

AN INSTITUTIONAL STUDY OF THE
ADMINISTRATION OF FOREST RESERVES
IN OSUN STATE

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1997

AN INSTITUTIONAL STUDY OF THE ADMINISTRATION OF FOREST
RESERVES IN OSUN STATE

BY

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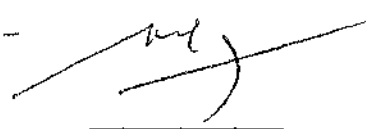
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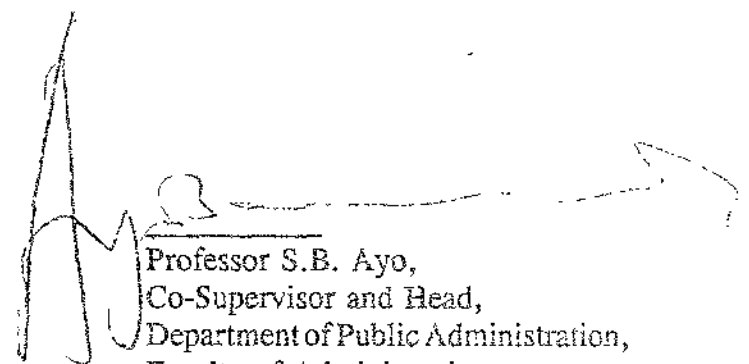
1997

CERTIFICATION

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ABSTRACT

The administration of forest reserves in Nigeria is now at the crossroads concerning their sustainable use and their ability to meet human needs. Over the years, the administration of the renewable natural resources has been monopolised by the state government within the federal structure in Nigeria. The failure to involve forest users and the other levels of government, especially the local government, in their administration has apparently led to their inability to generate benefits to meet human needs across generations. Yet their ability to meet intergenerational needs requires the involvement of the stakeholders in decision making and implementation.

This study is focused on the administration of forest reserves in Osun State. The need for the study was informed by the importance of forest reserves to human survival. The study critically examined the administration of forest reserves in Osun State by the state government acting through its Forestry Department; determined the extent to which forest users participate in the administration of forest reserves in Osun State and the implications of such involvement in terms of governance; and suggested a better approach to their administration.

The Institutional Analysis Approach was used as the framework for the study. Both primary and secondary sources of data collection were employed for the study. Primary data were obtained through the use of questionnaire and structured interviews. Secondary data were sourced from the library and official documents.

The study discovered that sustainable administration of forest reserves is yet to be realised in Osun State whose forest reserves have shrunk by about 78 % over the years through unguided tree-felling. In the face of this crisis, the administration of the reserves has been and

remains the exclusive preserve of the Osun State Government acting through its Forestry Department. To resolve this crisis, the study recommends the involvement of forest users in administering the natural resources.

The need to involve forest users in the administration of forest reserves in Osun State is confirmed by the findings of the study. It was discovered that the efforts of forest users' associations, especially those of timber-contractors, though not officially recognised, have often complemented those of Osun State's forestry personnel in Zonal Offices in reducing illegal exploitation. It was further discovered that the poor salaries and wages of the forestry staff has contributed to illegal exploitation in the forest reserves - as they could easily be induced with money. It is therefore also recommended that a better remuneration package be arranged for forestry staff in Osun State.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Forests have been recognised worldwide as an essential natural resource. But the sustainable administration of forests has become a difficult task in many countries, especially the developing countries including Nigeria. The reasons advanced for this development vary a great deal among scholars and policy-makers. First, there is the lack of private demand for sustainable forest administration. Secondly, where there is a concern for managing forest in a sustainable manner, the interest often conflicts with the interests of those who are willing to exploit forests only as a source of revenue. Thirdly, stakeholders such as forest users and forest-dwelling communities have long been excluded in decision making and implementation. This is the result of the overbearing attitude of the operators of the formal structures of government responsible for forest administration especially in Nigeria.

In the face of these diverse attitudes toward forests, the danger of deforestation worldwide has aroused a great concern for ensuring their sustainable administration. At both the global and national levels this danger is very obvious. The unguided destruction of about 15% of the world's forests between 1850 and 1980 alone is an obvious manifestation of this danger.¹ Also, about 78% of Osun State's forest reserves have been lost to commercial exploitation over

¹ World Resources Institute, "Conserving Global Forests" in World Resources Institute, World Resources Institute's Publication, Washington, USA, 1995, p.4.

the years with little attention being paid to regeneration.² Increasing human populations and growing economic activities in Nigeria have in addition continued to put increasing pressure on forest resources.

In recent times the need to mitigate the sting of deforestation has provoked efforts to ensure sustainable forest administration in almost all countries of the world. These efforts are necessary because man's existence and well-being hinge substantially on forests³. In other words, the basic needs of man - clothing, food, fuel, good health and shelter - would be difficult to come by without forests. In addition, the biophysical properties produced by the natural resource also serve to reduce to a healthy quantity the carbon dioxide in the atmosphere. It is in this way that atmospheric warming is held in check. Thus Olofinboba (1979)⁴ has succinctly remarked inter alia:

... without trees, there is no purified air, water, food and shelter, there is no neighbourliness. Without neighbourliness, there is no society and no peace. Without Society and Peace, the WORLD is EMPTY.

The need for sustainable administration of forests has attracted several responses from non-governmental bodies, national governmental agencies, policy-makers at both international and national levels, international financial institutions and external donors and agencies as well

² Forestry Association of Nigeria, Forestry and the Small Scale Farmer: Proceedings of the 24th Annual Conference of the Forestry Association of Nigeria, Held in Kaduna State between 30th October and 4th November, 1995, p.21.

³ World Resources Institute, "Conserving Global Forests" in World Resources Institute, World Resources Institute's Publication, Washington, USA, 1995, p.4.

⁴ M.O. Olofinboba, Forest: The Need for Improved Management, Ilorin, University of Ilorin Press, 1979, p.24.

as scholars. For instance, participants (30 of them from Africa with over 100 heads of government in attendance) at the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil in June 1992 unanimously resolved to encourage and promote the sustainable administration of the world's natural resources, including forests.⁵ Sharing the same view, Jatau (1994) also argues that demand for wood products which the World Bank has projected to reach 6.6 billion m³ by the year 2,025 can be met through sustainable management of natural forests.⁶

Similarly, managing forests in a sustainable way is an issue which has started to receive public attention in Cameroon, Nigeria's eastern neighbour, since 1992. In its bid to realise this objective, the government of the Republic of Cameroon in 1992 created a Ministry for the Environment and Forests⁷. Knowing fully well the importance of stakeholders' participation in forest administration, the Ministry is now making desperate moves to encourage rural people including forest users to take part in managing the nation's forests. The need for people's participation is necessary because, according to the Ministry's helms-man, "... when the forest belongs to the Government it belongs to all and to none. Thus by trying to bring in the population, we make them understand that it is their forest and that they can benefit more from

⁵ K. Helmore, "African NGOs and the Promises of UNCED" in African Farmer, New York, The Hunger Project, March 1993, p.36.

⁶ D.F. Jatau, "An Appraisal of Options for the Efficient Management of Forest Resources in Adamawa State." M.Sc. Thesis. Ibadan, University of Ibadan, 1994, p.24.

⁷ C. Uwaegbulam, "Sustaining Resource Balance in Cameroon" in The Guardian, Lagos, Guardian Newspapers Limited, 1996, pp.17 and 19.

it."⁸

Scholars as well have not been left out of this topical issue. It is noteworthy that responses from the academic circles have spawned new, but divergent, models. These divergent responses have been designed and directed to answer a number of questions, chief among which are the following: What is the most appropriate forest management approach? Which practices can best protect forests and still allow economic gains from the commercial exploitation of the natural resources? How can overuse of the natural resources be prevented? In what way can the problem of free-riding be avoided?

Given the strategic importance of forests to human existence, the quest to ensure effective forest administration has been an important concern of successive administrations in Nigeria even long before independence in 1960. To this end, many measures have been put in place for sustainable administration of forest reserves in Nigeria.

With the advent of the British in Nigeria, forest administration became an exclusive responsibility of the government. Later, precisely in the early 1920s, forest administration grew to become one of the responsibilities of the local governments until the late 1960s. As from the late 1960s the state governments in South-Western Nigeria, especially the former Western and Mid-Western States, assumed full ownership and administration of forests within their geographical jurisdiction.

In addition, although the federal government plays only a monitoring role, a number of objectives have been set by it for all State Governments with emphasis on achieving self-

⁸ **Ibid. p.19.**

sufficiency in wood production.⁹ Chief among these objectives are the following: to consolidate and expand the country's forest estate and manage it for sustained yield; to conserve the forests and protect the environment; to regenerate forests after exploitation; and to encourage the participation of local communities in managing forests.¹⁰

While government's intention in respect of these objectives may be genuine, achievements have not been impressive. This is because the net benefits of the efforts have not been commensurate with the costs. For example, while only N986,356.35 was the actual revenue collected in 1992 by the Osun State's Forestry Department, the expenditure made by the Department during the year was N1,608,500.00.¹¹ Based on these data, the administration of forest reserves in Osun State can barely be said to be efficient during that period.

Generally, the genesis of this crisis has been anchored on the oil boom of the 1970s. For example, since the oil boom has come to strengthen the state governments' financial position significantly, sustainable forest administration, especially the regeneration aspect, began to receive negligible, trifling attention from the early 1970s. Thus, there is a yawning gap between regeneration and commercial exploitation of forest reserves. The result of this development is

⁹ Federal Republic of Nigeria, Agricultural Policy for Nigeria, Lagos, Federal Ministry of Agriculture, Water Resources and Rural Development, 1989, pp. 36-37.

¹⁰ P.R.O. Kio, J.E. Abu and R.G. Lowe, "High Forest Management in Nigeria" in P.J. Wood, J.K. Vanclay and W.R. Molid (eds.), The Quest for Sustainability: 100 Years of Silviculture and Management in the Tropics, Malaysia, Forest Research Institute, 1993, p.134.

¹¹ Osun State Government, Osun State: The State of the Living Spring, Lagos, Macmillan Nigeria Publishers Limited, 1992, pp. 82, 133.

the unprecedented and rapid disappearance of Nigeria's rich forest. Consequently, the supply of forest products, particularly in Osun State, is now on the decline even in the face of expanding domestic demand. It therefore appears that forest reserves in Osun State are in danger of inability to meet human needs across generations.

1.2 Statement of Problem

Having regard to the background to this study, the need for an appropriate approach to sustainable administration of forest reserves in Osun State in particular and Nigeria in general can no longer be treated with levity. This is because forests support both the present and future generations. Consequently, their sustainable administration for benefits across generations becomes an important objective the realisation of which calls for the involvement of the various groups having general and particular interests in the forest reserves.

However, the administration of forest reserves in Osun State has been and remains the exclusive preserve of the State Government. Contrary to expectations, the State Government's various efforts at effective administration of the forest reserves in a sustainable manner are yet to remove the problem of poor forest administration. This may be ascribed to many factors some of which are identified below.

First, none of the steps taken to ensure sustainable management of forest reserves by the Osun State government appreciates the crucial place and role of forest users (such as hunters, taungya farmers and timber-contractors). Yet the successful administration of forest reserves can be achieved only where the stakeholders are involved in decision making and implementation.

Secondly, there is the problem of the poor quality and quantity of the personnel as well

as their attitude to work and honesty. Whereas dearth of qualified personnel has greatly contributed to poor administration of forest reserves in Osun State, corrupt practices by most of the officials have had a more grim impact. One factor responsible for this untoward situation is the inadequate incentive given to forestry personnel in terms of salary packages given the prevailing economic conditions.

Thirdly, the forest reserves are being treated by the State Government only as a source of revenue rather than a means of investment to generate benefits across generations.

The foregoing factors have combined to aggravate the poor state of forest administration in Osun State. The evidence of this deteriorating condition includes the shrinking of the State's forest reserves by about 78%¹²; loss in biodiversity and genetic resources; loss of protection which plant cover gives to the soil; and excess of carbon dioxide discharges which have complicated environmental warming crisis¹³.

Given the foregoing background, to continue to view the administration of the forest reserves as the exclusive responsibility of the Osun State Government, to the utter neglect of the stakeholders such as forest users, would mean a patent support for the anachronistic notion of the formal structure of government (the state) as the only solution to the problem of renewable natural resources management. In the emerging debate on the waning competence of many African States, many scholars have taken a swipe at the state as the only solution to the problem

¹² Forestry Association of Nigeria, Forestry and the Small Scale Farmer: Proceedings of the 24th Annual Conference of the Forestry Association of Nigeria, Held in Kaduna State between 30th October and 4th November, 1995, p.21.

¹³ NEST (Nigerian Environmental Study/Action Team), Nigeria's Threatened Environment: A National Profile, Ibadan, NEST, 1991, p.164.

of the management of human and natural resources. Their criticisms have found expression in the obvious failure of many African States, Nigeria inclusive, to fulfil the aspiration of their people. As Adedeji lucidly remarks, "... after nearly four decades of political independence, the average African state is adjudged to have failed woefully in guaranteeing its citizens even the most minimal standard of living and security ... and in providing essential basic services and a modicum of human dignity."¹⁴ Similarly, Fantu Cheru observes that as the African states lose competence, they also lose the ability to manage more complex issues of the day such as human settlements, environmental protection and sustainable management of natural resources.¹⁵ The loss by the formal structures of government (including the state government as in Nigeria) of grip with sustainable forest administration underscores the need for more widespread participation.

At this juncture, one would want to postulate that the poor administration of forest reserves in Osun State is due to lack of participation by forest users in decision making and implementation. The on-going exclusion of these stakeholders in the administration of the forest reserves definitely calls for an inquiry into an approach that makes for their involvement along with the State Government in decision making and implementation. This work intends to break new grounds by investigating along this direction.

¹⁴ A. Adedeji, "Towards a New African Order with a New South Africa" in Adedeji, A. (ed.) South Africa and Africa: Within or Apart?, London, Zed Books Ltd., 1996, p.217.

¹⁵ F. Cheru, "Africa and the New World Order: Rethinking Development Planning in the Age of Globalisaton" in Adedeji, A. (ed.) South Africa and Africa: Within or Apart?, London, Zed Books Ltd., 1996, p. 51.

1.3 Objectives of the Study

The objectives of this study include the following:

- (a) To examine critically the administration of forest reserves in Osun State by the State Government acting through its Forestry Department.
- (b) To determine the extent to which forest users participate in the administration of forest reserves in Osun State and the implications of such involvement in terms of governance.
- (c) To suggest a better approach to administering forest reserves in Osun State.

1.4 Research Questions:

- (a) Is the administration of forest reserves the exclusive responsibility of the State Government or a shared responsibility among the State Government and forest users?
- (b) Should the administration of forest reserves be a shared responsibility among the State Government and forest users or the exclusive responsibility of the State Government?
- (c) Are forest users allowed to play a role under the existing framework of forest administration in Osun State?
- (d) Are forestry policy proposals often initiated by the State Government alone or by the State Government along with other stakeholders?
- (e) Are forestry policy choices by the State Government significantly influenced by all interested parties? Does the final determination of forestry policies involve the State Government as well as forest users?
- (f) Will the administration of forest reserves by the State Government alone or by the State Government and other stakeholders lead to their sustainability?
- (g) How are rules monitored and rule infractions sanctioned?
- (h) Which approach is appropriate to managing Forest Reserves in Osun State given their local environmental conditions? or How can the various stakeholders be involved in the administration of forest reserves in Osun State?

1.5 Hypotheses of the Study

The hypotheses of the study are stated as follows:

- (a) The administration of forest reserves by the State Government alone does not lead to sustainable administration of these forest reserves.
- (b) The involvement of forest users along with the state government in the administration of forest reserves reduces disregard for forestry laws/rules by forestry staff and forest users.

1.6 Significance of the Study

There is no doubt that a number of useful studies have been carried out on forest management or administration in Nigeria. It stands out clearly in the previous studies that attempts are yet to be made to undertake an institutional study of forest administration in Nigeria with a view to suggesting an approach that is more environmentally suitable to managing individual forest reserves. Also, none of the previous studies in Nigeria has considered forest management from the perspective of the discipline of Public Administration. More importantly, scholars of Public Administration in Nigeria are yet to direct their intellectual attention to the issue of forest administration.

As a turning point, the significance of the study therefore rests on the following:

- (a) The conduct of the present study from the perspective of public administration. This is evident in the adoption of the Institutional Framework in the study.
- (b) The clarification the study intends to provide on the importance of adopting a forest management approach that is suitable to the local environmental conditions of the Forest Reserves in Osun State.
- (c) The evaluation of the implications of forest administration formerly under local governments and currently by the state governments for forest users' participation in decision-making, for efficient and sustainable forest management as well as rent-seeking behaviour by officials.

1.7 Definition of Terms

The terms below will be used in the following senses in the study. This is to avoid conceptual abstruseness in the use of these terms.

Common-Pool Resource: This refers to "a natural or man-made resource that is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use"¹⁶. There are two types of common-pool resources. One is open-pool resource, which is not managed but used by its beneficiaries as they wish. The other one is common-property resource which is managed to some extent and its use is also held in check.

Effectiveness: This is the extent to which an organization realises its goals or objectives, while Efficiency occurs when output outweighs input.¹⁷

Free-riding behaviour: This is a type of behaviour that occurs when an individual only waits to enjoy joint benefits to which he did not contribute any effort for their production.¹⁸ In other words, free-riding behaviour results when an individual refuses to contribute to the costs of producing some benefits but only waits to enjoy the benefits with the actual producers of the benefits.

¹⁶ E. Ostrom, Governing the Commons, New York, Cambridge University Press, 1990, p. 30.

¹⁷ E.E. Ekong, "Efficiency or Effectiveness: The Dilemma of Emphasis in the Public Service of the Developing Economies" in M.J. Balogun (ed.), Managerial Efficiency in the Public Sector, Ife, University of Ife, 1980, p.20.

¹⁸ E. Ostrom, op.cit., p.6. Also, see E.Ostrom and Mary-Berth Wertime, International Forestry Resources and Institutions (IFRI) Research Program and Database: IFRI Research Strategy, Bloomington, Workshop in Political Theory and Policy Analysis, Indiana University, 1995, p.18.

Forest: These are woodlands and tree-covered lands including forest reserves and local/free forests.

Forest Reserves: These are land areas set aside for the protection, conservation and production of forest resources such as tree products, plant and animal populations. Local/Free Forests are woodlands outside areas tagged as forest reserves. The impact of the State Government on the Local/Free Forests does not go beyond granting permit for the felling of trees in these woodlands.

Forest Users: In this study forest users will refer to those who exploit forest produce like trees and animals as well as taungya farmers. They include hunters, taungya farmers, and timber-contractors. Hunters depend on forest reserves for games. While farmers in the forest reserves use the exploited areas for taungya farming, timber-contractors rely on forests for timber for commercial logging.

Forest Owners: Based on the 1978 Land Use Decree, government is the owner of forests in Nigeria; but according to ancestral claim, indigenes whose fore-fathers had ancestral rights to forest land own the forests thereon. While the latter view was applied until 1978, the former began to gain relevance as from 1978.

Governance: This refers to a set of rules which has the values of the people as its bedrock, acceded to by the people and is allowed to operate freely in the society.¹⁹ According to Dele Olowu and S.T. Akinola, governance has two faces.²⁰ The first face has to do with the

¹⁹ D. Olowu and S.R. Akinola, "Urban Governance and Urban Poverty in Nigeria" in A.G. Onibokun and A. Faniran (eds.), Urban Governance and Urban Poverty in Nigeria, Ibadan, CASSAD, 1995, pp.22-23.

²⁰ Ibid. pp.22-23.

leaders or "governors" whose responsibilities are derived from the principles of effective governmental organisation such as efficiency, accountability, transparency, responsiveness to the public, pluralism in policy options and choices. The second face involves the governed with the duties to take part in the socio-economic and political affairs of their society by making relevant inputs.

Institutions: These mean "the sets of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided, and what payoffs will be assigned to individuals dependent on their actions."²¹

Rule-Conformance: This means to follow or obey rule.

Rule-Infraction: This refers to violation of rules.

Silviculture: This refers to "the science of how a forest crop can be produced naturally or artificially and cultured under the prevailing economic conditions to maturity for the projected use, so as to realise the highest profits in terms of the land owner's objectives in managing the forest."²² Social Forestry: This refers to a forest management approach "where forest resources are managed by rural people through their community local institution."²³ This term shall be used to refer to the term "local participation" in the study.

²¹ E.Ostrom, op.cit., p.51.

²² L.C. Nwoboshi, Tropical Silviculture: Principles and Techniques, Ibadan, University of Ibadan, 1982, p.14.

²³ N. Uphoff, Local Institutional Development: An Analytical Sourcebook with Cases, West Harford, Kumarian Press, 1986, p.21.

Stakeholders: These refer to forest users, local government where forest reserves are located, state governments, federal government, non-governmental organisations and international organisations. But this study focuses on forest users and Osun State government as the stakeholders of consideration.

State government: This is a level of government between the federal and local government in Nigeria. Any of these levels of government is regarded in this study as formal or modern structure of government.

Sustainable Forest Administration: This shall be used to refer to managing forests with a view to meeting the needs of the present without compromising the ability of future generations to meet their own needs. This definition is a modified form of the one given to sustainable development in the Brundtland Report.²⁴ That is when the need for protecting the environment for benefits across generations is brought into balance with the commercial exploitation of forests.

The Tragedy of the Commons: This refers to a situation "where each individual resource user gains more than he loses by increasing his use of that resource, but if all increase their use, the resource will be depleted and eventually annihilated."²⁵

²⁴ T.R. Franks, "Managing Sustainable Development: Definitions, Paradigms, and Dimensions" in Sustainable Development Vol.4 No.2, (London, ERP Environment, August 1996, p.55.

²⁵ N. Uphoff, op.cit., p.25.

1.9 Outline of the Study

The study is divided into six chapters. Various issues were examined in each chapter and these are stated below:

Chapter One: This is mainly the introductory chapter which addresses issues such as the background to the study, statement of problem, objectives, hypotheses, significance of study, definition of terms and outline of study.

Chapter Two: This chapter focuses on review of relevant literature on forest administration. It attempts to look at issues including the meaning of forest, types of forests, definitions of management, administration and forest management. Besides, the meeting point between the concepts of management and administration is examined in this chapter. Other issues which this chapter considers are models advanced as the basis for recommending approaches to the management of natural resources including forest reserves, relevance of these models to the administration of forests in Osun State before and after the creation of Osun State in 1991, and suggested views on the appropriate approaches to forest management.

Chapter Three: The focus of this chapter is on research methodology. Discussion in this chapter dwells on the scope of the study and research methods used to gather and analyse data.

Chapter Four: This chapter deals with the Administration of the Forest Reserves in Osun State from both historical and descriptive point of view.

Chapter Five: In this chapter, attention is mainly on analysing data gathered from both oral interview and questionnaire.

Chapter Six: Summary of findings, recommendations and conclusions dominate this chapter.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction:

The understanding of this chapter requires the definition of some concepts such as forest, management, administration and forest management. In addition, three categories of views already advanced as a basis for recommending approaches to forest management will be discussed in this study. The discussion will be confined to the three views with a view to avoiding the problem of dabbling into generality.

2.20 Definitions of Forest, Management Administration, and Forest Management

Before we review the literature on forest management, it may be helpful to look upon the concepts of "Forest", "Administration", "Management" and "Forest Management".

2.21 **Forest:** The Dictionary of the Environment defines forest as "an extensive area of woodland, either unmanaged or maintained for the production of timbers..."¹ M. Allaby identifies three major types of forests.² First, there are High Forests which are matured woodlands made up of tall trees, the tops of which form a closed canopy. The second type is Rainforest which is evergreen forest growing in the regions of high rainfall. Mixed Forest is the third type which is composed of two or more species. Osun State is blanketed by Rainforest.

¹ **M. Allaby, Dictionary of Environment, (London, The MacMillan Press Ltd., 1979) p.211.**

² **Ibid, pp.211 and 212.**

2.23 Management and Administration; Administration and Management are concepts that have been considered by various people in different ways and from different perspectives. While a number of scholars admit that administration is different from management, the two concepts are still being used interchangeably in some circles. Ferrel Head (1979) defines administration as "determined action taken in pursuit of conscious purpose."³ Heady (1979) adds that administrative activity can occur in a variety of settings, which include business firms, labour unions, educational institutions, governmental units.

Administration, according to Augustus Adebayo (1989), is "the organisation and direction of persons in order to accomplish a specified end."⁴ The belief is that administration involves bringing people together in a hierarchical set-up so that manpower, material resources and money can be used to achieve the desired objectives. This process requires planning, organisation, command, coordination, and control. "It is this process of organization and management which constitutes administration", according to Adebayo (1989).

In his scholarly contribution, Ladipo Adamolekun (1983)⁵ argues that administration and management can be seen as synonyms. His argument is based on the fact that administration in the public sector and management in the private sector share some features in common one of which is specificity of objectives. Adopting a centralised view on the definition of

³ Ferrel Heady, Public Administration: A Comparative Perspective, (New York and Basel: Marcel Dekker Inc., 1979), p. 2.

⁴ Augustus Adebayo, Principles and Practice of Public Administration in Nigeria, (Ibadan: Spectrum Books Limited, 1989), pp. 1-2.

⁵ Ladipo Adamolekun, Public Administration: A Nigerian and Comparative Perspective, (England: Longman Group Limited, 1983), p.3.

administration, Appleby sees administration as involving the activities of the higher level of the management group who determine the main aims and policies.⁶ Having considered the views of some scholars on the term "Administration", it is appropriate to turn to the concept of "Management".

With respect to management, R.C. Appleby (1969) argues that management is "a process by which scarce resources are combined to achieve given ends."⁷ Koontz and O'Donnel go on to argue that management involves "the design or creation and maintenance of an internal environment in an enterprise where individuals, working together in groups, can perform efficiently and effectively toward the attainment of group goals."⁸ This reveals that for human beings to do things efficiently and effectively, appropriate incentives must be put in place. Interestingly, there is a general agreement among a large number of scholars that the term "Management" means "getting things done through and with people."⁹

Similarly, Augustus Adebayo (1989) see administration as getting policy or decision done.¹⁰ Like 'Ladipo Adamolekun he sees administration and management as synonyms. It is in this sense that administration and management will be used in this study - as synonyms.

⁶ R.C. Appelby, Modern Business Administration, (London: Pitman Books Limited, 1969) pp.5.

⁷ R.C. Appelby, Modern Business Administration, (London: Pitman Books Limited, 1969) p.6.

⁸ Harold Koontz and Cyril O'Donnel, Principles of Management: An Analysis of Managerial Functions, (Tokyo, Kagakusha Company Ltd., 1968), p.1.

⁹ Harold Koontz and Cyril O'Donnel, Principles of Management: An Analysis of Managerial Functions, (Tokyo, Kagakusha Company Ltd., 1968), p.42.

¹⁰ Augustus Adebayo, Op. Cit., p.4.

Besides, administration will be used to imply efforts to ensure sustainable use of forest resources. With the consideration of the above views on management and administration, we can now turn to the definition of forest management.

2.23 Forest Management: In the literature it is common to find the term "forest management" being used interchangeably with the concept of forestry. In fact, a number of scholars are of the opinion that the two concepts mean one and the same thing. Working from its dictionary definition as "the science of cultivating forests and of promoting the growth of forests", the term "forestry" is considered to be the management of forests for timber conservation.¹¹

Similarly, R.S. Troup (1940) sees forestry as "the management of forests for economic or other reasons, and the production, marketing and utilization of other forest products."¹² In Jatau's view, the term "forestry" is " the theory and practice of growing trees, the management and utilization of forest products as a renewable resource, for the enhancement of higher living standard of the community in which the forest is located."¹³ "

With respect to forest management, Jatau (1994) argues that forest management" consists of the planning, execution and monitoring in space and in time of action necessary to enable the forest resources under management to provide the desired yield of goods and services with due consideration for renewable and systematic nature of the resources and the need to maintain their

¹¹ Webster, New 20th Century Dictionary, Collin World, 1928.

¹² R.R. Troup, Colonial Forest Administration, (London: Oxford University Press, 1940) p.1.

¹³ D. F. Jatau, "An Appraisal of Options for the Efficient Management of Forest Resources in Adamawa State", M.Sc. Thesis, (Ibadan: University of Ibadan, 1994) p.7.

potentials."¹⁴ In his masterly contribution, Norman Uphoff (1986) opines that forest management entails "the utilization of tree and related plant and animal populations in ways that perpetuate the forest ecosystem."¹⁵ In clear terms, Uphoff tries to show that forest management goes beyond the issue of trees and plant management to include animals as well.

The views expressed above bring some issues into clear focus. Although the concept "forestry" is at times substituted for the term "forest management", forest management, drawing on the views of many scholars, may be said to be an aspect of forestry. It is also acknowledged in the preceding opinions that forests, not minding their types, may or may not be under management. If those being managed are to meet the desirable ends, human involvement in their management requires careful and adequate consideration. In other words, the involvement of human beings has to be carefully done in such a manner that can motivate them to work towards the desirable objectives. This, without doubt, demands the creation of an appropriate environment where the stakeholders or the individuals concerned can work effectively and efficiently towards the expected outcomes.

Besides, it is interesting to identify other notable grounds where the scholars agree. Among the definitions given above, there is a consensus that meeting human needs, which can be either social or economic, or both, is the underlying concern for managing forest resources. But Norman Uphoff and D.F. Jatau seem to share the same opinion. They appear to argue that the basis for forest management should not only be limited to the present needs of human beings but be extended to take care of human needs across generations. Since human needs defer,

¹⁴ **Ibid, p.23.**

¹⁵ **N. Uphoff, Local Institutional: An Analytical Sourcebook with Cases, (West Harford, Kumarian Press, 1986) p.25.**

cooperation or collective actions among the stakeholders could hardly be ignored in realising the end. It can therefore be said that the central objective of forest management is to organise the use of forest resources in order to ensure their long-term, productive use across generations. This view has continued to provoke various responses from policy-makers and scholars alike, as it has earlier been indicated in the first chapter. To guide against the problem of generality, some of these responses will be given attention below.

2.3 Theoretical Models for Natural Resources Management

The interest in the long-term, productive use of forests have led to the postulation of divergent models by several scholars. Two of these models are found to be particularly relevant to this study and have been used by many scholars and policy-makers as a basis for suggesting state or market solution. To avoid dabbling into the question of generality, this study will be limited to the two models. These models are "The Tragedy of the Commons" by Garret Hardin and "The logic of collective Action" by Mancur Olson.¹⁶ For a clear understanding of these models, the consideration of an account given of them by Elinor Ostrom (1990) could be helpful.

With respect to the Tragedy of the Commons, it describes the nature of the problem individuals encounter when they use a scarce resource in common. The central idea of this model is that the individuals involved pursue only their personal interests. The care for the sustainable use of the resource is, however, least considered. Thus "everybody's property is

¹⁶ E. Ostrom, Governing the Commons, (New York, Cambridge University Press, 1990), pp.2-13.

nobody's property.¹⁷

The Tragedy of the Commons has, according to Elinor Ostrom¹⁸, quite often been formalized as a Prisoner's Dilemma Game. The basic feature of the Prisoner's Dilemma Game is the presumption that the individuals involved cannot change their non-cooperative situation. Put differently, the key heart of the framework is the paradox that "individually rational strategies lead to collectively irrational outcomes."¹⁹

Another theoretical construct that portrays non-cooperative behaviour in the use of a common pool-resource by rational individuals is the Logic of Collective Action by Olson. As Elinor Ostrom stated in her work, Olson argues, "unless the number of individual is quite small or unless there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests."²⁰

The core obstacle to cooperative behaviour in the two aforementioned models is the problem of free-riding. This is the problem that arises "whenever one person cannot be excluded from the benefits that other provide, each person is motivated not to contribute to the joint efforts, but to free-ride on the efforts of others."²¹ As a result of the tendency towards free-riding behaviour, the individuals involved are in a trap from which they cannot escape through their own initiatives.

¹⁷ Ibid. p.3.

¹⁸ Ibid, p.3.

¹⁹ Ibid, p.8.

²⁰ Ibid. p.6.

²¹ Ibid, p.6.

Based on the views of the proponents of these models, changing this non-cooperative situation is a goal which only an external actor can achieve. There is therefore a consensus among the proponents of these models that those involved in the use of natural resources, such as forests, are not likely to employ the advantage of their interdependent relationships and cooperate to produce collective benefits.²² The fear is that temptations to free-ride and behave opportunistically serve as obstacles to such cooperation. Hence, they call for the imposition of a solution by an external actor either as a central authority or in form of privatization: "The only way to solve a common dilemma is doing X."²³

However, the models and the policy advice upon which these models are based have been criticized for a number of weaknesses. First, the models are said to be dangerous because "the constraints that are assumed to be fixed for the purpose of analysis are taken on faith as being fixed in empirical settings, unless external authorities change them."²⁴ In other words, they are metaphoric in nature. According to E. Ostrom (1990),²⁵ relying on metaphor as a basis for policy advice can produce outcomes substantially different from those presumed to be likely. Recognising diversity in situations, E. Ostrom argues that state and market may be appropriate in many situations. She, however, adds that instead of thinking of the only way for solving the tragedy of the commons, many solutions exist to deal with many different problems.

In the alternative, E.Ostrom presents a new view. The hallmark of this new perspective

²² Ibid, pp.2-15.

²³ Ibid, pp.13-14.

²⁴ Ibid, pp.6-7.

²⁵ Ibid., p.23.

is that the individuals faced with the crisis of non-cooperative behaviour in the joint use of a resource can change their non-cooperative situation or end the tragedy of the commons themselves without any external actor's intervention. This methodological construct has the following features:²⁶

- (i) individuals using a resource [common-pool resources (CPRs) or natural resources] can enter into a binding contract to commit themselves to a cooperative strategy which they themselves design;
- (ii) this contract is a product of unanimous agreement by the individuals affected (stakeholder);
- iii) the stakeholder do not depend on the accuracy of the information obtained by a distant government official regarding their strategies;
- (iv) the enforcers enforce only that on which the stakeholder agree;
- (v) the model does not seek to present a solution as the only way to solve a commons dilemma? "It is merely one way", according to E.Ostrom (1990).²⁷ In other words, many solutions exist to handle different situations, and "there cannot be one best way of organising the management of natural resource systems."²⁸

E. Ostrom also sets out that the capacity of the stakeholder to free themselves from various types of dilemma situations varies with circumstances characterized by specific physical,

²⁶ Ibid., pp.15-16.

²⁷ Ibid, p.16.

²⁸ E. Ostrom, "Institutional Arrangements and the Commons Dilemma" in V. Ostrom, D. Feeny and H. Picth (eds.) Rethinking Institutional Analysis and Development: Issues, Alternatives, and Choices, California, International Center for Economic Growth, 1988, p.120.

economic and social factors. Moved perhaps empirically by the potential danger of solution by an external actor, Elinor Ostrom, in her masterly accounts of Governing the Commons: The Evolution of Institutions for Collective Action, declares in the opening chapter that "neither the state nor the market is uniformly successful in enabling individuals to sustain long-term, productive use of natural resource systems"²⁹ such as forest reserves. This is because the sustainable management of natural resources, particularly forest reserves, requires cooperative behaviour among the stakeholders.

It has been contended that the point against the market (privatization) is the lack of private demand for sustainable forest management.³⁰ This problem is often anchored on the profit-maximizing motive of the private business, which is usually feared to be inimical to the productive use of the resources over time, and may eventually lead to their destruction. In the case of the central authority or the state, some limiting factors have been identified. First, it has been observed that since government officials reside far away from the resource system, their ability to identify with the interests of the users may be greatly limited.³¹ Secondly, acquisition of timely and accurate information about the conditions of the resource system may be difficult due to the same factor of government officials' distance from the resource base. It has also been argued that the involvement of bureaucratic organisations alone in the management of a natural

²⁹ E. Ostrom, Governing the Commons, New York, Cambridge University Press, 1990, p.1.

³⁰ N.M. Kishor and L.F. Constantino, "Sustainable Forest: Can It Compete?" in Finance and Development, Washington, D.C., International Monetary Fund Publications, December 1994, p.36.

³¹ T.S. Yang, Institutions and Collective Actions: Self-Governance in Irrigation, California, Institute for Contemporary Studies, 1995, p.115.

resource or common-pool resource (CPR) together with their associated problems is capable of making rule enforcement and sanctioning of rule infractions cumbersome.³²

The efforts to avoid these identified problems have led to the recommendation that stakeholders participate in the management of their resources. With respect to forest management, this suggestion is based on some conditions. First, due to their closeness to the forest, forest users are believed to be more capable of designing rules compatible with the local environmental requirements for managing forests (Elinor Ostrom and Mary-Beth Wertime, 1995).³³ This is due to the fact that they are believed to have better knowledge of the social and cultural factors that are peculiar to a specific forest.

Secondly, with adequate assurance that the long-term benefits of their investment will come to them, forest users are believed to be in a better position to monitor rules and sanction rule-infractions with a relatively lower cost.³⁴ The World Bank is also talking in these terms as its World Development Report on Development and Environment 1992 stresses people's participation in the management of natural resources and in their own development and governance³⁵. Scholars that fall into this school of thought have advocated users' participation

³² N. Uphoff, Op.cit., 1986, p.25.

³³ E. Ostrom and Mary-Berth Wertime, International Forestry Resources and Institutions (IFRI) Research Program and Database: IFRI Research Strategy, Bloomington, Workshop in Political Theory Policy Analysis, Indiana University, 1995, p.7.

³⁴ Ibid., p.7.

³⁵ B. Turok, "The Debate about Reconstruction and Development in South Africa" in Adedeji, A. (ed.) South Africa and Africa: Within or Apart?, London, Zed Books Ltd., 1996, pp. 157-158.

or local community-based approach or Social Forestry as a way to secure the sustainable management of forests (Norman Uphoff, 1986³⁶; J.T. Thomson, 1992³⁷; O.J. Lynch and Kirk Talbott, 1995³⁸). The heart of their argument is that the involvement of forest users in forest management does not necessary lead to a tragedy of commons, if and only if there are effective local organisations.³⁹ Their works have contributed in no small measure to the emerging debate on the need for users and rural people's participation in natural resources management. Although their studies covered some developed and developing countries in Asia and Africa, no forest area in Nigeria is part of their resource system case studies.

The concern of this study therefore is to fill this gap by critically examining the extent of users' participation in the administration of forest reserves in Osun State. This is to determine an appropriate approach that tends to encourage forest users' participation in forest management.

Put differently, it is our intention in this study to capture the extent to which forest management approaches have been characterized by the basic components of governance. These

³⁶ N. Uphoff, op.cit., pp.40-47.

³⁷ J.T. Thomson, A Framework for Analyzing Institutional Incentives in Community Forestry, Rome, Food and Agriculture Organisation of the United Nations, 1992, pp. 121-129.

³⁸ O.J. Lynch and K. Talbott, Balancing Acts: Community-Based Forest Management and National Law in Asia and the Pacific, Washington, D.C., World Resources Institute's Publication, 1995, pp.23-29.

³⁹ L.M. Rasmussen and R. Meinzen-Dick, "Local Organisations for Natural Resource Management: Lessons from Theoretical and Empirical Literature", (Paper Presented at a Workshop on Local Organisations for Natural Resource Management, Columbia, Maryland, October 19 - 21, 1994) .

components are political, technical and institutional in dimension.⁴⁰

The political focuses on "the commitment to exercise authority ...in a just, legitimate and rule-ordered fashion." The technical centres on " issues of efficiency, competence or the capacity to manage public affairs effectively, to solve problems, and to produce good results in resource mobilisation and public management." The institutional has to do with "options, choices, and sustainable arrangements or institutional channels which allow for broad participation, initiative, and growth-enhancing activities by the public while ensuring honest or good conduct on the part of public officials." To see the extent to which these models have been relevant to us, it is pertinent to look at what the situation has been in Osun State before and after its creation in 1991.

2.4 The Situation in Osun State Before and After Its Creation; Theoretical Relevance

In the pre-colonial era, individual towns in Osun State of South-Western Nigeria owned and managed their own forests for the benefits of community members. Traditional rulers made rules with the assistance of their councils of chiefs for regulating access to and use of the resources (Johnson 1921).⁴¹ Each town's guild of hunters had responsibility for enforcing the rules and imposing punishments for rule infractions. During this time, there was neither any

⁴⁰ S.A. Nkom and A.P. Sorkaa, "A Comparative Analysis of Grassroots Governance in Two Nigerian Communities: A Case Study of Samaru and Abwa-Mbagen" in African Journal of Institutions and Development (AJID). Vol. 2 No. 1, 1996, p.43.

⁴¹ S. Johnson, The History of the Yoruba, 50 Broad Street, Lagos, C.S.S. Bookshops, 1921, pp.95-96.

record of conflict among users over exploitation nor evidence of destructive, devastating threats to forests. The proclivity by the traditional rulers to convert communal forest reserves to private property did not arise. The underlying factor for this development was the existence and effective enforcement of mechanisms for public accountability. For example, rulers were made to observe customs and traditions of the people, which compelled the rulers to place the governed's interests above personal interests. Checks and balances generated by the customs and traditions also aided the impressive display of accountability by the traditional rulers⁴², prevented a drift towards high-handed personal rule and autocracy⁴³, and guarded against anti-communal spirit by the rulers. Besides, the rulers held land and the resources thereon in trust for community members and governed by consensus.⁴⁴ However, this approach, social forestry, collapsed and gave way to the structure imposed on the arrival of the British in Nigeria in the late 1800s.

⁴² S.A. Oladosu, "The Historical Development of Local Government in Nigeria" in Aborisade, O. (ed.) Readings in Nigerian Local Government, Ile-Ife, Department of Local Government Studies, Obafemi Awolowo University, 1986, p.6.

⁴³ D. Olowu, "Centralization, Self-Governance, and Development in Nigeria" in Wunsch J.S. and Olowu D. (eds.) The Failure of the Centralized State: Institutions and Self-Governance in Africa, California, Institute for Contemporary Studies, 1995, p.205.

⁴⁴ O.J. Fapohunda, "An Economic System for the Future Management of the Nigerian Economy" in Inanga, E.L. (ed.) Managing Nigeria's Economic System: A Book of Readings, Ibadan, Heinemann Educational Books (Nigeria) Limited, 1985, p.10. Also, see Olowu, C.A.B., Bureaucracy and the People: The Nigerian Experience, Ile-Ife, Obafemi Awolowo University, 1996, p.9. The situation described here was the general feature of South-Western Nigeria including Oyo, Ogun, Osun, Ondo and Ekiti States.

With the imposition of the British rule on Nigeria, forest administration in the region of South-Western Nigeria including Osun State became one of the major responsibilities of the colonial government. Two explanations could be advanced for this development. The first was the need to manage forests to sustain the supply of wood materials in perpetuity.⁴⁵ Secondly, the colonial administrators added this to their governing duties for the fear of the perceived danger of the endemic pattern of agricultural practice - shifting cultivation - by local farmers. Their main anxiety was that the practice, if not checked, could contribute to denude large tracks of good and profitable forests.⁴⁶ Consequently, the British began government forest service in South-Western Nigeria. Some forest reserves were consequently created in 1928 through agreement with communal land owners.⁴⁷

Due perhaps to the financial obligations and manpower requirements involved, the British allowed ownership and management of forest reserves to be exercised by local authorities headed by traditional rulers.⁴⁸ This responsibility was carried out in a manner consistent with the policy goals of the colonial administration, which were apparently in conflict with the indigenes' interest. Although experiences in some places were impressive, many local communities could not have their interests protected in the administration of these reserves because of a number of

⁴⁵ NEST (Nigerian Environmental Study/Action Team), Nigeria's Threatened Environment: A National Profile, Ibadan, NEST, 1991, p.138.

⁴⁶ B.O. Agbeja, *Op. Cit.*, p.22.

⁴⁷ P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" in Wood, P.J., Vanclay, J.K. and Molid, W.R. (eds.) The Quest for Sustainability: 100 Years of Silviculture and Management in the Tropics, Malaysia, Forest Research Institute, 1993, p.122.

⁴⁸ *Ibid*, p.123.

factors.

First, the colonial system of local government broadened the basis of power and influence of traditional rulers such that the rulers were obviously excessively empowered.⁴⁹ As a result, they became oppressive and exercised more power than customs and traditions permitted⁵⁰, which often put them in conflict with the governed's wishes. Apart from the fact that the traditional rulers were no longer subject to the wishes of their people, popular participation and public accountability to the governed were least encouraged.⁵¹ This concisely best describes the administration of forest reserves in the territory now known as Osun State even after the introduction of a representative system of local government in the Western Region in 1955. In fact, the untoward developments were clearly inconsistent with the intention of the representative system of local government. Under the latter system, citizens were supposed to be encouraged to participate in the decisions made through the electoral process. Also, elected representatives of the people were expected to consider the interests of the people within their constituencies in the decision-making process.⁵² The exact opposite was what was recorded - a wide, yawning

⁴⁹ O. Oyediran, "Local Influence and Traditional Leadership: The Politics of Ife Forest Reserve" in O. Oyediran (ed.) Essays on Local Government and Administration in Nigeria, Lagos, Project Publications Limited, 1988, p.150.

⁵⁰ S.A. Oladosu, Op. Cit., p.7.

⁵¹ G. Hyden, No Shortcuts to Progress: African Development Management in Perspective, Berkeley, University of California Press, 1983, p.111. Also see C.A.B. Olowu, Op. Cit., p.13.

⁵² O. Oyediran, "Local Influence and Traditional Leadership: The Politics of Ife Forest Reserve" in O. Oyediran (ed.) Essays on Local Government and Administration in Nigeria, Lagos, Project Publications Limited, 1988, p.151.

gap between intention and reality.

The situation became worsened as many traditional rulers were not held in check by the colonial administration. This was due to the fact that the traditional rulers were collaborators with and ready tools in the hands of the British in expropriating forest resources to the utter neglect of the interests of local community members.

The above identified factors cast immense doubt over the integrity and competence of traditional rulers in protecting their subjects' interests. The failure on the part of the heads of native administration to manage forest reserves for the joint benefits of the community's members is however in sharp contrast to experiences elsewhere. For example, spectacular success has been attained in the practice of social forestry or rural people and forest users' participation in places like Senegal (African Reforestation Projects), Nepal (Traditional Local Government, Panchayets for Forest Management), India (Chipko Forest Protection Movement), South Korea (Village Forest Associations)⁵³; Switzerland (Torbel, Community-Based Management) and Japan (Hirano, Nagerike, and Tamanoka (Village Institutions for Forest Management)⁵⁴. In these cases, sustainable forest management has been realised by local forest users either with or without the support of the formal local government.

To solve the problems facing forest management under the local authorities, a Forest Commission directly responsible to the Western Regional Government was put in place in the late 1960s to assume responsibility for forest management.⁵⁵ With the restructuring of the four

⁵³ N. Uphoff, Op. Cit., pp.272-276.

⁵⁴ E. Ostrom, Op. Cit., pp.61-69.

⁵⁵ O. Oyediran, Op. Cit., p.55.

regions into 12 smaller units known as states in 1967, government at the state level in Nigeria took over the management and ownership of the forests within their territorial jurisdiction. This has been reinforced by the 1978 Land Use Decree which stripped the citizens of ownership over their land, and vested same in the respective state governors who hold the same in trust for the people. Accordingly, forest reserves in Nigeria are today being managed and protected by State forest services departments.⁵⁶ The federal/central government has only a monitoring function⁵⁷. A number of decrees and edicts have been promulgated to secure the long-term productive use of forests. Such laws include the Western State Forest Amendment Edicts 1969, 1970, 1973; the Exclusive Economic Zone Decree, 1978; the Endangered Species Decree 1985; the Oyo State Forestry Laws of 1988 and the Natural Resources Conservation council Decree 1989 (NEST, 1991).⁵⁸

However, none of these laws seems to appreciate the very crucial place and role of forest users and the importance of collective actions among the stakeholders in improvement efforts and process. Also, the direct involvement of the state government and the promulgation of the above laws appear to make sustainable forest management a more distant dream. This is because the efforts made by the State governments have not lessened corrupt practices by officials. Besides, the management of forests solely by the State governments has denied local community members the opportunity to challenge the abuse of the resources. Thus, some people, who have been described as timber thieves, have for years been stealing timber from forest reserves,

⁵⁶ NEST, Op. Cit., p.171.

⁵⁷ P.R.O. Kio, J.E. Abu and R.G. Lowe, Op. Cit., p.112.

⁵⁸ NEST, Op. Cit., p.173.

despite all attempts by the government to stem the trend. More importantly, no attention is being paid to the regeneration of the forest reserves by the illegal users.⁵⁹ Timber-Contractors who maintain regular contacts with forest reserves particularly in Osun State have no say in forestry policy. These problems are not peculiar to Nigeria alone. Many Third World countries are also facing similar crisis. For example, Elinor Ostrom (1990)⁶⁰ underscores some of the problems of forest management in Third World countries. She observes inter alia:

.... villagers had earlier exercised considerable restraint over the rate and manner of harvesting forest products. In some of the (Third World) countries, national agencies issued elaborate regulations concerning the use of forests, but were unable to employ sufficient numbers of foresters to enforce those regulations. The foresters who were employed were paid such low salaries that accepting bribes became a common means of supplementing their income. The consequence was that nationalization (centralization) created open-access resources where limited-access common-property resources had previously existed, (emphasis added)

From the foregoing, it can be inferred that popular participation supported by E. Ostrom' analytical framework characterized forest management in the pre-colonial era. Developments from the colonial era to the present post-colonial Nigeria can, however, be located within the theoretical models that support the state as the only solution in its capacity as an external actor. The manifestation of this approach is in the form of the adoption of the centralized method for forest administration. This centralised approach has been recommended by some of the scholars whose works are examined below.

⁵⁹ C.C. Gyamfi, "Ogun, Desperate to Save its Forests, Deploys Soldiers" in The Guardian, Monday, June 16, 1997, Lagos, Guardian Newspapers Ltd., p.11.

⁶⁰ E. Ostrom, Op. Cit., p.23.

2.5 Suggested Views on Appropriate Approaches to Forest Management

In Nigeria after independence in 1960, the basic focus of the emerging national regimes was on the achievement of a single national identity from different cultural, ethnic, religious and educational backgrounds. This goal affected both policy direction and intellectual focus as far as the management or administration of natural resources such as forests is concerned. The earlier studies on forest management were influenced by this development which led to the recommendation of the centralized approach (that is overall management by government) as the most suitable forest management approach.

In this regard, the work of S.K. Adeyaju (1975) is worth referring to. In his work titled Forestry and the Nigerian Economy, Adeyaju sought to assess forest economy and the competitive ability of Nigerian firms in selling forest products in international markets⁶¹. Apart from the fact that his approach is both historical and descriptive, Adeyaju endeavoured to subject the economic potency of the forestry sector to a critical analysis. He suggested that the management of forests in Nigeria should be centralized⁶². This should be done by creating a National Forestry Commission to which all state forest services are to be subservient. This Commission, according to the scholar, should take over the responsibility for forest management. Without any equivocation, the conclusion drawn by Adeyaju was directly informed by the federal government's principle of fighting the 1969-1970 civil war: "To Keep Nigeria One." The impression created here is that participation by forest users, especially local forest

⁶⁴ S.K. Adeyaju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan Press, 1975, pp.1-308

⁶² S.K. Adeyaju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan, 1975, pp.69, 70 and 250.

users, should be sacrificed for forging national unity or a national identity. The feasibility of this claim will be part of the issues to be examined in this work.

Similarly, Olofinboba (1979)⁶³ in his work on Forest: the Need for Improved Management sought to take stock of how formal structures of government could improve on forest management in Nigeria. Although his study is not an evaluation of different forest management approaches, Olofinboba argued that effective forest management would continue to elude us in Nigeria but only until the government designed effective planning and recruited qualified personnel to manage forests. He argued further that Nigerian Universities also had some role to play in the area of training and developing the needed personnel.

In another intellectual context, Oseni (1986⁶⁴) argues that balanced land use would be a realised dream by farming in forest areas (the practice of taungya). The achievement of this end, according to him, will be the responsibility of foresters (government staff). While not bothering himself with the importance of governance in the administration of forests, Oseni assigns to the state (government) the role of reserving some areas as forest reserves.

However, among some scholars, there has been a shift of focus on forest management to the integration of the efforts of the private sector with those of the government. The underlying factor for this shift is the awareness that government alone could not continue to have full responsibility for forest administration. Rather, these scholars began to see the responsibility

⁶³ M.O. Olofinboba, Forest: The Need for Improved Management, Ilorin, University of Ilorin, 1979, pp.3-23.

⁶⁴ A.M. Oseni, "The Role of Forestry in the Land Development" in E.O. Adeniyi and I.B. Bello-Imam (eds.) Development and Environment: Proceedings of a National Conference, Ibadan, Nigerian Institute of Social And Economic Research {NISER}, 1986, pp. 37-45.

as a shared concern between the public and the private sectors. Relevant in this regard is the view held by Enabor of the Department of Forest Resources Management, University of Ibadan, Nigeria that government should give adequate financial attention to forest management and involve the private sector through necessary incentives.⁶⁵ Although Nwoboshi (1982)⁶⁶ has earlier stressed the importance of silviculture as the biological aspect of forest resources management, Nwoboshi (1990)⁶⁷ and Nigeria Environmental Study/Action Team (NEST) (1991)⁶⁸ shared with Enabor the idea of involving the private sector in forest management in Nigeria. But NEST is more explicit as to who should be involved from the private sector. For example, NEST argued that forest management should be a shared responsibility between the formal structures of government and the private sector. The latter, according to NEST, should include local communities and non-governmental organisations. The same recommendation for joint responsibility in respect of forest management had earlier been supported by A.O. Olayemi (1985)⁶⁹; E.S. Udo (1985)⁷⁰; and M.O. Afolayan (1985).⁷¹ Also, in a research report for the

⁶⁵ N. Ikeano, "An Urgent Need for Forest Management" in Daily Times, Lagos, Daily Times of Nigeria Publications, May 23, 1989, p.7.

⁶⁶ L.C. Nwoboshi, Tropical Silviculture: Principles and Techniques, Ibadan, University of Ibadan, 1982, pp.333.

⁶⁷ L.C. Nwoboshi, "Towards Self-Sufficiency in Wood Production" in Daily Sketch, Ibadan, Sketch Publication, July 7, 1990, p.10.

⁶⁸ NEST, Op. Cit., pp.132-175.

⁶⁹ O.A. Olayemi, "Private Forestry in Nigeria" in The Changing Character of the Nigerian Forest Resources and the Implications for Future Development: Proceedings of the 1985 Annual Conference of Forestry Association of Nigeria, Held in Gongola State, pp.327-339.

World Bank, John Palmer and Timothy J. Synnoth (1992)⁷² also toe the same line of argument.

J Palmer and T. J. Synnoth (1992) add that while both government and the private sector - including industrial and wood-using enterprises, local farmers and other consumers of forest products - should see themselves as partners in forest management, overall authority for managing forest resources should reside in legally recognised and accountable government. But this suggestion is very critical with respect to Nigeria where government officials do not think they are accountable to anybody; and where ethnic and regional rivalries have long been exploited by the country's leaders to perpetuate their rule and thwart political, economic and democratic development.⁷³

Similarly, A.O. Isichei (1995)⁷⁴ shares the same view with Palmer and Synnoth, but the

⁷⁰ E.S. Udo, "The Challenge of Private Forestry and Forestry Extension Service" in The Changing Character of the Nigerian Forest Resources and the Implications for Future Development: Proceedings of 1985 Annual Conference of Forestry Association of Nigeria, Held in Gongola State, pp.370-377.

⁷¹ M.O. Afolayan, "Private Forestry: Its Potential Contribution to the Nigerian Forestry Development" in The Changing Character of the Nigerian Forest Resources and the Implications for Future Development: Proceedings of 1985 Annual Conference of Forestry Association of Nigeria, Held in Gongola State, pp.378-387.

⁷² J. Palmer and T.J. Synnoth, "Forest Management" in Sharma, N.P., (ed.) Managing the World's Forest: Looking for Balance Between Conservation and Development, Bulugu Lowo, Hunt/Kendall Publishing Company, 1992, pp.340-349.

⁷³ O. Akinbode, "What Future for One Nigeria?" in The Guardian, Lagos, The Guardian Newspaper, September 25, 1996, p.26.

⁷⁴ O.A. Isichie, Omo Biosphere Reserve, Current Status Utilization of Biological Resources and Sustainable Management in Nigeria: Working Paper, No. 11, Paris, UNESCO, 1995, pp.36-38.

former recognises that local communities in and around forest reserves are the most significant community of interest. Isichei's view appears to bring to the open the importance of rural people's participation in forest management in Nigeria. Isichei, therefore, argues that local communities living in and around forest areas in Africa should be involved in forest management. But there is a lack of clarity by him on what role the forest users should play in decision-making. This is because neither forest users nor forest-dwelling communities are part of the decision-makers he suggested in his study. The decision-makers he identified include the State government, Nigerian MAB (Man and Biosphere) Committee and UNESCO as well as the World Bank.

While stressing the importance of people's participation in forest management, Jatau (1994) identifies that citizens have uncooperative attitude towards the management of forest resources in Nigeria. The reasons for this, according to Jatau, are the general ignorance by the people of the benefits which can be obtained from properly managed forests and the dangers inherent in depleted forests. Jatau contends that this problem will be solved when people are well informed about the values and needs for protection and appropriate use of forest resources. In his view, Jatau suggests that "in a plural society comprising of a large number of groups and classes with diverse demands, intensive multiple use-management appears to be the only option."⁷⁵ This is to ensure that forest management is directed not only to wood production but also to "watershed, recreational amenity and, other forest products and services"⁷⁶ which have been slighted over the years.

⁷⁵ D.F. Jatau, *Op. cit.*, pp.88-90.

⁷⁶ *Ibid*, p.27.

However, Kio, Abu and Lowe (1993)⁷⁷ in their joint work on "High Forest Management in Nigeria" did not see any reason for decentralization of forest management responsibility. Rather, they stress that formal government should continue to have responsibility for forest management in Nigeria. They also add that a federal parastatal should be created, which should have overall control over the management of forest reserves in Nigeria - the centralization of forest management by a national agency.

Another study on forest management advocates the involvement of local communities as a way of managing forest resources in order to ensure their long-term, productive use. The study conducted by P.M. Parka (1995)⁷⁸ in the Arid Zone (the northern part) of Nigeria is very important in this respect. While limiting his study to the on-going afforestation project in some states in Northern Nigeria, Parka recognises that effective forestry may not be realized without the active involvement of local communities. What has not been adequately highlighted in his study is the role the forest users should play in decision-making.

2.6 Conclusions

There is no doubt that the need for efficient and sustainable forest management is central and common to the studies examined above. In fact, the need is becoming increasingly urgent as the amount of our forest resources is on the grim decline, and to avoid being forest products

⁷⁷ P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" Op. Cit., pp.112-144.

⁷⁸ P.M. Parka, "Community Participation in Forestry Development in Nigeria" in State Forestry and the Small-Scale Farmer: Proceedings of 1995 Annual Conference of the Forestry Association of Nigeria, Held in Kaduna, Kaduna State, pp.1-18.

import-dependent country.

From the preceding, however, some gaps can be identified. Adeyoju, Olofinboba and Kio, Abu and Lowe argued that government should provide overall management of forests. These scholars support this suggestion as a way of forging a single national identity from different tribal, social, religious and ethnic backgrounds. Argument for overall management by the government or the state seem to have been overtaken by events taking place in Africa. For example, many scholars have stressed the failure of the states in Africa, Nigeria inclusive, in guaranteeing the citizens the most minimal standard of living and security, in providing essential basic services and a modicum of human dignity⁷⁹ and in the management of man-made, human and renewable natural resources including forests⁸⁰. The collapse of basic infrastructural

⁷⁹ A. Adedeji, "Towards a New African Order with a New South Africa" in Adedeji, A. (ed.) South Africa and Africa: Within or Apart?, London, Zed Books Ltd., 1996, p.217.

⁸⁰ F. Cheru, "Africa and the New World Order: Rethinking Development Planning in the Age of Globalisation" in Adedeji, A. (ed.) South Africa and Africa: Within or Apart?, London, Zed Books Ltd., 1996, pp. 50-51. Also see Erero, J., "Return to the Source: Towards Improved Governance in Nigeria" in African Journal of Institutions and Development (AJID); Vol. 2 No. 1, 1996, Nigeria: Research Group on Local Institutions in Nigeria, Obafemi Awolowo University, Ile-Ife, pp. 1-5; C.A.B. Olowu, Bureaucracy and the People: The Nigerian Experience. Nigeria: Obafemi Awolowo University Press limited, 1996, pp. 23- 26; and Wunsch, J.S. and Olowu, D. (eds.), The Failure of the Centralized State: Institutions and Self-Governance in Africa. California, Institute for Contemporary Studies (ICS Press), 1995, pp. 1-334.

facilities and the rapid depletion of vast forest land⁸¹ in Nigeria are evidence of this failure. This is because the administration of forest reserves requires collective actions and cooperative behaviour among the stakeholders.

Thus, there is the need to begin to look beyond the formal structures of government and encourage the involvement of forest users. The involvement requires collective actions among the users, the success of which in turn depends on common understanding among the users about what is and what is not allowed in the use of forest resources. Such common understanding cannot be provided by an external authority alone, but has to be developed by the individuals affected through continuous interactions with one another in various daily exigencies.

With respect to the involvement of the private sector, there is the problem of the profit-maximizing motive which may be inimical to the productive use of forest resources over time, and may eventually lead to their destruction. In addition, scholars that stress the participation of local communities (rural people) did not clearly underscore the need for the involvement of government, forest users and forest dwelling-communities in decision making and implementation. This clarification is very important in order to ensure effective governance.

The argument here does not, however, indicate that critically analytical studies have not been conducted to answer the questions on what approach is appropriate to managing which natural/man-made resource, given its local environmental conditions. Relevant in this regard are

⁸¹ C.C. Gyamfi, "Ogun, Desperate to Save its Forests, Deploys Soldiers" in The Guardian, Monday, June 16, 1997, Lagos, Guardian Newspapers Ltd., p.11. Also see Oribioye, S., "Arresting Environmental Degradation: Concern Grows for Depletion of Forest" in Daily Times, Thursday, June 19, 1997, Lagos, The Daily Times of Nigeria Plc, p.27.

the works of some Scholars of Policy Analysis and Public Administration such as N. Uphoff (1986), E. Ostrom (1990), E. Ostrom (1992), S.Y. Tang (1992), and O.J. Lynch and K. Talbott (1995) as earlier cited. However, the works of these scholars have been confined not only to settings outside Nigeria, as earlier indicated but, with a few exceptions, also to CPRs other than forests.

The above preoccupations as legitimate as they seem to be create another obvious gap. The vacuum in question has to do with the fact that till date, no systematic analysis has been carried out on the administration of forest reserves in Osun State especially from the perspective of Public Administration. An examination such as this is pertinent because it can assist in determining the extent of forest users' participation, approaches that make for the sustainability of forests and how corrupt practices by officials can be checked. It is from this background we take our theoretical departure by examining the administration of forest reserves in Osun state. In addition, the effort will enable us to determine the management approach that is suitable to the local environmental conditions of forest reserves in Osun State. Apart from the fact that the present study is poised to fill these gaps, the information that will arise from the research work will contribute to the on-going literature on forest management in Nigeria. The study will also help to extend to Nigeria studies on evaluation of alternatives to markets and formal organisational hierarchies. At this juncture, we can now turn to research methodology adopted for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction:

In this chapter attention will be focussed on the framework for analysis and methodological approach adopted for the study. This is aimed at a critical analysis of the extent of forest users' participation in the administration of forest reserves in Osun State. Both the framework for analysis and methodological approach adopted in this study will provide a theoretical basis for the analysis of our data.

3.2 Framework of Analysis

To channel a clear course for this study, the Institutional Framework is adopted. The approach is adopted from the works of E. Ostrom¹ and her colleagues at the Workshop in Political Theory and Policy Analysis, University of Indiana, Bloomington, United States of America.

The framework has four parts. The first part includes the attributes of the physical world or event, attributes of the actors or participants, and the attributes of the institutional arrangements or governing rules in use. These attributes constitute independent variables which

¹ E.Ostrom, Governing the Commons, New York, Cambridge University Press, 1990. See J.T. Thomson, A Framework for Analyzing Institutional Incentives in Community Forestry, Rome, Food and Agriculture Organisation of the United Nations, 1992. Also relevant is the work of T.S. Yang, Institutions and Collective Actions: Self-Governance in Irrigation, San Francisco, California, Institute for Contemporary Studies, 1992.

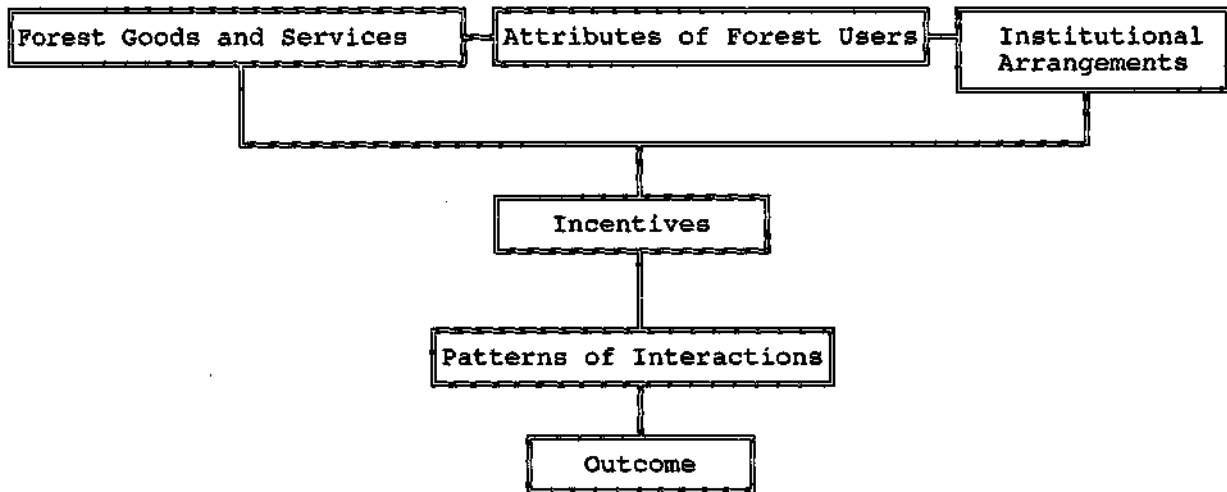
affect the other parts of the framework. The second part focuses on incentives created for individual actors by the attributes of the actors, the attributes of the goods, and the attributes of the governing rules. The third part embraces the patterns of interactions which arise as individuals implement their strategies. The fourth part has to do with the outcomes or the effects behaviour patterns produce - such outcomes can be sustainability and efficiency of producing and sharing goods. The focal point of the framework is the decision situations facing individuals which in turn affect collective actions as well as outcomes such as the sustainable management of forests.

These component parts roll into a framework which is a theoretical mode of institutional analysis that seeks to set out the way different contextual variables determine various collective actions in forest systems. Put differently, "it is an evolving method for identifying and analyzing how attributes of a physical world interact with those of the general cultural setting and the specific rules-in-use to affect the incentives facing individuals in particular situations and the likely outcomes to result."² It is interesting to note that the types of institutional arrangements and the attributes of the events (resources of interest) as well as the features of the community of individuals may lead to different incentive structures that generate cooperation or conflict among individuals. For illustrative purposes, the figure below gives graphic insights into the framework.

² Elinor Ostrom, IFRI Data collection Instruction Manual, Indiana, Workshop in Political Theory and Policy Analysis, 1993, p.2.

Figure I

A Framework for Institutional Analysis



As shown in the figure above, the framework connects the features of the event (forest) with those of the forest users and the rules-in-use. These attributes in turn affect the incentives facing individuals operating in specific situations and the outcomes of the interactions. For the event such as forest reserves and their produce, their attributes relate to the following: their sizes, ease of excluding users, divisibility, temperature, altitude, etc. The attributes of a community include the size, homogeneity or heterogeneity of members, and shared norms of those who affect or who are affected by a resource. Institutional arrangements are the specific rules (the musts, the must nots, and mayas of resource use) which are commonly understood, followed to a large extent and enforced. The source of these rules may be local or external. They are local in source when such rules are developed by local users. However, when the rules are contained in legislation, court decisions or administrative procedures of the state system, they are external in source. Institutional arrangements can be operational, collective choice and constitutional in nature and are nested in higher layer of rules. Operational rules which are a set of rules that governs the way the individuals concerned relate to the resource in terms of use and management are made at the collective choice-level. The decisions that lead to these rules are taken at the collective-choice level, such as at a periodic meeting of state government executive councils or an annual meeting of forest users' association. When such an association has an executive committee that determines joint activities or collective-choice actions to be undertaken, the decisions take place at the constitutional-choice level. Having discussed the framework for analysis adopted for this study, it is necessary to turn to the methods adopted for data collection and analysis.

3.30 Data Collection Methods

Both primary and secondary data are used to achieve the stated objectives of the study.

3.31 Primary Data: These are gathered from selected forest users (timber-contractors, hunters and taungya farmers) in Osun State and some staff of Osun State's Forestry Department responsible

directly for the State's forest reserves. The data are collected with a view to generating information about the extent of forest users' involvement in decision-making; the attributes of forest reserves in Osun State, forest users and the institutional arrangements for forest administration; the degree of sustainable forest administration and corrupt practices by officials. In this regard, two separate structured questionnaires were prepared: one set for the forest users and the other set for Osun State's Forestry Department's staff.

On the whole, 150 questionnaires were administered using purposive method. 50 of the questionnaires were administered to the staff of the Forestry Department of Osun State - these constituted a little over 30% of the staff since the staff size ranges between 120 and 150. The remaining 100 questionnaires were administered to the selected forest users in the State.

The questionnaires were administered personally by me in a face-to-face situation. Since some of the respondents were illiterate, efforts were made to explain the purpose of the questionnaire survey to them. Some questions that were not clear to the respondents were also clarified. As earlier indicated, the questionnaires were structured. But it was recognised that this form of questionnaires does not give room for such things as lengthy explanation by the respondents. The structured questionnaires were adopted because they are easy to administer to large numbers of respondents and they facilitate the process of analysis.

Besides, in-depth interview was conducted with eleven forestry staff of the State's forestry department. Also, forest users including eleven timber-contractors, two hunters and two taungya farmers were also interviewed. This was aimed at reinforcing and corroborating the responses gathered through the administration of the questionnaires. This was however done after critical questions and comments on those responses.

3.32 Secondary Data; To complement the data that were gathered from the primary sources, data and information from the library and official documents were utilised. The works consulted in the library were published materials such as books, newspaper reports, articles and research reports such as

theses and dissertations. Official documents such as gazettes, circular, technical reports and guidelines were also consulted. These sources provided information on policy changes; the size of the reserves; types of tree species and general indications regarding the condition of the forest reserves.

Accordingly, data derived from library and documentary records were used in writing the first three chapters. The fourth chapter was written on the basis of data obtained from documents which were provided by the Osun State Forestry Department. The fifth chapter was written using only information derived from the conduct of interviews and administration of questionnaires. Below is presented the summary of questionnaires administration and retrieval.

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Table 3.1
Summary of Questionnaires Administration and Retrieval

S/NO	Items	Forestry Staff	Forest Users	Total
1	Population Strength	139	968	1106
2	Number of Questionnaires Administered	50	100	150
3	Number of Questionnaires Retrieved	39	63	102
4	% of 2/1	35.95%	10.33%	13.56%
5	% of 3/2	78.00%	63.00%	68.00%

Note: The study samples were selected based on the purposive sampling method because of the problem of determining the exact size of the study population.

Table 3.1 above depicts the summary of questionnaire administered and retrieved. From the table, the study population is 1106 out of which forestry staff and forest users account for 139 and 968 respectively. The study sample size is 150 representing 13.56% of the study population. As can be seen from the table, the overall response rate was very high. Out of 150 questionnaire administered, 102 were retrieved, representing an overall response rate of 68%. Specifically, 50 questionnaire were administered to forestry staff out of which 39 were retrieved, representing a response rate of 78%. As for forest users, 100 questionnaire were administered to them out of which 63 were retrieved. This figure represents 63%.

3.4 Data Analysis; The quantitative data generated in the field were electronically processed, using the SPSS computer software package. In addition, appropriate frequency distribution tables were produced.

In reporting and analysing the data, the Institutional Analysis Method was adopted. This method, as earlier indicated, is a mode of institutional analysis that can help to identify how different contextual variables structure various collective action situations in forest systems. With respect to the testing of the hypotheses of the study, the analytical technique used is the Chi-square Test.

3.5 Scope of the Study: The scope of this study is defined by the boundaries of the subject-matter to be covered and the geographical coverage.

The subject-matter of the study has as its focus "An Institutional Study of the Administration of Forest Reserves in Osun State." For the purpose of easy analysis, Ife (Ife F3 and Shasha or Area 5) and Ago-Owu Forest Reserves served as forest reserves of reference in this study. The choice of these Forest Reserves was purposive. This is informed by the fact that the two forest reserves are the only reserves which have not been fully exploited in Osun State. Ago-Owu and Ife Forest Reserves still have 21.99% and 36.42% respectively left unexploited. It is in these two forest reserves that exploitation is at present

going on. But Ikeji-Ipetu, Ila, Oba Hills and Oni Forest Reserves have been fully exploited. Although exploitation is no longer going in these reserves, some reference will be made to them in the study.

Besides, the study covers the period from 1988 to 1997. This time coverage has been adopted because it was in 1988 that a new set of policy objectives was adopted for all States of the Nigerian federation. Also, the current Forestry Law and organisational structure of Osun State's Forestry Department came into force in 1988. Although these changes occurred when Osun State was still part of the old Oyo State, Osun State has continued to use the Forestry Laws and the organisational structure.

3.6 Limitations of the Study

As earlier mentioned in the study, the bias or purposive sampling technique was adopted in choosing the study samples. The result of choosing the method is that sampling errors are not estimated. Thus, our samples cannot be said to represent the population of forestry staff and forest users in Osun State. This is because it has been proposed that for a population of 1,000 persons, a sample size of 20% is adequate. Besides, for a population of 5,000 persons, a sample size of 10% is adequate.³ However, our sample size of 150 or 13.56% drawn from the population of 1106 forestry staff and forest users does not fall within the proposed frame. But the position does not destroy or flaw the study as the use of purposive sampling techniques are acceptable in social science research when the need arises to draw samples from among persons considered to be in good positions to supply required information⁴ Thus, the purposive method was adopted.

³ S.A. Adetoro, Research Technique for Project Proposal, Reports, Theses and Disertations, Zaria, Gaskiya Corporation Limited, 1986, p.40.

⁴ J.A. True, Finding Out: Conducting and Evaluation in Social Research, California, Wadsworth Inc., 1989, pp.103 - 104.

Other reasons for the adoption of the method are identified below. First. The purposive method was used because of the problem of ascertaining the actual population of the staff of Osun State' Forestry Department and forest users due to the non-existence of an up-to-date information. Secondly, most of the forest users are ill-equipped educationally to serve as useful respondents to our questionnaires as well as interviews. In this regard it was considered most prudent and practicable to use the purposive method.

The limitation of the study only to the involvement of state government and forest users in the administration of forest reserves as stakeholders is because interactions as regards the use of forest reserves take place between the two groups. In addition, the choice of Osun State as our case study is aimed at generating State specific studies which are useful in the illustration of generating and testing of hypotheses. In this regard, the study provides the basis for further research studies on the quest for ways to ensure sustainable administration of forest reserves in Nigeria. Thus the findings of the study can be opposed, modified or confirmed, all to the advancement of knowledge of on the subject-matter.

CHAPTER FOUR**THE ADMINISTRATION OF FOREST RESERVES IN OSUN STATE.****4.1 Introduction**

Decentralization policy in Nigeria has often been directed towards the creation of new state and local governments. More often than not, the intention of the policy is to ensure the rights to self-government, though not sovereignty, for people in a multi-ethnic society such as Nigeria. Another justification for the creation of more state and local governments in Nigeria is to bring more developments to the grassroots. It was in these circumstances that Osun State with its capital in Osogbo was carved out of the Old Oyo State on 27th August, 1991 to enjoy the status of a distinct geographical unit within the Nigerian federation. The reality of a new state became a concrete achievement following tireless and unrelenting efforts and quest for a State by the people of Osun State. In actual sense, the creation of the State by the Babangida administration was a dream fulfilled for the people of Osun State.

Osun State, which is located within the geographical unit called South-Western Nigeria, is predominantly inhabited by the Yoruba. With a population size of 2,260,936 and twenty-eight local governments, Osun State harbours people who practise such religion as Christianity, Islam and African traditional religions (idol worship). Besides, the people of the state are greatly enterprising, having occupations such as trade and agriculture. Endowed naturally with evergreen rain forests, the state is also blessed with a number of small-scale firms, primary and secondary schools as well as institutions of higher learning.

These are essential pools of resources Colonel Leo Segun Ajiborisa met when he became the first military chief executive of the State in 1991. As a result of the aborted transition to civil rule programme of the Babangida administration, Colonel Ajiborisha in 1992 had to hand over the affairs of the state to Alhaji Isiaka Adetunji Adeleke who became the first democratically elected governor of the state. The civilian helms-man of the State was abruptly relieved of his post as a result another military incursion in

Nigerian politics on 18th November, 1993. Nevertheless, the State has remained a going concern from the onset, operating with a number of ministries and parastatals.

Going back to the early days of Osun State, a number of Ministries were put in place for effective and efficient administration. Of special interest to this study is the Ministry of Agriculture and Natural Resources which has Forestry Department as one of its Units. The Forestry Department headed by a Director, who is a professional forester of appreciable years, administers all the forest reserves and free/local forests in the State. While local forests are woodlands outside areas constituted as forest reserves, forest reserves in the State are Ife F3, Shasha, Ago-Owu, Ikeji-Ipetu, Oni, Ila, Oba Hills and Iwo fuel Forest Reserves. Forest reserves are administered directly by the State Government. For a better understanding of the development of forest administration in Osun State, it may be helpful to consider how forests were administered before the adoption of the existing **Forestry Laws** in 1988.

4.20 History of Forest Administration Before The Forestry Laws of 1988

4.21 Pre colonial Era

The history of forest administration in Osun State, South-Western Nigeria can be traced back to the pre-colonial era. This exercise may be too difficult a task because of the lack of written historical records during the pre-colonial period.

Nevertheless, Johnson recorded that the people of South-Western Nigeria, comprising the Yoruba as the major ethnic tribe, administered their forests through indigenous traditional institutions.¹ In each Yoruba town, for example, an Oba (King) with the assistance of his subordinate chiefs directed the affairs of the town. These rulers also served as caretakers of ancestral land and the key operative concept for

¹ S. Johnson, The History of the Yoruba, (Lagos, C.S.S. Bookshops, 1921), p.95.

decision making was consensus.² It is interesting that these traditional rulers offered the subjects a kind of leadership rooted in the principle of public accountability. In addition, they also operated within this political framework to design rules and regulations for managing forests and other resources. In the case of forest administration, forest laws which defined how and when to use the forest were enforced by the town's guild of hunters.³ It was this guild's members who served as forest guards during the time.

These forests served a number of purposes such as places of worship and sources of raw materials for building and construction.⁴ However, Johnson's account did not mention the existence of any places specially designated as forest reserves in the pre-colonial era. But the imposition of British rule on Nigeria brought in a structural twist in forest administration in South-Western Nigeria.

4.22 Colonial Era: The introduction of colonialism and the imposition of British imperial rule on Nigeria set a new dawn for forest administration. The responsibility which used to be carried out by the existing traditional institutions was gradually usurped by the British. It was in these circumstances that organised administration of forests came into being first in South-Western Nigeria including the Protectorate of Lagos⁵ and later in other parts of the country. Organised forestry owes its beginning to the Governor of Lagos Colony, Sir Alfred Moloney.⁶ This pioneering concern set the pace for moves

² C.A.B., Olowu, Bureaucracy and the People: The Nigerian Experience. (Nigeria, Obafemi Awolowo University, 1996), p.9. Also see Mamadou Dia, Indegenous Management Practices: Lessons for Africa's Management in the '90s, Concept Paper for Regional Study Africa Technical Department, (Institutional Development and Management, Washington D.C., April 1992), p.2.

³ S. Johnson, The History of the Yoruba, (Lagos, C.S.S. Bookshops, 1921), p.95.

⁴ Ibid. p.95.

⁵ S.K. Adeyoju, Forestry and the Nigerian Economy. Ibadan, University of Ibadan Press, 1975, p.19.

⁶ Ibid. p.19.

about the development of forest administration in Nigeria. Without doubt, these efforts gave birth to some fruits some of which are considered in the discussion that follows.

To start with, one of the fruits of the moves by various British administrators was the forest service which was born in 1897.⁷ Consequently, the colonial government began to acquire forest lands through agreement with local communities.⁸ Thus for effective administration of forests, a separate Forestry Department was created with headquarters at Olokemeji.⁹ This Department, which carried out forest service in Nigeria, was essentially saddled with reservation and protection of the existing forests.

Other activities of the new department were as follows:

- (i) Dealing with the question of concessions and the rights of local people in the face of increasing export of wood and forest produce.
- (ii) Combating the harmful effects that an uncontrolled and unguided farming could have on forests.¹⁰
- (iii) Regulating the tapping of the natural African rubber trees.¹¹

Following the creation of the Department of Forestry, conscious efforts began to be made to constitute forest reserves. As a result of these moves, Olokemeji and Mamu (Gambari), both now in Oyo

⁷ P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" Op. Cit., p. 112.

⁸ P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" in Wood, P.J., Vanclay, J.K. and Molid, W.R. (eds.) The Quest for Sustainability: 100 Years of Silviculture and Management in the Tropics, Malaysia, Forest Research Institute, 1993, p.122.

⁹ S.K. Adeyoju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan Press, 1975, p.19.

¹⁰ Ibid, p.20.

¹¹ P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" in Wood, P.J., Vanclay, J.K. and Molid, W.R. (eds.) The Quest for Sustainability: 100 Years of Silviculture and Management in the Tropics, Malaysia, Forest Research Institute, 1993, p. 123.

State, emerged as the first forest reserves in Nigeria in 1900 and 1889 respectfully.¹² In addition, with the Forestry Amendment Ordinance of 1927, two types of reserves sprang up in South-Western Nigeria.¹³ These were Government Reserves and Local Authority Forest Reserves. While, exclusive control was exercised over the former by the colonial government¹⁴, the latter were under the native administration. But the ultimate intention of the forest policy was to hand over most of the forest reserves to the local authority councils.¹⁵ This policy and the 1927 Forest Amendment Ordinance thus served as a motivating factor for local authority councils to constitute their own forest reserves.

The constitution of forest reserves in the geographical unit now known as Osun State can be said to begin around 1931.¹⁶ Ikeji-Ipetu forest reserve was the first of such reserves. It was constituted in 1931 by Ilesa local authority and is as at present in Atakumosa local government area. In quick succession, other forest reserves were created between 1941 and 1960 in the geographical unit now known as Osun State. These are Ife (1941)¹⁷, Shasha (1955), Ago-Owu, Ila, Oni, and Oba Hills Forest

¹² P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" in Wood, P.J., Vanclay, J.K. and Molid, W.R. (eds.) The Quest for Sustainability: 100 Years of Silviculture and Management in the Tropics, Malaysia, Forest Research Institute, 1993, p. 123.

¹³ R.R. Troup, Colonial Forest Administration, London, Oxford University Press, 1940, p. 328.

¹⁴ R.R. Troup, Colonial Forest Administration, London, Oxford University Press, 1940, p. 331.

¹⁵ S.K. Adeyoju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan Press, 1975, pp.48.

¹⁶ This information was obtained through oral interview with a Senior Forest Officer at the Osogbo Headquarters of Osun State Forestry Department.

¹⁷ O. Oyediran, "Local Influence and Traditional Leadership: The Politics of Ife Forest Reserve" in O. Oyediran (ed.) Essays on Local Government and Administration in Nigeria, Lagos, Project Publications Limited, 1988, p. 153.

Reserves.

Initially, these forest reserves were mainly blanketed by a variety of rich and abundant indigenous trees species. These tree species in local trade names with their botanical names in bracket are Opepe (Sarcocephalus diedernichii), Iroko (Milicia excelsa), Ekki (Laphira alata), Idigbo (Terminalia ivorensis), Ijebo (Entandrophragme spp) Oganwo (Khaya ivorensis), Apa (Azelia africana spp), Arere (Triplochiton scleroxylon"), Omo (Cordia millenii spp), Ofun (Mansonia altissima), Igi Agbon (Barasrium aethiopianum), Akasun (Cowbretodeniron spp), Ayunre (Albizzia ferruginea spp), Araba (Ceiba pentandra), etc.¹⁸ These trees were and still are of high economic value both in foreign and domestic markets. Exotic tree species were later introduced in the forest reserves.

With respect to their administration, the aforementioned forest reserves in South-Western Nigeria were administered by Native District Councils until 1954, and representative local government councils between 1954 and 1969.¹⁹ Thereafter, the old Western State assumed full responsibility for their ownership and administration²⁰ until 1976 when Oyo State, created out of the old Western State, began to administer them. With the creation of Osun State by the Babaginda administration in 1992, these reserves came under the administration of Osun State. Without equivocation, the 1978 Land Use Act gave tremendous strength to their ownership and administration by the State Governments in Nigeria. Before turning to how they are being administered by Osun State Government, it may be helpful to consider what led to the State Government's ownership and administration of forest reserves in South-Western Nigerian.

To start with, until 1954 each of the mentioned forest reserves was administered by the

¹⁸ Osun State of Nigeria, Proposed Tariff for Operation Inside Forest Reserves in Osun State, 1997.

¹⁹ Oral Interview was used to obtain this information for lack of accurate recorded data.

²⁰ P.R.O. Kio, J.E. Abu and R.G. Lowe, " High Forest Management in Nigeria" Op. Cit., p. 124.

appropriate Native Administrative councils on whose land the reserves were located. At this time, forest policy objectives were dictated by the colonial government.²¹ But the Native Authorities administered the forest reserves through an Assistant Conservator of Forests.²² Under the Conservator were uniformed men whose functions were to guard, patrol and control log movement. Although all forest personnel were on the pay-roll of the concerned native administration, Assistant Conservator of Forests was responsible to the colonial government of Western region. This is because the Assistant Conservator was part of the hierarchical structure of the colonial government of the region.²³

Also, although forest reserves in the domain of native administrative councils were viable sources of their finance, the administration of forest reserves by native administrative councils raised many questions. A number of factors were responsible for this untoward situation. First, the period was one of connivance between the Obas (kings), the heads of the native administrations, and the colonial government.²⁴ These Obas collaborated with the colonial master to extract resources to meet the needs of the colonial home country instead of those of the indigenes.

Secondly, the Obas, especially those accorded the status of sole native authority, were excessively empowered and given " powers of appointment to the native authority, power to make bye-laws, to control any activities of the community which appeared to the Oba to be a threat to order and good government, power to recommend appointment, suspension and dismissal of chiefs, and power to recommend members of the native courts and their salaries."²⁵ Thus, these traditional rulers became all

²¹ R.R. Troup, Colonial Forest Administration, London, Oxford University Press, 1940, p. 330.

²² Ibid., pp. 329 - 330.

²³ Ibid., p. 331.

²⁴ Oral Interview-sourced data.

²⁵ O. Oyediran, "Local Influence and Traditional Leadership: The Politics of Ife Forest Reserve" in O. Oyediran (ed.) Essays on Local Government and Administration in Nigeria.

in all in their domains as long as their activities were not inimical to the colonial objectives of expropriating and carting away natural resources to their home country.²⁶ In addition, many of these rulers tended toward autocratic behaviour.

Consequently, customs and traditions of the people and respect for the principles of public accountability, responsiveness and transparency which, before colonialization served as sources of checks and balances on the rulers, gradually became moribund.²⁷ Thus, there followed abuse of power by many heads of the native administrative councils.

As a result, the administration of forest reserves suffered in the hands of the native administrations. This eventually led to the display of opportunistical behaviour on the part of the rulers in terms of the exploitation of forest reserves which were expected to benefit people within each council's domain. Even where financial returns were obtained from the forest reserves, such receipts were often diverted into private accounts of the rulers. However, no effort was made to check this situation by the colonial government. The colonial government might refuse to check the rulers because the exploitation of the reserves was carried out by indigenous firms with technical advice from (the British) foreigners. In this regard, the crisis of governance with reference to the administration of Ife Forest Reserve, which is the largest reserve (about 46%) in the State and a typical case of the situation above, will be examined below.

Ife Forest Reserve came into being in 1941. The forest reserve was expected to be administered

Lagos, Project Publications Limited, 1988, p. 150.

²⁶ Oral Interview with Community leaders in Ife.

²⁷ S.A. Oladosu, "The Historical Development of Local Government in Nigeria" in Aborisade, O. (ed.) Readings in Nigerian Local Government; Ile-Ife, Department of Local Government Studies, Obafemi Awolowo University, 1986, p.6.

for the benefit of the Ifes.²⁸ To the contrary, it was secretly exploited by the Ooni, head, of Ife District Naive Authority, as a private property without the knowledge of the Ife community members. When the deal became a public knowledge, the Oba refused to hand off the reserve and pay to the pulse of the Council the estimated annual revenue of over #40,000 derived from the reserve. The need to administer the forest reserve for the benefit of the Ifes became a policy goal when the system of representative local government was put in place in 1954.

With the introduction of the system of representative local government in Western Region in 1954, the native authority councils lost forest administration to representative local government councils. Although some members of the old native authority councils did not hand off forest matters immediately, their replacement made councillors the custodians of forest reserves.²⁹ Also, the choice of exploiters began to be the decision of local government councils. Characteristic of the periods of representative local government system and Native Administration was the problem of dual administration of forest reserves.³⁰ This involved the forest policy emanating from the regional government and the local governments were expected to carry them out.

The problem of dual control greatly encouraged unauthorised timber felling. The situation continued to grow worse as ill-trained, dishonest local government forest guards connived with councillors to flout the laws imposed by the regional government.³¹ Due to the degrading nature of the forest reserves in Western Region, the government was forced to raise some probe panels in the late

²⁸ O. Oyediran, "Local Influence and Traditional Leadership: The Politics of Ife Forest Reserve" in O. Oyediran (ed.) Essays on Local Government and Administration in Nigeria, Lagos, Project Publications Limited, 1988, pp. 150 - 161.

²⁹ S.K. Adeyoju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan, 1975, p.59.

³⁰ Ibid, pp. 48, 59.

³¹ Ibid, p. 59.

1960s. The terms of reference of the panels included investigation into illegal operations in the forest reserves.

Among the panels set up were **the Mabogunje Committee on Forest Policy and Management of 1966 -1967; the Somolu Commission of Inquiry into the Assets of Public Officers in the Western State, 1965 - 69; and the Inquiry into the Assets of Certain Local Government Officials in the Western State, 1969 -1970.**³² These panels separately raised accusation of conflict of interest against certain politicians and forestry officials who unduly enriched themselves either by plundering the forest reserves or diverting vast sums of public revenues accruing from exploitation into private projects and savings accounts.

Lack of forest rules or laws cannot be said to be responsible for the above problems. This is because a number of rules or laws were put in place between 1901 and 1950 for forest administration in Nigeria. It should be added that the forest laws enacted up to 1954 were used to administer all forest reserves in Nigeria. Thereafter, each regional government began to enact its own forest rules. Some of these rules are enumerated below.

Governing Rules: The following rules were used to administer forests in Nigeria up to 1954:

- A. The Forestry Law of 1901.³³ This law was to:
- (i) empower the government to acquire forest land and constitute forest reserves and start afforestation where there was no forest;
 - (ii) prescribe the procedure to be followed in constituting any land as forest reserves. These included publications of a notice in the gazette of government intention to constitute forest reserves, stating the boundaries of the land, the purpose for which reserves was

³² **Ibid, p. 60.**

³³ **Ibid, p. 22.**

- to be constituted and the appointment of reserve settlement officer; and
- (iii) control the felling of timber.
- B. The Forestry Ordinance of 1916³⁴ - Its provisions were:
- (i) to empower the governor to create compulsory reserves in order to guard against the destruction of forests;
 - (ii) to allow local communities where reserves are located the rights to use or exploit forest reserves;
 - (iii) to prohibit the destruction of trees and forest produce on communal lands; and
 - (iv) to pay local communities royalties for forest produce taken from their forest reserves.
- C. 1927 Forestry Amendment Ordinance:³⁵ This ordinance legalised the constitution of forest reserves by local authorities.
- D. 1941 Forestry Amendment Ordinance:³⁶ It provided for the creation and management of forest reserves by local authorities.

As earlier indicated, the above laws were applicable to the administration of all forest reserves in Nigeria up till 1954. With the introduction of a federal constitution in 1954, which gave some measure of autonomy to each region, each regional government began to enact its own forestry rules.³⁷ As a result, the Western Regional Government began to design its forest rules for forest administration with emphasis on production of forest produce to meet local needs, maintenance and protection of forests and

³⁴ **Ibid**, p. 21.

³⁵ R.R. Troup, Colonial Forest Administration. London, Oxford University Press, 1940, p. 329.

³⁶ S.K. Adeyoju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan Press, 1975, p. 23.

³⁷ S.K. Adeyoju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan Press, 1975, p. 48.

the principle of sustained yield.³⁸

Some important features can be identified in the aforementioned forestry laws listed above. First, the forestry laws were unitary. This is because they were enacted at the central level of government without the involvement of the concerned local governments and forest users. Even when the western region began to enact its own forestry rules as from 1954, the decision-making process rarely involved the affected local governments and forest users.

Also, a number of other problems militated against forest administration during the colonial period. First, there was lack of regeneration exercise which might have led to the shrinking of forest reserves in the region. Secondly, because of the overwhelming interest of foreign firms covertly or overtly backed up by the colonial government, a lot of able and willing indigenous timber-contractors could not have access to the reserves. Thirdly and more seriously, forest officials were not adequately remunerated and equipped with the required facilities such as patrol vehicles. Fourthly, bribe-taking and connivance with illegal forest users were very rampant among forest officials. The findings of the probe panels mentioned earlier also corroborated the existence of these problems.

To avoid the above problems the old Western State took over all forest reserves within its geographical territory and began to have full responsibility for their administration from the late 1960s. Thus, a Forest Commission directly responsible to the state government was established to administer all local forest reserves.³⁹ This marked the beginning of the administration of forest reserves by the state government in South-Western Nigeria. Even when the old Western State was divided into smaller units (state) in 1976, each state continued to exercise ownership and administration over all its forest reserves.

³⁸ S.K. Adeyoju, Forestry and the Nigerian Economy, Ibadan, University of Ibadan, 1975, p. 48.

³⁹ O. Oyediran, Essays on Local Government and Administration in Nigeria, Lagos, Project Publications Limited, 1988, p. 55.

Nothing has changed this arrangement in South-Western Nigeria up to date. It is therefore useful to turn to the discussion of the administration of forest reserves in Osun State by the state government after the adoption of the Forestry Laws in 1988.

4.3 Administration of Forest Reserves by the Osun State Government

In the preceding sections, efforts have been made to trace the history of forest administration in South-Western Nigeria. The only justification for these efforts is that the existing forest reserves in Osun State were formerly administered by the government of this region. In clear terms, the historical accounts are not irrelevant because they help in understanding the background to the administration of the existing forest reserves in Osun State. On this note, an examination of the administration of forest reserves in Osun State can now be undertaken. This exercise will consider the features of the forest reserves, the organizational structure of Osun State's Forestry Department, institutional arrangements for administering the forest reserves and problems of the administration of forest reserves in Osun State.

4.31 Attributes of Forest Reserves in Osun State

There are a number of forest reserves in Osun State. Seven of these forest reserves, their current hectareage, extent of exploitation and locations in Osun State are shown in the table below.

Table 4.1

Current Hectarage of Forest Reserves Showing
Extent of Exploitation and Locations in Osun State

S/NO	NAMES OF FOREST RESERVES	LOCAL GOVERNMENT AREA OF LOCATION	TOTAL HECTARAGE	TOTAL AREA ALREADY EXPLOITED	TOTAL AREA NOT EXPLOITED	PERCENTAGE (%) EXPLOITED	PERCENTAGE (%) NOT EXPLOITED
1.	IfeF3	Ife South	7,168	512	6,656	7.14	92.86
2.	Shasha or Area 5	Ife South	31,232	20,204	11,028	64.69	35.31
3.	Ago-Owu	Ayedaade	31,744	24,765	6,979	78.01	21.99
4.	Ikeji-Ipetu	Oriade	3,328	3,328	-	100	-
5.	Oni	Atakumosa	5,632	5,632	-	100	-
6.	Ila	Ila	256	256	-	100	-
7.	Oba Hills	Ola-Oluwa	6,773.66	6,773.66	-	100	-
8.	Total		86,133.66	61,470.66	24,663	78.55	21.45

Note: Ife F3 and Shasha or Area 5 Forest Reserves are jointly called Ife Forest Reserves.

SOURCE: Forestry Association of Nigeria, State Forestry and the Small-Scale Farmer: Proceedings of 1995 Annual Conference of the Forestry Association of Nigeria. Held in Kaduna, Kaduna State, 1995, p. 21. See Appendix F for the Map containing the Forest Reserves.

From the table above, Ife and Ago-Owu forest reserves are the only forest reserves in Osun State which have not been fully exploited. While about 49.05% of Ife forest reserves is yet to be exploited, it is only 21.99% of Ago-Owu forest reserve that is now left for commercial timber-felling. Although other forest reserves such as Ikeji-Ipetu, Oni, Da and Oba Hills are still maintained as forest reserves, they have been totally exploited. In addition, the Osun State government has continued to exercise ownership over them and kept them for either natural regeneration and/or plantation of exotic tree species. In sum, the total hectareage of the seven reserves are 86,133.76 hectares out of which 61,470.66 hectares have been fully exploited. This is a shrink of about 78%.

As grim as the above situation is, Ago-owu and Ife Forest reserves, which is the main hope of Osun State for now, are blanketed by several tree and animal species. Tree species in the forest reserves can be categorized into first class wood species, second class wood species and other lesser known species. Examples of these categories are given below both in their local trade and botanical names:⁴⁰

First class wood species which are the first rate, the most profitable and valuable are Arere (Triploclhiton Scelerokylon), Iroko (Milicia excelsa), Ofun (Mansonia altissima), Apa (Afzelia africana all spp), Opepe (Nancelea diderrichiD), Olofun (Guarea), Ole (Nesogordonia papaver). Omo (Cordia millenii all spp), Afara (Terminalia superba), Ayan (Distemonanthus benthamianus), Ebony (Diospyros spp), Agboin (Piptadeniastrum africanum), Ayee (Sterculia oblonga), Apado (Berlina all spp), Ooroiroriro (Antiaris africana), Asunwole (Danielia ogea), Ako (Brachystegia spp).

Examples of the second class wood species are Asasun (Corobretodaniron spp), Emiigbo (Minosopaspp), Oporoporo (Pterygota all spp), Ekki (Lophira alata), Olia (Cylicodiacum gaburensis), Erun (Erythrophyleum spp), etc. The category of other lesser known species has Celtis as an example.

These tree species are mostly indigenous. It is only recently that exotic tree species such as Teaks are introduced. The area which these exotic tree species occupy are usually called plantations.

⁴⁰

Osun State of Nigeria, Proposed Timber Tariff for Operation Inside Forest Reserves in Osun State, 1997.

While exotic tree species are being deliberately planted, indigenous tree species are allowed to grow on their own in forest reserves without any thinning activity. At maturity, some portion of each reserve is set aside for exploitation during a given period.

Once wood species are cut into logs, out-turn volume rates are paid on them. The payment of these rates and the impression of the official stamp of Osun State's Forestry Department on the felled logs constitute the permit for removing logs from the forest reserves in the State.⁴¹ These out-turn volume rates in respect of each of the above categories of wood species are given in the table below:

⁴¹⁴¹

Data Obtained from Oral Interview with Some Senior Forest Officers in Osogbo, Ikire and Ife.

Table 4.2
Out-Turn Volume Rates

S/N	ITEMS	OLD (EXISTING) RATE (₦)	PROPOSED RATE (₦)
1.	1st Class Wood Species	5.00	10.00/cu.ft
2.	2nd Class Wood Species	3.00	6.00/cu.ft
3.	Other Lesser Known Wood Species	2.00	4.00/cu.ft

SOURCE: Osun State of Nigeria, Proposed Timber Tariff for Operation Inside Forest Reserves in Osun State, 1997.

The rates in the above table are payable to the Osun State Forestry Department. It is interesting that without being given a property/marketing hammer and allocated a plot in the forest reserve, no timber-contractor can cut timber from any of the reserves in Osun State. Only a timber-contractor with a property marking hammer can be allocated a plot of four hectares in only one forest reserve in Osun State. Each allottee is allowed to use power saw machines for timber felling. Whether the power saw machines are owned by the allottee or not, N500.00 and N250 are payable yearly as registration and annual renewal fees respectively.

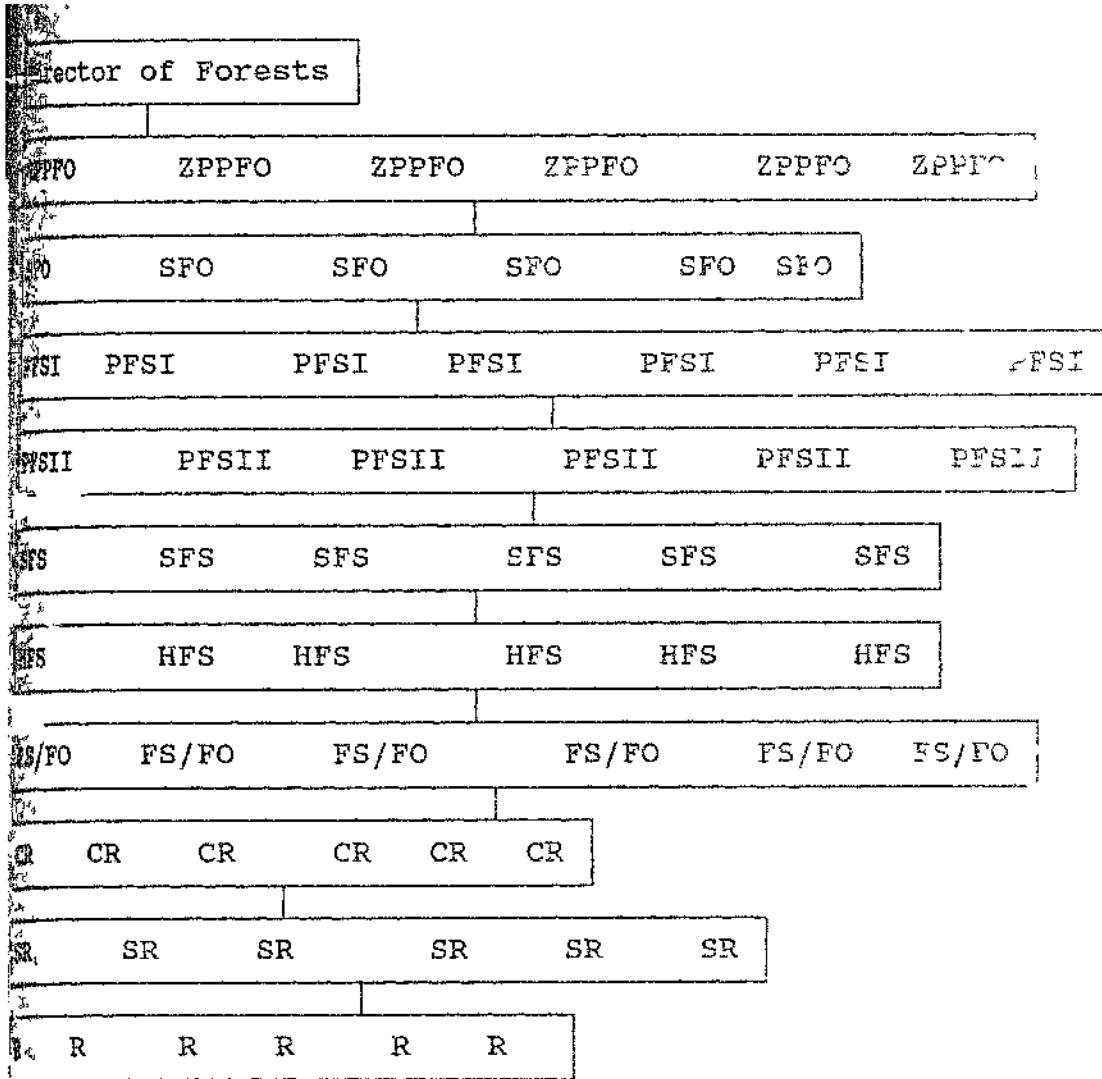
Forest reserves in Osun State, especially those which are yet to be fully exploited, do not only harbour tree species, they are also flooded with animal species.⁴² Such animal species include snails, rats, rabbits, hyena, leopards, different types of snakes (cobras, brooks, pythons, etc.), hedgehogs, mongooses, fox, armadillos, grass-cutters, etc. The presence of these animals gives room for hunting for which each permitted or licensed hunter pays N 1000.00 per month. Another activity in these forest reserves is taungya farming which attracts M200.00 per hectare per year.

The above are the various tree species and animal species as well as activities which forest reserves in Osun State promote and attract. The responsibility for the administration of the reserves falls directly on the State's Forestry Department. Before we examine the forestry laws or rules or regulations, it will be helpful to first consider the organisational structure of the Department and the functions of each category of staff.

⁴² Oral interview with both forest users and forestry staff.

Figure 2

Organogram of Osun State Forestry Department



Notes: The Organogram was adopted in 1988 when Osun State was still part of the old Oyo State

Key:

ZPPFO = Zonal Programme Principal Forest Officer

SFO = Senior Forest Officer FO = Forest Officer

PFS = Principal Forest Superintendent SFS = Senior Forest Superintendent

HFS = Higher Forest Superintendent FS = Forest Superintendent

CR = Chief Ranger (Uniformed) SR = Senior Ranger (Uniformed)

R = Ranger

The above organogram presents a picture of the hierarchical organisation of Osun State's Forestry staff. It was adopted in 1988 by the old Oyo State and is still being used by the Osun State Forestry Department. From the organogram three classes of staff can be identified. They are professional, technical and uniformed staff who are seventeen, thirty-four and eighty-eight respectively.⁴³ These staff are distributed into the six zonal offices of the Forestry Department and placed on monthly salaries as permanent staff of the State. While Osogbo zonal office serves both as a zonal office and headquarters, the other five zonal offices are in Ife, Iwo, Ilesa, Ikirun and Ede. Each zonal office is headed by a Principal Forest Officer responsible directly to the Director of Forests at the Osogbo headquarters.

With respect to qualification for each category of staff, University degree in Forestry is the minimum requirement for joining the professional class. In some cases a technical staff may be promoted to the rank of a professional staff on the basis of experience. This class includes staff from the rank of Forest Officers to that of Director of Forests. Technical staff who are usually Higher National Diploma or Ordinary National Diploma holders in Forestry always have superintendent attached to their ranks. The uniformed staff are usually rangers whose level of education oscillates between primary and secondary schools. For the effective administration of forest reserves, each category of staff has a number of functions to perform. Such functions are discussed as follows.

4.32 Functions of Professional Staff: These functions can be divided into the functions of Director of Forests and those of Principal Forest Officer.⁴⁴ These are considered in succession

⁴³ **This information was obtained through oral interview with Forestry staff in Osogbo.**

⁴⁴ **As part of the changes brought about by the alteration of nomenclature of Forestry staff in 1988, the Chief Conservator of Forests and Provincial Forest Officer respectively became Director of Forests and Principal Forest Officer. It was also gathered through oral interview that the two senior staff with the aid of their subordinate professional staff performs the functions on behalf of the Commissioner for Agriculture and Natural Resources by the provisions of the regulations. See Oyo State Forestry Law, pp. 59 - 61.**

below:

4.33 Functions of Director of Forest: These are as follows:

- (i) To approve, in the case of timber to be taken for samples, the remission of fees or royalties or both fees and royalties,
- (ii) To approve the reduction in special cases of minimum girth for trees to be taken under the permit below the standard laid down in tariff.
- (iii) To approve the issue, or the causing to be issued, of free permits for taken timber for public purposes.
- (iv) To approve the issue, or the causing to be issued, of free permit to take protected trees growing on any site required for public or government building or road or for any public purpose.
- (v) To approve the disposal of timber felled under such free permit.
- (vi) To approve the form of and conditions attachable to permit authorizing the person or class of persons named therein to do in a forest reserve or protected forest any act or thing prohibited.
- (vii) To concur in the approval of transference of permit.

4.34 Functions of Principal Forest Officer: These functions include the following:

- (i) To approve the granting or the causing to be granted of permits to take protected trees.
- (ii) To approve the reduction of fees and royalties on dead, fallen, hollow or the misshapened trees,
- (iii) To approve the extension of the period of permit for one month in any one case or four months in the aggregate.
- (iv) To approve the deposit of security by a permit holder or applicant for permit,
- (v) To approve the forfeiture of deposit wholly or in part if a permit holder fails to fulfil

his obligations to pay his labourers.

- (vi) To approve the certification of trees taken on permit as wholly or partly unsound.
- (vii) To approve the disposal of timber not removed after expiry of permit,
- (viii) To approve the cancellation of permit for failure to comply with any of its conditions.
- (ix) To approve the authorization to alter, deface or destroy permit.

4.35 Functions of Technical and Uniformed Staff:

Technical staff concentrate only on silviculture or regeneration. Tree seedlings and the establishment of plantation are the chief duties undertaken by this category of staff. Among the species that are being raised by the staff are exotic trees such as Teak and Gmelina.

4.36 Functions of Uniformed Staff:

With respect to uniformed staff, alternatively known as rangers, their main functions include enforcing forest laws and regulations to see that logs and other forest products are removed legally. These staff are all in the Forestry Regulations and Control Unit headed by a professional staff who must be a Senior Forest Officer. Apart from the staff of the Forestry Department, there are some other bodies which are directly or remotely involved in the administration of forest reserves in Osun State. These bodies are the Forestry Advisory Commission and the Accelerated Revenue Task Force (ARTF). The roles and composition of these bodies are considered in succession in the discussion that follows.

The Forestry Advisory Commission will first be considered and followed by the Accelerated Revenue Task Force.

4.37 Forestry Advisory Commission's Composition⁴⁵

This body consists of the following:

- (i) A chairman who should be an outstanding person in terms of knowledge or

⁴⁵ **Oyo State of Nigeria, The Forestry Laws of Oyo State, pp. 8 - 10. It was adopted by Oyo State Government in 1988 and still being used by the Osun State Government for the Administration of forests in Osun State.**

experience in forestry matters;

- (ii) Two members representing the interests of the timber trade and industry;
- (iii) Two members representing the interests of communal owners or local government areas where forest reserves are located;
- (iv) Six members who appear to the Chief Executive of the State to possess special knowledge or experience in forestry matters;
- (v) The Director of Forests as an ex-officio member; and
- (vi) An officer in the public service of the State serving as Secretary of the Commission.

Every member of the Commission serves for a period of three years from the date of appointment. But the Chief Executive of the State may declare vacant the position of any of member of the Commission for mental or physical illness, being bankrupt, and being absent from two consecutive meetings of the Commission without the permission of the Chief Executive of the State. The Commission meets at least four times in every financial year at such times and places as its chairman may direct. One-half of the members of the commission form a quorum at any meeting of the Commission.

4.38 The Commission's Functions:

The Commission is expected to advise the Commissioner, the Executive Council, or the Chief Executive of the State, as the case may be, with respect to:

- (a) The formulation of short-term policies on planned forestry protection, control and management (administration) including the whole range of forestry activities such as the areas to be exploited or to be regenerated from time to time; the manner of such exploitation or regeneration; and the establishment of forestry industries and the furtherance of forestry trade.
- (b) The ways and means whereby finance can be raised for the effective implementation of the forestry policies of the government from time to time.

4.39 Accelerated Revenue Task Force (ARTE):⁴⁶ This body draws its members from the Forestry Department, the Police and the State's public service. ARTF functions as a body that determines and reviews tariffs in respect of forest produce.

One thing that runs through the aforementioned bodies is that their functions and composition are determined by the state government. Besides, the bodies and staff of Forestry Department perform their functions in order to achieve certain objectives. The objectives are contained in the forest policy adopted by the federal government in 1988 and they are:⁴⁷

- (a) to consolidate and expand the country's forest estate and manage it for sustained yield;
- (b) to conserve the forests and protect the environment;
- (c) to regenerate forests after exploitation;
- (d) to promote research and education in all aspects of forestry and forest products;
- (e) to encourage the participation of local communities in managing forests; and
- (f) to provide adequate funds at all times for the realisation of the policy objectives.⁴⁸

4.4 Governing Rules:

Apart from the functions which are carried out to realise the above objectives, certain forest rules and regulations are in existence for the administration of forest reserves in Osun State. Such rules and regulations which determine actions and operations allowed or disallowed in forest reserves, penalties for rule-infractions, enforcers of the rules and the modes of gaining access to the forest

⁴⁶ Through oral interview with some forestry staff in Osogbo.

⁴⁷ B.O. Agbeja, "An Analysis of Socio-Economic Impacts of Timber Production in Ago-Owu Forest Reserve, Osun State," M.Sc. Thesis. Ibadan, University of Ibadan, 1994, pp.37 - 39.

⁴⁸ P.R.O. Kio, J.E. Abu and R.G. Lowe, "High Forest Management in Nigeria" in P.J. Wood. J.K. Vanclay and W.R. Molid (eds.), The Quest for Sustainability; 100 Years of Silviculture and Management in the Tropics. Malaysia, Forest Research Institute, 1993, p.134.

reserves in Osun State are as follows:⁴⁹

- (a) Without the authority in writing of the prescribed officer nobody shall take any forest produce, pasture cattle or permit cattle to trespass, hunt or fish, damage in any way or destroy any forestry property or trespasses in any part of a forest reserve. Whoever commit the above infraction shall be liable on summary conviction to a fine or to imprisonment for twelve months or both;
- (b) Users of forest reserves may be asked to renew their licenses yearly and pay a fee in such sum as may by notice in the state gazette be determined by the Director of Forests with the approval of the Commissioner;
- (c) Anybody caught engaging in unauthorised felling of timber knowingly shall be liable on summary conviction to imprisonment for not less than five years or fine or both;
- (d) The court convicting any person or any offence under (c) above shall order the forfeiture to the government of the State, of any timber, plank saw, cutlass, axe, tractor and vehicle at the disposal of the convict;
- (e) Offences under (c) above shall be triable by any magistrate's court and every such court shall have power and jurisdiction to inflict to the full extent the penalty of (c);
- (f) Any administrative officer, forestry officer or police not below the rank of Assistant Superintendent of Police may himself, or by any government employee acting under his direction, stop and search any tractor, vehicle or other thing being used for the conveyance of any forest produce reasonably suspected of having been unlawfully obtained or being unlawfully removed and seize such tractor, vehicle or other things or forest produce so as to enable any offender against any of the provisions of this law to be dealt with;
- (g) Any person who forge fraudulently, uses or aids or abets any person to forge or

⁴⁹

Oyo State of Nigeria, The Forestry Laws of Oyo State, Department of Forestry, 1988, pp. 27 - 53.

fraudulently use, any registered hammer or hammer mark or any mark used for denoting the ownership of any forest produce or any other mark used by the Forestry Department in relation to the administration of the provisions of forestry law, or alters, removes, destroys or defaces any such mark place in forest produce or any boundary mark of a forest shall be liable to a fine or imprisonment for two years or both. Any person so arrested shall be taken before magistrate or customary court or to the nearest police station without any unnecessary delay;

- (h) Anybody who violates any regulations made under forestry law or the conditions of any license or permit issued under forestry laws for which no penalty is expressly prescribed shall be liable to imprisonment of six months or fine or both;
- (i) Any farm or plantation made in a forest reserve without the authority in writing of the prescribed forest officer shall be destroyed or confiscated and any license or permit held under this law shall be canceled;
- (j) Marking hammer or marking instrument for impressing marks on timber shall not be in the possession of anybody except the person has been legally given. Such person so given shall not use the marking instrument so registered outside area specified in the registration certificate;
- (k) Permit to exploit the allocated plot shall last for a period of three months and the permit may be extended for a minimum period of one month but not more than four months in the aggregate;
- (l) No movement of timber from a forest reserve until passed by impressing official stamp on the timber; and
- (m) Any timber not removed at the expiry of the permit shall be disposed of and at the discretion of the Principal Forest Officer with the approval of the Commissioner and the permit-holder shall have no right thereto.

In addition, to avoid misunderstanding and lack of knowledge about the above regulations and

rules, Osun State Government acting through its Forestry Department has laid out in a precise manner many of the regulations and rules as conditions on the use of forestry marking hammer or instrument. Such conditions⁵⁰ as they affect timber-contractors are stated below:

- (a) The possession of the marking instrument is not a guarantee that the holder must be allocated a plot in any forest reserves for the purpose of exploitation;
- (b) The state government acting through the Forestry Department shall delete any name with marking hammer from the register of marking hammer-holders:
 - (i) If a marking hammer-holder engages in illegal felling of timber and any other forestry malpractice;
 - (ii) If a marking hammer-holder removes logs without permit or without the approval of the Director of Forests;
 - (iii) If a marking hammer-holder defaults in the payment of any forestry revenues; and
 - (iv) If a marking hammer holder defaults to pay the annual renewal fee within the first quarter of the year (i.e. between January and March of every year). On the basis of these sub-conditions, a defaulting marking instrument-holder shall automatically have his or her allocation revoked;
- (c) The state government acting through the Director of Forestry reserves the right to review from time to time the fees payable for the renewal of the marking hammer;
- (d) No timber-contractor who is an holder of marking hammer shall sell or cause to be sold or transport any log from Osun State or any other State or processing without written permission granted by the Director of Forestry;
- (e) No holder of marking hammer shall sell his or her logs to an unlicensed sawmill;
- (f) No holder of marking hammer shall transfer, hire out, or sell or in any way trade with the said marking instrument or hammer.

⁵⁰

Osun State of Nigeria, Conditions On the Use of Forestry Marking Hammer or Instrument, Forestry Department.

- (g) Any marking hammer holder whose marking hammer is canceled or withdraws voluntarily from timber felling trade shall surrender the said marking hammer to the Director of Forestry and totally dissociates himself or herself from its use thereafter;
- (h) Marking hammer shall have full responsibility for safe custody and use of the said marking instrument and in the event of its probable loss, a report shall be made to the Director of Forestry immediately; and
- (i) Every holder of marking hammer shall abide by the above and any other conditions that may be imposed from time to time by the Director of Forestry.

If the above conditions are accepted by the applicant for a marking hammer, he or she shall append his signature on the form. Thus these conditions become the operational rules for the marking hammer holder. An applicant for marking hammer pays N5,000.00 and N200.00 as registration and application fees respectively.⁵¹ If the application is considered and the applicant is given a marking hammer, he will pay N3,500.00 annually as a renewal fee.

As far as the above rules are concerned, they are contained in the Forestry Laws of Oyo State adopted for use in 1988. Osun State has continued to use them perhaps because of its long association with the old Oyo State out of which it was carved as a distinct geographical unit in 1991.

Furthermore, as it has been noted by Shui Yan Tang, operational rules are neither self-generating nor self-enforcing.⁵² While according to the aforementioned rules and regulations, forestry staff, police and magistrate's court are enforcing agents of forestry rules and regulations, the power to make them lies with the Executive Council of the State.⁵³ As earlier indicated, the State Forestry Advisory Commission could also make some input into decision-making. However, the

⁵¹ Osun State of Nigeria, Licences, Other Minor Forest Produce, 1997.

⁵² S.Y. Tang, Institutions and Collective Action: Self-Governance in Irrigation, California, San Francisco: Institute for Contemporary Studies, 1992, p.31.

⁵³ Oyo State of Nigeria, The Forestry Laws of Oyo State, Department of Forestry, 1988, p.25.

Executive Council headed by the State Governor has the last say as far as regulations/rules-making is concerned. But the rules or regulations must not contradict any decrees or legal statutes of Nigeria. It is through these regulations the existing forest reserves in Osun State are administered.

4.5 Problems of the Administration of Forest Reserves in Osun

In the preceding discussion, some observations can be made. To begin with, the administration of forest reserves in Osun State has been dominated by the state government even when the reserves were in the old Oyo State. This conclusion is reached because rule-making and rule-enforcing in respect of forest administration are the sole responsibility of the state government. For example, since the state government makes rules and regulations for forest administration, bias for centralizing decision-making can rarely be ruled out. This has limited participation as forest users are not legally recognised in either rule-making or rule-enforcement.

Also, the idea of having two members of the Forestry Advisory Commission representing the interests of the timber trade and industry does not mitigate concentrating decision-making at the state level to the neglect of forest users and even the local governments concerned. This is because on one hand such members must appear to the Executive Chief of the State as representing the timber trade and industry. The criteria for determining the representation are not stated and thereby obscure. On the other hand, if the Commission gives any advice, the Executive Council of the state is not bound to take such advice. The result of centralising decision-making has been preventing forest users' participation as forestry laws in force create no place for forest users in the administration of forest reserves in Osun State. In addition, the Commission does not have members representing other forest users such as taungya farmers and hunters.

Another problem is inadequate financial resources. This problem has negatively affected regeneration exercise in Osun State. Thus there is a yawning gap between regeneration and areas opened for commercial exploitation in forest reserves. In fact, the problem has been associated with the fact that the State has been treating its forest reserves as a source of income rather than means of

investment.

Inadequate staff is another imbroglio. Trained technical and uniformed staff are not enough for effective administration of forest reserves in the State. In fact, Osun State Forestry Department does not have forest guards who should guard the forest reserves. It is rangers and senior rangers, who are to supervise forest guards, that perform this function.

Also, remunerations for forestry staff are grossly inadequate. This problem has aggravated bribe-taking among the staff. This situation has often been exploited by timber-contractors to engage in illegal removal of timber from forest reserves in the state.

Illegal use of forest lands especially by cultivators of *Cannabis sativa* or marijuana (Indian hemp) is another problem. Despite the fact that trespasses in forest reserves are prohibited, cultivators of marijuana have been having a field day in many forest reserves in the State. This is a fall-out of the problem of inadequate forestry staff for protecting and patrolling forest reserves. Also contributing to this problem is the issue of inadequate facilities for patrolling and effective communication. In fact, uniformed staff who patrol forest reserves in Osun State lack appropriate vehicles, walkie-talkie, radio-phones and defensive arms for effective performance.

Another problem facing Osun State Forestry Department is the current dispute between the State and Ondo State over the ownership of Oni Forest Reserve. This development has led to unguarded dereservation of the forest reserve. Quite unfortunately, indigenes of Osun and Ondo States are both involved in the opportunistic behaviour. To be able see the extent to which forest users have been slighted in the administration of forest reserves in Osun State, we can now turn to the analysis of the responses of the selected forest staff and forest users to a number of questions in the chapter that follows.

CHAPTER FIVE**DATA PRESENTATION AND ANALYSIS****5.1 Data Drawn From Oral Interview**

As indicated in the Research methodology, it took a period of four months to administer and retrieve the questionnaire and conduct oral face-to-face interview. These two data collection methods were used hand in hand to elicit data from the sampled population. Twenty-six people were interviewed. Of these respondents, eleven were staff of the Department of Forestry, Osun State. Those questioned cut across the three categories of the forestry staff earlier identified. The forestry personnel interviewed included one Deputy Director of Forests, one Chief Forest Officer, one Principal Officer of Forests, one Senior Forest Officer, two Senior Forest Superintendents, three Senior Rangers and two Rangers.

On the other hand, forest users including eleven timber-contractors, two hunters and two taungya farmers were also interviewed. The number of timber-contractors interviewed outweighs those of the other forest users because timber-contractors' activities are the prime target of forest administration in Osun State. Since their business in forest reserves is to fell tree for commercial logging, timber-contractors' activities cannot be left unguided otherwise the forest reserves will be denuded.

Most of the interviewed forest users were not initially willing to answer my questions. This is because they took me for a security agent. It, however, took the intervention of some staff of the Osun State Department of Forestry before the users could be convinced that my study survey was purely for academic purposes. Sampled forest users and the selected staff of the Osun State Forestry Department were interviewed on issues ranging from the attributes of forest reserves in Osun State, features of community of forest users, rule in use and the level of forest users and the state government's involvement in the administration of forest reserves in Osun State.

In line with the analytical framework adopted for this study, the data obtained from oral interview are analysed below in the light of the Institutional Analysis Method:

- (i) Analysis of the features of the forest reserves and the forest produce as well as those of forest users;
- (ii) Analysis of the sets of rules that are used to organise production of forest produce and control access to them and their use;
- (iii) The patterns of interactions among forestry staff and forest users as they obtain forest produce from the forest reserves; and
- (iv) Analysis of outcome in terms of the sustainability of the forest reserves.

Before analysing data in line with the above sub-sections, it may be helpful to present data obtained on general issues. To start with, the ownership structure of forest reserves in the State was among the general issues that the interview addressed. In response to a question on this issue, both the sampled staff and forest users unanimously established that the forest reserves in Osun State belong to the state government. This ownership structure, according to a senior forest officer, was reinforced by the 1978 Land Use Act. The Act vested ownership of land in the state government. This opinion on the ownership of forest reserves in Osun State led me to understand why the state government is both manager and owner of the forest reserves.

In addition, the selected forestry staff disclosed that the interests of the local government areas where the forest reserves are located are usually considered. This, according to the interviewees, often reflects in the sharing of the revenues realised from the forest reserves. On the basis of the available information, the local government area where a forest reserve is located gets 42% of the total revenue generated from the forest reserve. This proportion is worked out after the costs of administering the forest reserve have been provided for. The remaining balance goes to the state government. Apart from the revenues they share, the respondents claimed that local governments concerned do not play any role in the administration of the forest reserves. It was after this, the focus of the interview was directed to questions on the attributes of the forest reserves, forest produce and services and forest users.

Attributes of Forest Reserves. ForestsProduce and Services and Forest Users

In the light of the aforementioned sub-sections, the attributes of forest reserves, forest produce and services as well as the features of forest users were part of what the oral interview dealt with. In the opinion of the selected respondents, forest reserves in Osun State are being administered by the state government through its Forestry Department as a common property resource for the benefits of the people of the state. They noted that the problem of the exclusion of would-be users and subtractability of forest produce inform the management pattern. The interviewees added that Ago-Owu and Ife Forest Reserves are the only forest reserves opened for commercial exploitation as other forest reserves such as Ikeji-Ipetu, Oni, Ila, and Oba Hills forest reserves have been fully exploited.

With respect to Ikeji-Ipetu, Oni, Ila, and Oba Hills forest reserves, which have been fully exploited, it was gathered that silvicultural regeneration is going on there. In the course of the interview, it was gathered that Oni forest reserve is currently in dispute between Osun and Ondo States. This development has created room for inordinate trespasses in the area by the indigenes of the two states.

Besides, the interviewees also unanimously stressed that the forest reserves currently open for commercial exploitation are replete with rich indigenous trees species which have been enumerated in chapter four. Exotic trees species such as Teaks and Gmelina are also said to be in the forest reserves. It was indicated that exotic tree species, which are the major aspect of regeneration exercise, are a common feature of the forest reserves already fully exploited. But the respondents claimed that adequate funds are not usually voted for regeneration purposes. A senior forest officer added that this development has aggravated the ability of the state government to realise sustainable administration of the forest reserves more so as indigenous tree species take at least 25 years to regenerate to maturity. The interviewees noted that this situation is greatly responsible for the rapid shrinking of the forest reserves, especially for timber felling.

In addition, three broad activities were identified in the forest reserves in the State, namely:

timber felling, hunting and taungya farming. These are considered in succession in the discussion that follows.

Timber-Felling: Timber-felling in any of the forest reserves in Osun State is carried out by timber-contractors with marking hammer. In response to questions on the ownership of goods or forest produce in each allocated plot, the timber-contractors interviewed revealed that trees of harvestable size (the harvestable size varies with the types of trees but the minimum size (girth) is four feet in circumference) in the plot belong to the allottee within the stipulated period for exploitation. The respondents added that privacy over the trees is reinforced by the regulations against trespasses in the forest reserves. This view led me to conclude that as long as a timber-contractor allocated a plot in a forest reserve follows the forestry regulations, the harvestable trees in the plot are his or hers. In other words, the trees are private goods.

While responding to a question on alternative source(s) of timber, the respondents unanimously said that a marking hammer holder is not allowed to carry out exploitation in other places than the forest reserve where he or she is given a plot. Anything to the contrary, according to the interviewees, is an illegal timber-felling which can lead to the seizure and eventual loss of the offender's marking hammer and other penalties as the case may be.

The interview also focused on timber contractors' language(s) and religions and how timber contractors' activities are monitored and coordinated. With respect to their language and religions, the respondents claimed that they all share the same language - Yoruba. They also added that while all timber-contractors practise either Christian or Islamic religion, they all come from the same state (Osun State). This is because the state government gives allocations to only timber-contractors of Osun State of origin.

The interview dealt with the closeness of the legally or officially recognised decision-makers to the forest reserves. In response, the interviewed timber-contractors argued that though they come from different parts of Osun State, they live in the villages in or around forest reserves. But the legally recognised decision-makers do not live in villages in or around forest reserves. They are found

in the state capital. This, thus, indicates that the concentration of the decision-makers in the state capital can deny them the opportunity to make decision that reflect the local peculiarities of each of the forest reserves. It can therefore be argued that if timber contractors are involved in the administration of forest reserves in the state, they may bring the advantage of their closeness to the reserves to bear on the effective administration of forest reserves.

In response to how timber-contractors' activities are monitored and coordinated, the respondents disclosed that for every ten timber-contractors, a ranger is attached to coordinate and monitor their activities. When asked whether they have an association which also monitors and coordinates their activities, the interviewed timber-contractors claimed that they have associations: one at the state level and the other at the local level - that is where the forest reserves are located. Tracing the beginning of their association, the respondents made it clear that they started with local timber-contractors' association which was established in the late 1950s in Ife. Later, other local timber-contractors' associations were established in local government areas where forest reserves are located. Besides, an association was constituted at the state level around the early 1970s, which serves as parent association for all the local timber contractors' associations in the State. As at present, the activities of the associations are obvious in Ife and Ago-Owu where the two forest reserves yet to be fully exploited in Osun State are located.

With respect to the local timber contractors' association, its main function is to see to the welfare and interests of its members. The association at the state level often liaises with the state government for favourable terms for their members at the local level. Although the association, either at the local or the state level, is not given any legal or official recognition by the state government, both the interviewed forestry staff and timber contractors unanimously claimed that their role is complementary with that of the Osun State Government in forest administration.

The interview also paid attention to the structure of the associations. It was said that the associations both at the state and local levels have a simple leadership structure. The respondents revealed that for formidable and effective leadership, executive members of the associations both at

the state and local levels include Chairman, Vice-Chairman, Secretary, Treasurer, Financial Secretary and Public Relations Officer. These officers form the executive members of the associations.

It was further gathered that members of the executive council are elected through electoral process. They serve for a period of at least three years each. For good performance, an executive member may continue to serve for as many terms as possible. However, the respondents indicated that voluntary resignation and poor performance may warrant the abrupt removal of an executive member. Unanimous opinion was also expressed that the executive council of the association is not autocratic but runs the affairs of the association by consensus. This view leads me to conclude that timber contractors' association members in Osun State place high premium on the principle of public accountability, responsiveness and openness; but are averse to high-handedness, autocracy and behind-the-bar-decision-making by leaders.

In response to a question on the requirements for membership in the association, the respondents claimed that membership is attainable once the applicant is a marking hammer holder and pays membership fees. But anyone convicted of crime by the law court can not be considered for membership. As regard how the association functions, the interviewees explained that at the local level members meet on every monday to deliberate on issues of interest. They also added that the association operates through committees. These committees are set up to meet the need of the time. Once they complete their assignments, they stand dissolved, according the respondents.

Besides, the respondents made it known that their association performs a number functions. Among the functions are conflict resolution between members, road construction and maintenance (that is roads that lead to the forest reserves), monitoring conformance to rules governing the use of the reserves, struggling to get plots for members not allocated any plot and rule-making. While appreciating the role of timber contractors' associations in the administration of forest reserves in Osun State, the Deputy Director of Forests disclosed that the associations' functions of monitoring conformance to rules and rule-making are not given any legal recognition. This is because members of the associations are dealt with on the individual rather group basis.

Hunting: With respect to licensed hunters, some questions were raised about the nature of their activities in the forest reserves, and their association. The respondents indicated that once a hunter pays the access fee of N 1000.00 per month, he is free to make games in any part of the forest reserve. Based on his ability, an hunter is allowed to killed as many animals as he can. Exclusion of other licensed hunters by one licensed hunter from the reserve is, however, a difficult task because no fixed plot is allocated to an hunter in a forest reserve. In addition, animals killed in the reserves belong solely to the individual hunters. Thus it can be inferred that animals in the reserves are common property goods, they can be killed by any licensed hunter.

As regard hunters' association, the respondents revealed that they do not have any association. The fact is that licensed hunters enter the forest reserves for which they are given permit purely on individual basis.

Taungya Farming: In the case of the taungya farmers, they gain access to exploited forest land in forest reserves after paying an annual fee of M250.00 per hectare. The respondents argued that no taungya farmer can be allocated more than four hectares per year. The interview also sought to elicit information on the farming activities allowed on the allocated plots. The interviewees explained that they were only authorised to plant food crops such as maize, yam, beans, guinea corn, and in some cases banana. Planting of cash/tree crops are strictly prohibited, according to the respondents.

Also, taungya farmers interviewed said that they cultivated their allocated plots under the condition of planting exotic trees such as Teaks. Once the trees become mature, the farmers are obliged to vacate the place. Although the food crops planted belong to the farmers, the exotic trees on the taungya farm belong to the state government. In response to the questions on whether or not they have association, they selected taungya farmers disclosed that they do not have any association. Having considered some peculiar features of the forest users, we can now turn to some factors that are common to them.

Generally, all the forest users indicated that they are indigenes of Osun State. Non-indigenes

according to them are not allowed any access to the forest reserves. In an attempt to know the reason for this, the Deputy Director of Forests disclosed that the justification is to stabilise labour and create employment opportunities for the people of the state. But the differences in responses from the various forest user interviewed have to do with the attributes of the goods forest users obtain from the reserves. For example, based on the views of timber-contractors, hunters and taungya farmers, timber and farm products obtained from the forest reserves are private, but animals in the reserves are purely common property goods. Apart from the attributes considered above, the interview also focused on the rules-in-use for the administration of forest reserves in Osun State. Bellow are analysed the views of the respondents on the rules-in-use.

5.12 Rules-In-Use

Forest reserves in Osun State are owned and administered by the Osun State Government acting through its Forestry Department. As earlier pointed out, rules and regulation are put in place for the administration of the forest reserves by the state government. In this regard, the interview was directed to elicit data on the rules-in-use.

Operational rules

To start with a question was asked about who can be allowed to carry out timber exploitation, hunting and taungya farming in the forest reserves in Osun State. In response, the interviewees argued that it is only forest users of Osun State of origin that can be allowed to use forest reserves in the state. Besides, they revealed that once a forest users is given a place in a reserve, he or she cannot apply for allocation in another forest reserve in the state. Besides, the users must have evidence of authority to enter the forest reserves.

According the sampled respondents, for timber-contractors, hunters and taungya farmers to carry out anything in any of the forest reserves, they must be holders of marking hammers, licensed hunters and licensed taungya farmers respectively. It was gathered that once hunters and taungya farmers pay the stipulated fees, they will be allowed to use the appropriate areas in the forest

reserves. But they cannot carry out other activities than those they are allowed to practise. The respondents added that there are, however, other requirements timber-contractors must meet before they can be allocated plots in any of the forest reserves.

Among these requirements are the possession of a marking hammer and development level tax clearance. With this at his or her disposal, the would-be timber-contractor is qualified to apply for allocation in only one of the forest reserves in the State. Before any allocation is made, all applicants for allocations must take part in a lottery draw through which the required number of applicants are selected. This lottery is usually conducted by the Forestry Zonal Office in charge of the forest reserve in question.

The respondents added that a timber-contractor can be allocated a plot of four hectares in only a forest reserve for a period of three months. At the expiration of this period, a timber-contractor may be allowed to carry out further exploitation in the same allocated area for a period of at least one month and at most four months. Such an allottee must pay the prescribed allocation fee and must not fell timber outside the allocated plot. For 1997, the allocation fee, according to the interviewees, is N3,500.00. Besides, the timber-contractor under consideration must obtain permit from the Forestry Zonal Office in question before removing timber from forest reserves. This permit is usually in form of the impression of the official or government stamp on the logs to be removed. However, if the licensed timber-contractor dies, he or she loses his or her allocation, if given at that time, and marking hammer.

While answering a question on the rules governing their operations in the forest reserves in the State, the interviewed timber-contractors argued that such rules are contained in the Forestry Laws and some of them are summarised in Conditions on the use of forestry marking hammer.⁵⁴ Violation of any of the rules, according to the interviewees, may earn the offender such penalties as loss of his or her allocation and marking hammer, imprisonment and fine. An unauthorised forest users or violators of any of the rules, according the respondents, may be given a prison term of ten years or

⁵⁴ **The rules have been discussed in chapter 4**

a fine ranging between N 10,000.00 and N50,000.00. Even after the offender might have spent his or her terms of penalty, he may never be given any allocation in the forest reserves. The interviewed timber contractors disclosed that if such an offender is a member of their association, he or she will be ostracised.

Collective Choice Rules:

In addition, the respondents claimed that all the legally recognised rules for administering forest reserves in Osun State are made by the state government and monitored and enforced by the state's forestry staff, law courts and police. It was gathered that although forest users, especially timber contractors, are allowed to express their views on the governing rules and their modification, such views according to the selected timber contractors, rarely reflect in the rules made for administering forest reserves in Osun State.

The interview also concentrated on whether forest users, particularly timber contractors, play any role in the administration of forest reserves in the state. The selected timber-contractors indicated that, they are not given any legal role in forest administration, but their role is usually appreciated by some forestry staff in the state. They argued that their role has been effective in the area of rules they make through their associations for regulating their activities in the reserves. These rules, which are unwritten but based on the State's Forestry Laws are as follows:

- (a) No timber contractors shall engage in illegal exploitation in any of the forest reserves in the state;
- (b) Any member convicted of crimes shall be ostracised from the timber contractors' association;
- (c) Felled timber shall be removed from forest reserves only through official permit;
- (d) Every member shall have an identification card for easy identification;
- (e) Every timber-contractors allocated a plot in a forest reserve shall contribute to the maintenance of roads to the reserves;
- (f) Violator of the (e) above shall not be allowed to convey his or her logs through the

affected roads;

- (g) No member shall take his or her fellow timber-contractors to court without first exploiting the conflict-resolution mechanisms put in place by timber-contractors' association;
- (h) No member shall cut trees designated as non-harvestable;
- (i) No member shall enter unallocated areas: non-conformance to these rules may lead to the ostracisation of the violator;
- (j) Every member allocated a plot in the forest reserves in the state shall monitor the activities of other forest users and report rule-infractions to the executive of the association; and
- (j) The executive members of the association shall rule by consensus.

These rules were made by the local associations within the framework provided by the association at the state level. The aforementioned rules made by timber-contractors' associations are claimed by the interviewed association members as the actual operational rules being used to regulate access to and use of the forest reserves by licensed timber-contractors. The respondents indicated that although forest users, especially timber contractors, have their own rules, such rules are never recognised as Forestry Regulations or Rules by the state government. This is because the state executive council is the only rule-making body. But based on the views of the respondents, timber-contractors' operational rules and state government's forestry laws are not in conflict. Thus, it has been easy for timber-contractors' rules to continue to be useful for the administration of forest reserves in Osun State, though without official recognition. Both the interviewed forest users and forestry staff held unanimous perception on the issue of the best method for the administration forest reserves in the state. The respondents argued that a method that allows for partnership between the state government and forest users, especially timber-contractors, will be the best way to administer forest reserves in Osun State.

5.13 Incentives Generated From the Attributes of Forest Goods and Services, Attributes of Forest Users and Forestry Staff and Attributes of Rules-In-Use

From the preceding, certain incentives were observed to have been generated from attributes of forest goods and services, attributes of forest users and forestry staff and attributes of rules-in-use. To start with, forest reserves in Osun State, especially Ago-Owu and Ife Forest Reserves, are replete with tree species of high economic value. These tree species have been classified as first class tree species. The presence of the tree species in the forest reserves explains why forest users in the state desire to have plots in any of the two reserves for commercial exploitation. According to the interviewed timber-contractors, the high economic value of the tree species in the reserves have served as a motivating factor for timber-contractors (that is the allottees for the harvesting period in question) to invest both energy and finance to control access to the reserves.

One way through which access to Ago-Owu and Ife Forest Reserves are controlled is the maintenance of the roads that lead to the reserves. The two reserves are located far away from the log market. To convey felled timber from the reserves to the market, motorable roads are needed. In order to ensure this, allottees in each forest reserve are expected to contribute an equal amount for road maintenance. Any allottee who defaults will be denied the use of the road. But it should be noted that it is only allottee that can make such a financial contribution. This development has greatly compelled timber-contractors in Osun State to engage in collective actions and cooperative behaviour in the use of the forest reserves.

In addition, the fact that forest users, especially timber-contractors, speak the same language and hail from the same state has served as an incentive for cooperative behaviour among the forest users. This is responsible for the reason why rules made by the local timber-contractors' associations have continued to be respected by their members. One of such rules is that timber-contractors given allocations in a forest reserve must follow the rules laid down by the state government.

However, the fact that the role of forest users, especially timber-contractors, is not given any legal recognition has motivated many timber-contractors to give bribe to forestry staff in order to

cover up some illegal exploitation in the reserves. Bribe-offering to forestry staff by timber-contractors has been facilitated by the fact while an average timber-contractor can make as high as N=50,000 per month from forest reserve, a level fourteen forestry staff does not earn above N=6,000 per month.

5.14 Patterns of Interactions Among Forest Users and Staff

The interview also focused on the pattern of interactions among forest users and staff. First, a question was asked on when various activities are carried out in forest reserves in the State. In response, the interviewees made it clear that apart from the hunting and taungya farming activities that can be carried out at any time of the year, timber felling often occurs between November and April. This period falls within the dry season. While giving reason for the timber felling period, the interviewed timber contractors explained that the time is the most suitable for removing and conveying felled timber out of the forest reserves. It was added that conveyance of timber from the forest reserves during the rainy season is usually a cumbersome task as free movement of timber vehicles is often hindered by muddy roads. Based on this knowledge, the Department of Forestry usually allocates plots for commercial exploitation between November in the present year and April in the next year.

With regards to rule conformance, a unanimous view was held about the level of conformance to rules by forest users. Based on the opinion of the respondents, forest users in Osun State generally conform to the various rules and regulations in the Forestry Laws adopted by the State. Thus there is a general belief among the interviewees that this favourable level conformance to rules and regulations has helped to reduce incidents of rule-infractions.

Besides, the respondents revealed that business interests (profits) and monitoring efforts by users, especially timber-contractors, are responsible for the drastic reduction in rule-infractions among forest users. For example, it was gathered that every timber contractors knows that infraction to the rules for the use of forest reserve may lead to the closure of the forest reserve. In order to prevent this, the respondents argued that each timber-contractor engages in monitoring the activities of other

forest users. Immediately, there is a case of rule-infraction, the observer of such incident usually makes haste to report the case to the appropriate forestry zonal office. The zonal office will then determine the appropriate actions and penalties for the violation of the forestry regulations and rules.

The respondents also indicated that monitoring activities by forest users are complementary to those of the forestry staff. Uniformed men are said to be the monitoring agents in the forest reserves. In order to exercise proper control over the use of forest reserves in the state, the Chief Ranger of Osun State (the most senior uniformed staff in terms of years of service) with the aid of some other subordinate staff visit each forest once a week. This, according to the respondents, is aimed at preventing illegal use of the forest reserves and reporting about their conditions. In most cases, forest users, especially timber contractors, in each forest reserve do not know the day such a visit may be made in their forest reserves of operations.

But whenever such visit comes, it was gathered that timber-contractors are often responsible for the feeding and accommodation of the uniformed men. Unanimous perception was shared about the aim of timber-contractors' attitude. As was gathered, the ultimate end of their attitude is to secure the favour of the forestry staff for tolerating illegal activities including illegal timber-felling. It was gathered that this pattern of interactions has yielded strong cooperation between the staff and timber-contractors in each forest reserve in the state, though at the expense of sustainable administration of the reserves. Besides, technical staff also pay regular visits to the forest reserves to ensure that tree species not ripe felling are not destroyed and to report on the conditions of the reserves.

However, it was gathered that in spite of the aforementioned monitoring activities by forestry staff, certain infractions still occur. For example, the selected forest users who spoke in confidence to me disclosed that logs are often removed from forest reserves in the state without permit. Such acts are often carried out through the connivance of timber contractors with uniformed staff whose level of income cannot sustain a reasonable standard of living given the prevailing economic conditions in the country. In order to avoid being caught, the cover of the night is usually used to perpetrate such acts, according to the respondents.

Besides, some timber-contractors were said to be disregarding the forestry rule that outlaws transfer of allocated plots from one person to another. This violation is often practised in a subtle manner. For example, in the event of illegal transfer of a allocated plot, every operation in the area is carried out in the name of the legal allottee. His or her marking hammer is also used by the person to whom such transfer is made. It was gathered that cases of illegal transfer of allocated plots in the forest reserves and illegal use of marking hammer have not been dealt with in a serious manner. This is because, according the respondents, the offenders are either people of influence or people associated with influential men in the society.

Other forms of infractions observed in forest reserves in Osun State, according to the respondents, are cases of illegal use of the reserves for prohibited activities. For example, these illegal acts were said to be common among the people that grow **Cannabis sativa (Indian hemp)**. The cultivators of **Cannabis sativa (Indian hemp)** often ensure that their activities are carried out in the remotest part of the reserves in the State. According to the interviewed timber-contractors, such cases have been recorded in Ife and Oni forest reserves. But, as a result of the monitoring efforts of timber-contractors, most of these illegal users have been rounded up and handed over to forestry staff for appropriate actions. Having analysed the patterns of interactions among forest users and forestry staff, effort will now be made to examine the outcome of the administration of forest reserves in the State.

5.15 Outcome

In assessing the outcome of the administration of forest reserves in Osun State, the sustainability of the forest reserves, equity in allocation of forest goods and services and viability of the governing institutions are examined in the discussion that follows.

With respect to the sustainability, the administration of forest reserves in Osun State is not yet sustainable. Considering the seven forest reserves mentioned in chapter four, it is only two of them that are yet to be fully exploited. The other five have been fully exploited. Thus, the State is now having less than 22% of the combined size of the forest reserves left for exploitation. Even regeneration which is expected to ensure the sustainability of the reserves is suffering for inadequate

funds. This is because the attitude of the State government is that of seeing forest reserves as a means of revenues rather than a channel of investments.

In addition, while little can be said about the level of equity in granting licenses to taungya farmers and hunters, the allocation of plots in forest reserves in Osun State for timber felling is relatively equitable. This is because all qualified applicants for allocation are expected to participate in a lottery-draw through which the successful applicants are selected. Since the lottery-draw is a game of chance, every participant has an equal opportunity of being selected. This has greatly alleviated complaints against equity in allocation of plots in the reserves. But the use of lottery for selecting allottee for timber felling in the forest reserves has not ruled out special consideration being given to some people. This the reason for some people to be given special allocation.

In the case of the viability of the existing legal institutions for the administration of forest reserves in Osun State, much is still to be desired. In this study, it has been demonstrated that forest users, be they taungya farmers, hunters and timber-contractors, are very important in the administration of the forest reserves. As earlier shown, without the efforts of forest users (especially timber-contractors) in making their own rules for governing use of forest reserves, it might be difficult for the State to regulate the use of the reserves. Even cases of illegal users have been discovered more by timber-contractors than forestry staff. For viable institutions for the administration of forest reserves in Osun State, partnership between forest users and Osun State' forestry staff needs to be explored.

5.2

Data Drawn from Questionnaires

The preceding section addressed the discussion of the data collected from face-to-face interview. Face-to-face interview is one of the two techniques used in generating primary data for this study. The other method employed is the questionnaire technique and the data collected through its use are presented and analysed in this section.

Specifically, the questionnaire administered were designed for two sets of respondents. These

are selected forestry staff and forest users in Osun State. The questionnaire was divided into sections A and B. Section A deal with personal data. Section B address issues including ownership and economic importance of the forest reserves in Osun State, administration of these forest reserves, and forest users' participation, conflict resolution mechanisms and Osun State Government's performance in the administration of its forest reserves and their sustainable administration. Besides, the questionnaire was designed to elicit responses to Yes and No and multiple choice questions. The aim of seeking after these responses is to determine the extent of forest users' involvement in the administration of the forest reserves and an appropriate approach to sustainable administration of forest reserves in Osun State in particular and in Nigeria in general.

In analysing the data, the simple percentages method was adopted. The need to determine the relative strength of the categories of the attributes studied informed the use of the method. For clarification purposes, the frequency of each category of attributes in the tables is given as the frequency of each category divided by the total frequency. This can be mathematically represented as follows.

$$\text{Percentages} = \frac{\text{Frequency of each category}}{\text{Total Frequency}} \times 100$$

As indicated in the methodology, the Chi-Square (X^2) was adopted in testing the hypotheses on which this study is based. The Chi-Square is a measure of the discrepancy between observed and expected frequencies. Notationally, the formular can be given as

$$X^2 = \sum \frac{(O - E)^2}{E} \text{ Where E is Expected Frequency and O is Observed Frequency.}$$

Having regards to the foregoing, the data generated with the use of questionnaire technique are presented and analysed as follows.

Table 5.1
Sex Distribution

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Sex				
Male	39	100	51	81.0
Female	-	-	12	19.0
Total	39	100	63	100

Table 5.1 above shows that all the forestry staff are male while fifty-one and twelve of the forest users who responded are male and female respectively. These figures represent 81.0% and 19.0% respectively of the return rate. It can be inferred from the above data that the administration of forest reserves in Osun State is essentially men's affairs. Since recommendations for new forestry laws emanate from the Forestry Department, there is no doubt that female representation in making such recommendations is non-existent. Although men constitute a significant proportion of forest users in the state, a few of the forest users are found to be female.

Table 5.2
Age Distribution

Category of respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
20 - 30 years	-	-	-	-
31 - 40 years	3	7.7	24	38.1
41 - 50 years	26	66.7	26	41.3
51 years & Above	10	25.6	13	20.6
Total	39	100	63	100

With regard to the age range of the respondents, most of them are found to be in the age bracket of 41 and 51 years. In table 5.2 above these are represented by twenty-six (66.7%) and twenty-six (41.3%) of the forestry staff and forest users respectively. Some of them are within the age range of 31 and 40 years and they are three (7.7%) and 24 (38.1%) of the forestry staff and forest users respectively. Besides, ten (25.6%) and thirteen (20.6%) of the forestry and forest users have their ages range respectively between 51 years and above. These data indicate that respondents whose ages are between 41 and 50 years constitute the biggest class in each of the category of the respondents.

Table 5.3
Local Government Area of Origin

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Atakumosa	1	2.6	3	4.8
Ayedaade	4	10.3	1	1.6
Boluwaduro	2	5.1	-	-
Boripe	1	2.6	-	-
Ede	1	2.6	-	-
Ejigbo	-	-	1	1.6
Ife Central	5	12.8	8	12.7
Ife East	8	20.5	21	33.3
Ife North	2	5.1	6	9.5
Ife South	-	-	6	9.5
Ifelodun	-	-	3	4.8
Ila	1	2.6	1	1.6
Irepodun	-	-	2	3.2
Ilesa	1	2.6	-	-
Irewole	1	2.6	6	9.5
Isokan	2	5.1	2	3.2
Iwo	1	2.6	-	-
Iwo Central	3	7.7	-	-
Obokun	2	5.1	-	-
Orolu	1	2.6	-	-
No Response	3	7.7	2	3.2
Total	39	100	63	100

Table 5.3 above shows the distribution of forestry staff and forest users among the local government areas in Osun State. In actual sense, the table provides the data that confirm that all the respondents are indigenes of Osun State. This is because none of them claim any other local government area than those in the state. Besides, the table depicts that more than half of the local government areas in the state provide the state's forestry staff with eight (20.5%), four (10.3%), five (12.8%) and one (2.6%) from Ife East, Ayedaade, Ife Central and Irewole local governments respectively. These local government areas also surround the Ife and Ago-Owu forest reserves on which this study focuses. On the other hand, most of the forest users in the state are also from these local government areas. These are eight (12.7%), twenty-one (33.3%), six (9.5%), six (9.5%) and six (9.5%) from Ife East, Irewole, Ife North and Ife South respectively. This situation should not be interpreted to mean that special preferences are given to people from these areas. But the situation can be attributed to the fact timber-felling and commercial logging are likely to be the main of activities of the people from the local government areas. It should be noted that the idea of special preferences for the people from the local government areas does not arise as face-to-face interviews confirmed that each intending forest user has an equal opportunity of being chosen as a licensed forest user in any of the forest reserves in the state.

Table 5.4
Educational Qualification

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Primary School Leaving Certificate	25	64.1	46	73.0
Diploma/Professional Certificate	5	12.8	-	-
B.A/B.Sc Degree	5	12.8	2	3.2
M.Sc Degree	1	2.6	-	-
No Response	3	7.7	15	23.8
Total	39	100	63	100

As regard the educational qualifications of the two categories of respondents, table 5.4 above demonstrates that most of the respondents do not have above primary school education. Their figures are twenty-five (64.1%) and forty-six (73.0%) for forestry staff and forest users respectively. However, a few of the respondents have higher education. While two (3.2%) of the forest users have University first degrees, only five (12.8) and one (2.6%) of the forestry staff have first degrees and masters degree respectively. Although two (2.6%) and fifteen (23.8%) of the forestry staff and forest users respectively did not indicate their educational qualifications, five (12.8%) of the forestry staff have Diploma/Professional Certificates. In all, the table shows that the level of educational among forest users and forestry staff is very low. Without equivocation, low educational attainment by forestry staff can deny them the opportunity to possess technical knowledge required in the administration of forest reserves. This buttresses an earlier claim that dearth of qualified personnel is capable of impairing sustainable administration of forest reserves.

Table 5.5.
Years of Experience

Category of Respondents	Forestry Staff	
Years of Experience	Frequency	Percent
2 - 9	2	5.1
10- 17	4	10.3
18-25	17	43.6
26-33	14	35.9
No Response	2	5.1
Total	39	100

Table 5.5 above shows years of experience of forestry staff and forest users' length of dealing with Osun State's forest reserves. In the case of the forest staff, two (5.1 %), four (10.3%), seventeen (43.6%), and fourteen (35.9%) have years of experience ranging between 2 and 9 years, 10 and 17 years, 1 and 25 years, and 26 and 33 years respectively. Since years of experience of most of the forestry staff are 17 years and above, it can be concluded that the Osun State Forestry Department is staffed with highly experienced forestry personnel. If such experience can be brought to bear on the administration of forest reserves, this may have made up for the problem of forestry staffs poor level of education. Besides, their several years of experience may also enable the forestry staff to have useful knowledge of the environmental conditions of the forest reserves which can in turn facilitate sustainable administration of forest reserves.

Table 5.6
Rank/Activity Distribution

Category of Respondents	Forestry staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Assistant Director	1	2.6	-	-
Principal Forest Officer	3	7.7	-	-
Senior Forest Officer	1	2.6	-	-
Chief Forest Superintendent	2	5.1	-	-
Principal Superintendent	9	23.1	-	-
Senior Forest Superintendent	9	23.1	-	-
Higher Forest Superintendent	1	2.6	-	-
Forest Officer	2	5.1	-	-
Forest Superintendent	1	2.6	-	-
Chief Rangers	3	7.7	-	-
Senior Ranger	5	12.8	-	-
Ranger	2	5.1	-	-
Timber-Contractor	-	-	46	73.0
Hunters	-	-	9	14.3
Farmers	-	-	7	11.1
Firewood Collectors	-	-	1	1.6
Total	39	100	63	100

Table 5.6 above indicates that one Assistant Director of Forests, three Principal Forest Officers, one Senior Forest Officer, two Chief Forest Superintendents, nine Principal Forest Superintendents and nine Senior Forest Superintendents are among forestry staff that responded to the question. These figures represent 2.6%, 7.7%, 2.6%, 5.1 %, 23.1 % and 23.1 % respectively. Face-to-face interview confirmed that these staff, who are involved in decision-making for the administration of forest reserves in the state, are found at the Forestry headquarters in Osogbo. This thus supports the fact that decision-makers in respect of forestry matters live far away from the forest reserves. Also from table 5.6, forty-six, timber-contractors, nine hunters, seven taungya farmers and one firewood

collector responded. These figures represent 73.0%, 14.3%, 11.1% and 1.6% respectively. It can be seen from the table that most of the forest users are timber-contractors. This supports an earlier claim that timber-contractors constitute the biggest class of the forest users in Osun State.

Table 5.7
Salary Grade Level of Forestry Staff

Salary Grade Level	Frequency	Percent
4	1	2.6
5	2	5.1
6	5	12.8
7	3	7.7
8	2	5.1
9	11	28.2
10	5	12.8
12	7	17.8
14	2	5.1
No Response	1	2.6
Total	39	100

Table 5.7 above shows the salary grade level of the forestry staff in Osun State. Of the respondents in the table, one (2.6%), two (5.1%), five (12.8%), three (7.7%), two (5.1%), eleven (28.2%), five (12.8%), seven (17.9%) and two (5.1%) are on salary grade level 4, 5, 6, 7, 8, 9, 10, 12 and 14 respectively. Only one (2.6%) respondent failed to indicate his salary grade level. Based on data from face-to-face interview, a level 14 officer in Osun State earns just N=6,000 per month. But an average timber-contractor can realise as high as N=50,000 per month from timber-felling and log sales. In actual sense, it becomes obvious that forestry staff in Osun State are poorly paid. The danger of this situation is that timber-contractors may see it as an opportunity to carry out illegal timber-felling in the forest reserves by dint of offering bribe to the forestry staff. Such corrupt activities can impair the sustainable administration of the reserves, which in turn can hinder the ability of the reserves to meet human needs across generations.

Table 5.8
Ownership of the Forest Reserves

Respondents	Forestry Staff	
	Frequency	Percent
Communities where the forest reserves are located	3	7.7
Local Government	2	5.1
State Government	33	84.6
No Response	1	2.6
Total	39	100

Table 5.8 above shows opinion on the owner(s) of the forest reserves. From the table three, two and thirty-three of the forest staff respectively believed that local communities, local governments, and state government own the forest reserves. These figures represent 7.7%, 5.1%, and 84.6% respectively. Only one (2.6%) respondent failed to express his view on the owners of the reserves. Without any doubt, the data in table 5.8 show that the state government owns the forest reserves. This also confirms the finding obtained from the face-to-face interview and literature review that the state governments in Nigeria owns forest reserves in their territorial jurisdiction.

Table 5.9
Economic Impact of the Forest Reserves on State's Revenue

Economic Importance	Frequency	Percent
Strong Economic Importance	39	100
Of no Economic Importance	-	-
No Response	-	-
Total	39	100

Table 5.9 above shows the economic impact of the forest reserves on the state's revenue. All the thirty-nine forestry staff that responded indicated that the forest reserves constitute a major component of the state government's internally generated revenue. By virtue of the economic importance of the forest reserves to the state government, it can be concluded that the state has a stake in the forest reserves. Thus, the state government constitutes one of the stakeholders that should be involved in the administration of the forest reserves.

Table 5.10
Economic Dependence of Forest Users on the Forest Reserves

Economic Dependence	Frequency	Percent
Total Dependence	15	23.8
Have Additional Sources of Income	44	69.8
No Response	4	6.4
Total	63	100

As table 5.10 above shows, fifteen (23.8%) of the respondents have total dependence on the forest reserves for their incomes. While forty-four (69.8%) have other means of earning income, four (6.4%) of the respondents did not give any response. It can be concluded that if appropriate governing rules are not put in place, those who have other sources of income may put up opportunistical behaviour by over-exploiting the reserves to the point that they are unable to meet human needs across generations.

Table 5.11
Basis of Access and Use of the Forest Reserves

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Renewable Licence	39	100	59	93.7
Ancestral Rights	-	-	-	-
Official Discretion	-	-	-	-
Feel the Forest Reserves Belong to Everybody	-	-	-	-
No Response	-	-	4	6.3
Total	39	100	63	100

Table 5.11 above shows the basis of access to and use of the forest reserves by forest users. From the table, thirty-nine and fifty-nine of forestry staff and forest users indicated that issuance of renewable license is the basis for using the reserves. These figures represent 100% and 93.7% respectively. Only four (6.3%) of the forest users failed to respond. The picture that the data in table 5.11 presents is that anybody operating in the forest reserves without renewable licence is an illegal forest users.

Table 5.12
Financial Sources of the State Forestry Department

Financial Source	Frequency	Percent
Subvention from the State Government	22	56.4
Revenue Realised from the Forest Reserves	14	35.9
No Response	3	7.7
Total	39	100

In table 5.12 above, while three (7.7 %) of the forestry staff did not give any response to the question, twenty-two (56.4%) and fourteen (35.9%) responded that subvention from the state government and revenue realised from the forest reserves respectively are sources of financial resources for the administration of the forest reserves. The information that the data in the table convey is that the Osun State Government alone bears the financial burden of administering its forest reserves.

Table 5.13
Category of users in Operating in the Forest Reserves

Category of Respondents	Forestry staff		Forest Users	
Category of Users	Frequency	Percent	Frequency	Percent
Only Authorised Users	16	41.0	28	44.4
Both Authorised and Unauthorised Users	22	56.4	29	46.0
No Response	1	2.6	4	9.5
Total	39	100	63	100

In table 5.13 sixteen and twenty-eighth, forestry staff and forest users respectively claimed that only authorised users have access to the forest reserves. These figures represent 41.0% and 44.4% respectively. Twenty-two and twenty-nine of the forestry staff and forest users responded that unauthorised users have access to and use the reserves. These figures represent 56.4% and 46.0% respectively. Only one (2.6%) and six (9.5%) of the forestry staff and forest users respectively did not respond. In a clear term, the responses of the majority of the people questioned show that illegal users gain access to and use the reserves. Inadequate number of forest guards or rangers and lack of fencing facilities may be responsible for this problem. This fact is corroborated by one of the findings from the data gathered from face-to-face interview.

Table 5.14
Impact of Unauthorised Users on Forest Reserves

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Negative Impact	26	66.7	30	47.6
No Negative Impact	9	23.1	4	6.3
No Response	4	10.3	29	46.0
Total	39	100	63	100

As table 5.14 above shows, twenty-six and thirty of the forestry staff and forest users indicated that the use of the reserves by unauthorised users has negative impact on them. These figures represent 66.7% and 47.6% respectively. Nine and four of the forestry staff and forest users responded that the existence of the unauthorised users in the forest reserves has no negative impact on the reserves. These figures represent 23.1% and 6.3% respectively. Four (10.3%) and twenty-nine (46.0%) forestry staff and forest users did not give any response. Many of the forest users that failed to respond to the question might want to hide the information about the presence of the illegal users in the forest reserves in order to create the impression that only authorised forest users use the reserves. But the fact remains that the presence of unauthorised users in the reserves is a reality in Osun State. The data from face-to-face interview also support this claim.

Table 5.15
Users' Tribe/Language

Tribe/Language	Frequency	Percent
Yoruba	37	94.9
Otherwise Tribe/Language	-	-
No Response	2	5.1
Total	39	100

From table 5.15 above, while two (5.1 %) of the forestry staff questioned gave no response, thirty-seven (94.9) of the forestry staff that responded claimed that the forest users all belong to Yoruba tribe whose language is Yoruba. The homogeneity in language and tribe of the forest users can be a strong factor for facilitating common understanding and cooperation among them as well as a means of building formidable users' associations for governing forest reserves along with the state government.

Table 5.16
Users' Associations

Users' Association	Frequency	Percent
Users Have Associations	48	76.2
No Association	14	22.2
No Response	1	1.6
Total	63	100

In table 5.16 above, forty-eighth (76.2%) of the forest users responded that they have associations. While fourteen (22.2%) claimed that they do not have any association, one respondent (1.6%) did not give any response to the question. The data in the table show that not all forest users have associations. In this respect, face-to-face interview reveals that while only timber-contractors have organised associations, other categories of users such as hunters, taungya farmers and firewood collectors do not have any association.

Table 5.17
Financial Sources for Running Timber-Contractors' Associations

Financial Sources	Frequency	Percent
Donations from and Levies on Members	48	76.2
Government Grants	-	-
No Response	15	23.8
Total	63	100

As table 5.17 above shows, forty-eight (76.2%) of the forest users that responded claimed that their associations are financed through donations and regular levies paid by members. Although fifteen (23.8%) did not give any response, it is obvious from the table that state government does not give any financial support to the users' associations. Those who did not respond, as the table shows, are forest users such as hunters, taungya farmers and firewood collectors who do not have any associations as confirmed by the face-to-face interview.

Table 5.18

Decision Makers for the Administration of Forest Reserves
(those Legally Recognised by the Forestry Laws in Force in Osun State)

Categories of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Decision Makers				
Forest Users	-	-	2	3.2
State Government	37	94.9	55	87.3
Forest Users and State Government	-	-	-	-
No Response	2	5.1	6	9.5
Total	39	100	63	100

Table 5.18 above shows that thirty-seven and fifty-five of the forestry staff and forest users indicated that the state government with the involvement of the senior staff of its Forestry Department determines the contents of the Forestry Laws/Rules in force. These figures represent 94.9% and 87.3% respectively. Although two (3.2%) of the forest users indicated that Forestry Laws are made by forest users, these respondents might be mistaking the rules (which are not officially recognised by the state government) made by timber-contractors' associations for the officially recognised Forestry Laws. This confirms the fact that forest users are not involved in decision making as it affects the determination of the Forestry Laws.

Table 5.19
Closeness of Decision Makers to Forest Reserves

Category of Respondents	Forestry Staff		Forest users	
	Frequency	Percent	Frequency	Percent
Live in or near Forest Reserves	10	25.6	24	38.1
Do Not Live in or near Forest Reserves	25	64.1	32	50.8
No Response	4	10.3	7	11.1
Total	39	100	63	100

Table 5.19 above indicates that ten and twenty-four of the forestry staff and forest users respectively claimed that the decision makers live in or near the forest reserves. These figures represent 25.6% and 38.1% respectively. But twenty-five and thirty-two of the forestry staff and forest users indicated that the decision makers do not live either in or near the forest reserves. These figures represent 64.1 % and 50.8% respectively. In situation where those who make decisions for the administration of forest reserves live far away from them, there is the danger that such decisions may not reflect the local environmental needs of each of the forest reserves. This danger is very obvious in the case of the administration of forest reserves in Osun State as state government officials that determine the contents of the Forestry Laws do not live in or near the forest reserves but the state capital, Osogbo.

Table 5.20
Nature of Forestry Laws/Rules in Use

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Unitary	25	64.1	49	77.8
Environment-Specific	10	25.6	9	14.3
No Response	4	10.3	5	7.9
Total	39	100	63	100

As table 5.20 above shows, four (10.3%) and five (7.9%) of the forestry staff and forest users no response to the question. But twenty-five (64.1%) and forty (77.8%) of the forestry staff and forest users respectively indicated that the same set of Forestry Rules are used in the administration of forest reserves in the state. It can be concluded that the Forestry Laws will not reflect the local environmental peculiarities of the reserves.

Table 5.21
Involvement of Users in Modifying Forestry Laws/Rules

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Involvement of Users in Modifying Forestry Laws				
Forest Users are Involved	13	33.3	4	6.3
Forest Users are not Involved	22	56.4	58	92.1
No Response	4	10.3	1	1.6
Total	39	100	63	100

Table 5.21 above depicts forest users' participation in changing/modifying forestry laws. From the table, twenty-two (56.4%) and fifty-eight (92.1%) of the forestry staff and forest users respectively indicated that forest users do not participate in modifying the officially recognised Forestry Laws in force in Osun State. This is supportive of an earlier claim that decision making as regards the administration of forest reserves is mainly dominated by the state government.

Table 5.22.
Users' Participation in General Meetings to Express
Their Needs to the State Government

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Participate in General Meetings	39	100	56	88.9
Do Not Participate in General Meetings	-	-	1	1.6
No Response	-	-	6	9.5
Total	39	100	63	100

Table 5.22 above shows the extent to which forest users are allowed to meet and express their needs to the state government. Although six (9.5%) of the forest users did not give any response, thirty-nine (100%) and fifty-six (88.9%) of the forestry staff and forest users claimed that forest users participate in general meetings where they articulate their needs and express those needs to the state government. This kind of environment is good for forging mutual and common understanding between the forest users and forestry staff. Also, meaningful results will be realised from this mutual understanding if forest users' needs can be brought to bear on the formulation of the Forestry Laws.

Table 5.23.
Rule-Conformance by Forest Users

Category of Respondents	Forestry staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Conform to the Rules	37	94.9	54	85.7
Do Not Conform to the Rules	1	2.6	1	1.6
No Response	1	2.6	8	12.7
Total	39	100	63	100

As table 5.23 above shows, thirty-seven (94.9%) and fifty-four (85.7%) of forestry staff and forest users agreed with the view that forest users follow or obey the Forestry Rules or Laws. This shows that despite the fact that they are not involved in decision making, there is high level of rule-conformance by the forest users.

Table 5.24
Penalty Mechanisms Against Rule-Infractions

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Incarceration	2	5.1	3	4.8
Loss of License	25	64.1	42	66.7
Fines	10	25.6	17	26.9
No Response	2	5.1	1	1.6
Total	39	100	63	100

The distribution in table 5.24 above shows that twenty-five (64.1%) and forty-two (66.7%) of the forestry staff and forest users respectively believed that loss of license serves as a penalty mechanism against rule-infractions by forest users. While ten (25.6%) and seventeen (26.9%) of the forestry staff and forest users respectively indicated that fines are the penalty instrument, two (5.1%) and three (4.8%) of the forestry staff and forest users take incarceration as the means of punishing forest users for rule-infractions. Two (5.1%) and one (1.6%) of the forestry staff and forest users did not give any response.

Table 5.25
Conflict Resolution Mechanisms

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Users' Associations	1	2.6	3	4.8
Government-Owned Courts	5	12.8	17	26.9
Direct Intervention by the State's Forestry Department	32	82.1	42	66.7
No Response	1	2.6	1	1.6
Total	39	100	63	100

Table 5.25 above shows that thirty-two (82.1%) and forty-two (66.7%) of the forestry staff and forest users respectively saw direct intervention by the state's Forestry Department as the conflict resolution mechanism. For one (2.6%) and three (4.8%) of the forestry staff and forest users respectively, conflict between/among forest users are resolved through forest users' associations (this is applicable only to timber-contractors). Five (12.8%) and seventeen (26.9%) of the forestry staff and forest users respectively indicated that conflicts between/among forest users are resolved through government-owned courts. One (2.6%) and one (1.6%) of the forestry staff and forest users did not respond to the question.

Table 5.26
Administration of Forest Reserves by the State Government
Alone Does Not Lead to Their Sustainable Administration

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Agree	30	76.9	52	82.5
Disagree	9	23.1	11	17.5
No Response	-	-	-	-
Total	39	100	63	100

The distribution in table 5.26 above indicates that thirty (76.9%) and fifty-two (82.5%) of forestry staff and forest users respectively agreed that administration of forest reserves by the state government alone does not lead to sustainable administration of the forest reserves. This shows that sustainable administration of the forest reserves requires the involvement of other stakeholders such forest users along with the state government.

Table 5.27
Involvement of Forest Users along with the State Government in the
Administration of the Forest Reserves Reduces Rule-Infractions

Category of Respondents	Forestry Staff		Forest Users	
	Frequency	Percent	Frequency	Percent
Agree	30	76.9	53	84.1
Disagree	9	23.1	10	15.9
No Response	-	-	-	-
Total	39	100	63	100

In table 5.27 above, thirty (76.9%) and fifty-three (84.1%) of the forestry staff and forest users respectively support the view that the involvement of forest users along with the state government in the administration of forest reserves reduces disregard for the Forestry Laws/Rules by forest users and forestry staff. However, nine (23.1%) and ten (15.9%) of forestry staff and forest users respectively did not agree that such involvement can minimize disregard for Forestry Laws by forest users and forestry staff.

Table 5.28
Assessment Osun State's Performance in Ensuring
Sustainable Administration of Its Forest Reserves

Category of Respondents	Forest Users	
	Frequency	Percent
Satisfactory	23	36.5
Not Satisfactory	38	60.3
No Response	2	3.2
Total	63	100

Table 5.28 above depicts that twenty-three (36.5%) of the forest users saw the performance of the Osun State government in realising sustainable administration of its forest reserves as satisfactory. While two (2.6%) of the forest users did not respond to the question, thirty-eight (60.3%) of the forest users did not see the state's performance as satisfactory.

Table 5.29
Suggestion on Suitable Approach to Administering Forest Reserves

Category of Respondents Approach	Forestry Users	
	Frequency	Percent
Users-Oriented Approach User Alone	12	19.0
Local Government Alone	2	3.2
Users and Local Government	7	11.1
State Government Alone	5	7.9
Users and State Government	36	57.1
No Response	1	1.6
Total	63	100

The distribution in table 5.29 above depicts that thirty-six (57.1 %) of the forest users suggest that the state government and the forest users should be involved in the administration of the forest reserves. Twelve (19.0%) of the forest users felt that forest user alone should be involved in the administration of the forest reserves. The administration of the forest reserves by the state government alone is favoured by five (7.9%) of the forest users. While seven (11.1%) of the forest users felt that the responsibility should be left for forest users and local governments where the reserves are located, two (3.2%) of the forest users saw the administration of the forest reserves by the concerned local government alone as the most suitable approach. One (1.6%) of the forest users did not give any response to the question.

5.3

Hypotheses Testing

In this part the hypotheses earlier formulated for the study are tested. This is informed by the fact an hypothesis is a conjectural statement of the relationship between two or more variables. The validity of the conjectural statement can be proved by subjecting it to empirical testing. To this end, the views of the two categories of respondents (forestry staff and forest users) are sought on the two earlier formulated hypotheses. The two categories of the respondents were made to respond in terms of agree or disagree to the questions set on the hypotheses. The table below shows how the hypotheses are tested.

Table 5.30
A Cross Tabulation Giving X² Calculation and X²
Table Values Used in Testing the Two Hypotheses

Hypothesis No	X ² Calculated	Number of Degree of Freedom	Level of Significance	X ² Table	Is X ² Calculated Greater than X ² Table	Remark
1	0.12454	1	5%	3.84	No	Accept Ho
2	0.54545	1	5%	3.84	No	Accept Ho

Note: Computer print out gives X² calculated. X² table was used to find out the X² table figure. 5% chosen as level of significance assumes that we are 95% confident in the results.

Hypothesis 1: The first hypothesis tests in the null that the administration of forest reserves in Osun State by the state government alone does not lead to their sustainable administration at 5% level significance and 2 degree of freedom. The X^2 distribution test used is given by computer print-out. In the table X^2 calculated is less than X^2 and the alternative hypothesis is rejected. It can therefore be concluded that the administration of forest reserves by the state government alone does not lead to their sustainable administration.

Hypothesis 2: The second hypothesis also tests in the null that the involvement of forest users along with the state government in the administration of the forest reserves reduces disregard for the Forestry Laws/Rules by forest user and forestry staff at 5% level of significance and 2 degree of freedom. The X^2 distribution test used is given by computer print-out. In the table X^2 calculated is less than X^2 and the alternative hypothesis is rejected. It can therefore be concluded that the involvement of forest users along with the state government reduces disregard for the Forestry Laws by forest users and forestry staff.

5.4 Conclusion

In this chapter, it has been brought to light that the Osun State government alone administers the forest reserves in its territorial jurisdiction. The data discussed in this chapter show that forest users, especially timber-contractors, are involved in preventing illegal activities in the forest reserves, designing operational rules for governing their interactions with one another and with the forest reserves, resolving conflicts among themselves, but none of these efforts are officially recognised by the state government. Yet the involvement of the state government alone has produced poor performance in the administration of the forest reserves. This is evident in the shrinking of the state's forest reserves by about 78%.

The crisis has become worsened as inadequate attention has been paid to regeneration of the denuded areas in the forest reserves. There is therefore the need to bring other stakeholders such as forest users in the administration of the reserves. This is because sustainable administration of forest

reserves are ensured where the stakeholders are involved in decision making and implementation.

Chapter Six

Conclusion

6.1 Introduction: In this chapter, attempts will be made to presented a summary and findings of the study. These will serve as the basis for drawing conclusions and making recommendations for further research studies.

6.2 Summary of the Study

This study is concerned with an institutional study of the administration of forest reserves in Osun State. It has been attempted in this study to critically examine the extent to which the forest reserves have been administered by the state government in a sustainable way. Besides, the question has been considered that how best to administer forest reserves. In this regard, efforts were made to highlight diverse opinions held by several scholars on the administration of forests. Some of these scholars argue that the responsibility should be exclusively left for the government or the private sector. Their views, as discussed in the chapter containing literature review, are based on the fact that those who use natural resources, including forests, cannot ensure their sustainable administration. This is because of the problem that individual rational actions lead to collective irrational outcome. Some other scholars hold the view that the responsibility will be better carried out by the stakeholders including forest users.

Specifically, the focus of this research work has been essentially to determine the level of involvement of forest users along with the Osun State Government in the administration of forest reserves in Osun State; and to suggest an appropriate approach for administering them. To these ends, it has been attempted in the study to trace the history of forest administration in South-Western Nigeria where Osun State is located. Besides, the pre-colonial when individual towns administered their forests, it became obvious in the study that the state (government) has been dominating forest

administration from colonial period to date.

Forest administration became the responsibility of the government with the advent of the British in Nigeria in the late 19th century. Around 1920, the responsibility began to be carried out by the local governments until the late 1960s in the South-West when the state government assumed full ownership and administration of forests, both free (local) area forests and forest reserves. Today in Nigeria, the state governments remain the owners and managers of forest reserves in their territorial jurisdiction.

The study was based on two hypotheses. The first one is that the administration of forest reserves by the State Government alone does not lead to sustainable administration of these forest reserves. The second hypothesis is that the involvement of forest users along with the state government in the administration of first reserves reduces disregard for forestry laws/rules by forestry staff and forest users. These hypotheses were tested with the use of Chi-Square method.

In the course of collecting data for this study, two types of data were gathered. They are primary and secondary data. Questionnaire and face-to-face interview techniques were adopted to generate primary data. As regard the questionnaire administered, two sets of structured questionnaire were used - a set each for forestry staff and forest users respectively. The sample size on which the questionnaire were administered using non-probability method is 150 respondents: 50 forestry staff and 100 forest users including timber-contractors, taungya farmers, hunters and firewood collectors.

The face-to-face interview was used to elicit responses from twenty-six people. This is to corroborate responses generated through the use of questionnaire method. To complement the data that were gathered from the primary sources, data and information from the library and official documents were utilised. The quantitative data generated from the field were electronically processed using the SPSS Computer Software Package. The Institutional Analysis method was adopted in analysing and reporting the data.

6.3 Major Findings of the Study.

1. It was discovered in the study that Osun State has seven forest reserves. These forest reserves are Ife F3, Shasha, Ago-Owu, Ikeji-Ipetu, Oni, Ila and Oba Hills Forest Reserves and located in Ife South, Ife South, Ayedaade, Oriade, Atakumosa, Ila and Ola-Oluwa local governments areas respectively. The total size of these reserves is 86,134 hectares out of which 61,471 hectares (about 78%) have been lost to commercial (authorised and unauthorised) exploitation over the years. Precisely, while Ife F3, Shasha and Ago-Owu Forest Reserves are the only reserves yet to be fully exploited, the other forest reserves have been fully exploited and denuded. This is a reflection of poor administration of the forest reserves and lack of cooperation between timber-contractors and the state government in regenerating the denuded areas.

2. Forest reserves in Osun State are administered by the Osun State Government alone through its Forestry Department. Every decision concerning the administration of the forest reserves emanates from the Department for the approval of the State Executive Council. No role is created for forest users in decision making and implementation. Put differently, forest users are not officially assigned any place in the administration of the forest reserves.

3. Forest users, especially timber-contractors, are found to have associations in each of the local governments where forest reserves are located. While operational concept for the leadership of the associations is consensus, the associations serve to protect and further the interest of their members. In addition, checks and balances put in place do not allow for high-handedness by their leaders. These associations also govern the members' interactions with the forest reserves. The funding of the associations is borne solely by regular dues paid by members.

4. In the course of conducting the interview, it was discovered that only indigenes of Osun State are allowed to use the forest reserves. The objective of providing employment opportunities for the people was said to have informed the restriction. But the restriction has nothing to do with whether the indigenes have non-indigenes as wives or husbands. Besides, all forest users in Osun State belong to Yoruba tribe.

5. The local government areas where the forest reserves are located are not involved in their administration. However, the local governments are allocated 42% of the revenue realised from the forest reserves within their geographical jurisdiction.

6. All forestry staff in Osun State Government service are male and most of them have low level of education. But most of them have between 18 and 33 years of working experience. As regard forest users in the state, they are a mixture of females and males. Although most of the forest users have been using the reserves for 10 years and above, rarely has any of them above Diploma Certificate.

7. Forest users, especially timber-contractors, were discovered to be making huge fortunes from exploiting the forest reserves. However, forestry staff in Osun State are poorly remunerated. The poor salary package for the forestry staff in the is said to be responsible for the susceptibility forestry personnel to taking bribe and kick-backs from timber-contractors. As discussed earlier, this attitude has negatively affected sustainable administration of the forest reserves.

8. The state government treats every forest user on individual basis. This is against the fact that forest users, especially timber-contractors, have associations. The associations and their activities are not officially recognised by the state government. Thus only the operational rules made by the state government are given official recognition. Those made by the associations are not officially recognised by the government. But none of the operational rules made by the timber-contractors' associations are opposed to those made by the state government.

9. Users are allowed to participate in general meetings to express their needs to the decision-makers (the Osun State Executive Council).

10. The arrest of illegal users of the forest reserves have been made possible with assistance from timber-contractors' associations. This is because timber-contractors live in the villages in or near the forest reserves, thus affording them the opportunity to know those using the reserves without being authorised.

11. In the course of the study it was discovered that the same set of Forestry Laws are used

in administering the forest reserves not minding their local peculiarities

12. None of the decision-makers in respect of the administration of the forest reserves live in or near the reserves. All of them, save the Zonal Programme Principal Forest Officers who head the Zonal Offices, work and reside in Osogbo, the state capital. The state capital is very far to all the forest reserves and the road leading to them are very rough. There is a tendency for the decision-makers to arrive at decisions that do not reflect the local environmental peculiarities of the forest reserves.

13. Rule-infractions are checked or penalised through the use of such mechanisms as incarceration, fines and loss of property/marketing hammers by the timber-contractors.

14. In the course of conducting the study, it was discovered that activities in forest reserves in Osun State are dominated by tree-felling for commercial logging. As a result, timber-contractors were found to form the biggest class of the forest users in the state. Tree-felling is followed by hunting, taungya farming and to some extent firewood collection.

15. There is a consensus of opinion that the Osun State Government alone cannot administer its forest reserves in a sustainable way. This shows that other stakeholders such as forest users will have to be involved in their administration. Besides the involvement of the users along with the state government in forest administration is also observed to be capable of reducing disregard for Forestry Laws by users and staff.

16. Users, especially timber-contractors, are selected through lottery draws and successful timber-contractors are allocated a plot each only in a forest reserves in the state. This shows that no timber-contractor can carry out exploitation in more than one forest reserve.

6.4 Conclusion

In conclusion, the picture that emerges from the totality of my findings is that the Osun State Government has failed to realise sustainable administration of its forest reserves. This problem has further aggravated as forest users are denied the opportunity of participating in the administration of

the forest reserves. As noted previously in the study forest users, especially timber-contractors, have associations which make rules for governing and regulating the activities of members in the forest reserves. Interview with some forestry staff and forest users confirmed that the activities of the associations have gone a long way in helping to curb and check illegal activities in the forest reserves. Despite the positive role of the associations, the state government does not assign them any place in decision making and implementation.

The problem of limited participation in the administration of forest reserves in Osun State has worsened the deteriorating state of the reserves. The evidence of which include the loss of about 78% of all the state' forest reserves, loss in biodiversity and genetic resources, loss of protection which plant gives to the soil and increasing discharges of carbon dioxide which have complicated environmental warming crisis. The evidence of poor administration of forest reserves in the state shows that there is definitely a need for widespread participation in their administration. In corroborating this need, my findings confirm that an appropriate approach to the administration of forest reserves is one that makes for the involvement of forest users along with the state government in decision making and implementation. This will make room for forest users to bring to bear on forestry policy their knowledge of the local peculiarities of the forest reserves. This is because successful administration of forest reserves can be achieved only where the stakeholders are involved in decision making and implementation. Therefore, the need for greater participation of forest users in the administration forest reserves in the state is re-emphasized.

6.5 Recommendations for Further Research Studies

In the course of my discussion, it was stated that widespread participation in the administration of forest reserves is required for their sustainable administration. This is to guard against the negative impacts of those whose interests are not represented in forest administration on the ability of the forest reserves to meet human needs across generations. However, the study has been confined to the role of two stakeholders: the state government and forest users such as timber-

contractors, taungya farmers, hunters and firewood collectors. The roles of other stakeholders such as the local governments where forest reserves are located, forest-dwelling communities, interested non-governmental organisations (international and national) and the federal government are not considered in the study.

For further research studies on the subject-matter, the roles of these other interests not considered in the study may be of interest to researchers. Such an examination may bring to light the way these stakeholders can contribute to administer forest reserves for benefits across generations.

Besides, the study has been limited to the administration of forest reserves in Osun State. This limitation appears to create room for a comparative study of the administration of forest reserves, especially in South-Western Nigeria using the experience of two or more states. In this regard, it is being recommended that attention should be paid to the level of cooperation between the state government and the other stakeholders in achieving sustainable administration of forest reserves in each state. Also the focus of further research studies may be paid to the structure of incentives for cooperation among the various stakeholders to ensure that the renewable natural resources are capable of providing benefits to meet human needs across generations. Specifically, there is need for further studies on the subject-matter to focus on how to bridge the yawning gap between exploitation and regeneration of tree species in forest reserves. This is because tree species are attracting factors for other categories of species in forest reserves. For example, if tree species in forest reserves are destroyed, this will definitely lead to loss of habitation for animal species. In consequence, the survival of human beings will be endangered. It may be of interest to researchers to focus on how to prevent the unguided use of tree species to guard against their serving as a threat to human survival.

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Appendix: A

Questionnaire Set I

DEPARTMENT OF PUBLIC ADMINISTRATION
OBAFEMI AWOLOWO UNIVERSITY
ILE-IFE

Part II

The Questionnaire is designed to investigate the role of forest users in the administration of forest reserves in Osun State. You are requested to tick the responses you agree to. Any information given is purely for academic purpose, and will be treated strictly in confidence.

Thank you.

Forest Users

Section A

Personal Information

Sex: Male () Female ()

Age: 20-30 ()

 31-40 ()

 41-50 ()

 51 years and above ()

Local Government Area of Origin:

Village of Dwelling:

Town of Origin:

Section B:

1. Tick any of the relevant categories below
 (a) Lumberman/Saw-miller (b) Hunter (c) Firewood Collector (d) Farmer (e) Native Doctor
2. Tick Type of use you make of Forest Reserves in Osun State
 (a) Tree felling for commercial logging (b) Hunting (Games) (c) Firewood collection (d) Farming (e) Medicinal materials
3. What is the basis of your access to and use of the Forest Reserve:
 (a) By License (b) By Ancestral Rights (c) Official discretion (d) Feel the Reserve belongs to everybody (e) No Response
4. Comment on your economic dependence on the Reserves:
 (a) Totally (b) Have other additional income sources (c) No Response
5. Is the quantity of forest products available in the Reserves adequate to meet your needs? (a) Yes (b) No (c) No Response
6. Does the actual number of users exceed that of those authorized? (a) Yes (b) No (c) No Response
7. If (6) is Yes, does this have any negative impact on the reserves? (a) Yes (b) No (c) No Response
8. Do you have any users associations? (a) Yes (b) No (c) No Response
9. What are the major financial sources of your associations?
 (a) Levies from members (b) Government grants (c) Donations by members (d) Other sources (e) No Response
10. Who make(s) the operational rules for the reserve? (a) Users' Associations (b) Government Agents (c) Both the Users' Association and Government Agents

11. Do those who make operational rules or decision-makers report to any external or higher authority for approval? (a) Yes [] (b) No [] (c) No Response []
12. Do the Decision-makers live in or near the Reserve?
(a) Yes [] (b) No [] (c) No Response []
13. What is the nature of the governing rules? (a) Unitary [] (b) Compatible with the Local environmental conditions [] (c) No Response []
14. Can the users participate in general meetings to express their needs and concerns to the decision-makers? (a) Yes [] (b) No [] (c) No Response []
15. Do most users affected by the operational rules participate in modifying the rules?
(a) Yes [] (b) No [] (c) No Response []
16. Do most users follow the operational rules in use?
(a) Yes [] (b) No [] (c) No Response []
17. What penalty rules are employed? (a) Incarceration (Imprisonment) [] (b) Loss of license and rights to use the Reserve [3 (c) Fines [] (d) No Response []
18. What are the Conflict Resolution Mechanisms? (a) Panels set up by users [] (b) Government established courts [3 (c) Direct intervention by the State's Forestry Services Department [] (d) No Response [3
19. The administration of forest reserves by the State Government alone does not lead to sustainable administration of the forest reserves. (a) agree [] (b) disagree []
20. The involvement of forest users along with the state government in the administration of first reserves reduces disregard for forestry laws/rules by forestry staff and forest users, (a) agreed [] (b) disagreed []
21. How will you rate the performance of the state government in ensuring the sustainability of forests? (a) Satisfactory [] (b) Not satisfactory [3 (c) No

Response []

22. Suggest the most suitable approach to forest management.

- (a) Users' participation oriented approach []
- (b) Local Government Management []
- (c) State Government Management []
- (d) Management by Users and Local Government []
- (e) Management by Users and State Government []
- (f) I Do Not Know []

Appendix: B

Questionnaire Set II

DEPARTMENT OF PUBLIC ADMINISTRATION
OBAFEMI AWOLowo UNIVERSITY
ILE-IFE

The Questionnaire is designed to investigate the role of Osun State Government and forest users in the administration of forest reserves in Osun State. You are requested to tick the responses you agree to. Any information given is purely for academic purpose, and will be treated strictly in confidence.

Thank you.

Osun State Forest Service Department

Section A:

Personal Information:

Sex: Male () Female ()

Age: 20-30 ()

 31-40 ()

 41-50 ()

 51 years and above ()

Local Government Area of Origin (Indicate):

Educational Qualifications:

() Primary School Leaving Certificate

() Diploma/Professional Certificate

() B.A./B.Sc. Degree

() M.Sc./Ph.D. Degree

Years of Experience in the Service:

Present Rank:

Salary Grade Level:

Section B:

1. Who own(s) Forest Reserve in Osun State?
 - (a) the Community [] (b) Local Government [] (c) State Government [] (d) Users [] (e) No Response []
2. Of what strength is the economic impact of the Ife Forest Reserve on the State's revenues? (a) Strong [] (b) Not Strong [] (c) No Response []
3. Is the quantity of forest products available in the Reserve adequate to meet the needs of its users? (a) Yes [] (b) No [] (c) No Response []
4. What is/are the major financial sources of the State Forestry Service Department?
 - (a) Subventions from the State Government [] (b) Revenue realized from forest reserves in the state [] (c) Both (a) and (b) [] (d) No Response []
5. How are forest products allocated among users? (a) Issuance of time-fixed license [] (b) Ancestral rights to the Land [] (c) Official discretion [] (d) No Response •
6. For each allocation period what is the average number of licensed/authorized users? Between (a) 10 and 50 [] (b) 51 and 100 [] (c) 101 and 150 [] (d) 151 and above [] (e) No Response []
7. Does the actual number of users exceed that of those authorized? (a) Yes [] (b) No [] (c) No Response []
8. If (7) is Yes, does this have any negative effect on the reserve? (a) Yes [] (b) No

- (c) No Response
9. Do the users belong to the same tribe, speak the same language and share the same culture? (a) Yes (b) No (c) No Response
10. Who make(s) the operational rules for the Reserve?
 (a) The users themselves (b) Government Agents
 (c) Both the users and Government Agents
11. Do those who make operational rules or decision-makers report to any external or higher authority for approval? (a) Yes (b) No (c) No Response
12. Do the Decision-makers live in or near the Reserve?
 (a) Yes (b) No (c) No Response
13. What is the nature of the rules? (a) Unitary (b) Environment-specific (c) No Response
14. Can the users participate in general meetings to express their needs and concerns to the decision-makers?
 (a) Yes (b) No (c) No Response
15. Do most users affected by the operational rules participate in modifying the rules?
 (a) Yes (b) No (c) No Response
16. Do most users follow to operational rules in use?
 (a) Yes (b) No (c) No Response
17. What penalty rules are employed?
 (a) Incarceration (b) Loss of License (c) Fines (d) No Response
18. What are the Conflict Resolution Mechanisms? (a) Panel set up by users (b) Government owned courts (c) Direct intervention by the State's Forest Service Department (d) No Response

19. The administration of forest reserves by the State Government alone does not lead to sustainable administration of the forest reserves, (a) agree [] (b) disagree []
20. The involvement of forest users along with the state government in the administration of first reserves reduces disregard for forestry laws/rules by forestry staff and forest users. (a) agreed [] (b) disagreed []
21. How will you rate the performance of the State Government in ensuring the sustainability of forests through its Department of Forestry Services? (a) Satisfactory [] (b) Not satisfactory [] (c) No Response []
22. Suggest the most suitable approach to forest management, (a) Management by Users' Association [] (b) State Government Management [] (c) Local Government Management [] (d) Management by users and Local Government [] (e) No Response []

Appendix: CInterview Schedule

The Interview Schedule below is designed to investigate the role of forest users and the Osun State Government in the administration of forest reserves in Osun State. You are requested to feel free in responding to the questions that follow. Any information given is purely for academic purpose, and will be treated strictly in confidence.

1. What will you say about the role of the local governments in administering forest reserves in Osun State? Do the local governments derive any benefit from the resources.
2. Has the state government been able to realize sustainable administration of the Forest Reserves?
3. What roles are played by forest owners/users in the administration of the Reserves? What forms of corrupt practices are indulged in by forest users and forestry staff and how are these checked?
4. How many Forest Reserves are in Osun State and who own(s) the Forest Reserves and make(s), enforce(s) and modify(s) operational rules for the use of the Reserves?
5. Are the rules compatible with the local environmental conditions of the Reserves?
6. Do most people affected by the operational rules have the opportunity to be involved in modifying the rules?
7. How are rules monitored and rule infractions sanctioned?
8. Will you suggest that the same unitary decisions should be made in managing all forest reserves within the territorial jurisdiction of a State Government?
9. Is the administration of forest reserves the exclusive responsibility of the State

- Government or a shared responsibility among the State Government and forest users?
10. Should the administration of forest reserves be a shared responsibility among the State Government and forest users or the exclusive responsibility of the State Government?
 11. Are forest users allowed to play a role under the existing framework of forest administration in Osun State?
 12. Are forestry policy proposals often initiated by the State Government alone or by the State Government along with other stakeholders?
 13. Are forestry policy choices by the State Government significantly influenced by all interested parties? Does the final determination of forestry policies involve the State Government as well as forest users?
 14. Will the administration of forest reserves by the State Government alone or by the State Government and other stakeholders lead to their sustainability?
 15. How are rules monitored and rule infractions sanctioned?
 16. Which approach is appropriate to managing Forest Reserves in Osun State given their local environmental conditions? or How can the various stakeholders be involved in the administration of forest reserves in Osun State?
 17. Can participatory institutions minimize corrupt activities by officials in trying to manage forests?
 18. How many of the Forest Reserves have been fully and/or partially exploited? What is the current size of the forest reserves in the state that are yet to be exploited?
 19. What are the attributes of the forest reserves and what activities are carried out there?

Appendix: E

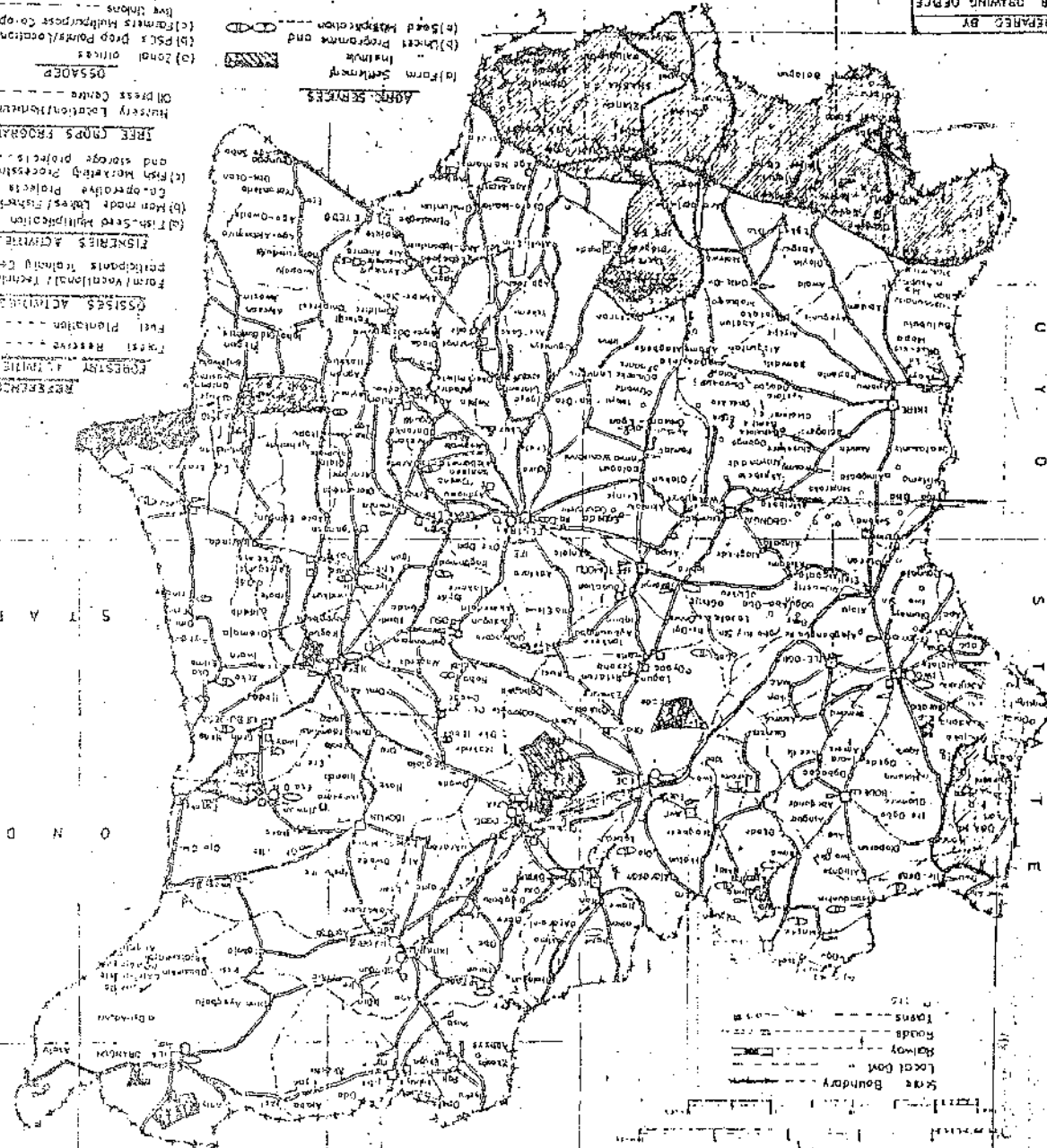
Tariff for Trees Outside Forest Reserves
(Stumpage Rate Osun State)

S/NO	Botanical Name	Local Trade Name	Existing Rate N=	Proposed Rate N=
1	<u>Triplochiton sceleroxylon</u>	Arere	250	300
2	<u>Milicia excelsa</u>	Iroko	250	300
3	<u>Mansonia altissima</u>	Ofun	250	400
4	<u>Azelia africana</u>	Apa	250	400
5	<u>Sarcocephalus diederrichii</u>	Opepe	150	300
6	<u>Guarea</u>	Olofun	150	300
7	<u>Nesoardonnia papaver</u>	Ole	80	150
8	<u>Cordia millenii</u>	Omo	150	300
9	<u>Terminalia superba</u>	Afara	100	200
10	<u>Distemonanthus laxiflora</u>	Ayan	60	120
11	<u>Diospyros spp</u>	Ebony	250	350
12	<u>Piptadeniastrum africanum</u>	Agboin	80	150
13	<u>Minosopa spp</u>	Emiigbo	80	150
14	<u>Lophira alata</u>	Ekki	200	300
15	<u>Erythrophleum spp</u>	Erun	60	100
16	<u>Pterycrota all spp</u>	Oporoporo	80	100
17	<u>Corobretodaniron spp</u>	Akasun	60	100
18	<u>Sterculia oblonga</u>	Ayee	150	200

OSUN STATE
 MAHA DRAWING OFFICE
 PREPARED BY

OSUN STATE

- AGRICULTURE**
- (a) Zonal offices
 - (b) PSC's Crop Production
 - (c) Farmers Multipurpose Co-operatives
- AGRICULTURE**
- (a) Zonal offices
 - (b) PSC's Crop Production
 - (c) Farmers Multipurpose Co-operatives
- AGRICULTURE**
- (a) Zonal offices
 - (b) PSC's Crop Production
 - (c) Farmers Multipurpose Co-operatives



SCALE 1:250,000 OR 1 CM = 2.5 KM

OSUN STATE

MAP - 01

Appendix: B