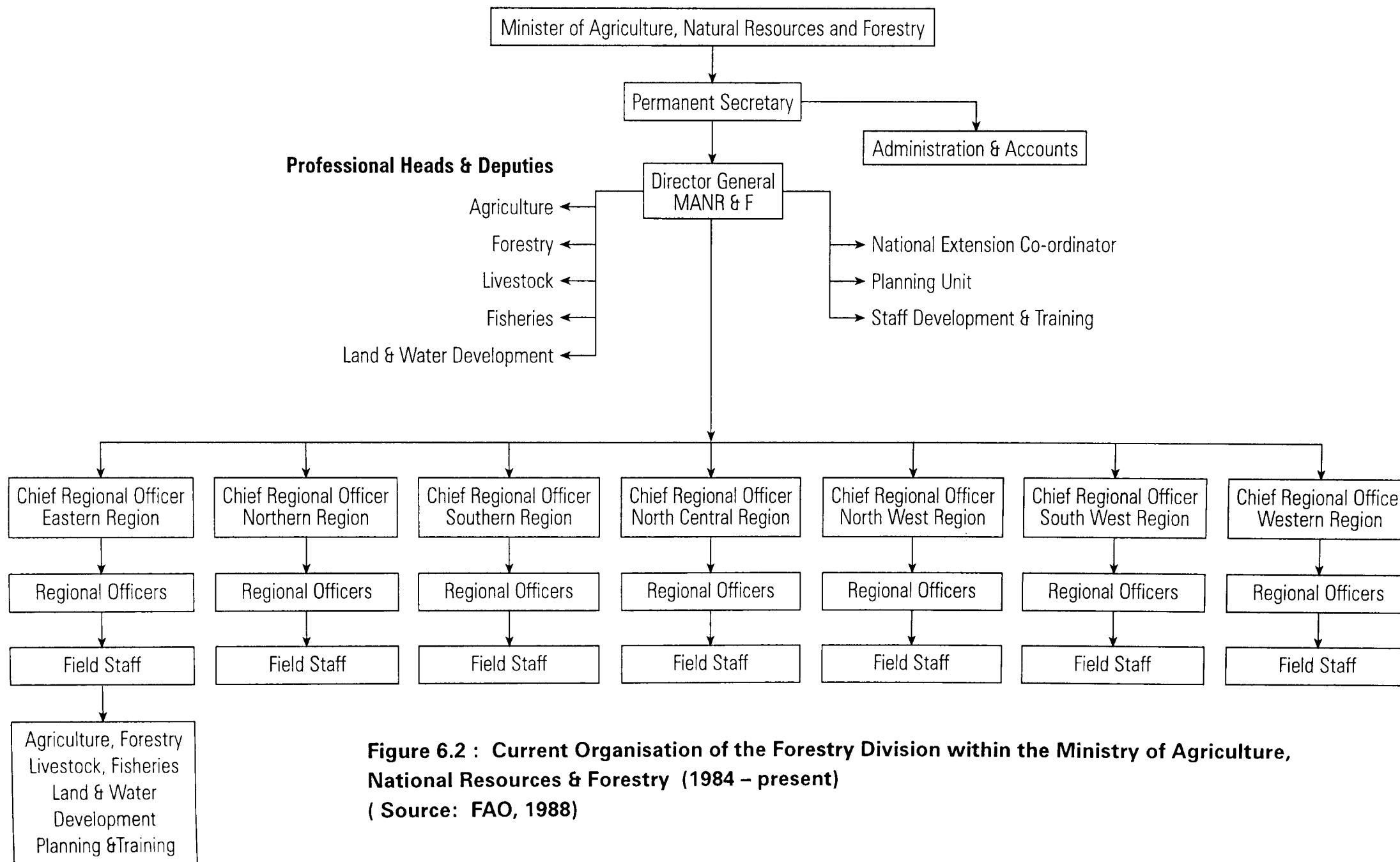


Figure 6.2 : Current Organisation of the Forestry Division within the Ministry of Agriculture, National Resources & Forestry (1984 – present)
 (Source: FAO, 1988)

at the top between Division heads and the Director General. The new structure also created dual allegiance by subordinate staff at all levels. Forestry staff at the grassroots might seem to have been unaffected by changes at the top, but they could easily fall prey to conflicting instructions from separate superiors struggling for authority and control.

If the disadvantages are so great why were the changes made? It could have been a simple attempt to decentralise power and control, in order to ensure greater public participation in forest management. Another reason may have been to reduce the influence of the Chief Conservator of Forests, who had dominated forest management in the country for decades. It could also have been a corruption control measure. A review of the new structure was recommended by the joint inter-agency forestry sector review mission set up under the auspices of FAO and UNDP (Tsoukers, 1993).

The new structure has had serious implications for forest policy implementation. The well defined chain of command has been constantly breached by regional staff who continue to follow the old lines of communication. The more the Director General is bypassed the more likely he will consider it an attempt to sabotage his authority. Even though the Chief Conservator of Forests has nothing to do with this development, it might lead to all sorts of suspicions about his role, which would inevitably affect the effectiveness of policy implementation. The possibility for intra-organisational conflict is therefore very great.

6.4 ORGANISATIONAL STRENGTH

6.4.1 Organisational Strength and Policy Implementation

Constraints on policy implementation caused by limitations of organisational strength and structure are closely linked. The strength of an organisation refers to the total availability of personnel and other resources, and its structure to how these are arranged in different hierarchical levels and locations. Organisations usually try to influence their environment by how they use the resources available to them, establishing a network of power to achieve their goals and objectives. Those with limited and inadequate resources are sometimes dwarfed into insignificance by organisations with huge financial, material and human resources.

The Forestry Division seems to have suffered from a chronic organisational weakness for most of its existence. But since most government departments in the country are also weak the Forestry Divisions problems do not seem to be just a consequence of inadequate policy. It therefore seems justified to regard policy limitations and institutional constraints as two separate - if interlinked - causes of poor forest management.

6.4.2 Personnel Numbers

Data were insufficient to monitor changes in the levels and distribution of forestry personnel in this century, though it is known that there was a drastic cut in staff levels

after the old Forestry Department was demerged from the Agriculture Department in 1929. Further cuts were made in 1970, for although more funds were allocated for forestry development wages were also increased at the same time.

On the basis of the best set of administrative records available, the Forestry Division currently has a staff of 15 professional foresters, 7 sub-professionals, 163 technical personnel and close to 900 other employees, a total of 1072 (Table 6.1). However, based on personal observations and interviews, the figure for “other employees” is not reliable. Established positions do not necessarily reflect appropriate staffing levels of the forestry division. For example, under the restructured Forestry Division, the established positions in the professional ranks were increased from 20 positions in 1987/88 to 29 positions in 1988/89, but only about half (15 positions) are currently filled. Sub-professional positions were also raised from 13 positions in 1987/88 to 17 positions in 1988/89, but only one-third of these (7 positions) are filled (GOSL, 1989). This clearly substantiates the degree of understaffing within the Forestry Division in Sierra Leone, even though records of established positions provide a highly misleading picture of the reality. Alternative sources of employment data in the Forestry Division yielded slightly different numbers that could not be easily reconciled.

The Forestry Division is subdivided into the rubber division and wildlife conservation. Even though the rubber division operates within the forest division, it has a separate budget. The rubber division is headquartered in the South from where it operates rubber plantations and extension operations to private plantation owners. The wildlife division operates within the forestry division and within its budget, with a small staff substantially

Staff	Headquarters	Western Region	Eastern Region	Southern Region	Northern Region	South Western Region	North Western Region	North Central Region	On Leave	Total
Professional										
Chief Conservator of Forests	1									1
Deputy Chief Conservator	1									1
Assistant Chief Conservator									1	1
Senior Assistant Chief Conservator of forest			1	1					1	3
Senior Forest Research Officer		1								1
Assistant Conservator of Forest		3	1		1	1	1			7
Forest Research Officer			1							1
Sub-Professional										
Senior Forestor			1					1	1	3
Forestor									1	1
Assistant Forestor		1	1	1						3
Technical										
Forest Supervisors		4			1	1		2		8
Chief Forest Ranger			1							1
Rangers		7	14	10	8	6	6	9		60
Head Guards			4	3	1			2		10
Forest Guards		16	17	13	10	4	12	12		84
Other Employees										
	2	22	23	20	8	14	17	9	2	115
Other Staff	3	9	8	10	6	3	3	5	3	47
Clerical & Accounts	3	104	164	161	109	72	59	53	3	725
Labour – Permanent										
Total Employees	10	166	237	219	144	101	98	93	4	1072

Table 6.1: Regional Distribution of Forestry Division Employees

(Source: FAO, (1988))

less than the established positions. It is headed by a Game Superintendent in Freetown, with field staff located in each region.

The wildlife conservation unit is badly understaffed relative to establishment levels, with only half of the established positions filled and mostly at the technical level. The production and utilisation unit is operating at about one-quarter, but with the shortages of equipment and parts, lack of operation and perhaps direction is unnecessary.

6.4.3 Levels of Financial and Material Resources

The majority of Forestry Division staff questioned by the author acknowledged the low level of resources and equipment at their disposal (Table 6.2). Further personal observations and oral interviews revealed that even the headquarters office has

Table 6.2 The Opinion Of Employees Of The FD And NGOs About The Level Of Equipment And Resources Available To Them, Rated As High, Low and None And Expressed In Percentage

Organisations	High		Low		None		Total Responses
	#	%	#	%	#	%	
FD	7	7	79	76	18	17	104
NGOs	48	92	4	8	0	0	52
Total responses	55		83		18		156

insufficient resources to function on a daily basis, and the situation is much worse for regional and local offices. There has been a long-standing shortfall between budgeted expenditure and actual expenditure. For example, in the 1987/88 financial year, actual spending was £6.3 million compared to the approved budget estimate of only £5.4

million (Table 6.3). It is understood that the deficit was met by overseas aid. After the second coup d'état in 1997, the institutional strength of the Forestry Division deteriorated further as it was looted, along with other government buildings, so it is hardly conducive as a place to work.

The low level of operation of the forestry division was further exemplified by the fact that, in 1988/89 for example, the forestry division's estimated expenditure totalled Le 9.88 million. Wages, salaries and allowances accounted for 90% of the estimates. Estimated expenditures on office supplies and equipment, travel, fuel, materials, etc., was Le 0.94 million and accounted for the other 10% of the budget. Not all of the funds allocated to other expenditures are spent, due to delays in purchasing approval and other factors. In 1986/87, the actual expenditures requiring purchasing approval were only Le 42,500 although budgeted estimates for these items totalled Le 246,400, so that wages, salaries and allowances were 98% of actual spending. In 1987/88, wages, salaries and allowances were 95% of the projected actual spending.

Conditions of service play a large part in influencing the morale of workers, their commitment to the management process, and hence the overall productivity of the organisation. The average salary of a Forestry Division employee, about Le10,000 (ten thousands Leones) per month, cannot even buy a bag of rice - the staple food in the country. Some forestry staff may therefore be tempted to make ends meet by taking bribes in return for allowing people illegal access to forests, which suffer as a consequence. More than 80% of FD employees questioned were not satisfied with their working conditions (Table 6.4). This is not surprising given their dilapidated working

Table 6.3: Forestry Division Budget Estimates & Actual Expenditures**Forestry Division – Ministry of Agriculture, Natural Resources & Forestry**

Expenditure	1986/87		1987/88		1988/89	
	Budget Estimates Approved (Le` 000)	Actual Spending (Le` 000)	Budget Estimates Approved (Le` 000)	Projected Actual Spending (Le` 000)	Budget Estimates (Le` 000)	Actual Spending (Le` 000)
Personnel						
Salaries	617.8	1,048.2	1,909.8	1,922.6	2,035.8	
Wages	1,315.4	2,518.3	2,687.9	2,688.0	5,552.4	
Allowances (Medical transport)	23.1	0.0	227.9	1,299.5	1,354.7	
Total	1,956.3	3,566.5	4,825.6	5,910.0	9,942.9	
Expenditures Requiring Expenditure Approval						
Overtime	1.0	0.0	1.5	0.0	1.5	
Transport, Fuel oil	45.0	32.2	60.0	60.0	80.0	
Total	46.0	40.0	61.5	60.0	81.5	
Expenditures Requiring Purchasing Approval						
Office and General	50.0	9.7	100.0	100.0	200.0	
Transport, Fuel oil	60.0	32.2	80.0	80.0	200.0	
Stoves	50.0	0.6	60.0	0.0	100.0	
Cablegrams, Postage	0.5	0.0	5.0	0.0	10.0	
Printing	2.0	0.0	5.0	0.0	10.0	
Office Furniture and Equipment	6.0	0.0	50.0	16.4	60.0	
Building Maintenance	10.0	0.0	20.0	0.0	30.0	
Purchase of Tree Seeds	2.0	0.0	10.0	0.0	20.0	
Agriculture Show	6.0	0.0	15.0	0.0	15.0	
Volunteer Support	12.0	0.0	20.0	8.7	20.0	
Urban tree Felling	6.0	0.0	10.0	0.0	10.0	
National Tree Planting Day	10.0	0.0	20.0	20.0	50.0	
Subscriptions	1.9	0.0	5.0	0.0	10.0	
Forestry Training School	15.0	0.0	30.0	25.1	50.0	
Upkeep of Bambawo Research & Training Centre	15.0	0.0	30.0	0.0	50.0	
Total	264.4	42.5	440.0	250.2	855.0	
Grand Total Expenditures	2,248.7	3,649.0	5,327.1	6,220.3	9,879.4	

- Notes:
1. Expenditures cover the Forestry Division including Wild Life Conservation, Production Unit, and Utilization. The Rubber Division is not included. It operates under a separate budget
 2. Fiscal years July 1st to June 30th.
 3. 1986/87 Actual Salaries and Wages expenditures exceed the estimates as a result of a salary and wage increase of 70% to 100% in Feb. 1987.
 4. 1987/88 Projected Actual Spending based on six months actual expenditure July 1st – Dec 31st 1987, and anticipated expenditures Jan 1st – June 30th 1988.
 5. 1988/89 Actual Salaries and Wages will be 75% to 80% higher as a result of an approximate 100% increase in salaries and wages planned to be introduced in Oct 1988.

Source: FAO (1988)

environments and low salaries and allowances. Even the most basic essentials for office and field work are sometimes lacking, so employees find it very difficult to perform to their maximum.

This is not a new problem however. For as early as 1941, a report from the Acting Governor to the Secretary of State for the Colonies said that professional staff in the Forestry Department were demoralised by low pay and poor working conditions, even though at this time timber production was rising at a rapid rate (Blood, 1941).

NGOs in Sierra Leone have much stronger organisations. A large number of the NGO personnel questioned believed they had high levels of resources and equipment (Table 6.2). In reality, however, most NGOs simply have adequate resources to manage their affairs optimally. Those who complained of resource inadequacy mainly worked for smaller NGOs or pressure groups. These cannot function without support from larger NGOs and are usually involved in executing specific consultancies and forest management projects.

Only 25% of NGO employees questioned expressed dissatisfaction with their working conditions (Table 6.4). Nevertheless, 42% of them were only partially satisfied, and observations and interviews revealed that an important reason for this was that they see expatriate counterparts with similar qualifications and experience enjoying much better conditions of service, although NGO salaries and working environments are superior to those in the FD.

Table 6.4 The Level Of Satisfaction With Working Conditions Of FD And NGO Employees, Expressed In Percentages

Organisations	Fully Satisfied		Partially Satisfied		Not Satisfied		Total Responses
	#	%	#	%	#	%	
FD	2	2	12	11	90	87	104
NGOs	17	33	22	42	13	25	52
Total responses	19		34		103		156

The overall strength of an organisation can best be tested by analysing its weakest points. Employee interviews revealed lots of criticisms about the operations of the FD and far fewer criticisms of NGOs. Criticisms of the FD included lack of funds to complete projects, preferential treatment for a few at the expense of the many, bribery and corruption, back-stabbing, and too many barely literate staff at the grassroots. NGOs were most criticised for demanding very high standards of work and being heavy handed in dealing with allegations that require disciplinary action.

6.4.4 Training Opportunities

The lack of scope for employees to receive training to improve their skills also leads to dissatisfaction and poor morale. Training in forestry has been neglected in recent years. With the decline and closure of the Mano River Union Training Centre at Bomi Hill in Liberia, training of forest rangers and guards has all but ceased. There has been a decline in the technical training of staff in other institutions in West and East Africa, and overseas. No training courses are currently available in Sierra Leone. In recent years

most of the training has been restricted to a few short courses and refresher courses with the Forestry Division and the Ministry generally. These were funded by aid agencies and covered specific topics thought useful by the sponsoring agency, rather than the Forestry Division.

Higher level pre-service and in-service training for forest management is also a thing of the past in Sierra Leone, and so very few trained individuals are available to implement the government's new stated policy on sustainable forest management. In fact, most of the forestry staff are barely literate and would not be able to benefit from advanced training. The shortage of training opportunities in the Forestry Division is unlikely to change in the short term because of lack of resources. NGO employees seemed from interviews and the author's personal observations to be better trained (Table 6.5), mainly because NGOs usually prefer to employ people with outstanding academic capabilities and professional experience. Table 6.5 further substantiates the fact that employees within NGOs are better satisfied with the training opportunities available to them, quite unlike government employees who revealed a very high level of dissatisfaction.

Table 6.5 Opinions Of FD And NGO Employees About Their Level Of Satisfaction With The Quality Of training Opportunities, Expressed In Percentages

Organisations	Fully Satisfied		Partially Satisfied		Not Satisfied		Total Responses
	#	%	#	%	#	%	
FD	14	13	31	30	59	57	104
NGOs	16	31	34	65	2	4	52
Total responses	30		65		61		156

6.4.5 Conformity With Job Specifications

Employees can also become dissatisfied with their jobs if their duties do not correspond to their official job descriptions. About half of those interviewed in the FD believed that their actual jobs were different from what they were expected to do (Table 6.6), and personal observations and interviews suggested that an appreciable number of employees, especially at local levels, did not receive any written document at all which listed their duties. They relied wholly on verbal information and instructions from their immediate superiors, and most of the information they received did not give them a clear picture of what to expect. In contrast, most NGO employees interviewed stated that their job duties were as expected. Most NGOs in Sierra Leone seemed to ensure that they gave their employees detailed job descriptions and verbal explanations when there were any areas of doubt, though they are also expected to respond to emergencies that might require changes in duties.

Table 6.6 The Percentage Of Employees Of The FD And NGOs Who Believed That Their Job Duties Were Directly Related To What They Expected To Do

Organisations	Directly Related		Seldom Related		Not Related		Total Responses
	#	%	#	%	#	%	
FD	21	20	31	30	52	50	104
NGOs	34	65	17	33	1	2	52
Total responses	55		48		53		156

6.4.6 Level of Participation

Employee commitment and morale is generally enhanced if they are involved in decision making. About half the FD employees interviewed stated that they had never been involved in making decisions that affected their work, while another 37% had seldom been involved (Table 6.7). Most decisions are made at headquarters and the only time that regional and local staff appear to be involved in decision making is when there is a crisis to be resolved and a meeting or brainstorming exercise is held. On the other hand, over half of NGO employees interviewed believed that they were fully involved in making decisions that affected their work. They consider themselves more as partners in development than as superiors or subordinates. Such an attitude greatly enhances the commitment of employees to achieving the objectives of the organisation for which they work.

Table 6.7 Opinions Of FD And NGO Employees About Their Level Of Involvement In Making Major Decisions That Affected Their Work, Expressed In Percentages

Organisations	Frequently Involved		Seldom Involved		Not Involved		Total Responses
	#	%	#	%	#	%	
FD	19	18	37	36	48	46	104
NGOs	27	52	14	27	11	21	52
Total responses	46		51		59		156

Consultative meetings are essential for updating plans and evaluating progress within an organisation. A large number of interviewees within the FD said that consultative meetings were never held, and when they were they only involved a few select

employees. Local staff are never asked to travel to attend such meetings, though sometimes they may receive reports on the meeting - after a protracted period. NGOs hold frequent consultative meetings of this kind and normally have adequate resources to enable representatives to come from all levels of the organisation.

6.4.7 Promotion Possibilities

The potential to be promoted to increasingly higher levels of an organisation engenders hard work, determination and ambition among employees. Few FD staff questioned believed that there existed a promotion system which would enable the best qualified employee to rise to the top (Table 6.8). Appointments and promotions seemed to be the prerogative of the better qualified people already near the top of the organisation. Some employees complained of favouritism in appointments and promotions. NGOs, by contrast, tend to have more transparent promotion systems with required qualifications for all positions in the organisation, although promotion is hindered by the short-term nature of their projects.

A high proportion of FD employees questioned felt the need for more opportunities to assume more important responsibilities within their organisation, and also more varied ones to relieve the boredom of routine tasks. Since there are large areas of forests to be managed, employees of both the FD and NGOs are regularly transferred from one job or area to another. Some transfers are accompanied by promotions, but they can also be carried out on disciplinary grounds, when an employee is not felt able to continue serving in a particular area or position. Opinions varied about the desirability of transfers, though

most employees were not bothered whether they were transferred or not. Most of those who were opposed to transfers had got emotionally attached to their jobs and wanted them to remain that way for ever. Proposals for transfers were therefore viewed as calculated efforts to rid them of all they had acquired over time. There were suggestions that some employees preferred not to move because their successors might find out about past personal gains which, if reported, would lead to disciplinary action.

Table 6.8 The Percentage Of FD And NGO Employees Who Believed That There Was A Promotion System That Lets The Best Qualified Person Rise To The Top Of Their Organisation

Organisations	System Exists		System Does Not Exist		Don't Know		Total Responses
	#	%	#	%	#	%	
FD	22	21	75	72	7	7	104
NGOs	33	63	16	31	3	6	52
Total responses	5		91		10		156

6.4.8 Compensating for Lack of Organisational Strength

Weak organisations tend to rely on stronger organisations for support of various kinds. For example, forestry departments in many tropical countries lack either the power or the institutional strength to apprehend and charge those contravening forest laws. In the newly independent Sierra Leone the Forestry Division had to rely on the police to enforce these laws, but the police often left such matters to the Paramount Chief, resulting in very weak enforcement of forest laws which did not provide a deterrent to violators. The District Councils which assisted in forest management at local level were

dissolved in 1972. The relative weakness of the Forestry Division, and the relative strength of NGOs involved in forestry activities, has, in the last twenty years, led to exchanges and alliances between them.

6.5 INTERNAL CONSTRAINTS ON POLICY TRANSMISSION

6.5.1 Introduction

Good internal linkages are essential for the efficient transmission of policy down the chain of command in an organisation. The better these linkages are, the better the communication within the organisation, the higher the morale of staff, and the more effective the organisation is in implementing policy. This section evaluates the linkages in the Forestry Division and other government organisations in Sierra Leone, and compares them with similar linkages in NGOs.

6.5.2 Factors Limiting Internal Linkages

6.5.2.1 Poor Information Sharing

Internal linkages within GOs in Sierra Leone are beset with a variety of problems, ranging from inadequate resources to a blatant refusal by employees to share information with each other. As corruption continues to be rife in high places, employees prefer to shroud their activities in secrecy instead of opening them up to other colleagues. This

seriously militates against team working and the general efficiency of the organisation as a whole.

Table 6.9 The Opinions Of FD And NGO Employees About The Level Of Information Sharing Within Their Organisations, Expressed In Percentages

Organisations	High Level		Low Level		None		Total Responses
	#	%	#	%	#	%	
FD	+97	93	2	2	5	5	104
NGOs	+46	89	6	11	0	0	52
Total responses	143		8		5		156

NB: + indicate not significantly different at 95% confidence level ($Z = 0.87$)

A high percentage of the FD staff interviewed believed that there is a high level of information sharing in their organisation (Table 6.9). However, personal observations by the author suggested the opposite is the case. Lines of communication in the Forestry Division cannot be maintained over a protracted period. Forestry staff must sometimes revert to passing instructions by word of mouth in order to cut costs. This can lead to misinterpretations and misunderstandings that invariably hamper policy implementation.

Most of the NGOs studied appear to have adequate resources to establish and maintain internal linkages among their staff. These are strengthened by periodic consultative meetings, brainstorming exercises and impromptu interviews and discussions to assess employee satisfaction. Interviews carried out by the author, together with administrative records and other material consulted, revealed that NGOs take great pains to keep their

employees updated on developments. This is constrained by the poor postal service in the country - employees in poorly accessible areas hardly receive circulars, and when they do they are obsolete by the time they receive them. NGOs try to counter this, however, by holding meetings, even in the least accessible areas.

6.5.2.2 *Freedom of Expression*

An essential component of information sharing within an organisation concerns the ability of employees to express their personal views to fellow employees without fear or favour. Just under 50% of those interviewed in GOs believed that they were always free to express their opinions (Table 6.10). Further discussions and personal observations revealed that much effort is made within the Forestry Division to encourage free expression, but it remains difficult because of fear of victimisation. Employees at grassroots level have hardly any contact with senior staff to whom they can express opinions, and there are only limited resources for managers to survey the opinions of their staff.

Table 6.10 The Percentage Of FD and NGO Employees Who Believed That There Was Freedom To Express Personal Opinion To Other Workers Within Their Organisations

Organisations	Always Free		Seldom Free		Never Free		Total Responses
	#	%	#	%	#	%	
FD	49*	47	46	44	9	9	104
NGOs	35*	67	17	33	0	0	52
Total responses	84		63		9		156

NB: * indicate significantly different at 95% confidence level ($Z = 2.38$)

NGO employees felt they have a considerable freedom to express their views, without fear of victimisation, on issues that affect their jobs within the organisation. This enables employers to continually develop ways to improve their working environment and the implementation process as a whole. A majority of those questioned also felt that there is always a cordial working relationship among staff. Most NGOs also provide welfare services for employees who encounter personal difficulties due to work-related problems. Good morale and adequate funds also helps to ensure that NGO staff are less susceptible to being corrupted by external actors.

6.5.3 Internal Attenuation of Policy

6.5.3.1 Attenuation Down the Chain of Command

In an ideal organisation that behaves in a perfectly efficient and homogeneous manner there is full compliance by employees at all levels of the organisational hierarchy with policy formulated at the top. But organisations do not behave so perfectly in the real world and the stark deviations between stated policy and policy as actually implemented reflect a cumulative lack of internal compliance, as well as influences by external actors, which results in an attenuation of policy as it passes down the chain of command.

6.5.3.2 Perceptions of Compliance

It is difficult to make an objective measure of degree of compliance, but it was striking that whereas 71% of FD employees questioned believed that forest policy was seldom

implemented successfully, 73% of NGO employees believed that the forest projects of their organisations were fully implemented (Table 6.11). Of course, it could be argued that NGO projects are more limited in scope than government forestry programmes and are therefore easier to implement. They do not have to respond to as many demands from a great diversity of interests, which is what FD employees must try to do with their meagre finances. Many of the FD employees questioned felt that the situation could be improved, provided that employees were more involved in decision making in their organisations.

Table 6.11 The opinions Of Employees Of The FD And NGOs About The Rate Of Successful Implementation Of Forest policies (FDs) And Projects (NGOs) Within Their Organisations Expressed In Percentages

Organisations	Always Successful		Seldom Successful		Never Successful		Total Responses
	#	%	#	%	#	%	
FD	21	20	74	71	9	9	104
NGOs	38	73	13	25	1	2	52
Total responses	59		87		10		156

6.5.3.3 Discretionary Action at the Top of the Chain

Forty years of reliance on the 1946 Forest Policy, with its out of date clauses concerning levies, for example, created great ambiguity about forest policy and gave administrators considerable discretion in decision making. This allowed many dubious deals and contracts to be signed with various groups and individuals, so they could exploit forests

without paying hardly anything to the government in return. Greed and personal gain took precedence even over the environmental concerns stated in the 1946 policy.

While the 1988 Forest Act was supposedly more up-to-date, clauses inserted in it, under pressure from senior politicians, civil servants and the business elite, allowed the Chief Conservator of Forests to retain considerable power and discretion. For example, he can grant licences for timber exploitation without any specific terms of reference. This gives great scope for abuse by timber firms. According to FAO (1988), the new Act needed to be accompanied by a corresponding set of forestry regulations to make the Forestry Division function better at regional and local levels.

6.5.3.4 Attenuation Further Down the Chain

Authority can decay as policy is transmitted from the top of the organisational hierarchy to the bottom, and this gives scope for policy to be modified. Detailed information about the mechanisms involved in this is difficult to obtain, but it is apparent in the way in which different parts of an organisation devise different policies, or employees cling to very out-of-date policies, so that forests are exploited at scarcely any cost. This means that exploitation of forests is perpetuated even if the stated policy has become more protectionist.

In theory, the greater the distance from the top of the organisational hierarchy, the greater the chance that policy will be distorted and escape detection and monitoring (Down, 1967; Lawrence and Lorsch, 1967). This partly explains the poor

implementation of forest policy at grassroots level. Some measure of this attenuation is that almost 70% of FD employees believed that the success of policy implementation was related to frequent contacts with headquarters (Table 6.12). This reflects the very centralised structure of the FDs. Oral interviews revealed that owing to the poor communication network and lack of information technology, instructions from headquarters are often badly distorted by the time they reach grassroots level.

Table 6.12 The Percentage Of Employees Of The FD And NGOs Who Believed That The Success Of Policy Implementation Was Associated With A High Frequency Of Contacts With Their Headquarters Offices

Organisations	Central Contacts Important		Central Contacts Unimportant		Don't Know		Total Responses
	#	%	#	%	#	%	
FD	72	69	18	17	14	14	104
NGOs	12	23	40	77	0	0	52
Total responses	84		58		14		156

This is in stark contrast to the perceptions of NGO employees, 77% of whom believed that successful implementation did not depend on frequency of contacts with headquarters. This probably reflects their better communication systems, so that information can be transmitted to distant areas without difficulty. However, because NGO structures are usually more decentralised, direct contact with the centre is of less significance. They normally have networks of well staffed and effective regional and local offices with adequate funds to ensure proper co-ordination of their activities. The FD also has regional and local offices, but too few resources to function adequately.

The greater the level of discretion in implementing policy on the part of employees the greater the chance that policy will be attenuated in going down the chain of command. However, more than 70% of FD employees questioned stated they had no discretion in implementing policy. The corresponding figure for NGO employees, on the other hand, was only 40% (Table 6.13). This reflects the more decentralised Structure of NGOs, and the fact that they tend to focus on specific projects to which individual employees are likely to have a chance of making inputs at the design and implementation stage. The level of discretion is sometimes dependent on the source of funding. For example, if contingencies arise which demand a change in the initial plan, an NGO implementing a self-funded project might easily be able to make changes, but if it depends on government funds this may only be possible after detailed scrutiny by the government.

One important caveat to the argument that physical and/or organisational distance plays a part in attenuating policy is that there is still considerable forest cover on the Freetown Peninsula, very close to the capital city, and yet it is as badly managed as forests in more distant parts of the country.

Table 6.13 The Opinions Of FD And NGO Employees About The Level Of Discretion Granted To Them By Their Organisations In Implementing Forest Policy, Expressed In Percentages

Organisations	High Discretion		Low Discretion		No Discretion		Total Responses
	#	%	#	%	#	%	
FD	11	11	18	17	75	72	104
NGOs	14	27	17	32	21	41	52
Total responses	25		35		96		156

6.6 SHARING OF POLICY IMPLEMENTATION

6.6.1 Structuring the Diversity of Implementing Organisations

Although the Forestry Division has the major responsibility for implementing forest policy, it also cooperates with other governmental organisations and non-governmental organisations who also have a share in implementation. Over four fifths of FD employees and all the NGO employees questioned were aware of this shared responsibility (Table 6.14). The effectiveness of forest policy implementation therefore depends on the effectiveness of multiple organisations and the links between them. This section analyses these linkages in three main groups: those between the FD and other GOs; those between the FD and NGOs; and those between NGOs and NGOs.

Table 6.14 The Percentage Of FD And NGO Employees Who Believed That The Implementation Of Forest Policy Is shared With Other Organisations

Organisations	Shared		Not Shared		Don't Know		Total Responses
	#	%	#	%	#	%	
FD	87+	84	16	15	1	1	104
NGOs	52+	100	0	0	0	0	52
Total responses	139		16		1		156

NB: + indicate not significantly different at 95% confidence level ($Z = 0.51$)

6.6.2 Cooperation With Other GOs

The Forestry Division cooperates with, and coordinates the work of other government departments in the forest sector, including the Ministry of Lands, Housing and the Environment (MLHE), the Ministry of Internal Affairs and Rural Development (MIARD) and the Ministry of Development (MOD).

Various consortia of ministries have been formed to coordinate the formulation and environmental and development policies. For example, the National Environmental Policy of 1992 was developed by the MLHE in close consultation with other government departments, such as MANR&F and MIARD. Development projects funded by the government must now conform with the conditions in the new policy. Senior ministers and officials have been requested to lend their support on a number of occasions to the implementation of projects undertaken by the Forestry Division, for example tree planting ceremonies undertaken during the National Tree Planting Drive. Another reason for collaboration between departments is to save costs. For example, the Forestry Division relies on the Department of Lands and Surveys to map forest reserves and develop structural plans because they have the necessary expertise and equipment.

6.6.3 Working Relationships Between The FD and NGOs

NGOs also contribute to the implementation of forest policy, by funding and/or coordinating forestry or forestry-related projects, which are mainly to do with afforestation or the provision of alternative sources of livelihoods for forest-edge

communities who would otherwise cause more deforestation. NGO activities in afforestation therefore complement the work of the Forestry Division in managing existing forests.

Working relationships between the FD and NGOs have been close since the early 1980s, to the extent that now some government employees even consider NGOs as under an obligation to serve the government. According to administrative records in the Forestry Division, most forest management activities in recent decades have involved some support from an international donor organisation or the participation of a national NGO. Despite the common acceptance that forest policy implementation is a shared responsibility, Forestry Division employees at the grassroots level are sometimes unaware of such arrangements and believe that all forestry activity is the work of their own organisation.

The growing role of NGOs has been partly dictated by external donor organisations. The Forestry Division and other GOs have been heavily dependent on grants and loans from external donor organisations for some time. This places it in a vulnerable position, so it has had to modify its activities to suit the wishes of these organisations. Thus, the new Forest Policy of 1988, and the decentralisation of forest management, were all essentially based on the recommendations of external donor organisations. Because of the poor performance of previous projects executed by the government, and the fraudulent conversion of project funds to personal use, donors have increasingly turned to organisations independent of the government to implement their programmes.

Close relationships between the FD and NGOs have also been fostered by the chronic lack of funds for the Forestry Division, compared with the adequate resources available for most NGOs. Besides undertaking their own specific projects, NGOs share information with other GOs and NGOs on possible projects and sources of funding, and provide expert advice on recent developments in forest management techniques and their potential application to Sierra Leone. There is also some sharing of equipment, although this is mainly restricted to obsolete survey and agricultural tools and office equipment. Sharing of personnel is common too, but mainly involves the use of expert and technical staff for consultancies. NGOs use Forestry Division staff and the Forestry Division uses NGO expert staff, as required. However, for actual implementation of their forestry projects, NGOs tend to recruit their own staff rather than using Forestry Division workers.

6.6.4 Relationships between NGOs and Other NGOs

There is a clear hierarchy of NGOs working in Sierra Leone. They can be divided into two broad types: (a) large NGOs, which support both GOs and other NGOs in forestry projects; and (b) smaller NGOs which mainly operate at the grassroots and rely on the larger NGOs for support. There is symbiosis between the two groups, since the larger ones have sufficient funds and expertise, but the smaller ones have national networks of staff and contacts. Groups of small NGOs also form coalitions to increase their effectiveness.

6.7 EXTERNAL ATTENUATION OF POLICY IMPLEMENTATION

6.7.1 Attenuation Down the Chain of Command

Like all open systems, organisations are influenced by a range of external factors that shape their operations (Burns and Stalker, 1961) and so a variety of external forces can attenuate policy as it is transmitted down the organisational hierarchy. Such influences can be either formal or informal (Grainger, 1996).

Formal influences are those that result from the overt interventions of individuals or organisations who either lobby or have the power to demand change at specific levels in the chain of command, e.g. regional civil servants, traditional rulers, political aspirants or even villagers exercising their property rights. Examples of such intervention are when traditional Paramount Chiefs take it upon themselves to determine what happens to forests within their personal jurisdiction, usually to satisfy their personal needs. Forest guards and rangers then get caught between implementing the stated policy of the Forest Division and meeting the needs of a traditional ruler who has the power to remove them from the Chiefdom - a dual allegiance problem which is a no-win situation for all concerned and which badly distorts forest policies.

Informal interventions occur when very influential people in high places exert tremendous pressures and control over those implementing forest policy, and either convince or coerce them to ignore forestry regulations. These relationships are usually closely related to family or monetary ties. People with the right connections through such

informal ties are likely to recklessly exploit forest resources. They are regarded by people in local communities as alien invaders whose activities are inimical to the sustainability of local forests.

After the All Peoples Congress Party (APC) came to power, following the General Election of 1967, there was a noticeable increase in the illegal harvesting of the few remaining roadside forest reserves, due to the vested interests of some politicians and their local representatives. Professional foresters found it very difficult to operate under such conditions because bringing the culprits to justice would offend their political backers and could cost the foresters their jobs and even lead to serious injury.

Such external pressures are a very sensitive subject among all employees. Over ninety percent of FD employees questioned acknowledged that such pressures were important. More than 70% of NGO employees said they were also influenced by external pressures (Table 6.15). Further questioning revealed that both FD and NGO employees faced external pressures of some kinds, although FD employees were obliged to respond to them, e.g. to keep their jobs, whereas NGO employees did not have to, and hardly ever did. The largest pressures were applied to employees at headquarters (e.g. from donor organisations, Ministers, and the general public) and local level (from traditional rulers and the general public). Officials in regional levels experienced fewer pressures.

Table 6.15 The Percentage Of FD And NGO Employees Who Believed That Their Organisations Were Influenced By External Forces

Organisations	External Influences Exist		No External Influences		Don't Know		Total Responses
	#	%	#	%	#	%	
FD	99*	95	3	3	2	2	104
NGOs	39*	75	10	19	3	6	52
Total responses	138		13		5		156

NB: * indicate significantly different at 95% confidence level ($Z = 3.64$)

6.7.2 Clashes Between Bureaucratic and Local Cultures

Clashes can also occur between the culture of an organisation, such as the Forestry Division which is dominated by forest exploitation and quasi-military control of forest resources, and local cultures, which take a more protectionist stance in order to preserve the sustainability of the supplies of food, fuel and other forest products on which they depend. This can sour relationships between forestry personnel and local people and make the latter unwilling to support forest protection. In the 1970s rural people, especially those in the Southern and Eastern Provinces where forests and other natural resources are concentrated, became increasingly frustrated at being excluded from the forests by a corrupt government intent on exploiting forests for the benefit of a select few. So when rebels from Liberia invaded in 1992 they were welcomed as liberators by these marginalised people.

Bureaucratic cultures can also conflict with formalised local institutions. For example, the land tenure system, which allows families to have access to vast areas of land. Usually, the more influential a person is, the more access they have to land. Traditional rulers, in particular, have been known to convert community land to private uses and even prevent the government from having access to public land. But sometimes local institutions can exert a protective influence. For example, the emergence of village development committees has served as a real force to control the illegal forest exploitation which the government has been unable to prevent itself.

6.7.3 Influence of Military Rule on Organisational Behaviour

In 1992, two years before the field work was undertaken for this project, Sierra Leone changed from a one-party State to a military dictatorship. FD and NGO employees questioned - while the Junta was still in power - were evenly divided as to whether the change in government had had any effect on the efficiency of their organisation's operations (Table 6.16). Informal discussions revealed that the new regime had reduced a lot of bureaucracy, especially within the Forestry Division, so forest management decisions could be reached much faster than before and appropriate actions taken. The Junta introduced National Social Mobilisation Squads all over the country that later provided a mechanism for it to gauge grassroots opinion.

Table 6.16 The Percentage Of FD And NGO Employees Who Believed That Their Organisations Was More Effective Under The NPRC Military Regime Than It Was Before 1992

Organisations	More Effective		Less Effective		Don't Know		Total Responses
	#	%	#	%	#	%	
FD	46	44	35	34	23	22	104
NGOs	20	38	17	33	15	29	52
Total responses	66		52		38		156

On the other hand, there were isolated instances of excessively harsh suspension or dismissal for minor offences. Even the Chief Conservator of Forests was once automatically suspended by the Deputy Chairman of the National Provisional Ruling Council (NPRC) for reporting late to work. Some employees also complained of undue harassment or molestation. Others merely became more dedicated to their duties, out of fear, or respect for themselves and the military Junta. A terrified and demoralised forestry staff was left at the mercy of a ruthless and egotistical government of young adults making spontaneous decisions and expecting them to be obeyed without question.

Under the Junta, government workers were obliged to respond to specific instructions from military men who were ready and willing to apply brute force to achieve their demands. What was stated on paper was only for official purposes. Most of the young leaders sought to enrich themselves quickly and build lavish houses for which they used free timber from the forests. Vehicles belonging to the Forestry Division and other government departments were diverted to private use on the pretext of national security purposes. The stringent forest policies enunciated by the Junta were simply a device to

prevent the public from exploiting forest resources so the Junta could exploit them instead.

When a democratic government assumed power in March 1996 it reintroduced more civil codes of personnel management. However, the recent coup of 25 May 1997 has left the new military Junta still trying to establish any form of control. Sierra Leone is now in a state of chaos, as the army and rebels form an unlikely ruling coalition.

6.7.4 Forest Policy Implementation in a Disordered Countryside

Forestry departments in most developing countries have found it difficult to implement policy effectively in distant rural areas, but this is made even worse when there is widespread civil unrest there. Over the last six years Sierra Leone has been plagued by a rebel war which has claimed tens of thousands of lives, left millions displaced, dispossessed and maimed, and eroded government control over peripheral areas under rebel control.

The war broke out because of a rebel insurgency from neighbouring Liberia (Richards, 1996). The rebels quickly established control over the diamond-rich areas of the Eastern and Southern Provinces, and used the forests as a safe haven to hide from government soldiers. Since most of the war was fought in the forests, foresters had to flee for their lives and the whole forest management system was thrown into chaos. The rebels carried out extensive illegal logging to give them a source of income so they could continue their war. They were joined by marginal people from Sierra Leone, who now

had a chance to exploit forest resources without any interference from the government. The forests became no-go areas for the government and large areas of forests in the southern and eastern regions were destroyed by military bombardment.

As a result of this disorder, regional forestry staff had to be redeployed to headquarters or to safer areas. There has also been a massive resettlement and rehabilitation of refugees which in some areas required clearing forest land for make-shift shelters. The war made it difficult for any new forest management plans to be developed without first removing the rebels. The rate of deforestation rose as migrants to safe areas cleared forest to earn income or provide land for farming. Peace and stability has therefore become a more important issue than environmental preservation, and a large proportion of the national budget has been devoted to trying to curb the rebels. Several attempts to negotiate with them failed, as they were unwilling to surrender their safe haven and source of income. In fact, their demands actually widened over time, and they even demanded to share power with the government. The instability caused by the rebel war resulted in the overthrow of the APC regime in 1992, and triggered the further coups in 1996 and 1997.

Implementation of forest policy has come to a standstill as most donor organisations and NGOs have temporarily suspended and/or reduced the scale of their operations. Even the vehicles of NGOs have been impounded by rebels or sobels (a new term that refers to soldiers collaborating with the rebels). The overall result of the civil war has been to make forests inaccessible to state institutions, leaving those actors who control peripheral areas to abuse forests at will.

6.8 CONCLUSIONS

The analysis of forest policy implementation in Sierra Leone reveal that poor forest management in Sierra Leone could also be attributed to poor policy implementation. Even though this is often blamed on weak institutions, the real causes are more complex, as revealed by an organisational theory model by Grainger (1996) which was applied to the Sierra Leone forest management context. The effectiveness of forest policy implementation in Sierra Leone is constrained by poor organisational structure, strength, linkages and the internal and external conditioning of policy as it moves down the chain of command.

Institutional arrangements for forest policy implementation in Sierra Leone are highly centralised, with professional and administrative staff and funds concentrated at the top or centre, leaving the lower levels even more grossly understaffed and underfunded. There is also great potential for intra-organisational conflicts, created by increasing differentiation as organisations grow in size, and as departments with different goals strive to maximise their share of a common pool of resources resulting in competition. For example, the amalgamation of the Forestry and Agriculture departments, first in 1922 and then again in 1962, created antipathy between the two departments as they competed for the meagre resources. The Forestry Department usually ended up being the loser as the Sierra Leone government attached more importance to agriculture. The structure of the Forestry Division was changed in 1984 to provide for more decentralisation, but the long and awkward reporting lines served as a major impediment

to effective communication. The attempt by some employees to resort to the old reporting line resulted in dual allegiance and conflicts.

There is a close link between constraints of organisational structure and strength. Lack of adequate personnel, financial and material resources are major constraints to forest policy implementation in Sierra Leone. Due to the chronic weakness of policy implementing organisations in Sierra Leone, they suffer from very poor conditions of service, job duties were unrelated to what was expected, inadequate training opportunities and a constant shortfall between income and expenditure which makes it very difficult for them to function effectively. Forest policy implementing organisations usually compensate for this lack of strength by relinquishing their rights to punish poachers, for example, to Traditional Rulers like Paramount Chiefs.

Good linkages are essential for policy implementation. The better the linkages, the better the communication network, the higher the morale and the more effective the organisation in implementing forest policy. However, in Sierra Leone, poor information sharing and lack of freedom of expression seriously limit internal linkages. The weak external linkages over large physical and social distances separating the centre from the grassroots limit the ability of implementing organisations to properly transmit policy from the centre to the grassroots. This is symptomatic of the State's inability to exercise control over peripheral areas from the core. Structured and unstructured interviews carried out by this author revealed that employees compensate for this by keeping in contact with the centre to the best of their abilities, which is really not much. Various

linkages have been formed to coordinate implementation in a bid to reap the advantages of collective strength.

If organisations behave in a perfectly efficient and homogeneous ways, then policy formulated at the top should be successfully implemented at the grassroots as planned, but forest management organisations in Sierra Leone don't function like this. Stark deviations occur between stated policy and policy as implemented. As such, implementing organisations have not been able to stem the tide of forest depletion due to poor rate of successful forest policy implementation. This could be attributed to both the internal and external conditioning of policy as it moves down the chain of command.

The interviews revealed a very low level of morale among employees of government organisations, unlike their NGO counterparts. They had little or no involvement in making decisions that affected their work. All major decisions were made at headquarters, and district and local level staff only got involved when there was a crisis to be resolved. Consultative meetings for updating plans and evaluating progress were also restricted to a few senior employees at the top. There is no promotion system to ensure that the best qualified person rises to the top. Appointments and promotions are the prerogative of the better qualified that are already near the top. This system creates room for favouritism. So many discretionary powers are given to the administrators, such as the Chief Conservator of Forests, that these can be abused to distort policy. Due to poor institutional linkages and poor communication networks, instructions from headquarters become distorted as authority decays down the chain of command with distance from the top of the hierarchy.

Forest policy implementation is also subject to a number of other forces which tend to distort the course of implementation. Clashes between bureaucratic culture (which is officially protective) and local cultures (which depend on the forests for their sustenance) creates room for conflicts and distortion of policy at the grassroots, especially when local communities are not involved in developing such policies. Two coup d'etat, and the subsequent dismantling of democratic principles and State authority have created much confusion which has had a further detrimental effect on policy implementation. The rebel war which has resulted in a disordered countryside and led to the redeployment of forestry staff, has further compounded the government's inability to exercise control over forests in peripheral areas.

CHAPTER 7

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The chapter summarises the major findings of this research into forest policy formulation and implementation in Sierra Leone, assesses the limitations of the study and makes recommendations for future research priorities and for policy changes by the government of Sierra Leone and international development agencies.

7.2 MAIN FINDINGS OF THE RESEARCH

The aim of this research was to identify the reasons for inadequate forest policies and policy implementation in Sierra Leone, a country in which forests have been so heavily depleted that sustainable forest management would have been expected to have been introduced by now. Only three forest policies have been published by the government - in 1912, 1946 and 1988. All of them have had protectionist goals, but these have been formally contradicted by written directives in 1929 and 1969 that favoured a more

exploitative approach. Since 1922 the actual policy of the government seems to have been one of exploitation, not protection and sustainable management. Reliance on out-of-date policies gave great scope for ambiguity, and allowed the government to pursue this hidden agenda.

The reasons for changes in policies have been analysed using a balance of policy pressures model in a regulatory output sense that assesses changes in the relative influence of major policy actors. The dominant actors since 1912 have been the Executive and the Bureaucracy, subject to varying degrees of pressure from the country's Business Elite. The interests of the Executive and the local Business Elite became increasingly intertwined after Independence in 1961, and after a change in government in 1969, policy ambiguity enabled patronage and corruption to proliferate, and deforestation and forest degradation became far worse than in the colonial era. The need for a new forest policy was recognised by the government in 1981, but it took until 1988 for one to be published. The main pressures for change came largely from overseas donor organisations. NGOs and other interest groups exerting protectionist pressures did not emerge until the 1980s and they still have insufficient influence to force a change to a more protectionist policy. This has not been helped by a general decline in the level of democracy and pluralism since Independence.

Poor policy implementation is often blamed on weak institutions but the true cause is more complex, as revealed by an analysis using an organisation theory model. Effectiveness of forest policy implementation in Sierra Leone after Independence was constrained by poor organisational strength, an organisational structure with a clear

chain of command but long reporting lines, a high level of discretion allowed to senior staff of the Forestry Division, and external conditioning of policy down the chain of command, e.g. by Paramount Chiefs. Because the strength of all government institutions in Sierra Leone is poor, the influence of institutional constraints on forest policy implementation seems to be separate from policy inadequacy. The organisational structure was changed in 1984 to facilitate more decentralised forest management, but it has made lines of communication more indirect and the use of old reporting lines has led to confusion and dual allegiance.

Efficiency of policy transmission down the chain of command is also reduced by poor compliance. A survey of Forestry Division personnel, using a questionnaire and informal interviews, found that morale is poor because of lack of freedom to express opinions, poor conditions of service, dilapidated working environments, a low level of equipment, low salaries, lack of opportunities for training and promotion, and lack of participation in policy formulation. As in other countries, the ability of government to manage forest resources in peripheral areas is limited by the long physical and social distance from the core, and this has been further eroded since 1991 by the rebel insurgency in the southern and eastern provinces which forced forestry staff to withdraw from these areas. But there is still extensive forest on the Freetown Peninsula adjacent to the core of the country, and this is poorly managed too. Although NGOs are still too weak to exert an influence on forest policy formulation they have taken action themselves to help implement national forest policy by undertaking afforestation projects, thereby complementing the role of the government in managing and protecting existing forests.

Thus, the belief of some environmentalist groups that the problem of poor management of tropical forests will be easily solved if governments committed themselves to introducing improved policies geared towards sustainable forest management would seem to be misplaced. Things are not quite as straightforward as originally anticipated. Few tropical countries have published forest policies and in those that do the policies are often out of date and do not correspond to what actually happens on the ground, and the government usually lacks the institutional capability to implement its policy by monitoring and regulating forest management. This is the current situation in Sierra Leone.

7.3 LIMITATIONS OF THE RESEARCH

7.3.1 Limitations of Field Study

The execution of this research has not been without limitations. The major limitation of the study had to do with the fact that Sierra Leone was plunged into a rebel war during the field study, and this placed serious limitations on the researcher's freedom of movement. Most of the travel to these communities, was done under military escort. This arrangement greatly restricted the duration of stay within local forest communities for safety and other reasons. Some of the areas visited were already deserted and alternative arrangements had to be made to visit other areas not hitherto planned. Most of the highways had been ambushed by rebels of the Revolutionary United Front (RUF), and the researcher had a number of near brushes with death which made data collection very difficult.

The air of uncertainty hanging over the country during this period made it extremely difficult for the researcher to establish a good rapport with suspicious respondents. It therefore took a lot of confidence building before the required information could be elicited from them. The researcher had to be extremely careful in conducting the unstructured interviews and observation skills in order to avoid being mistaken for a rebel on an information gathering assignment. This was one major reason for the recourse to military assistance with travelling arrangements, and the military presence even made the situation more difficult. Local communities had no confidence in them as they had been associated with earlier raids and looting on defenceless peaceful citizens. It took a lot of explaining for an uneasy calm to be maintained during the visits.

Because of these constraints, not all of the proposed forest communities were visited. Some of the forest reserves like the Gola East and West were already declared as no-go areas. The Gori Hills were also under rebel control. The Nimini, Dodo and Gboi Hills fell to the rebels a few weeks after the researcher's second visit. However, most of the reserves in the North and Western areas of the country were relatively safe and posed little difficulty for data collection, while a good number of forest reserves in the South and Eastern parts of the country were quite unsafe.

Data collection within government departments also proved extremely difficult, due to the paucity of information on actual forest policies in Sierra Leone even within the Forestry Division of MANR&F and the National Documentation Centre (NADOC). It was disappointing to discover that the Forestry Division could hardly provide any copy of the three formal forest policies published by the government so far. Most of the

information provided had to do with projects and programmes funded by international donor organisations. Even though some of these documents made reference to the stated policies, the stated policies themselves were nowhere to be found. Administering the questionnaire and interviews also proved very difficult, as officials did not want to subject themselves to what they might have perceived as a gruesome grilling on policy issues, to which they actually hardly gave any thought. Some of the questionnaires were purportedly misplaced and had to be re-administered. Some government officials even asked to be paid to respond to questions.

The restricted budget and time constraints as the fieldwork had to be completed within a certain time frame placed major limitations on the researcher. The fieldwork turned out to be far more expensive than anticipated due to the additional costs for security and safety. The researcher even had to request for additional funding during the fieldwork, which also proved inadequate. Therefore, some of the data which was not actually available in Sierra Leone had to be collected from the Oxford Forestry Institute (OFI), which holds even more information on forestry in Sierra Leone than the Forestry Division in Sierra Leone.

7.3.2 Limitations of the Models

Developing a modelling approach for the analysis of the institutional arrangement for forest policy formulation and implementation in Sierra Leone was not an easy task. This was due to the fact that the analysis of forest policy formulation and implementation is a relatively new area of research in forestry. Therefore, the author had to use state of the

art theories and models strictly outside forest science. Even though some of the theories/models discussed in chapter 3 had been earlier applied in the analysis of natural resource management issues, their application to forest management posed some unique challenges especially in terms of their adaptability to a highly complex forest management system like the Sierra Leone situation. Unique insights and approaches therefore had to be developed in order to make the theories/models applicable and workable.

Another unique dimension had to do with the fact that most (if not all) of the applications of policy and organisational theories and models to forestry research have not been based on the data collection strategy adopted in this study. Prior to this study, Malayang's balance of policy pressures model and Grainger's organisational theory had not actually been tested using a variety of raw field data. The development and testing of these theories of policy and organisational analysis were based on personal experiences in the Philippines and Thailand and a range of vicarious information gathered over a protracted period. The author therefore had to be as innovative as possible in the data collection, presentation and analyses procedures in order to elicit relevant information - especially when this study is the first comprehensive analysis of policy and institutions from a hidden agenda perspective in Sierra Leone.

Because this study addressed two subsystems of forest management (policy and institutions), it was not possible to rely on a single theory or model to analyse both subsystems. The author therefore had to critically determine which theories or models were most appropriate in analysing specific aspects of the study. The result was the adoption a hybrid model developed from existing models which constituted a double-

on forest resource management in Sierra Leone from a hidden agenda perspective, clearly bringing to light the deviations between what is stated and what is actually done. Based on the foregoing, Malayang's balance of policy pressures model was applied in a regulatory output sense in the analysis of forest policy, while Grainger's organisational theory was used in the analysis of institutional constraints on forest policy implementation.

The application of Malayang's balance of policy pressures model to policy analysis in Sierra Leone was not without problems. Even though the model analyses the pressures on policy makers relative to the powers of exploitative and protectionist groups, and the balance of pressures which is the policy, it does not address the resulting implications in terms of the tensions between winners and losers. In order to fill this gap, the author had to adopt a double-barrelled approach to policy analysis by using the regulatory output model which addresses the issue of ultimate winners and losers. This theoretical approach made it possible for the author to analyse policy formulation from both an input and output perspective - the input being the pressures on policy makers, and the output being the balance of pressures on policy makers resulting in conflicts between winners and losers.

Grainger's organisational theory model, even though much detailed in scope in terms of addressing the institutional constraints on forest policy implementing organisations, it does not adequately address the issue of forest policy implementation in turbulent and politically unstable environments like Sierra Leone. The ideal situation would have been to develop another hybrid model by jointly applying the Grainger model and the resource

to develop another hybrid model by jointly applying the Grainger model and the resource dependence models of Aldrich and Pfeffer. This approach would have provided not only for the analysis of institutional constraints on forest policy implementation, but would have also shed new insights into policy implementation in disordered environments like war-torn Sierra Leone. However, the paucity of substantiating evidence/data on the rapidly unfolding chaos in Sierra Leone did not make it possible for the resource dependence model of Aldrich and Pfeffer to be used to complement the Grainger model in this study. The Grainger model, however, provided a substantial analytical framework for the analysis of forestry-related organisations in Sierra Leone.

7.4 RECOMMENDATIONS FOR FUTURE RESEARCH

Even though this research has identified two major reasons for poor forest management in Sierra Leone - lack of an up-to-date policy and poor and weak organisations for implementing forest policy, it is by no means fully exhaustive of the intriguing questions that could be answered by further research. Various aspects of policy analysis and organisational analysis have been unearthed which could constitute the basis of future research.

7.4.1 Policy Research

Research into policy issues could be geared towards a thorough analysis of what actually constitutes policy. This would involve an extended analysis of the various perceptions of policy by policy actors and those that are affected by such policy, and how it affects

policy development. In the light of the fact that some developing countries like Sierra Leone hardly distinguish between policy, legislation and regulation, there is need for clear distinctions to be developed.

There is also need for further analysis of the concept of the hidden agenda, especially as it relates to an ambiguous policy situation and the development of actual policies. There is a need to assess whether the idea of the hidden agenda is premeditated or contingent upon developments within the policy process. Since such agendas are largely unwritten, skilful interview techniques have to be adopted to elicit the required information. Conclusions will then have to be inferred from discussions with policy makers and major policy actors.

Various typologies of policy models have been applied to the analysis of the policy process, but most of these have been lacking in scope and could not provide for an adequate analysis of policy issues without being completed by another model. The need therefore is for the development of a comprehensive model of policy analysis which could be adapted to various policy situations. For example, the application of Malayang's model to the policy process in Sierra Leone had to be complemented by the regulatory output model to provide for the inclusion of the ultimate winners and losers in the policy framework. The development of such a model would require the thorough examination of various models of policy making in different circumstances to serve as a basis for the development of this new approach.

In the light of the centralised policy making system in Sierra Leone, there is also a need to evaluate the advantages and disadvantages of centralised policy making, with a view to developing strategies for the involvement of grassroots communities and their representatives in policy making. Such an approach will enhance the development of appropriate strategies for tapping hidden potentials for policy development, and improve the commitment of local communities to the policy process.

7.4.2 Organisational Analysis

Even though various models of organisational analysis have been developed, most of them have concentrated on the analysis of intra-organisational relationships, with relatively fewer theories addressing inter-organisational relationships. Although this study makes reference to a good working relationship between governmental organisations, there is need for a further analysis of the nature, types and strength of such relationships. A similar approach could be adopted to assess the relationship between international NGOs and national NGOs in Sierra Leone.

The role of international and multilateral donor organisations in forest management in the developing world needs to be thoroughly examined, with a view to assessing the degree of sustainability of their aid packages in promoting forestry development and self reliance. There is also need to assess the Structural Adjustment Programmes, Agricultural Sector Support Programme, and other forms of development aid and loans to determine how they actually aid forestry development in the long-term.

There is also need for a critical examination of decentralisation in forest management in the Third World, because if over-centralisation is considered as harmful, it follows that over-decentralisation might have similar effects. Inasmuch as there is a strong case for the inclusion of grassroots communities in forest management, in order to enhance their commitment to the implementation process and increase the rate of successful implementation, it is extremely important to critically analyse the modalities for this in order to determine the required level of involvement and how this can be achieved. This could be done by interviewing all the major actors in the policy formulation and implementation process at all levels of the organisational hierarchy.

Another interesting area of research could be to test the application of the resource dependence model of Aldrich and Pfeffer (1976) to forest policy implementation in Sierra Leone's currently turbulent and uncertain environment. The intricacies involved in the struggle for control of the country's forest resources by the various actors, and the complex web of patrimonial linkages that are usually established to gain control constitute an innovative area for further research.

7.5 POLICY RECOMMENDATIONS

Forest policies and implementing organisations, both past and present, have failed to ensure proper forest management in Sierra Leone. A radical change in forest policy is therefore necessary. The future of forest policy should be geared towards achieving sustainable management by encompassing both the concepts of multiple use benefit and sustained yield resource management. It should go beyond focusing merely on wood

resources and yields to include the full range of services, values, uses, diversity, and continuity of ecosystems. Sustainable conservation strategies which promote the use of resources without exhausting the resource base should be encouraged, so that people can live in harmony with their environments and not in conflict, as in the past. There is an urgent need for conservation education geared primarily towards local communities living near forests. To achieve this, greater political commitment to conservation issues is required.

Forestry activities alone cannot reverse current trends in deforestation and poor forest management. A broad effort involving the public and private sectors, and including development agencies, government ministries and local community groups, is needed.

Past experiences have shown that laws and regulations cannot inhibit people from continuing with forest destruction to meet their needs. People do better when motivated by common concern rather than when pushed by law. There is need to encourage community participation in forest resource management. Women should be particularly encouraged since they play vital roles in food and livestock production and in the use of trees.

The training of foresters must change, so that instead of being policemen in conflict with forest users, they become facilitators of an improved way of life for people living around the forests. Local people will not participate in the management of forests as long as foresters act only as policemen. Foresters must be prepared to get out of the conflict of interest and provide good leadership in managing forest resources on an economically

effective and sustainable basis. There is need for Participatory Rural Appraisal teams comprising foresters, agriculturists, sociologists and development officers to mobilise local communities into formulating plans for forest management and assigning responsibilities.

The present forestry management organisation cannot cope with forest management demands both now and in the future. The Forestry Division should be divorced from the Ministry of Agriculture and Natural Resources, and made a separate Forest Authority or Corporation. This will eliminate the current administrative red-tape and encourage greater productivity and effectiveness. The Forest Authority will not only focus attention on forest resources, but will lay a firm foundation for agroforestry development to help people living around protected areas to establish farming systems that do not destroy the forest resources. The Division should also create employment facilities for landless people who otherwise live on the forests.

An immediate inventory/survey of forest resources in Sierra Leone should be undertaken to fill the critical gap in accurate forest resource data and determine which are the most threatened areas and what can be done to stem the tide of forest destruction. Areas set aside for protection must be well delineated and patrolled. Where necessary, hunting must be prevented in game reserves. The Military could also be involved in supporting conservation and sustainable development. Actions such as developing conservation oriented curricula for recruit training programmes should be encouraged.

BIBLIOGRAPHY

- Adeyoju, K., 1976, "A study on forest administration in six African nations". FAO, Rome.
- Aldrich, H.E. & J. Pfeffer, 1976, "Environment of organisations". Annual Review of Sociology, Vol. 2 (Palo Alto, CA, Annual Review Inc.)
- Allieu, E.K., 1992, "Chieftom By-laws concerning the use of fire". Rural Development Forestry Network, Network Paper 13e.
- Allison, G.T., 1971, "Essence of decision". Boston, Little Brown.
- Allison, P.A., 1946, "The collection of export produce in an agricultural community". Farm and Forest, 7(1), 11-18.
- Anderson, J.E., 1975, "Public policy making". London, Nelson.
- ATLANTA Industrie - und unternehmensberatung GmbH, (1979), "Forest resource development: Sierra Leone". Hamburg, Vol. 1, 120 p, Vol. 2, Background information, 250 p.
- ATLANTA Industrie - und unternehmensberatung GmbH, (1980a), "Feasibility study on forest administration in Sierra Leone". Hamburg, 165 p.
- Aucoin, P., 1970, "Theory and research in the study of policy making". In Doern, G.B.; & Aucoin, P., (eds.), *The structures of policy making in Canada*. 10-38, Toronto, Macmillan.
- Bentley, J.A., 1967, "The process of government". University of Chicago press, Chicago.
- Berger, P., Sullivan, J.E., 1970, "Instructional set, interview context, and the incidence of don't know responses". Journal of applied psychology, 54(5), 414-16.
- Blanford, H.R., (Ed), (1942), "Forest Industries - Sierra Leone". Empire Forestry Review, Vol. 29, London, Empire Forestry Association.
- Blondel, J., 1995, "Comparative government: an introduction". Wheatsheaf, London, Prentice/Harvester.
- Blood, H.R.R., 1941, "Re-organisation and expansion of the forestry department". Sessional Paper 11 of 1941, Freetown, Government Printer.
- Bomah, A.K., 1988, "Rainfall conditions and erosivity in the Njala area of Sierra Leone". Journal of Environmental Management, Vol. 26, 1-7.

- Bomah, A.K. & Sama, S., 1990, "Deforestation and soil degradation in Sierra Leone: The role of forest removal and upland erosion in a rural catchment under multiple uses". *International Journal of Ecology and Environmental Sciences*, Vol. 16.
- Bruce, J.P. and Maasland, D.E.L., 1968, "Water resources research in Canada", Queen's Printer, Ottawa.
- Burns, T. & Stalker, G.M., 1961, "The management of innovation", London, Tavistock.
- Buttoud, G., 1995, "La foret et l'etat en Afrique seche et a Madagascar. Karthala, Paris, 237 pp.
- Caldwell, L.K., 1990, "International Environmental Policy". Duke University Press, UK.
- CIFOR, 1995, "A vision for forest science in the twenty-first century". *Centre for International Forestry Research*, Bongor, Indonesia.
- Cline-Cole, R.A., 1993, "Wartime forest energy policy and practice in British West Africa: Social and economic impact on the labouring classes 1939-1945". *Africa*, 63(1).
- Cole, N.H.A., 1968, "The vegetation of Sierra Leone". Njala, Sierra Leone, Njala University College Press.
- Clarke, J.I., (Ed.), 1969, "Sierra Leone in Maps, graphic perspectives of a developing country". New York, Africana Publishing Corporation.
- Cubbage, F.W., O'Laughlin, J. & Bullock C.S.III, 1993, "Forest Resource Policy". John Wiley; New York.
- Dessler, G., 1992, "Organisation Theory". Prentice Hall; New York.
- Doktor, R., & Lie, J., 1991, "A systems theoretic perspective upon international organisational behaviour: some preliminary observations and hypothesis". *Management International Review*, Vol. 31.
- Downs, A., 1967, "Inside bureaucracy". Boston, Little Brown.
- Dror, Y., 1968, "Public policy-making re-examined", Scranton, Pa; Chandler.
- Drury, C.H., 1975, "Quantitative analysis and public policy making". *Canadian Public Policy*, 1, 89-96.
- Dummet, R., (1985), "Africa's strategic minerals during the second world war". *Journal of African history*, 26(4), 400-4.
- Dunleavy, P., 1985, "Bureaucrat, budgets and the growth of the state: restructuring an instrumental model", *British Journal of Political Science*, Vol. 15, 299-328.
- Economist, 1994, "Pocket World in Figures". London, Penguin.

- Edwards, M.; Hulme, D., 1992, "Making a difference: NGOs and development in a changing world". London; Earthscan.
- Ellefson, P.V., Kaiser, H.F., 1991; "Forest policy development and administration: potential research directions for the future". *Journal of World Forest Resource Management*; 5:85-100.
- Etzioni, A., 1967, "Mixed-scanning: a third approach to decision-making". *Public Administration Review*, 27, 385-92.
- Evans, H., (1944), "Studies in war-time organisation", The Resident Ministry of West Africa, *African Affairs*, 173(43), 152-8.
- Fairhead, J., Leach, M., 1996, "Misreading the African landscape: society and ecology in a forest-savanna mosaic". Cambridge, Cambridge University Press.
- FAO, (1982), "Sierra Leone forestry development project preparation report". Rome. FAO/World Bank Cooperative Programme Investment Centre, 45 p + annexes30/82, CP-SIL-8.
- FAO, (1988), "An interim report on the state of forest resources in the developing countries". FAO, Rome, Italy, 18 pp.
- FAO, (1992), *Production Yearbook 1991*, FAO Rome.
- FAO, 1993, "Forest resources assessment 1990: Tropical countries". FAO Forestry paper No. 112, United Nations Food and Agricultural Organisation (UNFAO) Rome.
- FAO, 1995, "Forest products yearbook 1993, UNFAO, Rome.
- Farrington, J., Bebbington, A., 1995, "Interactions between NGOs, governments and international funding agencies in renewable natural resources management". In Sandbukt, (Ed.), *Management of tropical forests: towards an integrated perspective*. 237-52, Centre for development and the Environment, University of Oslo.
- Farrington, J., Bebbington, A., and Lewis, D.J., 1993, "Reluctant partners: Non-governmental organisations, the state and sustainable agricultural development. London, Routledge.
- Fayol, H., 1949, "General and industrial management", London, Sir Isaac Pitman and Sons.
- Fernie, J., Pitkethly, A.S., 1985, "Resources: environment and policy". London, Harper and Row.
- Forestry department, Sierra Leone, "Annual reports 1940-1944", Freetown, Government Printer.

Freudenberger, M.S., 1992, "The great gum gamble: A planning perspective on environmental change in northern Senegal". Unpublished doctoral dissertation, University of California, Los Angeles.

Gibson, F., Hawkins, B., 1968, "Interviews versus questionnaires", *American Behavioural Scientist*, 12(1).

Gibson, J.L., et. al., 1985, "Organisations: behaviour, structure, processes". Plano, Texas, Business Publications Inc.

Gillis, M., (1988), "West Africa: Resource management policies and the tropical forests. Cambridge, Cambridge University Press, 299-351.

Gleave, M.B., 1992, (Ed), "Tropical African Development: geographical African Development". Longman Group UK Ltd., Essex, England.

Gordon, *et.al.*, (1977), "Perspectives on policy analysis". *Public Administration Bulletin*, No. 25.

Gordon-Drabek, A., 1987, "Development alternatives: the challenge for NGOs: an overview of the issues", *World Development* 15 (suppl.), 39-49.

Government of Sierra Leone, 1946, "Annual report on Sierra Leone for the year 1946". Freetown, Government Printer.

Government of Sierra Leone, 1912, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1930, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1938, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1946, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1960/61, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1962/63, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1963/64, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1964/65, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, 1974, "Annual report of the forest department" Freetown, Government Printers.

Government of Sierra Leone, 1982, "Annual report of the forest department". Freetown, Government Printers.

Government of Sierra Leone, (1986), "Green Revolution Programme draft report of Cabinet sub-committee". Freetown.

Government of Sierra Leone, 1988, "Joint inter-agency forestry sector review mission, Sierra Leone". Issues paper, Rome.

Government of Sierra Leone, 1989, "Annual report of the forest department". Freetown, Government Printers.

Grainger, A., 1995, "National land use morphology: patterns and possibilities". *Geography*, 20, 235-45

Grainger, A., 1996, "Institutional constraints on the control of deforestation in the Philippines and Thailand". In Grainger, A.; Malayang, B.S. III; Francisco, H.A.; Domingo, L.J.; Mehl C.B. and Tirasawat P.; (1996). *Controlling Deforestation in the Philippines and Thailand*. Report to the Economic and Social Research Council, School of Geography, University of Leeds.

Guppy, N., 1984, "Tropical deforestation: A global view", *Foreign Affairs*, Vol. 62, No. 4.

Hamill, L., 1968, "Process of making good decisions about the use of the environment of man". *Natural Resources Journal*, 8, 279-301.

Hogwood, B.W., Gunn, E.A., 1990, "Policy analysis for the real world". New York, Oxford University Press.

Hummel, F.C., 1984, (ed.), "Forest Policy". The Hague, Martinus Nijhoff/Dr W. Junk Publishers.

Jackson, J.H., 1986, "Organisational theory: A macro perspective for management". Englewood cliffs, NJ, USA, Prentice Hall Inc.

James, N.D.G., 1981, "A history of English Forestry". Basil Blackwell, Oxford.

Johnson, R.G. and Johnson, R.G., 1991, "State of Mangrove Resources and Coastal Environment in Sierra Leone". Paper presented at National Seminar on Fishery Industries Development, 25-29 November, Freetown.

Johnston, D.R., Grayson, A.J., & Bradley, R.T., 1967, "Forest Planning". London, Faber and Faber.

- Kamara, B.M. 1994, "Conservation and the rational use of forest resources for sustainable development". Unpublished Conference paper on Forest Management in Sierra Leone, Forestry Division, Sierra Leone.
- Kernan, H.S., 1980, "Sierra Leone: Assistance in forestry development". FAO, Rome, 124p, TCP/SIL/8907(1)
- Killingray, D., 1982, "Military and labour recruitment in the Gold Coast during the second world war". *Journal of African History*, 23(1), 83-95.
- Kingston, B., 1986, "A forestry action plan for Sierra Leone". FAO, Rome, Italy.
- Korten, D.C., 1990, "Getting to the 21st century: Voluntary action and the global agenda" West Hartford, CT: Kumarian Press.
- Lane-Poole, C.E., 1911, "Report on the forests of Sierra Leone". Freetown
- Lanly, J.P., (ed.). 1981, "Tropical Forest Resources Assessment Project (GEMS): Tropical Africa, Tropical Asia, Tropical America" . 4 Vols., FAO/UNEP, Rome.
- Latham, E., 1952, "The group basis of politics: notes for a theory". *American Political Science Review*, 46: 376-397.
- Lawrence, P.R., Lorsch, J.W., 1967, "Differentiation and integration in complex organisations" *Administrative Science Quarterly*, Vol. 12, 1-47.
- Leach, G., Mearns, R., 1988, "Beyond the woodfuel crises - People, land and trees in Africa". London, Earthscan Publications Ltd.
- Leach, M., 1991, "Engendered environments: understanding natural resource management in the West African forest zone". *IDS Bulletin*, Vol. 22, No. 4, Rural Development Abstracts.
- Lindblom, C.E., 1959, "The science of muddling through". *Public Administration Review*, Vol. 19, 79-88
- Lockett, M. & Spear, R., 1980, "Organisations as systems". Edited, Milton Keynes, UK., The Open University Press.
- Lowi, T., 1964, "American business, public policies, case studies and political theory", *World Politics*, Vol. 16, 677-715.
- MacGregor, W.D., 1942, "The forest production programme in Sierra Leone". *Farm and Forest*, 3(3), 116-19.
- Mahmoud, S.A.S., 1992, "Deforestation and ecological indicators in the Western Area Environment". Unpublished B.SC. dissertation, Department of Geography, Fourah Bay College, Freetown.

- Malayang, B.S. III, 1996, "Factors causing and controlling deforestation in the Philippines". In Grainger, A. Malayang, B.S. III, Francisco, H.A. Domingo. L.J.: Mehl, C.B. & Tirasawat P., 1996, *Controlling Deforestation in the Philippines and Thailand*. Report to the Economic and Social Research Council, School of Geography, University of Leeds.
- Millington, A., 1987, "Environmental degradation, Soil conservation and Agricultural Services in Sierra Leone, 1895-1984". pp. 240-248.
- Mann, D.E., 1975a, "Conflicts and coalition: political variables underlying water resource developments in the upper Colorado river basin", *Natural Resources Journal*, Vol. 15.
- Mitchell, B., 1989, "Geography and resource analysis", 2nd edition, London, Longman.
- MLHE, 1992, "National report of Sierra Leone for the United Nations conference on Environment and Development", Freetown.
- Moser, C.A., Kalton, G., 1971, "Survey methods in social investigation". London, Heinemann Educational Books Ltd.
- Myers, N., 1980, "Conversion of Tropical Moist Forests". US National Research Council, Washington D.C.
- Nemetz, P.N., 1992, "Emerging Issues in Forest Policy". Vancouver, UBC Press.
- Njoku, O.N., 1981, "Export production drive in Nigeria during the second world war" *Transafrican journal of history*, 10(1-2), 11-27.
- Olusanya, G.O., 1973, "The second world war and politics in Nigeria (1939-1953)". Ibadan, Ibadan University Press.
- O'Riordan, T., 1971, "Perspectives on resource management". London, Pion.
- Paivinen, R. & Witt, R., 1989, "The methodology development project for tropical forest cover assessment in West Africa". Unpublished report, UN Environmental Programme, Global Resource Inventory Database (GRID); Geneva.
- Persson, R., 1974, "World Forest Resources". Department of Forest Survey, Royal College of Forestry, Stockholm, Research Notes No.17.
- Pfeffer, J., 1992, "Organisations and organisation theory". Boston; Pitman
- Poore, M.E.D., 1989, "No timber without trees", London, Earthscan.
- Rees, J., 1990, "Natural Resources: Allocation, economics, and policy". 2nd edition, London, Routledge.

- Repetto, R. and Gillis, M., 1990, "Public policies and the misuse of forest resources". Edited, Press syndicate of the University of Cambridge.
- Ribot, J. & Cline-Cole, R.A., 1997, "Forest policy, West Africa". In Press, J. Middleton, et al., Encyclopaedia of Africa South of the Sahara.
- Richards, P., 1996, "Fighting for the rainforest: War, Youth and Resources in Sierra Leone". Oxford, The International African Institute in association with James Currey.
- Rietbergen, S., 1989, "Africa", In Poore, M.E.D., 1989, "*No timber without trees*". London, Earthscan.
- Robson, C., 1997, "Real world research: A resource for social scientists and practitioner-researchers". Oxford, UK, Blackwell Publishers Ltd.
- Rose, R., 1976, "Disciplined research and undisciplined problems". *International Social Science Journal*, 28.
- Sayer, J.A., Harcourt, C.S. & Collins, N.M., 1992, "The Conservation Atlas of Tropical Forests: Africa". Macmillan. London.
- Scott, W.R., 1987, "Organisations: rational natural and open systems", New Jersey, USA, Prentice Hall Inc.
- Sewell, W.R.D., 1973, "Broadening the approach to evaluation in resources management decision-making". *Journal of Environmental Management*, 1, 33-60.
- Simon, H.A., 1959, "Theories of decision making in economic and behavioural science". *American Economic Review*.
- Sommer, A., 1976, "Attempt at an assessment of the world's tropical forests". *Unasylva* 28(112-113).
- Smithussen, F., 1977, "Forest contacts on public lands". Rome, FAO Forestry Paper 1.
- Timberlake, L., 1985, "Africa in crisis: The causes, the cures of environmental bankruptcy". IIED, London.
- Truman, D., 1951, "The governmental process". New York, Knopf.
- Tsoukers, H., 1993, "The sociology of organisations: themes, perspectives and prospects". UNDP, (1987), *Joint inter-agency forestry sector review mission project document*. New York, 12 p + annex, SIL/87/010/01/12/A.
- Turay, H., 1980, "Land tenure systems in Sierra Leone. Owners of problems related to land tenure and action policies towards rural development - A Project Report". Njala University College.

Urwick, L., 1929, "The meaning of rationalism". *Industrial Organisation Efficiency*. 160p, London, Nisbet.

Weber, M., 1952, "The essentials of bureaucratic organisations: an ideal type construction"; in Robert K. Merton et. al. (ed); *A reader in bureaucracy*: Glencoe; The Free Press

White, G.F., 1972a, "Geography and public policy", *Professional Geographer*, 24. 101-4.

Williams, M., 1989, "Americans and Their Forests". Cambridge, Cambridge University Press.

World Bank Staff Appraisal Report, 1984, "Sierra Leone Agricultural Sector Support Project" Washington, Report No. 4833-SIL.

World Resources Institute, 1992, "World Resources 1992-93", New York, Oxford University Press.

Worrel, A.C., 1970, "Principles of Forest Policy". McGraw-Hill, New York.

Zucker, L.G., 1977, "The role of institutionalisation in cultural persistence", *American Sociological Review*, Vol. 42 (Oct).

APPENDIX**LIST OF ACRONYMS**

AFRC - Armed Forces Revolutionary Council

APC - All Peoples Party

ASSP - Associated Agricultural Sector Support Programme

ATC - Aureol Tobacco Company

AVHRR - Advanced Very High Resolution Radiometer

CARE - Cooperation of American Relief Everywhere

CCSL - Council of Churches in Sierra Leone

CEC - Cation Exchange Capacity

CHECSIL - Commonwealth Human Ecology Council Sierra Leone

CSSL - Conservation Society of Sierra Leone

DOS - Directorate of Overseas Surveys

ECOWAS - Economic Community of West African States

FAO - Food and Agricultural Organisation

FD - Forestry Division

GDP - Gross Domestic Product

GNP - Gross National Product

GOs - Governmental Organisations

GOSL - Government of Sierra Leone

GTZ - German Technical Cooperation

ha - Hectares

IMF - International Monetary Fund

ITD - Inter-Tropical Discontinuity

MANR&F - Ministry of Agriculture, Natural Resources and Forestry

MIARD - Ministry of Interior and Rural development

MLHE - Ministry of Lands, Housing and the Environment

MOD - Ministry of Development

MRU - Mano River Union

NADOC - National Documentation Centre

nd - No date

NGOs - Non-Governmental Organisations

NPRC - National Provisional Ruling Council

NRC - National Reformation Council

OAU - Organisation of African Unity

ODA - Overseas Development Administration

ORIENT - Organisation of Research and Extension of Intermediate Technology

RLTDC - Rokel Leaf Tobacco Development Company Limited

RSPB - Royal Society for the Protection of Birds

RUF - Revolutionary United Front

SLPP - Sierra Leone Peoples Party

TFAP - Tropical Forestry Action Plan

UN - United Nations

UNDP - United Nations Development Programme

US - United States (of America)

WB - World Bank

WWF - World Wild Fund for Nature