RURAL DEVELOPMENT THROUGH WORLD BANK-ASSISTED PROJECT: A CASE STUDY OF BIDA AGRICULTURAL DEVELOPMENT PROJECT.

BY

TSADO JACOB AUDU
B.A(ED) GEOGRAPHY, A.B.U.
ZARIA, 1978)

A thesis submitted to the Post-graduate School Ahmadu Bello University Zaria, in partial fulfilment of the reqiuirements for the professional Degree of Master of Science in Rural Development, Specialisation in Agricultural Development.

September, 1987.

DECLARATION

I hereby affirm that this Thesis has been undertaken by myself and that it is a record of my research work. It has not been accepted in any previous application for a higher degree. All the sources of information are specially acknowledged by means of references.

TSADO JACOB AUDU

DATE: 16/10/87

C E R T I F I C A T I O N

This Thesis by TSADO Jacob Audu, meets the regulations governing the award of Masters of Science Degree in Rural Development, Post-graduate School, Ahmadu Bello University, Zaria, contribution to knowledge and literary presentation.

Chairman, Supervisory Committee — Date:_____
Dr. J.M. Baba

Member-Supervisory Committee — Date:_____
Dr. J.A. Ariyo

Head of Department — Date: _____

Dean of Post-graduate School — Date: 6-6-88

External Examiner — Date: _____
Dr. G.E.D. Omuta

D E D I C A T I O N

This work is dedicated to my immediate Junior Sister, Mrs. Latan Nusa who died in February, 1981. I remembered her death at the time of my writing this work and I wished she had lived longer than she did.

A C K N O W L E D G E M E N T

A work of this nature usually owes its existence to the assistance and support of many individuals and organizations. I thank the management of Bida Agricultural Development Project, most especially Mr. Emmanuel Shiawoya, the project Manager and Mr. Barnabas Jiya, the Public Relation Officer of the B.A.D.P, for lending me some literature which were very helpful to this study.

This work could not have been possible without the co-operation of the farmers within the project area particularly the District Heads and the Village Area Heads who gave me the required permission to interview the farmers. These heads also took pains and explained the reason for the interview to the people.

I also wish to extend my profound gratitude to my wife who bore some inconveniences, my mother who kept assuring me of success and God's blessings and Dr. J.A. Gana for his assistance and encouragement.

I owe a alot to my colleagues and friends, especially Mohammed D. Muva and Hassan Umar. I have benefitted immensely from our numerous exchange of ideas at various times. They also provided material and moral support during difficult periods.

Mr. Job Mosimabale who typed this work deserves praise. I was impressed by his speed, accuracy and patience.

I remain highly indebted to my suprevisors(Dr. J.M Baba and Dr. J.A. Ariyo) each of whom read earlier drafts of this dissertation gave me the highest lesson in academic endeavour by telling me honestly that the initial drafts were not good enough. Much of whatever is valuable in this work owes its clarity and coherence to their willingness to tell me the truth. It is needless to say, however, that I bear full responsibility for the faults and short-comings that this work may still contain.

I also remain grateful to my sponsor(Niger State Government) and whoever might have contributed to the success of this Thesis.

Finally I thank God for seeing me through the course of this study.

TSADO J.A.

TABLE OF CONTENTS

		PAGE
1.	TITLE PAGE	i
2.	DECLARATION	ii
3.	CERTIFICATION	iii
4.	DEDICATION	iv
5.	ACKNOWLEDGEMENTS.....	v-vi
6.	TABLE OF CONTENTS	vii-ix
7.	LIST OF TABLES	xi
8.	LIST OF FIGURES	xii
9.	ABBREVIATIONS	xii-xiv
10.	ABSTRACT	xv-xvi
11.	CHAPTER ONE	1-19
12	CHAPTER TWO	22-50
13.	CHAPTER THREE	59-79
14.	CHAPTER FOUR	83-116
15.	CHAPTER FIVE	121-126
16.	CHAPTER SIX	128-135
17.	REFERENCES	136-139
18.	APPENDIX: A. SAMPLE QUESTIONNAIRES FOR FARMERS.....	140-146
	B: INTRODUCTION LETTER FROM DEPARTMENT OF GEOGRAPHY	147

Table of Contents

		Page
CHAPTER ONE:	INTRODUCTION	1
1.1	Statement of the problem	7
1.2	The meaning of Rural Development	7
1.3	Aim of study	17
1.5.1	Central Hypothesis	13
1.52	Related Hypothesis	13
1.6	The scope of the study	13
1.7	Research Methodology	14
1.7.1	Primary Source of Information	14
1.7.2	Secondary Sources	15
1.7.3	Sampling procedure	15
1.8	Methods of Data Analysis	17
1.9	The Limitation of the study	18
1.10	The significance of the study.	19
CHAPTER TWO:	LITERATURE REVIEW	22
2.1	Nigeria colonized peasantry	22
2.2	Outline of policy options	27
2.3	Farm settlement as a political option	30
2.4	The Agricultural sector in an oil economy	34
2.5	Supportive measures to improve a small holder production	40
2.6	The Nature of Rural Nigeria	45
2.6.1	Poverty and Inequality	48
2.7	The World Bank and the Agricultural Development projects	50
CHAPTER THREE:		59
3.0	Background to the study area.	59
3.1	Location of the study area	59
3.2.0.	Physiographic setting of the area	60
3.2.1	Geology	60
3.2.2	Topography	62
3.2.3	Drainage system	62
3.2.4	Vegetation and Forestry Resources	63
3.2.5	Climate	63
3.2.6	Soil	64

		Page
3.3.0.	Socio-Economic and Demographic Characteristics of the project area	65
3.3.1	Age-Sex structure	70
3.3.2	Ethnicity	71
3.3.3	Literacy level	71
3.3.4	Religious composition	72
3.3.5	Economic Background	72
3.3.6	Crop production system	72
3.3.7	Land Tenure system	75
3.4.0	Structure of project funding	77
3.5.0	Official objectives and Targets of the project	77
3.5.1	Programmes	77
3.6.0	Project organization and Management.	79
CHAPTER FOUR:	ANALYSIS OF DATA	83
4.1	General framework for the analysis	83
4.2.0.	Impact through infrastructural Development	85
4.2.1	Transport	85
4.2.2	Farm Service centres and Area Development centres	92
4.3.0	Economic impact through provision of farm inputs.	94
4.3.1	Improved Seeds and chemicals	98
4.3.2	Tractor Hiring services	102
4.4.	Impact through Extension services	106
4.5.	Special Training courses for farmers	110
4.6	Impact through credit facilities	114
4.7	Impact on Agricultural output.	116

		Page
CHAPTER FIVE:	TOWARDS AN ALTERNATIVE STRATEGY OF RURAL DEVELOPMENT IN BIDA ADP.	121
5.1	Marketing and processing facilities	122
5.2.	The Physical Infrastructure	123
5.3	The Agricultural Inputs	124
5.4	Extension Services	124
5.5	The factor of organisation.	126
CHAPTER SIX:	SUMMARY CONCLUSIONS AND RECOMMENDATIONS	128
6.1	Summary	128
6.2	Conclusion	130
6.3	Rec mmendation	132
6.4	Area for further Research.	135.

LIST OF TABLES

			PAGE
1.	Table 1.1.	Estimated foodstuff Deficits ('000 tons)	
2.	Table 1.2	Growth rate of Nigeria's Gross Domestic product, 1971/72-1975/76 at constant 1974/75 prices	4
3.	Table 1.3	Local Governments, Districts and main villages in B.A.D.P.	16
4.	Table 2.1	Recurrent Revenue of Federal Govt. and proportion Derived from petroleum 1972-75(Millions of naira)	37
			44
5.	Table 2.2	Consumer food Indices 1975-83	
6.	Table 2.3	Food Importation in Nigeria 1978-1983	45
7	Table 2.4	Average Income(in naira) by Socio-professional classes 1963-70	48
8.	Table 3.1	Population figures of the BADP	66
9.	Table 3.2	Relative importance of main crops in terms of number of farmers, total area cropped and crop mixtures	74
10.	Table 4.1	Statistics of Road constructed in(km)	
11.	Table 4.2	Fertilizers purchased by farmers in bags before 1980-1986(n=200)	
12.	Table 4.3	Adoption Rate for Insecticide	
13.	Table 4.4	Number of users of Tractors by LGA	
14.	Table 4.5	Land Development in (Ha)	
15.	Table 4.6	Number of Demonstration/ Comprehensive plots by crops	
16.	Table 4.7	Nature and Number of contacts with farmers	
17.	Table 4.8	Frequency of Extension visits in 1984-1986	
18.	Table 4.9	Extension advice by LGA's and incidence of type of advice	
19.	Table 4.10	Awareness of demonstration plots	
20.	Table 4.11	Amount of money disbursed 1983/86	
21.	Table 4.12	Crop production(Annual average in terms)	

LIST OF FIGURES

			Page
1.	Fig. 2.1	Map of Nigeria showing ADPS and ADAPS	52
	Fig. 3.1	Administrative boundaries and location of BADP Agricultural development project within Niger State	61
	Fig. 3.2	Physical Characteristics of BADP region	63
	Fig. 3.26	Geology of BADP region	63
	Fig. 3.3	BADP existing population density	67
	Fig. 3.4a	BADP farming population density	68
	Fig. 3.4b	BADP distribution of settlement	68
	Fig. 3.5a	BADP existing settlement pattern and transportation network	69
	Fig. 3.5b	Accessibility condition of BADP region	69
	Fig. 3.6a	Age-sex pyramid 1984	71
	Fig. 3.6b	Ethnic composition 1984 .	71
	Fig. 3.7a	Educational literacy level 1984	73
	Fig. 3.7b	Religions composition 1984	73
	Fig. 4.1a	Topological map of BADP road network in 1979	89
	Fig. 4.1b	Topological map of BADP road network 1987	90

ABBREVIATIONS

AADP	-	Ayangba Agricultural Development project
ADA	-	Accelerated Development Area.
ADC	-	Area Development Officers.
ADP	-	Agricultural Development Projects
APMEPU	-	Agricultural Project Monitoring and planning Unit.
ARMTI	-	Agricultural and Rural Management Training Institute.
ASCON	-	Administrative Staff College of Nigeria.
A.S.P.	-	Advanced Service Package.
BADP	-	Bida Agricultural Development Project.
BPEC	-	Bida Project Executive Committee.
BPMU	-	Bida Project Management Unit.
B.S.P.	-	Basic Service Package.
BPTCC	-	Bida Project Technical Co-ordinator Committee
BTL	-	Back to Land Programme.
CP	-	Cooperative Programme(s)
FACU	-	Federal Agricultural Development Unit.
FADP	-	Funtua Agricultural Development Project.
FAO	-	Food and Agricultural Organisation.
FASU	-	Federal Agricultural Supporting Unit.
FDA	-	Federal Department of Agriculture.
FDRD	-	Federal Department of Rural Development.
FMARD	-	Federal Ministry of Agriculture and Rural Development.
FRPP	-	Federal Rice Production Prgramme.
FSC	-	Farm Service Centre(s).
G.R.	-	Green Revolution.
GADP	-	Gusau Agricultural Development Project.
IBRD	-	International Bank for Reconstruction and Development.
IBWA	-	International Bank for West Africa.
IDA	-	International Development Association.

IFC	-	International Finance Corporation.
IITA	-	International Institute for Tropical Agriculture.
IMF	-	International Monetary Fund.
IRD	-	Integrated Rural Development
IRDA	-	Integrated Rural Development Approach
LGA	-	Local Government Area.
LGC	-	Local Government Council.
MNR	-	Ministry of Natural Rexources.
M&E	-	Monitoring and Evaluation.
M.R.D.C.	-	Ministry of Rural Development and Cooperatives.
MTC	-	Medium Term Credit.
NACB	-	Nigerian Agricultural Credit Bank.
NAFPP	-	National Accelerated Food Production Programme.
NIDB	-	Nigerian Industrial Development Bank.
OFN	-	Operation Feed the Nation.
T.H.U.	-	Tractor Hiring Units.
USAID	-	United State Agency for International Development.

RURAL DEVELOPMENT THROUGH WORLD BANK-ASSISTED PROJECT: A CASE STUDY OF BIDA AGRICULTURAL DEVELOPMENT PROJECT

ABSTRACT

The large income from petroleum export led to a depression of local food production and the deteriorating conditions in the rural areas of Nigeria. Unfortunately attempts to revamp the near moribund agricultural sector by massive investment of the oil revenue have not been successful. The cornerstone of the country's agricultural policy is the World Bank assisted and small holder oriented Agricultural Development projects. These projects are expected to cover the whole country, one for each of the nineteen states.

The projects are designed to improve rural life through transformation of the production system, institutional reforms, and the installation of basic social and physical infrastructures,

Bida ADP is therefore used as a case study with a view to understanding the political, social and economic ramifications of this particular interventionist strategy in small scale agriculture. Despite the huge amount of money spent on these projects, defective project design, political interference in their implementation, the lack of

administrative capacity and inadequate participatory role for majority of the small holder peasants have combined to adversely affect their impact.

In our analysis, collected data based on production figures that were supplied by the project's management, questionaire and interviews showed that the projects have not led to any dramatic increase in crop production. In fact, in some ADPS like Funtua, yields of some crops had actually dropped

Furthermore, rural differentiation is being exacerbated by selection of a few rich peasants who are termed "progressives" as direct beneficiaries of the projects.

Agricultural production units are breaking down gradually because the projects do not pay adequate attention to the important role of womer and the youths in the production process.

CHAPTER ONE:

INTRODUCTION

1.1 Statement of the Problem

Nigeria is the most populous country in Africa with some 75 percent of its population of over 80 million being officially described as rural. Yet, one of the most remarkable paradox of recent years is the increasing inability of the country to feed itself. Between 1973 and 1977, food import into the country rose from ₦162.2million to ₦1,280 million, a rate of growth of over 67 percent per annum. This precarious situation, made tolerable only by the fortuitously large income from petroleum export, clearly exemplifies the crisis of declining agricultural productivities and of deteriorating conditions in the rural area of Nigeria(Mabogunje and Gana 1981 P. 1).

Nigerian economy is basically agricultural. And agriculture for many decades was the largest generator of national income, government revenue and foreign exchange, contributing about 65 percent of the gross national product and employing over 70 percent of the total labour force. With the advent of the boom in crude petroleum sales, however, the relative contribution of agriculture to Gross Domestic Product declined from 43.4% in 1966-1967 to 31.6% in 1971-1972, and further down to 13.6% in 1979/80. Infact in recent times food production has not kept pace

with increases in demand resulting from rapid population growth, urbanization and rising per capita income (Olukosi, 1983 P. 1).

In other words, prior to and just after independence Nigeria was able to grow not only its food needs but produced surpluses of other agricultural raw materials such as cocoa, coffee, groundnuts, cotton, palm produce etc, for exports to other countries. In short agriculture at that time provided the Nigerian population with all its food needs and at the same time provided the much needed foreign currecny with which the country financed its capital development.

Unfortunately things have changed. Twenty-six years after independence Nigeria can no longer produce enough food for its fast growing population. Consequently the country has become an importer of food rather than exporter. This situation is exemplified in table 1.1. Even the likely future conditions is shown in the table.

Table 1.1 Estimated Food Stuff Deficits ('000 Tons)

COMMODITY	1980	1985	1990
Rice	892	948	150
Maize	1017	1061	400
Guinea Corn	459	28	800
Millet	1018	712	600
Yam	4025	1395	N.A.

Source: Appio, G.E and Associates (1982).

On the other hand, Table 1.2, furnishes us with some comparative data on the growth within various sector of the Nigerian economy between 1971/72 and 1975/76 at 1974/75 prices. The contrast between agriculture and virtually all other sectors in the table stands out clearly. Not only were the lowest growth rates generally recorded within this sector, but quite drastic declines were recorded between 1972 and 1974. These declines according to Baba (1984) may be attributed in part to the drought experienced during the early seventies. But that explanation suffices only as far as the immediate causes were concerned. More fundamentally, he believes it was a failure of the development strategies which left the rural /agricultural sector ill-equipped to cope with emergencies. Other reasons given for the declining importance of agriculture in the national economy include growing importance of oil industry, lack of investments, inadequate infrastructure, traditional inputs and technology being applied.

According to Baba(ibid), even if we were to assume that agricultural growth was synonymous with rural development, Nigeria has not achieved much of it. Although agriculture had generated considerable capital during the initial stages of nation building events in the last two decades or so, have been more towards rapid declines in agricultural production.

Table1.2. Growth Rate of Nigeria's Gross Domestic Product, 1971/72-1975/76 (at Constant 1974/75 Prices).

	Percent Growth Rate				
SECTORS	71/72	72/73	73/74	74/75	75/76
Agriculture	5.2	-6	-3	3.9	0.7
Mining and Quarying	40.4	18.4	13.9	10.5	-13.5
Manufacturing & Crafts	3.1	23.9	9.9	9.2	39.8
Electricity and Water	20.6	18.8	22.6	12.9	14.8
Building and Construction	41.2	23.2	25.3	15.6	55.2
Transport and Communication	21.8	23.0	8.0	16.8	12.1
Education	15.0	2.0	3.4	20.4	8.4
Health	3.3	24.4	19.1	20.1	16.0
Other Services	13.8	13.8	13.7	9.4	8.4
Aggregate Annual Growth Rate	18.4	7.3	9.5	9.7	2.8

Source: Uche, 1980 taken from Baba (1984).

Thus the National Development Plans took advantage of the greatly increased revenues to stimulate economic growth with big investment projects, mostly in the cities. The assumption was that, in due course, the increases in income would trickle down to the poor.

Therefore since the ovrall rate of economic growth has apparently been fast in the past two decades, there should be by now signs of substantial improvement in the living conditions of the majority of the Nigerian people. These are not evident.

Infact, large numbers are worse off in numerous respects, especially in the rural areas and in the big new slums of the cities. Even those whose buying power has increased speak frequently of what they have lost-regular supplies of water, continous electricity, telephones that worked, uncorrugated roads with good surfaces and, above all, the ability to walk or drive around without an ever-present fear of road accidents and armed robbery.

For some reasons, most of the development effort goes into the big cities, which means that eighty-five percent of the population are largely by-passed. What is to become of them? Simply to assume that the modern sector in the big cities will grow until it has absorbed almost the entire population-which is, of course, what has happened in many of the highly developed countries- is utterly unrealistic Schumacher,(1973).

Another important physical planning problems of rural areas is the selective migration that leaves behind weak, old and feeble people with the result that there is decline in both agricultural food and cash crop production. The reasons advanced for this migration are lack of basic social amenities in the rural areas, wide gap between rural and urban areas in standard of living and slow growth in agricultural

sector for their livelihood.

Successive Nigerian governments have approached rural development in a sectoral manner. This approach attempted to solve rural problems with isolated programmes and projects such as electricity and water supply, educational facilities, agricultural projects, etc, without realising that none of these can single-handedly improve the standard of living of the people. Usually these development efforts are not coordinated so as to improve the quality of life of the people concerned.

These problems which characterise the national scene are equally present not only at state level but also at the regional (the study area)- the Bida Agricultural Development Project (BADP) area.

In the light of these problems discussed above, an Integrated Rural Development approach(IRDA) which attacks rural problems from all fronts is recommended as a solution. This is an approach in which all components (projects and programmes) of the system of development are considered as equally important in playing their role in the development process and should therefore be coordinated and integrated for the quality of life to be improved.

In this study Bida Agricultural Development Project is taken as a case study, so as to be able to evaluate how far this particular interventionist strategy offers a definitive way out of the contemporary impasse in rural development in the project area in particular and Niger State in general. It is on the basis of this evaluation that an alternative rural development strategy will be suggested if the evaluated strategy is found inadequate or inefficient.

1.2 The Meaning of Rural Development

So much has been written on rural development but unfortunately, confusion still exists as to what Rural Development is all about. The term means different things to different people as manifested in its varying definitions and interpretations by people and organizations concerned with improving the lot of the rural poor.

According to Allahmagani(1986), the concept emerged in the decade as a result of the failure of the economic growth approach to effect changes in the lives of the rural people living in the developing countries.

To the United Nations (1971), "rural development is the outcome of a series of quantitative and qualitative changes occuring among a given rural population whose

converging effects indicate, in time, a rise in the standards of living and favourable changes in the way of life of the people concerned". In this case a comprehensive approach to development of the rural areas is implied.

According to Uma Lele(1975), rural development is a "means of improving living standards of the mass of the low-income population residing in rural areas and making the process of their development self-sustaining". To Mabogunje (1980) the term rural development is concerned with the improvement of the living standards of the low-income population living in the rural areas on a self-sustaining basis, through transforming the socio-spatial structures of their production activities". To J. Heyer, et al (1981) rural development is a planned change by public agencies based outside the rural areas, but also the standard of living of the rural population. On the other hand Adegboye(1973) sees rural development as the development of the rural people in such a continuous manner as to enable them to most effectively and efficiently utilize their intellect, technology and other resources for further development of both themselves and other resources. From the above discussions, it is clear that there is little concensus on what rural development really means. However, there is

emphasis by all the definitions on reducing poverty through increased productivity, improvement of living standards and the reorganization of the rural masses to make the process of change self-sustaining.

Another aspect relating to this subject is the distinguishing characteristics of rural people and how their development should be achieved. Olatunbosun (1975) for example called rural dwellers the "neglected majority", Anthonio(1967), regarded the rural areas as "stagnant Sector" and Ijere(1978) Simply refers to rural area as the "other Nigeria". These show different perceptions of the writers about the rural people and it is still not clear whether the rural sector is perceived as being structurally independent or rural development is a special technique which can be applied for the achievement of overall economic development. To Diejomaoh(1973), the rural sector is essentially structurally independent of the rest of the economy. On the other hand Williams(1978) shows a greater appreciation for the interdependence necessary for rural development. Whatever the case, rural development is still being viewed as an instrument in the overall economic development of the country.

In fact, until recently, "rural development" and "agricultural output" were considered synonymous. But agriculture is not the only possible occupation for rural dwellers, and this is why I think a new and broader view has emerged which distinguishes rural development from merely agricultural development. This view equates rural development with changes in social and economic structures, institutions, relationships and processes. It conceives of rural development not as mere agricultural and economic growth, but as the creation and fair sharing of social and economic benefits resulting from this growth. In this view is implied a massive effort to increase production, create and spread employment and root out fundamental causes of poverty, disease and ignorance(Williams 1978).

This writer believes that the scope of rural development is very wide and includes generation of new employment more equitable distribution of income, wide-spread improvements in health, nutrition, and housing; maintenance of law and order; creation of incentives and opportunities for saving, credit and investment. It also involves creating wider opportunities for individuals to realize their full potential through education and sharing in the decisions and actions which affect their lives.

It is not sectoral, but comprehensive. In a nutshell, rural development is the result of many interacting forces.

According to Abalu(1982), whatever the conceptualization of rural development is, it is clear that today's Nigerian agricultural problems have been shaped by social, political, cultural and economic considerations. These problems as earlier stated owe their origin to the colonial and neo-colonial administration of Britain and Western Europe. The legacies from these administrations included poor road infrastructure, insignificant numbers of trained people, and under-developed institutional systems.

Thus efforts to raise rural welfare must necessarily go beyond the traditional and limited approach of raising per capita income through agricultural development projects to the provision of rural basic needs, such as health and medical facilities, rural transportation facilities, electricity, pipe-borne water, schools, etc. The rural Nigerian must be seen beyond their roles as mere producers of food and fibre for the need of the urban economy to their roles as consumers and decent citizens equally entitle like their urban counterparts to the good things of life.

1.3 The Aim and Objectives Of the Study

1.3 Aim of Study

The aim of this research is to assess the socio-economic impact of the Bida Agricultural Development project on the people of the project area. Then on the basis of my findings, a more effective alternative rural development strategy to transform the rural economy of the region and to improve the standard of living of the people will be suggested.

1.4 Objectives

The above aim would be achieved through the following objectives:

(1) To identify the socio-economic characteristics of the project area.

(2) To identify and highlight the major factors that have contributed to the declining output in the agricultural sector of the rural area.

(3) To find out whether the provision of farm inputs and infrastructure by the BADP has actually improved the standard of living of the people.

(4) To examine the factors which may prevent a more equitable distribution of income within the project area.

(5) To suggest an alternative integrated development strategy to improve the rural economy of the area.

1.5 Hypotheses

1.5.1 Central Hypothesis:

That the establishment of the Bida Agricultural Development Project has resulted in greater social and economic development of the project area.

1.5.2 Related Hypotheses:

(1) That Bida Agricultural Development Project has increased considerably the rate of innovation adoption within the project area.

(2) That the living standards of the local farmers has improved as a result of an increase in productivity, income and the provision of infrastructural facilities like roads and farm service centres.

1.6 The Scope of the Study

This study examines the socio-economic characteristics of the Bida Agricultural Development Project area, and the study will therefore be confined to the existing boundary defining the project area. There is no doubt that there are other related agricultural development projects but their area coverage and impact are not as wide-spread as to make the

impact of the project under study undistinguishable. Consequently the study will limit itself mainly to assessing the socio-economic impact of the Bida Agricultural Development Project on its area of influences. This is done so that based on my findings, I may be able to suggest a more effective strategy of transforming the rural economy of the area and thus raise the living standard of the people.

1.7 Research Methodology

Two major sources of information were used, namely, primary and secondary.

1.7.1 For the primary source of information one set of questionnaire was administered on the farmers within the project area. This questionnaire provides information about the socio-economic and demographic characteristics of the farmers, as well as benefits derived from the project.

Personal interviews with project officials provided information which dealt mainly with project achievements and future plans.

Personal interviews with project field workers, farmers and women provided detailed information on the benefits they have derived or continue to derive from

the Bida Agricultural Development Project.

My visits to demonstration plots, Farmers' Field Days, Cooperative Group, Farming farms and Farm Service Centres during my six weeks attachment period with the project provided a good opportunity to observe progress on some of the project's programmes.

1.7.2 Secondary Sources:

(a) Bida Agricultural Development Project documents (Feasibility and Pre-feasibility studies,periodic reports, plan documents and maps) were consulted for secondary information about the project, its activities and achievements.

(b) Government documents(Regional and Town Master Plans were consulted for information on the general characteristic of the region.

(c) Relevant publications and other library materials were also used to provide information about similar studies.

1.7.3 Sampling Procedure

The Bida Agricultural Development project in 1979 conducted an enumeration exercise of the villages in the project area before the project took off in 1980.

The enumeration exercise provided a base for the distribution of population by local governments and districts as shown in Table 1.3. This list was used as the sampling frame.

As the table reveals, the largest number of villages are in Gbako and Lavun, followed by Agaie and Lapai Local Government Areas. Systematic and stratified random sampling methods were employed in the selection of settlements in which questionaires were administered

Table 1.3 The Local Governments, Districts and Main Villages in B.A.D.P.

Local Government	Districts	Main Villages
Gbako	4	57
Lavun	4	50
Agaie	2	28
Lapai	2	22
Total	12	157

Source: BADP Village listing Exercise(1979).

To ensure fair representation and spatial distribution the selected settlements ranged from large to small sizes. A total number of fifty settlements from 14 main villages of Gbako; 16 from 12 main villages of Lavun; 9 from 8 main villages of Agaie, and 7 from 6 main villages of Lapai Local Government Areas.

The total number of respondents (farming families) served with the questionnaire also varied with 72 from Gbako, 64 from Lavun, 36 from Agaie and 28 from Lapai Local Government Areas.

Random sampling was used in selection of farmers served with the questionnaire since the villages are not well planned and not all farmers within a settlement were likely to be present at the same time. Thus the villages were randomly selected but within each village I interviewed only those farmers I could find and were willing to be interviewed

1.8 Methods of Data Analysis

The data were analysed mannually, and with the use of a Computer. The descriptive and inferential statistical methods were adopted in the analysis. Linear corrrelation using Pearson correlation coefficients and connectivity coefficient were parts of statistical methods used. The choice of these methods is in consideration of the nature of the problem and the kind of data the problem entails. For example the data collected covers the entire project area and has to be analysed using descriptive and coefficient statistical methods.

In dealing with the population of the study area, only a percentage of the population was sampled so that some inferences on the whole population could be made. Thus the use of inferential and other statistical methods.

1.9 The Limitations of the Study

In the course of this research I discovered that fund and time constituted part of my serious problems. My movement from one Local Government to the other and from one settlement to another demanded alot of money and time.

In each Local Government Area it was not easy to administer the questionnaire without the permission of the District heads, the village heads and the compound heads. The protocol involved in obtaining these permissions took more time than necessary. Infact I had to make two or more trips to some heads just to obtain the permission. The farmers were very willing to cooperate, but they told me they had been warned not to accept strangers, especially those they are not familiar with. A related problem is the difficulty I encountered in getting to some of my sampled settlements.

In administering the questionnaire, the questions had to be translated to Nupe (the language of the respondents), and this did not only waste time, but created some problems when translating some words. Such words include programme, development, modernisation etc.

The fact that the respondents do not keep records of their farming operations constitute

another problem. Some of the respondents found it difficult to respond to some questions, and others exaggerated some responses as a result of this lack of records.

Finally, I found it very difficult to convince some communities that I am not a government agent, but a student and a researcher. To accept that I am a government agent in such communities would mean little or no cooperation from the people. Such communities complained that their area had been neglected, despite government numerous promises to develop the areas. Thus they are no longer willing to listen to such promises from the government.

1.10 The Significance of the Study

As earlier stated, prior to the 196 's agriculture was the mainstay of the Nigerian economy because it was not only the major foreign exchange earner (over 60%) but also a major absorber of the labour force. However this position has been gradually eroded as a result of the growing importance of oil production and the manufacturing sectors. Consequently contribution to the Gross Domestic Product(GDP) declined from 65% in the 1950s to 25% in the mid-1970's However this sharp relative decline not-withstanding, agriculture remains and will continue to remain a key

sector in the economy. This is simply because it is still the largest employer of the labour force, the principal source of food and raw materials for the increasing population and remains a significant source of foreign exchange. The rural areas, therefore, form the most important sector of the economy and national development is dependent upon these areas. More rapid agricultural growth and more opportunities for rural employment are crucial to our future national progress.

In countries like Nigeria, sustained urban development depends on agricultural expansion. According to Williams(1978), no growth of our towns and cities can be satisfactory while the rest of the country is poverty-striken, depending precariously on the miserable returns of subsistence agriculture.

Unfortunately the agricultural and rural development efforts in Nigeria have not been able to achieve the desired results. Our understanding of why this is so is hampered by inadequate knowledge or insufficient appreciation of all the social, economic and political ramifications of policy options. This is the more reason why any determination of the relevance, practicability and long term success of these projects or any other rural development effort must be based on comprehensive understanding of target population and a clear grasp

of the social and political dynamics of the state (Dunmoye 1986).

This study will therefore be concerned with the programmes, policies and measures the Federal and State Governments have adopted and those they are now adopting in effecting rural development.

In view of this, the study will be contributing to existing rudimentory schblarly literature on rural development in Nigeria. The findings I believe will hopefully throw some light on the sources, nature and possible solutions to problems of rural development in Nigeria.

Although it may probably be inadequate to use findings from this study to generate or conclude on the validity or otherwise of the integrated Rural/ agricultural Development strategy" my intention is to further provoke academic thinking by providing more empirical evidence from another geo-political area to increase the number of similar evaluational studies going on in other parts of the country.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Nigerian Colonized Peasantry

Nigeria is a class-stratified society.Historically a ruling class developed in certain parts of the country during the pre-colonial period. Some communities evolved a mode of production that generated a surplus through taxes, tributes, forced labour, market tools and all forms of extraction of peasant products in forms of goods and crafts. This surplus was appropriated by pre-capitalist ruling classes.

The British conquered these ethnic groups and utilising, the existing political structure fashioned, in collaboration with the conquered ruling aristocracies of the centralized tributary formations, a sort of new colonial state structure known as Indirect Rule. To form such a class alliance in the areas such social class did not exist, the British created them in the form of Warrant chiefs. The aim was to set up a social base for British control of the peasantry whose allegiance to pre-colonial ideological leadership was still based on the sentiment either of Muslim religion or of ancestor worship which in both cases, endowed the pre-colonial rulers with sacrality and made the peasant submission to these potentates possible (Nzimiro 1985:4). These local rulers took

advantage of their new class position to hold extra land rights and in some cases, as among the Nupes, areas conquered by the Fulanis, private land was worked for them by their slaves. This control enabled the expropriations already specified to be expanded under British rule.

The "pacification" of the peasantry through this alliance with the old class enabled the British to ensure that the foreign trading companies, the first to come to terms with the rulers, settled down without any further fear and intensified their activities. These included the expropriation of the products of the peasants, which commanded monetary prices and, therefore, became commodities. The peasants were made to pay taxes in the new currency and this money they obtained only if they sold their new cash crops to the British trading companies. To release the peasants for the production of these cash crops, the British ruling class in the colony had to decree against slavery and the traditional forced labour, in a typical liberal mixture of moralizing and economic expedience. This "freed labour " became free in that they could now work in their farms in order to sell the crops to obtain money to buy food and the cheap manufactured products that the British firms dumped into the market. The exchange of peasant products for money was dictated

by the trading companies and abetted by the government. A sort of unequal exchange obtained. The monetization of the rural communities created new social formations because the British trading companies that controlled the marketing of the peasant products needed African agents and gradually as the capitalist values permeated the society, comprador merchants developed among the Nigerians attached to these British firms, Other European companies joined and the commercial activities led to the spread of rural plantation farms and to individual farmers who, over the years, began to acquire land and to farm for capitalist purpose. Thus the rise of rural Kulaks in those areas where cash crops were in urgent demand. So in the groundnut, cotton, cocoa, palm produce, and rubber producing areas individual cultivation of farms led to the hiring of labour and to the migration of labour from areas that lacked these commodities to those areas where they were produced. The rural proletariat began to emerge working in plantations owned by the foreign companies and in those owned by new Nigerian Kulaks. The Russian term Kulak is used to designate more or less capitalist commercial farmers whose origin is in the peasantry. The wealth of the Kulak is not necessarily in his farms alone. It may also be linked to produce trading, transporting, money-lending and

the selling of services to other producers such as tractor or bullock plowing.

According to Nzimiro 1985, it was among middle class elements that the urge for political agitation was focussed. Acting true to type they stimulated nationalism but the British made sure that in granting national independence they did so to a class that had imbibed the capitalist ethos of change. In gradual transition from 1951-1966, through a series of constitutional reforms granted to this class(traditional and new) whose leaders controlled the three dominant parties, they negotiated political independence. This new ruling class then used their power position to develop from petty bourgeoisie to national bourgeoisie. In the period of transition we could identify within the bureaucratic structure of the neo-colonial state- the ministries and parastals- the bureaucratic bourgeoisie who used their position to establish links to the political class, as well as to the multinational corporations with which the regimes had joint ventures and whom they called into the country by laws that opened the gates of the neo-colonial economy to foreign firms.

In Nigeria, the peasants have used the hoe and the cutlass, the stick as plough, the basket and calabash and pot, all sorts of other simple tools to produce the food which, enabled them to reproduce and expand their population. But the conception of the

Green Revolution by the planners of the grand idea makes huge assumptions about the fundamental question who determines the policy for this revolution; whom is the revolution to serve and who profits from it?

From our discussion there is a ruling class which derives its legitimacy and hegemony from the state ideology of development. This class alienates the peasants from direct policy formulation and implementation of the Green Revolution strategy. Therefore it is necessary to go further historically, to show that all agricultural policies were geared to serve the interest of the departing British colonial capitalists and that these agricultural policies have not altered in the neo-colonial state controlled by the ruling class of that Republic. 1

The Green Revolution strategy which invariably is a package imported from the West has been the strategy adopted in our Developmental plans since independence, under various names.

According to Ake, C. (1981), Capital uses State power to regulate the conditions of peasant production by (a) making laws about who might produce what (b) imposing development programmes which put the peasant in the position of using inputs such as fertilizer and different techniques for tools. The

process of compelling the use of these inputs and techniques was ostensibly to help the peasant, but in fact they aid the integration of the peasants into exploitative commodity relations' imposing laws, which standardise products and production relations.

2.2. Outline of Policy Options

The peasants in Nigeria were integrated into the world capitalist system by the British and other foreign capitalists. The effects of this integration need to be examined because the social structure of the rural societies in being transformed did not imply the simple elevation of the status of peasant producers. Rather it selected and created a class of indigenous capitalist farmers which have been identified as (a) Big landowner(b) Middle level landowner; (c) Money lenders and land speculator; (d) Peasant squarters; (e) Dependent peasant population.

While this tranformation took place and did not better their social conditions and thereby the qualities of their lives, the peasants were nervetheless the backbone of the colonial and post-colonial economy. However these and contributors to the Finance of the colonial and post-colonial state before the oil money, were still not involved in the making of the agricultural policies. The entire period was

marked by the imposition of agricultural programmes on the peasants and their fate was at the whims and caprices of the colonial and post colonial ruling class.

Agricultural policies neglected the production of food, but emphasised the development of capitalist commodity products. This emphasis on cash crops benefitted the colonial regime. British interests controlled the buying, marketing and processing of agricultural products the foreign produce manufacturing firms formed a monopoly trust, the West African Produce Agents and through their representatives in Nigeria- Unilever, SCOA,CFAO, GBO. John Holt used indigenous middle compradors to reach the peasants who could not dispose of their raw products directly to the main foreign firms. The unequal exchange we have noted did not favour the peasants.

According to Nzimiro (op.cit), the British monopoly firms surrendered their marketing rights to Nigerian Marketing Boards controlled by the new ruling class to whom the British also handed over political power. Unfortunately this ruling class of the dominant parties accepted the capitalist path to development. They did not involve the peasants in agricultural policy formulation, mobilization of manpower, utilisation of modern techniques all aimed

at improving the quality of life of the peasants. On the contrary their agricultural policies were still geared towards the development of export crops to earn foreign exchange for development policies that refurbished the material opulence of the ruling class and their collaborators such as construction of hotels, casinos, senior staff housing projects, award of contracts aimed at getting ten-percent cuts, overseas trips to earn estacodes, lavish furnishing of offices and so forth to the neglect of those social services that will improve the overall social conditions of the urban environment.

According to Ezedinma(1980), the First National Development Plan 1962-68 was a conglomerate post-independence regionally based attempt to develop a national plan for general development. Agriculture was listed but the emphasis sadly was on commodity crops. The Plan enunciated "to increase the production of export crops through better seed distribution and more modern methods through farm settlements, co-operative plantations, improved implements such as hydraulic presses for extraction of palm-oil and a great expanded agricultural extension service".

Olatubosun (1975) also explains that the two National Development Plans paid little attention to

food production. Analysis of the composition of government on agriculture in the 1962-68 and 1970-74 Development Plans show that an overwhelming expenditure is devoted to export crops. In the 1962-68 Plan, no specific mention was made of food production in the plans of the then Federal Government nor Western and Northern Regions.

The performance shortfalls of the Third National Development Plan 1975-80 that the government identified include shortage of qualified manpower in key areas, inadequate supplies of agricultural inputs and support services, poor extension services, poor condition of feeder roads; skewed land tenure system, labour shortage traceable to rural-urban migration and lack of appropriate package of technology(The Third National Development Plan 1975-80, Volumes I and II).

2.3 Farm Settlement as a Political Option

The first farm settlements were introduced by the defunct Western Region in 1959 and were made up of 1,5000 acre farms. Although this programme was later introduced by the Eastern Regional Government, it did not obtain the same serious official attention as in the West. The reason might be traceable to the different political slants of the two parties that were involved. The Action Group Party which

was controlling the government of the West placed a high premium on free education, while the National Convention of Nigerian citizens in the East did not. Succinctly, the "raison-d'etre" behind the settlement farms was to find gainful employment or a semblance of it for the graduates of the free education programme, who were finding it increasingly difficult to secure white collar jobs.

One of the fundamental objectives of the scheme was to experiment with carefully planned systems that were designed to induce young unemployed high school graduates to take up farming or agriculture as a means of livelihood.

The new ruling class at this time lacked a clear idea about the relationship between mobilization of peasant labour and production activities of this labour for the raising of the national wealth, nor did they believe that the peasants, the creators of this wealth would become involved in the political process. Rather the ruling class, in keeping with their copying from abroad became obessed with the idea of farm settlements. The development of agriculture was seen in terms of creating islands of agricultural productivity.

To Nzimiro (op.cit), the farm settlement idea was tried in the Western and Eastern regions. In Keeping with their path to agricultural development, the two bourgeois regimes tried to create a new class of

farmers within tural enclaves and to introduce facilities which enable selected families to develop capitalist agriculture. Government would bequeath to them, over the scheme's duration, the right to land, the facilities for producing and selling, and, therefore the ability to yield profits from their farms. The farm settlements were not instruments for involving peasants in production through:

(a) mobilising their extensive labour communally:
(b) improving their techniques of production generally;
(c) guaranteeing prices;
(d) extending infrastructural facilities to them;
(e) improving the social environment and raising their standard of living.

Rather the families selected for the settlements were helped in the hope that their success would have an effect on the surrounding villages. The bourgeois regimes even thought they could build socialist enclaves within the neo-capitalist state, a form of utopian socialism which some of them dubbed "pragmatic socialism" (NCNC) and "democratic socialism"(Action Group).

Another political basis of this scheme is highlighted by Agboola, 1979, P. 186):

> Apart from the underlying expectation that if the scheme were successful, it would help stabilize political leadership, it was also considered capable of diminishing the influence of revolutionary youths, dedicated to overturning the status quo

Roider (1971) suggested, after his intensive research into the economic and social rates of return of the projects between 1965 and 1967, they were doomed to failure. This was because the politicians saw the settlement scheme "as a method for the solution of various kinds of problems- political, social, and economic- the variety of which, in retrospect, seems to have been too wide".

Although the settlement scheme was modelled after the Israeli Moshavim, it was not as successful since the social and ideological bases of both are not the same: The scheme was offered as a simultaneous solution to many problems, of an economic and social nature, in order to gain political ground. Although no where in official documents were political objectives clearly stated, it is obvious that the scheme was intended to strengthen political leadership.

In conclusion, since political consideration outweighed economic rationality in the introduction or conception of the scheme, its economic success could not be guaranteed. The abandonment of the scheme by the Military Government in the early 1970S, is a

testimony to its economic unprofitability. However, despite its failures as an agricultural venture, the lesson of its political relevance was not lost on the governing class who sought new ways of evolving agricultural programmes and sustaining political hegemony over the rural population.

2.4 The Agricultural Sector in an Oil Economy

In our earlier discussions we saw the efforts of the rulers of the First Republic to organise agriculture on purely capitalist lines. Their emphasis remained on export commodity crops as opposed to food. The military regime which took power from them was not a people's Army. Rather, there was a clear ideological cleavage between the army and the masses it is supposed to defend, that is, a class cleavage between the military hierarchy; class characteristics. Similar to those of the very class that led to the downfall of the First Republic. This was not to say that none of the military leaders attempted to identify the interests of the masses, but the ultimate alliance of army and bourgeoisie was the tragic outcome of the period as a whole (Nzimiro op. cit).

The military inherited a nation which operated a capitalist economy and lacked a coherent ideology rooted in the millions of toiling masses. There was no mobilisation of the peasants and workers called for in the production and development policies, which were simply imposed from above. Most of these policies were formulated from abroad or were the acts of hired

servants of the multinational corporations that indirectly control the economy. The regime's agricultural policies were inimical to the interests of the peasants. The army had no better idea than to operate the mixed economy policies of the political class that it ousted. So the army formed a ruling oligarchy with the bureaucratic bourgeoisie which served as the link between the army and the ousted class. It was a working alliance in every respect.

The army rapidly began to develop its social hegemony based on the theory that a strong army was essential for the stability of the state. Since their class interests coincided, the depoliticisation of the revolutionary segments of the masses, the urban working class and their lumpen allies and the peasants ideologically unaffected by then nationalism of the civilian ruling class was total. To achieve this hegemony, the army had to work with the bureaucratic bourgeoisie the few top civil servants who held key positions in the administration. Their ideas about development promoted the material base of their class to the neglect of the peasantry and other oppressed classes. The army had nothing to offer except to bolster their own base through militarisation of the economy and complete negation of the masses. The army had no constituency other than that of the masses.

A clear capitalist path to development was lacking too for almost thirteen years hence the nation's money, was diverted in armament to the detriment of food production (Nzimiro Ibid).

Yet the army did foster the capitalist base of the middle class. In collusion with this bureaucratic bourgeoisie they continued the old policies and this time the civilian arm of the indigenous bourgeoisie had assumed more top positions in business. Their compradorial roles were more visible through such organisations as the Manufacturing Association of Nigeria, Nigeria- American Chamber of Commerce, British-Nigerian Chamber of Commerce, Institute of Management, the Professional bodies of Lawyers, Medical doctors, engineers, chartered accountants, architects, chemists, chartered surveyors and estate evaluators all of whom had similar class interests and who interacted among themselves through state board meetings, government seminars, company, overseas tours, annual gatherings to compare notes and formulate policies. These bodies signified the emergence and active recognition of the class hegemony of these civilians in alliance with the bureaucractic bourgeoisie and the military oligarchy.

The members of this class acted as contractors to the major government works, either in competition with foreign contractors or in collusion with them, here acting as compradors to the foreign firms on behalf

of the regime. The oil boom stimulated the rise of this class and helped the army to boost and sustain its hegemony, but created the worst contract mania in the body politic and corruption of dimensions that eventually eradicated the vestiages of national pride and ethics. The military laid the foundation for the bourgeois takeo r of all the projects and turned them into capitalist profit making ventures.

The military adopted a state intervention policy. Believing that state capitalism was synonymous with "socialism" it bought shares in major banks, oil companies. It created the National oil Corporation, built a gigantic refinery, invested in iron and steel industry projects and so forth. All these it did to the neglect of agriculture and food production.

The military, was blessed with abundant oil revenue. The profits of the oil companies were increasing and the net effect was reflected in Nigeria's oil earning as the table 2.1 below indicates.

Table 2.1 Recurrent Revenue of Federal Government and Proportion Derived from Petroleum 1972-75(millions of naira)

Year	Total Revenue	Petroleum Revenue	As Percentage of Total
1970	633.2	166.4	25.3
1971	1169.0	510.2	43.6
1972	1404.8	764.3	54.4
1973	1695.3	1016.0	59.9
1974	4537.0	3726.7	88.1
1975	5514.7	4271.5	77.5

Source: Central Bank of Nigeria Economic and Financial Review, December, 1975.

Building a proto-pentagon was the only way the army could hold the Nigerian population in political subjugation, appropriating the national wealth for development of the military bureaucracy and power, having depoliticised the masses, with no opposition against heavy expenditure on arms. The expenditure for armament exceeded that for health, education, housing, urban development and environmental sanitation, agriculture, rural development etc.

Nigeria's core development values since 1970 have been (i) a united strong, and self- reliant nation; (ii) a great and dynamic economy; (iii) a just and egalitarian society; (iv) a land of bright and full opportunities for all citizens; and (v) a free and democratic society. (Federal Government of Nigeria (1978). As in Nigeria, development achievements in many Third World countries have been minimal. To Ariyo(1982), the lack of success in planning underscores the fact that goals are only statements of intentions and do not by themselves constitute development. Goals are only a guide for actions which must be taken before they can be attained. Resources allocation pattern is the key factor that hinders or promotes the achievement of development goals. Where the resource allocation patterns is inequitable as they are in many Third World countries, it must be changed so that many

more people can command enabling resources in order to develop themselves. But are social structures in Third World nations flexible enough to permit the poor to perceive their relative deprivation and to demand for a redress in the form of increased access to decision-making powers and hence to more resources? Do we have the required freedom of association in these countries so that voluntary and interest groups can develop and serve as channels through which the poor can demand their rights? The answer is that social structural flexibility varies from country to country. In too many of them, however, the overconcentration of wealth in a few hands, the tendency towards a one-party state, military dictatorship, and flexibility.

The cardinal policy of the military on the creation of an egalitarian society can be tested by its attitude towards food production and agriculture. Agriculture was woefully neglected. The oil boom transformed only some sections of the urban communities. But it afflicted the rural masses and disorganised them. Youths migrated to the cities in search of jobs so as to share in the oil boom. The contract mania soaked the appetite of the deluded youths. Petty contracting, touting, and middlemanship are easy ways of making money in such an economy. Overseas trade, rushing to foreign countries to buy consumer goods for re-sale in the home market, became the most attractive pastime.

Customs officials were thus exposed to scandalous corruption. Smuggling was rife. Foreign exchange trafficking was the source of the thriving overseas trade, depleting the money reserves. The nation lost its bearings. Food scarcity mounted. The military woke up to realise that the nation was starving, as the urban population pressure increased. Scarcity of rural labour, growing cost of hired labour for the farmers remaining in the rural areas, shrinkage in land area cultivated due to mounting cost of farming which was carried on through technology and without government assistance, all led to the cry for a change in agricultural policy. But the armment policy never allowed leeway for investment in agriculture and food production. Nevertheless, the military was compelled to take some public steps.

2.5. Supportive Measures to improve small holder Production

As a reaction to food crisis, the government introduced some measures to boost agricultural production in the 1970s. These include the creation of institutions geared towards research programmes designed to encourage urbanites to engage in farming, establishment of an agricultural bank, and later the promulgation of land use decree.

The National Accelerated Food Production Programme was established in 1973, and was contracted to the International Institute for Tropical Agriculture(IITA)

which is itself fostered by the United State Agency for International Development (USAID). IITA hired on contract mostly expatriate scientists who directed their Nigerian counterparts at national and state levels on production plans for selected farmers. The programme.emphasized research in order to develop a good package of technology to ensure high yields in respect of a number of staple food crops. It was directed essentially at small-holder producers, although large scale farmers also benefited. It was committed to integrated research and extension programmes. Distribution of inputs was to be undertaken by the various states through agro-service centres. It was intended to reach at least half a million farmers on the average annually. However, the existence of NAFPP was not known to most Nigerian small-holders and less than 100,000 farmers had so far participated in the scheme. It was also bedevilled by shortage of competent technocrats and structural bottle necks in the distribution of inputs.

Operation Feed the Nation (OFN) was launched in 1976, and was modelled after a similar compaign in Ghana in 1972-Operation Feed Yourself. The programme was meant to stimulate the growth of food by individuals, institutions such as schools, colleges, universities and infact diffusing through education the idea that everyone must grow food. In turn the state was to

create the necessary incentives to make this possible, through package deals. A major objective of the OFN, according to an analyst, was to make the troublesome urban and middle classes aware that something was actually being done to improve the food situation" (Hans-Ottosano 1983). The second objective was to restore the dignity of farming through propaganda and attempts at encouraging urban dwellers to take up backyard farming. The government also embarked on fertilizer procurement and the building of storage facilities. The OFN offered little to small-holders, since it was directed mainly at urban dwellers who were being encouraged to take up part-time (sunday) farming in order to beat the rising costs of food. In the actual sense, it was directed against producers, who might have to contend with surplus food and falling prices, had OFN been continued.

Lofty as this programme sounded, it is evident that the Operation Feed the Nation was controlled and directed by the bureaucratic bourgeoisie for their own benefit. Some of the government functionaries that sold the project retired and became consultants to the very same government. Huge consultancy fees were paid to groups all of whose surveys and analysis were based on capitalist methods of organising agriculture in an industrial society and never worked for a peasant society. Some of them formed companies with overseas

firms manufacturing fertilizers and turned the entire exercise into a huge import industry. The nation was glutted with fertilizers in type and quantity of no relevance to the institutional arrangements for transmitting these to the peasant producers. Thus individuals and multinational firms made huge profits from the venture to the detriment of the very producers of goods. Prices of foodstuffs increased. Cassava pest ate up the tubers. The national food imports continued to soar. Inflation took a greater toll on the poor than on the rich. Youths' drift to the cities did not decline. The few existing cooperative movements were not structured along the line of peasant social and communal organizations(Nzimiro 1985:27).

The relative decline in agricultural production had gradually led to a situation of food crisis. The immediate reaction of the Government was the importation of food on a massive scale. The problem deteriorated when the Government gave in to a wave of wage demands by workers and raised workers' salaries by about 75 percent. The Udoji awards(as it was called) compounded the problem of inflation and were partially responsible for the burgeoning food prices. The structural inflation and socio-political uncertainty that followed were among the reasons that led to the overthrow of Gowon's regime in July 1975. The new Government continued with the food importations, a policy not based on any economic

rationality, but used as a political device to placate the restless urban workers.

As earlier discussed the oil boom political economy, led to a depression of local food production, and the consumer price indices for both rural and urban areas shot up, although higher in the latter (see Table 2.2). Granted that the majority of rural dwellers and small holders did not pose any immediate threat to the state, food had to be imported to mollify the politically volatile urban working class(Dunmoye 1986).

Table 2.2 Consumer Food Indices 1975-1983(1975=100)

Year	Rural	Urban
1975	100	100
1976	122.7	128.1
1977	145.5	155.2
1978	170.9	196.3
1979	185.3	210.2
1980	198.4	233.5
1981	250.2	303.0
1982	272.2	327.7
1983	335.6	401.0

Source: ILO Year Book of Labour and Statistics Geneva, 1984 P. 732.

Rice, which is the major food of the urbanites (together with wheat-bread) has become Nigeria's prestigious food. The last civilian administration was

toppled in December 1983, partly because of the high cost of food, and the allegations that millions of naira were misappropriated by the Presidential Task Force on Rice, which was responsible for the importation (See Table 2.3).

Table 2.3 Food Importation in Nigeria 1978-1983

Year	Volume(US $ million)
1978	1,773.85
1979	1,769.44
1980	2,296. 8
1981	3,384.16
1982	1,520.96
1983	1,433. 6

Source: Awoyemi O. Character of Nigeria's Agriculture Bulletin Vol. 6, Central Bank of Nigeria, 1984.

Note: Between this period (1978-1983) Food importation as share of all imports hovered between 10% and 12.5%.

2.6.0 The Nature Of Rural Nigeria

About 80 percent of Nigeria's population live in the rural areas. In other words, well over fifty million Nigerians live and work in rural surroundings, engaged in either farm or non-farm occupations with a rural base. It also means that, in spite of the rate and incidence of urbanization much of the face of Nigeria still remains rural.

One of the reasons for this gap is that there is an intellectual background to the rural-urban bias which has until quite recently characterized the policy and

practice of our economic development. To the extent that education is a process of socialization and acculturation, much of Nigeria's agro-rural problems owe their origin to the colonial education system. Designed, as Nyerere said, to meet the needs of the colonial state, the education was not co-ordinated with the indigenous economy which is largely agricultural Primary schools, Secondary Schools and Universities offered curricula overburdened with the history, geography, languages and literature of Metropolitan and "Mother Britain". The net result was a profound lack of knowledge about traditional agriculture. Its effect on our economic development is most unfortunate. A good many African student farmers, by reason of an education which disdainfully neglected indigenous agriculture and by virtue of their training in Europ-American Agricultural Economics, display anything but a knowledge of traditional agriculture. It is true that "In many cases research results arrived at in advanced countries are relevant to the problems of an underdeveloped country,..... Yet knowledge of tropical soils, of tropical agriculture and forestry is in its infancy". The students are at home with theories developed more for studying the advanced industrial societies than for understanding the socio-economic and political process at work in indigenous agro-rural economies(Igbozurike 1976).

This lack of understanding of traditional agriculture has been largely responsible for a corresponding lack of

enthusiasm and serious concern among politicians, planners, and policy-makers, about the need of rural improvement.

For a number of reasons, rural areas in Nigeria are at a disadvantage. Urban life becomes more and more attractive daily, particularly to the youths. Rural products command unfavourable terms of exchange.

Schumacher (1973) contributing to this debate stated that one of the unhealthy and distruptive tendencies in virtually all the developing countries is an ever more accentuated form, of the "dual economy" in which there are two different patterns of living as widely separated from each other as two different worlds. It is not a matter of some people being rich and others being poor, both being united by a common way of life: It is a matter of two ways of life existing side by side in such a manner that even the humblest member of the one disposes of a daily income which is a high multiple of the income accruing to even the hardest working member of the other.

In the dual economy of a typical developing country, we may find fifteen percent of the population in the modern sector, mainly confined to one or two big cities. The other eighty-five percent exists in the rural areas and small towns.

2.6.1 Poverty and Inequality

Table 2.4 summarises the income situation in urban and Rural Nigeria between 1963 and 1970, using different professional classes in both sectors.

Table 2.4: Average Income (in naira) by Socio-Professional Classes 1963-70

Professional class	urban		Rural		Rural as % of urban	
Professional	1963 (1)	1970 (2)	1963 (3)	1970 (4)	1963 (5) %	1970 (6) %
Professional Managerial and Technical	3686	3930	974	1034	26.4	26.3
Clerical and Minor Profess.	476	628	308	380	64.7	60.5
Skilled	328	476	196	277	59.8	57.6
Unskilled	160	190	102	112	63.8	58.9
Farmers	160	148	102	94	63.8	63.5

Source: Uche(1980 taken from Baba 1984).

There are two central observations that can be made from these figures:

(i) the farmers (constituting the bulk of the population) were at the very botton of the incomes ladder. They also suffered a slight decline in their average incomes between 1963 and 1970, while in all other professional classes it was case of increase.

(ii) For all professional classes there was a gross disparity between rural and urban incomes. Rural incomes ranged from about 26% to about 65% of urban incomes within this period.

The persistence of the gross rural-urban differentials in the income pattern must also be seen in terms of the failure of the various income distribution strategies which government has attempted to pursue. Thus such programmes as the Guaranteed Minimum Price Scheme by which the government had hoped to tilt incomes more from urban to rural areas have clearly failed to meet the desired goals. While the urban sector has had the advantage of wage increase through labour unionism in recent years, the existing market mechanisms in Nigeria still reserve a central role for middlemen who liaise between the urban and rural sectors and thus depriving the latter of the full benefits of income redistribution through price mechanisms.

We can therefore conclude that from the point of view of rural incomes, the development, strategies in Nigeria cannot be said to have made a very profound impact. Not only is the average rural income still very low and therefore in capable of sustaining most communities above the poverty line, but the disparity between rural and urban incomes is on the increase, suggesting the increasing marginalization of the former sector.

2.7. The World Bank and The Agricultural Development Projects

A more positive effort of the integrated rural development strategy is reflected in the World Bank-assisted agricultural projects. These projects are not quite as "integrated" as to be labelled that by the Bank. They are simply called "Agricultural Development Projects" or ADPS, for short. After appraisal reports in 1973, the projects got started in 1975/76. They had completed the first five years under direct World Bank management. The original "pilot" projects are now integrated into state-wide schemes, as well as replicated in other parts of the federation. The Banks' Agricultural sector Review of 1979 envisages a massive programme of extension during the 1980s. By the end of the decade "virtually all" farmers in the country would have been reached. The original three schemes, the success" of which provide the main rational for this massive extension, are located in Funtua (Kaduna State), Gombe(Bauchi State) and Gusau(Sokoto State). They are joint Federal-State Schemes with World Bank management. They are fairly autonomous vis-a-vis state governments and their ministries of agriculture. The main project activity is the distribution of fertilizers. A series of Farm Service Centres have been established for this purpose. The "package" includes the construction of feeder roads, the building of small earth dams for water supply, seed

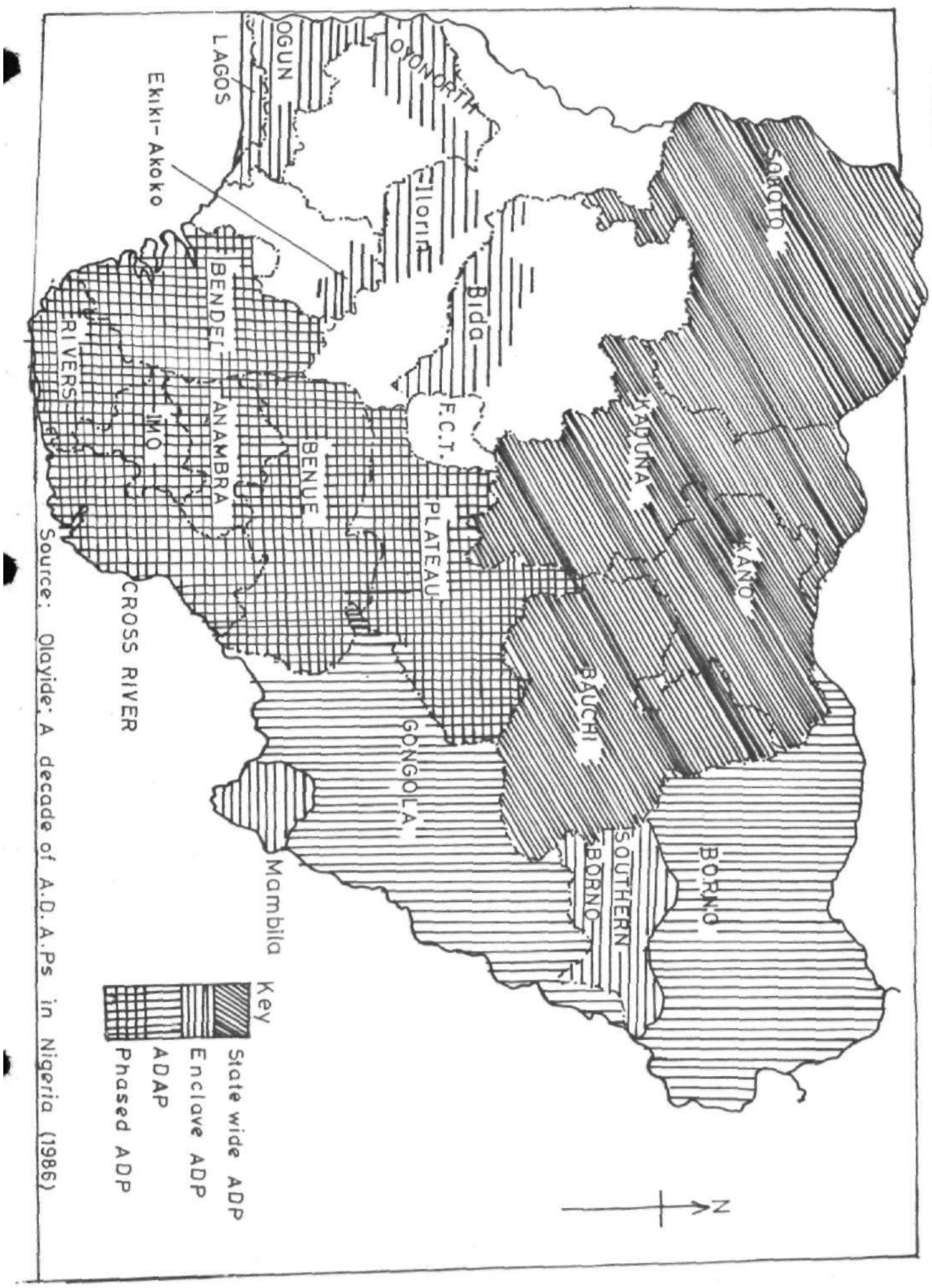


FIG. 2·1 MAP OF NIGERIA SHOWING ADPs AND ADAPs

Source: Olayide; A decade of A.D.A.Ps in Nigeria (1986)

The principal feature of the ADPS so far has been the distribution of heavily subsidised fertilisers through a network of Farm Service Centres(FSC) established under the Schemes. Farmers have been organised in committees to recommend candidates for credit and to enforce repayment. The projects have built feeder roads to the FSCs and their hinterland, improved water supplies for some villages and provided other inputs such as improved seeds, oxploughs, work bulls, herbicides and other chemicals. Farming planning units have been established to cater for large-scale farmers who have also been provided with tractors on credit and loans to cover operational costs.

Looking at the first decade of the pilot projects there is no doubt that they have achieved significant increase in production and the adoption of new commercial crops (maize). There has been a general rise in economic activity in the project areas and an increase in average farm income. The proclaimed success has provided the basis for the present massive expansion plans.

A number of valid points have been made emphasising the limitations of these achievements including the dubious methods used in official evaluation(Wallace 1979). It is hardly surprising that some results are obtained when resources are poured into a farily limited area, especially as the areas selected had already been

highly commercialised. There were ready structures to absorb the fresh inputs. Points can be made about the limited replicability of the pilot performance, the inefficient use of highly subsidised resources, the regional distortions in resource allocation etc. Doubts have also been reaised about the real beneficiaries of the schemes in view of the preferential treatment given to so called "progressive" farmers as well as the rise of some very conspicuous new large-scale farmers, often with a non-farming background(Williams 1981). Nationalist critics have drawn attention to extra-ordinary salaries collected by the World Bank Staff and the heavy foreign exchange costs in general.

The ADPs are the flagships of the Bank's new deal, its passionately declared policy of redirecting its lending to assist the poorest sections of third world populations, the small farmers. The project package design used in Nigeria has been promoted in a number of countries since the late 60's with growing emphasis on poverty target groups. It has been given powerful ideological backing. This World Bank's rate of reorientation which has taken place in practice has been seriously questioned on a number of grounds. First of all it has been maintained that very little of over all Bank resources have in fact been committed to such poverty oriented projects (Stryker 1979). More fundamentally, it has been pointed out that project design has differed little from earlier "green revolution"

packages which can be shown not to have benefitted the mass of poor peasants(Williams 1981). It is still a question of strategies concerned with expanding the commercial surplus extracted from the peasants, and largely irrelevant to the need to improve the material condition of the peasant masses.

The Bank also promotes the transformation of production on capitalist lines, leading to a polarisation within the peasant communities, with the emergence at one end of large-scale capitalist units and, at the other end, the proletarianisation of the small peasants to provide the necessary labour for the former. Peasant social relations of production constitute an obstacle to modern production methods and will therefore have to be liquidated. The poverty rehetoric is seen from this perspective as essentially an ideological cover-up for this strategy.

The backward social organisation of the peasantry is an obstacle in the way of the marketing strategies of transnational agribusiness. A fragmented poor peasantry provides poor customers for the sophisticated implements and inputs produced and marketed by the latter. Capitalist and commercial transformation, concentration of holdings and polarisation will enhance the absorbative capacity of the farming communities in this respect. The World Bank as the well-established friend of transnational corporations can thus be expected to promote the technological packages and project designs

which will support the interests of these firms (Beckman 1982).

In the past it could be seen that small peasant producers(e.g. cocoa farmers) served as a useful sources of cheap commodities with little promotion by the state or other "development agencies". The decline of peasant production in many established "cash crop" lines has necessitated increasing state (and World Bank) intervention both in the form of rehabilitation schemes with tighter controls over the production process and the establishment of a new type of more "scientific producers.

A similar argument relates to the need to control production costs and wages in particular in local industry by holding down the cost of food. World Bank intervention in peasant agriculture is thus seen as less concerned with the welfare of the peasantry as such but with the need to raise commercial surplus and reduce production costs through modernised methods. This is where the Bank is seen as presiding over the liquidation or commercial transformation of the peasantry.

Occassionally it is also argued that the transformation of peasant production is also necessary for the expansion of capitalism in general in that it "liberates" labour from the relative security of the peasant economy, making peasants available as "free" labour. Although not necessarily absorbed into

productive employment they will join the labour reserve army, playing a vital role in the disciplining of labour and the control of wages.

Another criticism is that the programme would not increase productivity dramatically. And that it has not concerned itself sufficiently, with other socially desirable objectives like equity question.

Another interesting aspect of the Bank's attitude is that it has abandoned its"small holder" and "war on rural poverty" rhetoric by emphasising the so-called "progressive" farmers, who are more receptive to new ideas and technology and who will spearhead the necessary change in the agricultural sector, This is theory of "trickle down" effect. The critiques of this aspect of the Bank's policy argue that it creates inequality in rural areas, and exacerbates rural poverty. The two academic analysts went further to describe the programme as World Bank directed, and not World Bank assisted(Mabogunje and Gana 1981).

Finally according to Beckman(1982), it is obvious that foreign capital takes a leading part in this capitalists) development, not only in the extraction of petroleum, but in all sectors- in commerce, banking, construction, and manufacturing. In agriculture, international capital is prominent through the World Bank.

The popular understanding in Nigeria is that the Bank directs the affairs and the implementation of the projects. And the behaviour of government functionaries

who are associated with these projects reinforces this belief. Furthermore, the Bank may not be willing to resist the pressure for loans that is mounted by Nigeria's governing class whose aim is to use the projects to redirect capital accumulation and enhance their political support.

CHAPTER THREE

3.0 BACKGROUND TO THE STUDY AREA

3.1 Location

Located in the southern part of Niger state, the Bida Agricultural Development project area lies between letitudes 9°30N and 8°30 N and longitudes 4°30E and 6°40'E. The project area which covers about 18,000km^2 comprises the four local Government Areas of Gbako, Lavun, Agaie and Lapai. This constitutes about 3% of the state's total land area of 585,000km^2. The project area is bordered to the north by the rest of Niger State, to the south and west by River Niger immediately across which lies the Kwara State to the North west is the Sokoto State and to the east by the Federal Capital Territory of Abuja. Fig. 3.1 shows the location of the area in the state and its administrative boundaries.

Bida Agricultural Development project originated from a proposed rice development project for the Bida area when it was part of the former North-Western State) and was first identified by FAO/IBRD co-operative programme in November, 1974. The cooperation programme was requested to assist in preparing a project covering the main rice growing areas of Bida and Agaie/Lapai Divisions. The terms of reference for the study were finalised in 1975: But the creation of Niger State from then North-Western State(February 1976) prevented full project preparation. Subsequently, the Federal Ministry of Agriculture and Rural Development (FMARD) requested the World Bank to identify additional agricultural

developments similar to those of Funtua, Gusau and Gombe.

In October 1976, a Bank identification mission reviewed the previously identified rice project in the Bida area and recommended that it should be expanded to include other major crops and infrastructural development. A cooperative programme preparation mission visited Nigeria in January/February 1977 and submitted its report in July 1977. Meanwhile, a team of local consultants (ENPLAN) commissioned by the Federal Department of Agriculture(FDA) completed irrigation engineering studies, a resource inventory and a socio-economic survey of the project area.

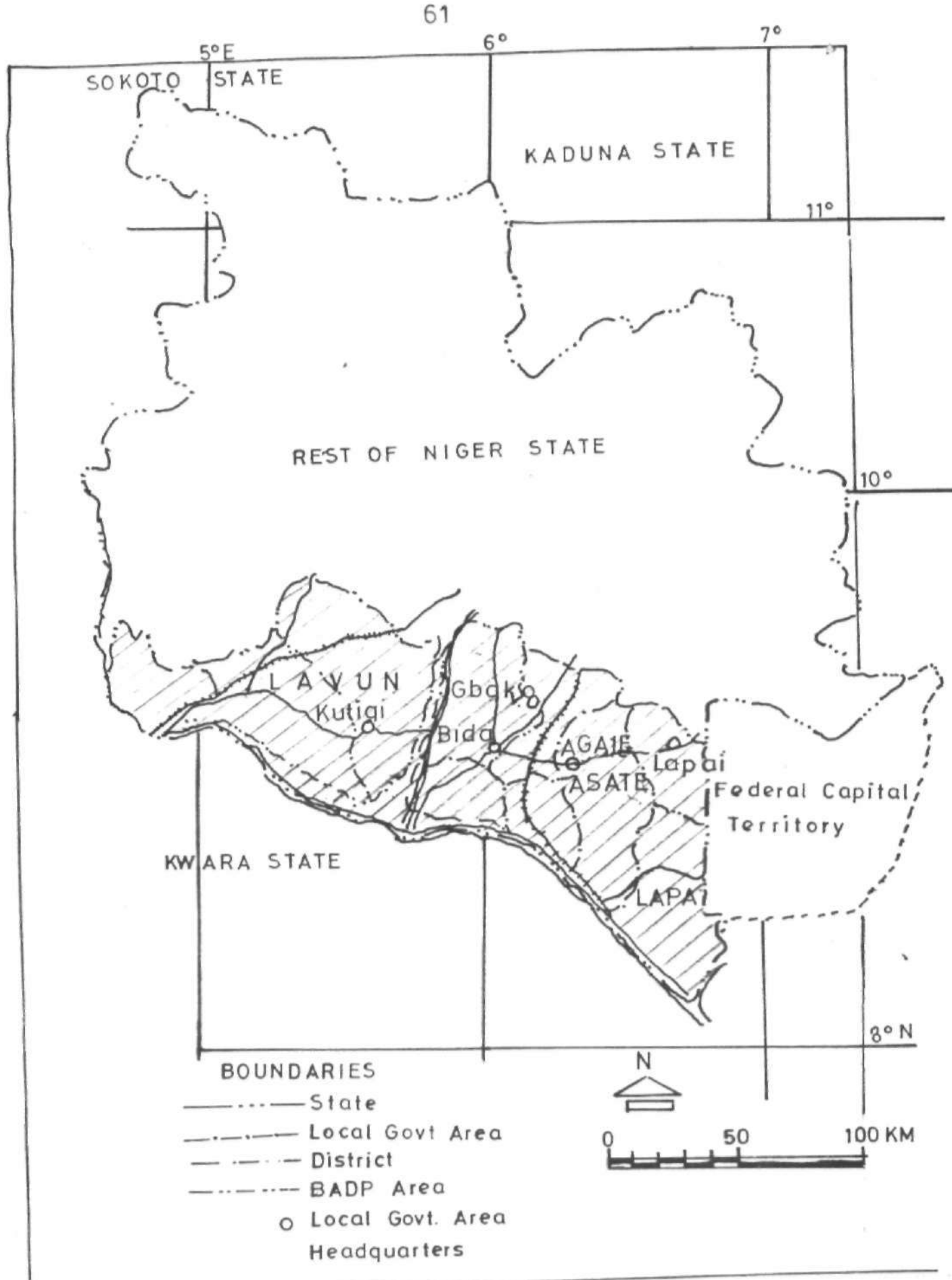
3.2.0. PHYSIOGRAPHIC SETTING OF THE AREA.

This covers geology, topography, drainage, climate, soils and vegetation,

3,2,1 GEOLOGY

Over 90% of the project area is underlain by Nupe Sandstones. These sandstones comprise weakly cemented fine to coarse grained clay, siltstones and sandstones with locally embedded with thin beds of carboneous shales. The sediments are generally laid horizontally especially to the West of Kaduna River.

The remaining area is underlain either by basement complex or river alluvium, while the basement complex is found along river valleys in varying thickness. Usually they are made of unconsolidated gravels, coarse and fine sand, silt and clay.



Source Maxlock group Ltd, (1980)

FIG. 3-1 ADMINISTRATIVE BOUNDARIES AND LOCATION OF BADP AGRICULTURAL DEVELOPMENT PROJECT WITHIN NIGER STATE

3.2.2 TOPOGRAPHY:

The landscape features of the area are largely determined by the underlying geology especially its lithology and structure. On the areas of the Nupe sandstones, it is the local texture that largely shapes the landscape morphology. Areas underlain by coarse sandstones are relatively flat to gently undulating while areas of fine sandstones are hilly and dissected. Most hills are flat topped and capped with hardened iron pan or sedimentary colitic ironstones. Generally they are found around Kutigi and Gulu areas, with hills ranging from 40-45m above sea level (See fig. 3.1 a).

3.2.3 DRAINAGE SYSTEM

Two major factors are responsible for the drainage system of this area. These factors are the climatic regime of the catchment areas and geology.

Rivers Kaduna and Gbako drain into River Niger. Since overlay soil of Nupe sandstone, tend to be highly permeable, hardly can prennial water which flow in streams be found, The drainage pattern on the Nupe sandstones tends to be dendritic and widely spaced. Areas underlain by Nupe sandstones have been confirmed to possess enormous underground water potentials which can be exploited. Most of the rivers are fed from catchment areas external to the area streams and the rivers of the basement complex areas tend to be perennial in nature.

3.2.4 VEGETATION AND FORESTRY RESOURCES:-

The project area lies mainly within the Southern guinea savanna Zone with much of the primary woodland over the plains modified by "slash-and-bush agricultural practices. A large part of the zone consists presently of open savanna woodland with tall coarse tussocky grasses. However along the river valleys where vegetations are typically of evergreen gallery of forest of the guinea savannah zone could be found decidous trees and palm groves.

Within the project area, the total land area of forest reserves amount to 1132km^2 which is about 12% of total land area while forest plantations cover about 1168.4 hectares. Nevertheless only about 1130km^2 of these reserves together with 1200hectares of forest plantation can be used to provide fuelwood, building poles or pulpwood.

3.2.5 CLIMATE

The region expereicnces a transitional climate between the arid desert climate in the north and tropical climate in the south with basically two distinct seasons namely dry and rainy seasons. The climate is influenced and controlled by north easterly and south easterly winds. The latter with high humidity and low temperature yields rains while the former which controls the greater part of the country between November and May does not produce rain. Generally

the length of rainy season and amount of rainfall decreases from south to north.

The mean annual rainfall ranges from about 1000mm on the west to about 1450mm in the east with a wet season of 180-250mm days

Generally the region experiences a uniform temperature throughout the year which does not fall below 20°c. Both daily maximum and minima temperatures rise to their annual peak of 38°c between February and March and 35°c between November and December.

The average annual evaporation is observed to be between 1200-1600mm but rainfall pattern provides adequate water for annual crops.

3.2.6. SOILS:

The soils can be broadly grouped into two-the upland and lowland soils. While the upland soils are generally sandy, the lowland soils are loamy.

The upland soils are mainly ferral soils, reddish yellow in colour, and generally sandy with a clayey soil. Apart from being highly leached they are slightly acidic(PH 6.5) with low to very low exchangeable cations. Furthermore they are characterised by low cation exchange capacity and organic matter due to their high sand content, they are easily degraded and can hardly sustain high crop yields for a long period without application of

artificial fertilizers. This possibly underlies the high demand for fertilizers in the area.

The soil fertility recuperates very slowly under fallow. However the deep friable and porous nature of the soils makes them potentially suitable for mechanization. The soils are also suitable for a range of traditional food and export crops.

The lowland soils are found on the flood plains of the major rivers especially the Niger, Kaduna and Gbako, and dense system of smaller streams all of which dissect the upland. These soils are weakly developed alluvium, usually hydromorphic with textures, ranging from sandy soils to clay loams. About 20% of the region comes under these soils with 11% having agricultural value (low Niger river terraces).

Generally these soils are either good for rice cultivation, where they are light or sugarcane cultivation where they are heavier.

The soils underlying the basement complex however are coarse sands and sandy clays. They are generally infertile and have little agricultural value.

3.3.0. SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF THE PROJECT AREA.

The baseline survey conducted by the project in 1979 placed the population of the project area at about 410,000 as opposed to official figures of 750,000 for the same year project from 1963 census on the

basis of 2.5% annual growth rate. This official growth rate assumes no migration and therefore could be unreliable since the area experiences rapid migration.

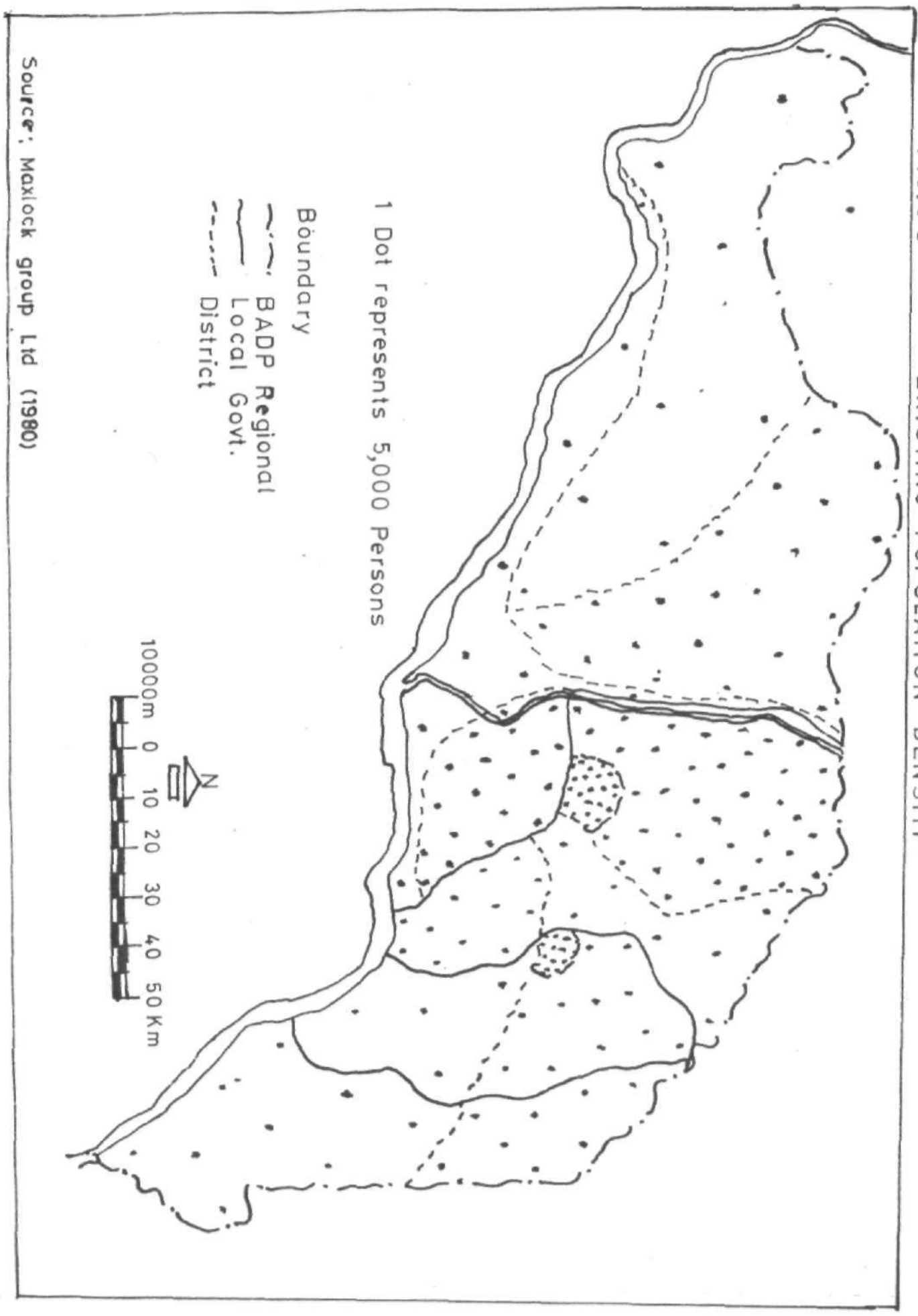
Above 80% of the population reside in the rural areas of the region. Out of the total number of 80,000 families in the region, 63000 constitutes the farming families with a mean family size of 6.5 persons. From Table 3.1 and Fig. 3.3, Gbako Local Government Area has the highest population density (33 persons per km^2) while Lapai Local Government has the lowest (14 persons per km). Fig. 3 4[a] and 3.5a which shows both the farming population densities and distribution pattern of settlements in the region also confirms this situation. Most of the highly populated towns include Kutigi, Bida, Agaie and Lapai (See Fig. 3.8).

Table 3.1 Population Figures of the B.A.D.P(1979)

LGA	Land Area (km^2)	1979 Project's Survey figure	Pop. density Persons/Km^2
Gbako	4500	148740	33
Lavun	9000	151400	17
Agaie	2000	61300	29
Lapai	3200	43800	14
Total	18200	405240	22

Sources: Max Lock Group Nig. Ltd.(1980) and B.A.D.P. (1980).

FIG. 3·3 EXISTING POPULATION DENSITY



Source: Maxlock group Ltd (1980)

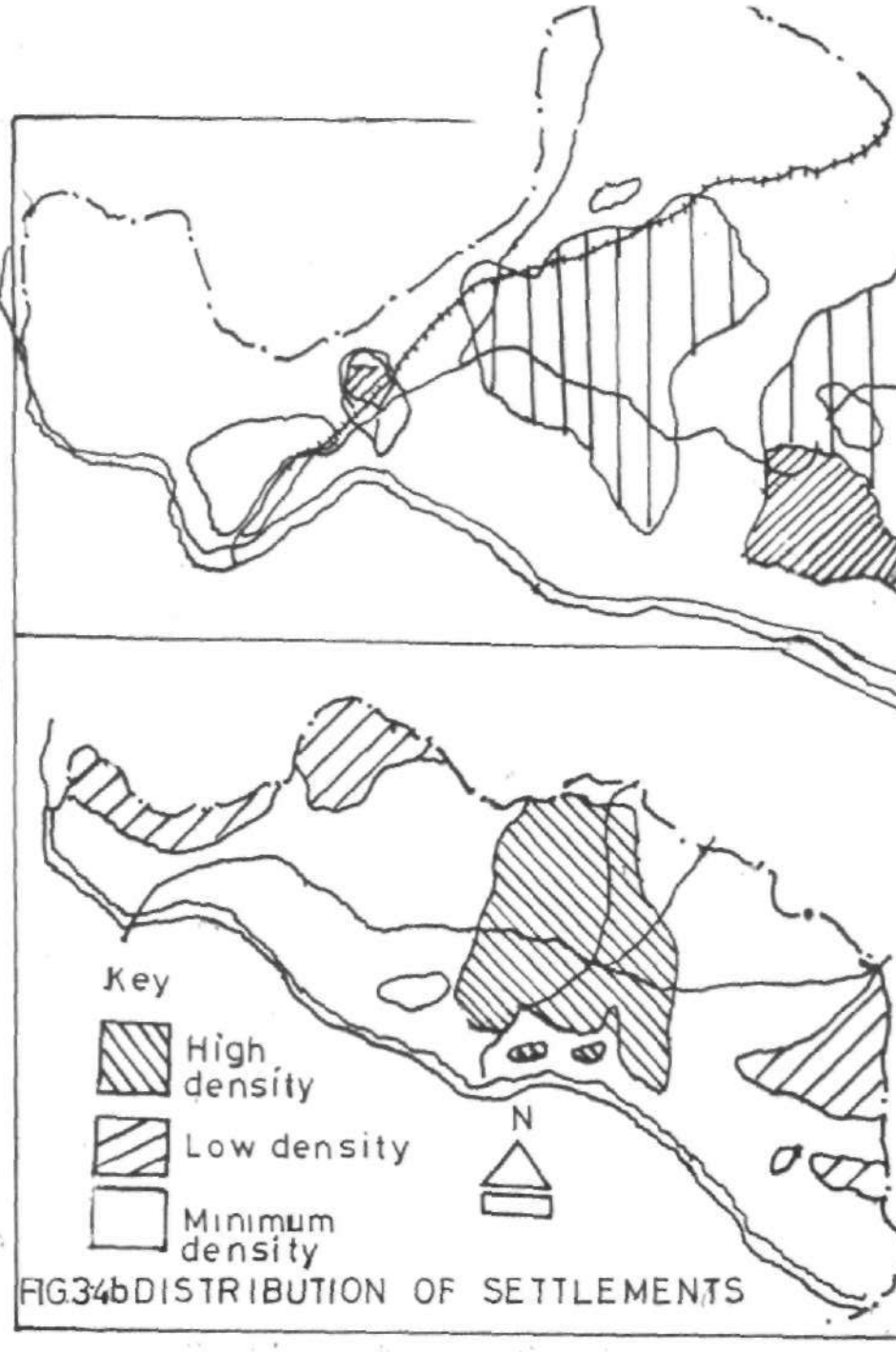


FIG 3.4b DISTRIBUTION OF SETTLEMENTS

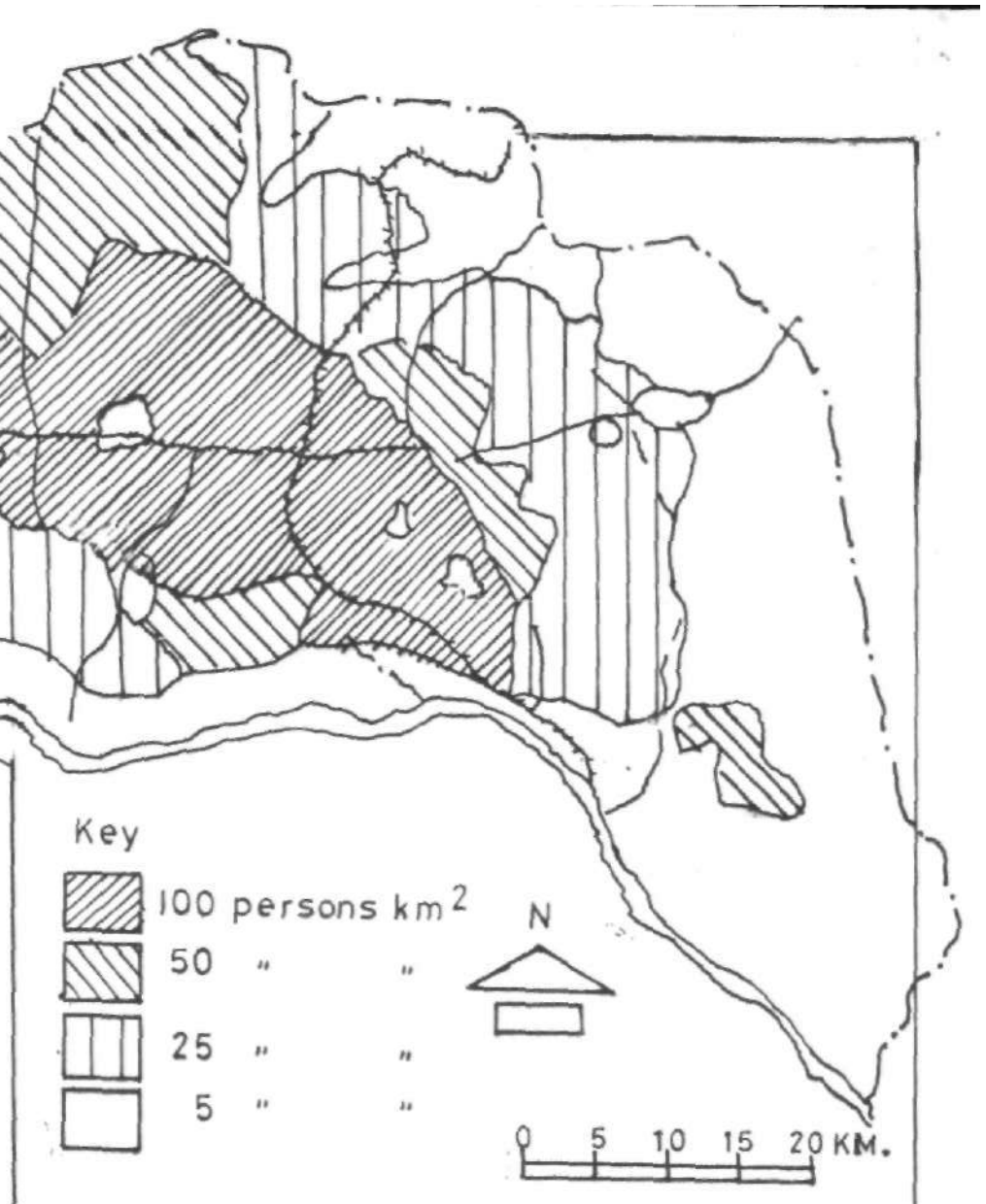


FIG. 3.4a FARMING POPULATION DENSITY

Source: World Bank Report (1977)

FIG. 3·5a EXISTING SETTLEMENT PATTERN AND TRANSPORTATION NETWORK BADP REGION

Source: Maxlock group Ltd (1980)

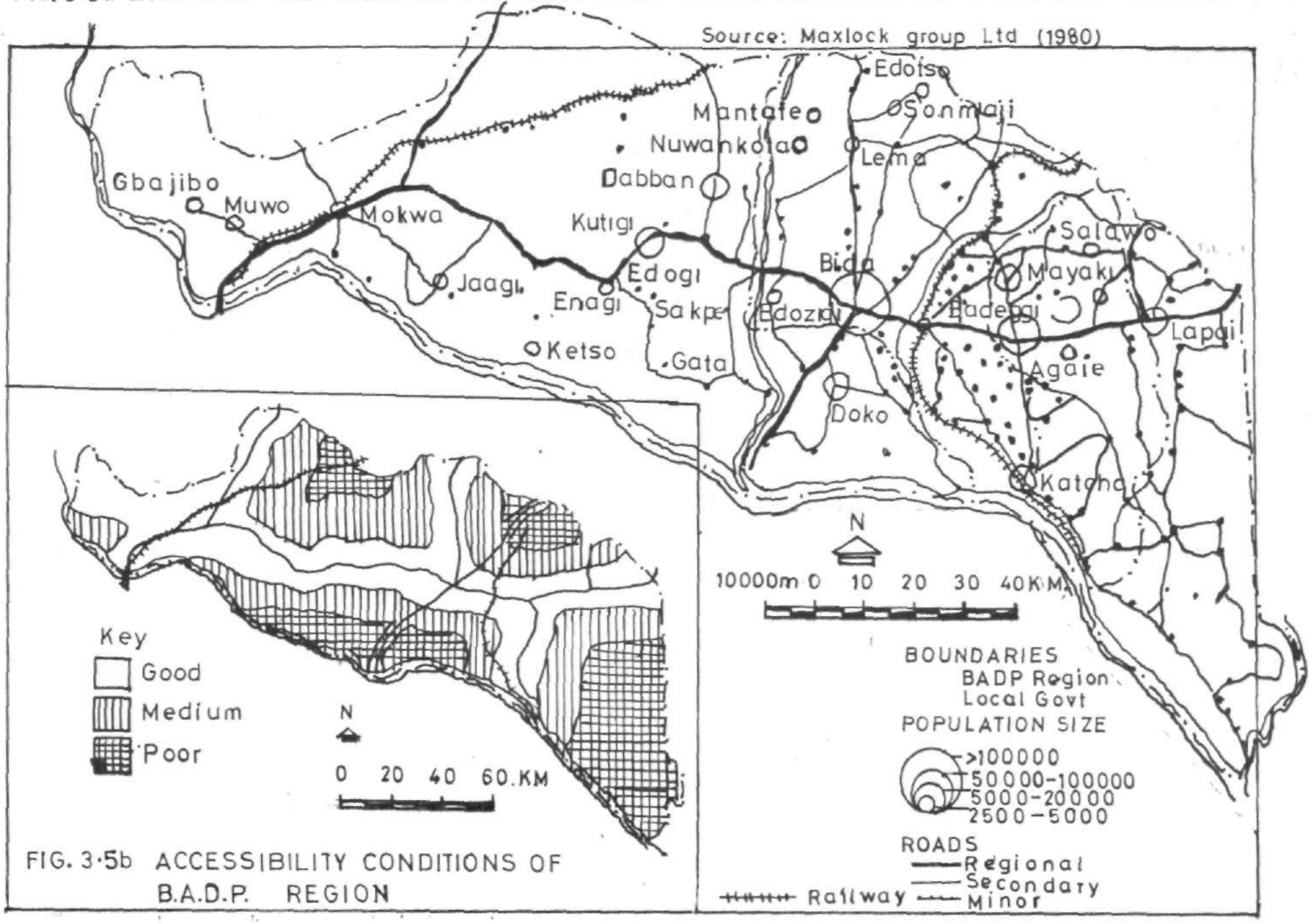


FIG. 3·5b ACCESSIBILITY CONDITIONS OF B.A.D.P. REGION

3.3.1 Age-Sex Structure:

Since age indicates both individual's and societal productive capacity, population becomes a main labour reservoir that could be tapped for development. Fig. 3.6a shows that about 45% of the group falls within the economically active age group (15-49 years age group. The pyramid assumes its shape as a result of rapid outmigration of young able-bodied men (15-39 years age group) from the region leaving behind women, old and younger ones. But when they are settled in their destinations, these youngmen come back for their wives and children hence the sharp reduction in female population (7% to 3%) within 30-39 years age group.

3.3.2 Ethnicity:

Fig. 3.6b shows that the region is dominated by Nupe (81%) followed by Hausa(5%) and Yoruba(4%). Other ethnic groups are Ganagana, Gwari, Fulani, Kakanda and Kambari which constitute about(10%). This cultural homogeneous nature of the region can be utilised to speed up development since people can easily be mobilized, other things being equal.

3.3.3 Literacy Level:

This is not only a measure of individual's socio-economic status but also the societal stock manpower especially the skilled manpower. Fig. 3.7a shows high illiteracy rate with only 8% having formal education. This militates against acceptance of unfamiliar innovations.

FIG 3.5a AGE-SEX PYRAMID 1984

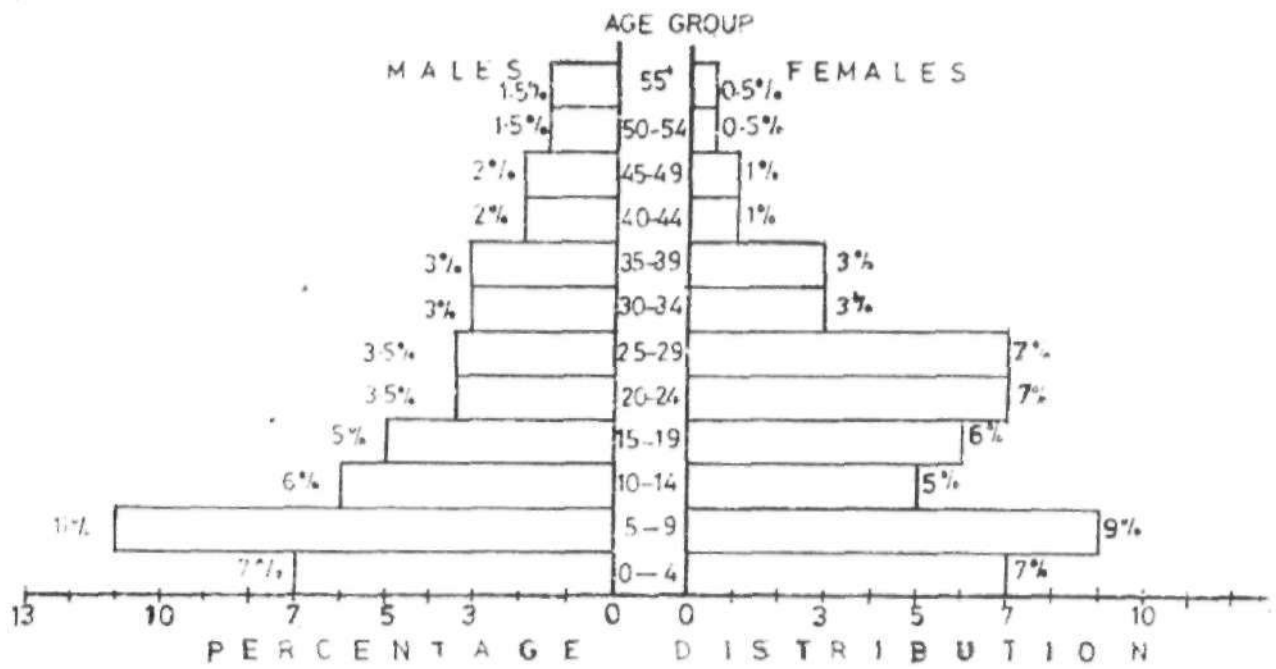
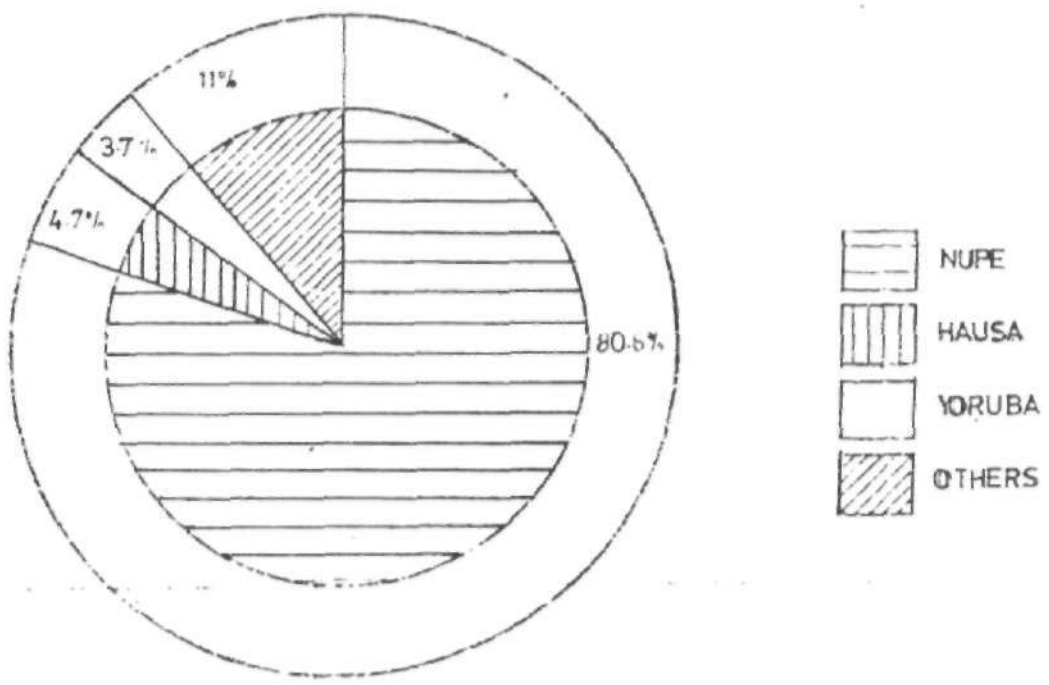


FIG 3.5b ETHNIC COMPOSITION 1984



3.3.4 Religious Composition:

The dominant religious groups are Islam(57%) and christianity (29%). This is then followed by the traditional religion (See fig. 3.7b).

3.3.5 Economic Background

Agricultural is the mainstay of the local economy and it absorbs about 76% of the population. Fishing followed with 12% of the population engaging in it, while the rest engages in business, craft, and artisan work as secondary occupation(See Fig. 3.8a).

Since a majority of the population engages in agriculture, the average annual income tends to be low. This is because of the small scale nature of landholding, natural forces which control production for example drought, low and unstable food prices. Other sources of income for the inhabitants are fishing trading, foresty and the formal sector, though at lesser extent.

3.3.6 Crop Production System:

The major crops grown in the area are guinea-corn Sorghum, rice, millet, Yams, groundnuts, and cassava. Others are bambara nuts, vegetables, melon and cotton.

Table 3.2 shows the relative importance of major crops with reference to the number of farmers, cropped areas, and crop mixtures. The table reveals that 83% of the farmers in the area cultivate guinea corn and largest area is devoted to it. This is followed

melon, yam and others in descending order. Even with the establishment of the project, the largest area is still devoted to the cultivation of guinea corn and the largest number of farmers still grow it.

Generally the cultivation is characterised by mixed cropping and bush-following; It has been observed by max lock croup that about 99% of the farmers are subsistence farmers and groups are disposed of at different proportions in the local markets. The extent of marketing varies substantially between crops with melon (74%), rice (57%) and groundnuts (76%) marketed more than as a proportion of the total production, yam (28%), guinea corn (31%) and maize (34%).

There are commercial farmers within the region who produce crops entirely for the market.

Table 3.2 Relative importance of main crops in terms of number farmers, total area cropped and crop mixtures.

Crops	Area ('000)	% of Farmers	Area/ Farmer (ha)	% grown Solely	% crop Mixture
Guinea Corn	54	83	1.0	32	56
Melon	27	63	0.7	0	56
Yam	12	57	0.3	84	13
Rice	25.5	55	0.4	100	0
Groundnuts	13	40	0.5	49	36
Maize	4.6	24	0.3	9	-
Cassava	11.7	13	-	-	-
Millet	12.7	44	0.5	21	39

Source: BADP, 1982.

3 3.7 LAND TENURE SYSTEM

The most important regulatory law enacted to influence agrarian relations in Nigeria is the Land use Decree of 1978. The government believed that one of the greatest problems which prevented a more rational utilization of land for agriculture in the rural area is the traditional concept of land ownership (FDRD Review paper (undated) pp 32-34). In Nigeria ethnic heterogeneity suggests that land tenure arrangements do not always lend themselves to a clearly defined single pattern.

In the Northern States the land tenure system has been influenced firstly by the religion of Islam and secondly by colonialism. In the early nineteeth century, when the Habe rulers were overthrown by the fulani, the Sultan of Sokoto became the head of the Fulani empire. There were emirates under his control, and each emir distributed lands to the elites and military notables under his emirate. In all moslem areas the sultan's authority over land was recognized. That authority could be considered as a trusteeship with a hierarchical structure, with the sultan at the head and the chief of a village at the bottom. Men of influence held land as fiefs. These fief holders worked the land with slaves or labourers and gave specified proportions of the harvests to the emir. When the fiefholders died, their lands reverted to the emirs' who distributed these among the families of the deceased The emirs themselves had control over vast amounts of unoccupied land which were cultivated with slave labour.

In the project area, the west of the Kaduna River (i.e Lavun Local Government Area or LavunKpa"(Lavun being the Nupe name for the Kaduna River) the communal land tenure system operates, under which traditional leaders are the custodians of all land in their areas of jurisdiction and are empowered to grant usufruct to individuals/families.

All lands can be repossessed by the chief on the deaths or departure of usufructuaries but generally they are inheritable through the family. At the discretion of the head of the family, land could also be divided among its members, leased out to other families or even to strangers; however, sale of farm land is not allowed and is forbidden by law in some areas. Therefore communal ownership is restricted only to vacant, virgin or undisputed land and once an individual/family has been granted a piece of land, it becomes their possession, with full security of tenure. Nearly 90% of the farmland in this area are estimated to be under these tenurial arrangements, and 10% on lease, loan or gift.

This area is generally characterised by large farm sizes, low farm fragmentation and low population density. However because of poor infrastructure and low population density, it has been relatively disadvantaged in the supply and availability of farm imputs in the past though the situation is presently improving with the establisshment of the Bida Agricultural Development Project. Since the area relatively lacks fadama land, farmers concentrate on upland crops.

To the east of the Kaduna River, particularly in the vast fadamas, fief-holder system is in existence. This area comprises Gbako, Agaie and Lapai Local Government Areas. After the fulani conquest of the Nupe territory, members of the royal family appropriated all unused lands and some village lands, which are subsequently bestowed upon followers of the royal family, members of the nobility and other individuals. These fief-holders have de-factor title to the lands which they usually sublet to other farmers, the farmer retaining the income but paying an annual tribute to the owners. These transactions are regarded as life tenancy or sale and the new tenants have alienation rights and full tenurial security as long as the payments are maintained. It is estimated that about 50% of the areas East of Kaduna River are under the fief-holder system and the rest under traditional communal system.

As a result of a large availability of fadama land around Bida area the farmers have the apportunities of cultivating both upland (Lati") nand lowland (Bata) in a ratio of approximately 3 to 1, respectively.

Generally crude farming method has been employed in the region-hoes, matchets, axes, sickles, etc. Nevertheless most farmers accept innovation to which they are already familiar. As a result, tractors are being increasing used in farm cultivation and there is even in satiable demand for it which will be difficult to meet immediately.

3.4 STRUCTURE OF PROJECT FUNDING:

The total cost of the project at appraisal was to be ₦41.8million over the five year period. The greatest burden of cost was to be borne by Niger State Government (₦16.4 million or 39%) a World Bank loan of 23 million US dollars (₦14.9 million or 36% in eqvivalent to foreign exchange costs), lent at a rate of interest of 7% per annum, and a Federal Government contribution of ₦10.5 million or 25%. By the terms of the loan agreement establishing the project, the state and Federal Goverhments are committe d to a programme of quarterly funding in advance, consequent upon approval of the project's annual budget as prepared by the Bida Project Management Unit (BPMU) and approved by the Bida Project Executive Committee (BPEC).

3.5.0 OFFICIAL OBJECTIVES AND TARGETS OF THE PROJECT

The main objective of the Bida ADP as spelt out by both the Appraisal REport and the Loan Agreement, is to increase agricultural production by about 25% and to raise farm incomes thereby improving the welfare and standard of living of the farming papulation.

3.5.1 PROGRAMMES:

The above objective is to be achieved through the following programme of activities.

(i) Improved delivery services of fertilizers and other farm inputs.

(ii) Intensive extension services to farmers.

(iii) Development or rehabilitation of a target 7,300 hectares of irrigation schemes.

(iv) Construction of 769 km. of low cost feeder roads and maintenance of an estimated 1,000km of feeder roads.

(v) Construction of three area development centres, 56 farm service centres, staff housing, expansion of the workshop and training facilities and construction of a project Headquarters.

(vi) Provision of Tractor Hire Services, Crop protecion services and credit facilities.

(vii) Massive training efforts for both project staff and farmers, backed up by on farm adaptive research and trials on improved farming methods, crop varieties and equipment.

In detail, the project was to provide a network of rural roads that would be usable throughout the year, in wet and dry seasons. The roads, it was hoped, would facilitate the evacuation of farm produce, timely supply of agricultural inputs and also allow the staff of the project to move freely within the area. The management believed that this type of rural infrstrucutre would also help the government to expand its other programmes like education and health care delivery into the project area.

On building development, the project was to construct houses, offices and stores that would be needed for project services. They were to be made up of three area development centres, 56 farm service centres, staff housing, expansion of the Workshop and training facilities and construction of a project Headquarters.

Seasonal agricultural inputs were to be made available to farmers for cash and credit. Such inputs and equipment were estimated to amount to 48,445 tons of fertilizer, 3,038 tons of improved seeds, 86 tons of insecticides, 52 tons of herbicides, tractors and associated implements during the five year implementation period (June 1980 to June, 1985). However the project, because of some later developments mainly connected with inadequate financing was extended for another period of 18 months. In order to facilitate the smooth provision of inputs, the project was to expand and intensify support services to farmers.

It was to increase the farmer-extension personnel ratio from 1;2440 to 1;500. This would involve an increase in the number of extension agents. The extension personnel were to include those specialists in seed multiplication, commercial farm management, farmer training and farm equipment. A credit service was also to be established to operate a project controlled credit revolving fund and contingent services to farmers.

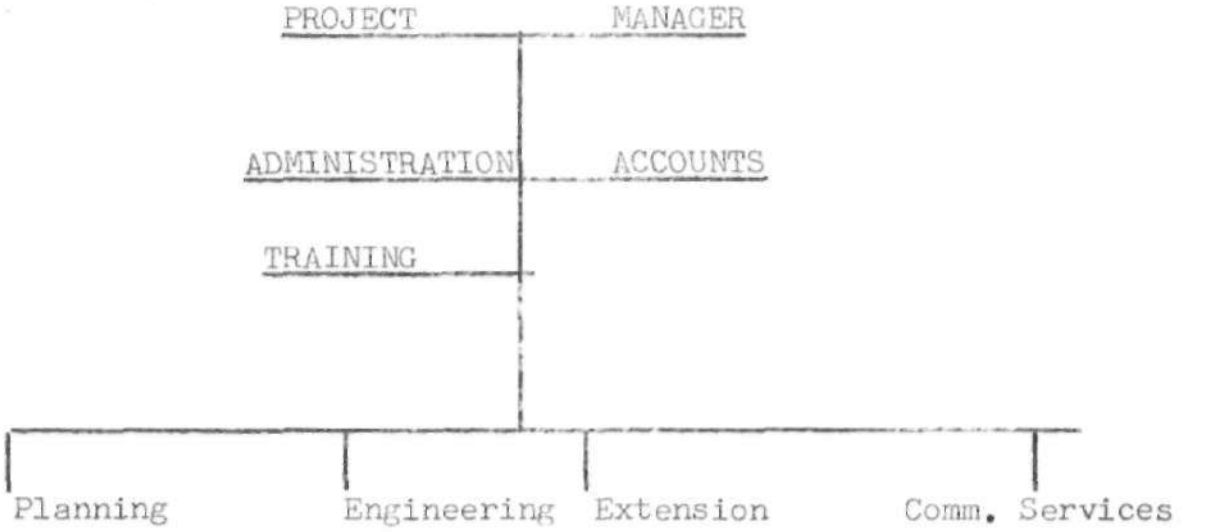
As earlier stated, an Agricultural project Monitoring Unit was established to carry out technical review, oversee financial records and statements in respect of the project, develop a system of evaluation and analysis, and provide the sponsors of the project with relevant economic and social data on the success or failure of the project.

3.6 PROJECT ORGANIZATION AND MANAGEMENT.

Bida Agricultural Development Project is being implemented under the Niger State Ministry of Natural Resources (MNR) through a semi-autonomous management unit, the Bida Project Management Unit (BPMU) which is responsible to the Bida Project Executive Committee. BPMU is advised by the Bida Project Technical co-ordination Committee (BPTCC).

The internal structure of the project consists of five departments directly under the control of the project manager who is also a member of the Bida Project Executive Committee (BPEC). These were to be training, Planning Commercial Services, Agricultural Services and Engineering Services.

Figure 3.9 ORGANIZATIONAL CHART OF BADP



Source: BADP News letter "Enuworo" Vol.8 No2 Dec, 1986 P. 11.

With a series of changes in structural organization generally, project as set up was very close to this design with relatively small re-allocations of technical and management responsibilities consequent upon the background and experience of locally and internationally recruited staff actually appointed to head the various departments and sections. Up to 1981 the project had the Project Manager's office and the following departments: Accounts and Audit, Administration, Planning, Commercial Services, Training, Extension, and Agricultural Supporting Services. The structural organisation was as shown above.

By the end of 1981, however, there was the need to streamline the project activities in line with its growth due to greater awareness of its activities in the area which called for a much more effective co-ordination at a higher level of management. Thus with effect from January, 1982, the organisation structure was changed to comprise a project Manager, Finance Division, Administration and Staff Development Division, Rural Development Division and Civil and

Commercial Development Division. Each of these divisions was an amalgamation of at least two related departments. The functions of the departments within each division remained essentially the same as before, except that lines of communication, responsibility and technical co-ordination of activities were arranged more functionally.

In view of the fact that the core programmes of the project had been geared towards rural development, development administration was evolved to ensure that the full impact of project activities were felt at grass-roots level. This led to the establishment of three Area Development Offices headed by Area Development Officers who were responsible to the Head of Administration and Staff Development until February, 1984.

Within this organizational structure, the project manager has over-all control of the project and he is directly responsible to the Niger State Government, BPEC, FDA and to the World Bank. There are two liaison offices and a public Relations Officer in the project Manager's Office.

The Finance department provides the project's accounting services. It has five sections viz; compilation, payment, disbursement, budget and insurrrance and Audit.

Administration is responsible for the day-to-day running of the project and reports to the project manager.

The project Area has been divided into three Development areas namely; Bida, Lapai and Kutigi. The Area Development officers are responsible to the Head of Administration for the overall co-ordination and supervision of field programmes in their respective Development Areas.

The Planning department is responsible for survey, land use development, evaluation and monitoring and schistosoiasis surveiance (Monitoring of health problems associated with irrigation development.

Engineering Department on the other hand is responsible for developing infrastructure, (Roads, Housing, Office and Workshops) and maintenance of proj ect vehicles, plants and equipment.

Extension is responsible for interpreting latest research information to the farmers and advices them on new techniques.

Commercial Services Department is responsible for procurement, distribution and sales of farm inputs. The department also takes care of credit to farmers, tractor hiring, crop protection and seed multiplication.

On staffing and Training, according to appraisal, the project itself was to be regarded as a massive training efforts in improving agricultural and rural administration. The project was to complement on the job experience with technical training for junior staff (mechanics, storemen, book-keepers) and staff development programmes, relying on resources both internal and external to the project. But there has been more emphasis on sending Junior Staff on technical training courses at venues extennal to the project itself. Senior Staff have been sent on courses both in and out-side Nigeria. The main emphasis of the project's own training programme has been on the training of its extension staff. In the first three years of the project, some three hundred staff were recruited, trained (at Bida and Rabba) and posted as field overseers. Another fifty-Seven were trained in 1985.

CHAPTER FOUR: ANALYSIS OF DATA

4.0 In this chapter we shall be looking at the extent to which the project has been able to influence the innovative behaviour of the farmers and to see the extent to which farmers are satisfied with the project services.

Generally Bida Agricultural Development Project appears to be governed by a simple philosophy of grafting on to the existing rural socio-economic system, those vital inputs and basic infrastructure which it lacks with a view to raising agricultural productivity and consequently improve the living standard of the rural populace. From all indications the project does not intend to radically transform the existing spartial and existing modes of production but rather to provide essential supporting services and inputs required for the productive functioning of the existing system.

4.1 General Framework for the Analysis:

Any development projects including Bida Agricultural Development Project will produce backwash (negative) and "spread" (positive impacts on their areas of influence).

"Spread" forces comprise of those aspects of the project which promote the distribution of development. The relevant processes for the transmis-

sion of these spread effects may be largely socio-cultural, economic, political, administrative or physical in nature. In Bida Agricultural Development Project these include provision of social infrastructure, income generation, increased agricultural productivity (stimulation of food and raw material production) and spread of productive innovations.

On the contrary backwash forces relate to the negative influences which tend to impoverish or widen the initial spatial disparities of development of the area. These include expropriation of agricultural land from farmers, environmental degradation in terms of air, water and land pollution, disequilibrating flows of factors of production (raw materials, labour and capital from the peripheral areas to fuel the economy of the centre) and overstretching of public facilities.

However, the extent to which these two sets of opposing forces/effects out weigh each other that the success or otherwise of any development project can be determined. When spread effects outweigh backwash effects, such a project will be termed a success and vice versa.

The general idea however is that over time, the spread effects emanating from the development projects will exceed the "backwash" effects. When spread

effects take prominence, then the quality of life of rural population can be enhanced. This hypothesises that spread effects will outweigh the backwash effects of development projects over time.

It is within this general framework that the impacts of Bida Agricultural Development Project will be critically examined.

4.2.0 Impact through Infrastructural Development

4.2.1 Transport

One aspect of evaluating the impact and success of the project is to examine its achievement with respect to provision of low cost feeder roads since this is one of its major technological components. Effective implementation of the project's programme will depend on both the existence of roads and the conditions of these roads. The provision of roads by the project is expected to facilitate the timely delivery of farm inputs to target farmers, evacuation of surplus agricultural and and other production to major consumption centres (markets). Other reasons include effective movement of extension staff, to facilitate dissemination of information and ideas to farmers, effective supervision of field staff by the project, collection of data and feed-backs from farmers from all corners of the area and improved access to farms and hamlets.

At appraisal therefore, the Bida Agricultural Development Project roads programme was that 620 kilometres of repairs and re-construction programme would be undertaken apart from periodic and routine maintenance of 500 and 1940 kilometres, respectively.

However, as soon as work resumed it was realised that the volume of work involved had been grossly under estimated in the appraised. The work was to involve complete reconstruction or new construction rather than repair and reconstruction - a factor that called for the purchase of additional plants and machinery to cope with the volume of work.

As a result of these problems nothing could be accomplished in 1980. Furthermore the concentration of heavy plants and machineries in the irrigation sites (as directed by Bida Project Executive Council to enable completion of the two largest irrigation schemes) for a minimum of six months (January to June) in each of the years (1984-1986) affected the progress of work. One other major constraint was the perennial short-fall in funding.

All along, the most important factors that influenced the selection of roads for construction include local priorities, technical feasibilities and agricultural potentials.

Bida Agricultural Development Project constructed 429.3 Kilometres out of 620 kilometres planned

at appraisal. Also, out 30 Kilometres of up-grading proposed, 15 Kilometres was executed. Similarly some 171.85 kilometres of roads were improved upon and routine and periodic maintenance both totalled 588.5 kilometres. All these were executed at a cost of ₦1.8 million (See table 4.1)

Table 4.1 Statistics of Road Constructed (in km)

TYPE OF ROAD	TARGET (KM)	ACHIEVEMENTS 1981	1982	1983	1984	1985	1986	TOTAL
New Construction	620	22	157	91	159.3	-	-	429.3
Rehabilitation/ Improvement	30	-	-	-	-	108.65	63.2	171.85
Maintenance (Periodic and Routine)	2,440	47	35	-	188.3	234.2	84	588.5

Source: Bida ADP Newsletter "ENUWORO" Vol.8 No 2 Dec. 1986.

This impact of Bida Agricultural Development Project in improving rural accessibility through the construction of rural roads, is measured by analysing the road network of the study area before the inception of the Agricultural Development Project and the road network in 1987 using the graph theoretic approach (Toyne & Newby, Pp. 172-176). The graph theoretic approach enables us to quantify the improvement in accessibility on connectivity in the rural area.

Procedure:

(1) Transform the road network map of each time

period into a topological structural map or a planar graph (Figure 4.1a and 4.1b).

(2) Calculate the connectivity coefficient of each graph by obtaining the circuit index or alpha (and) using the formula

$$\& = \frac{e-v+1}{2v-5} \times \frac{100}{1}$$

& is the ratio between the observed circuits and the maximum number that may theoretically exist in the network.

The observed number of circuits is given by the formula: $H = e - v + 1$ and the maximum theoretical number of circuits is given by the formula: $2V - 5$, where

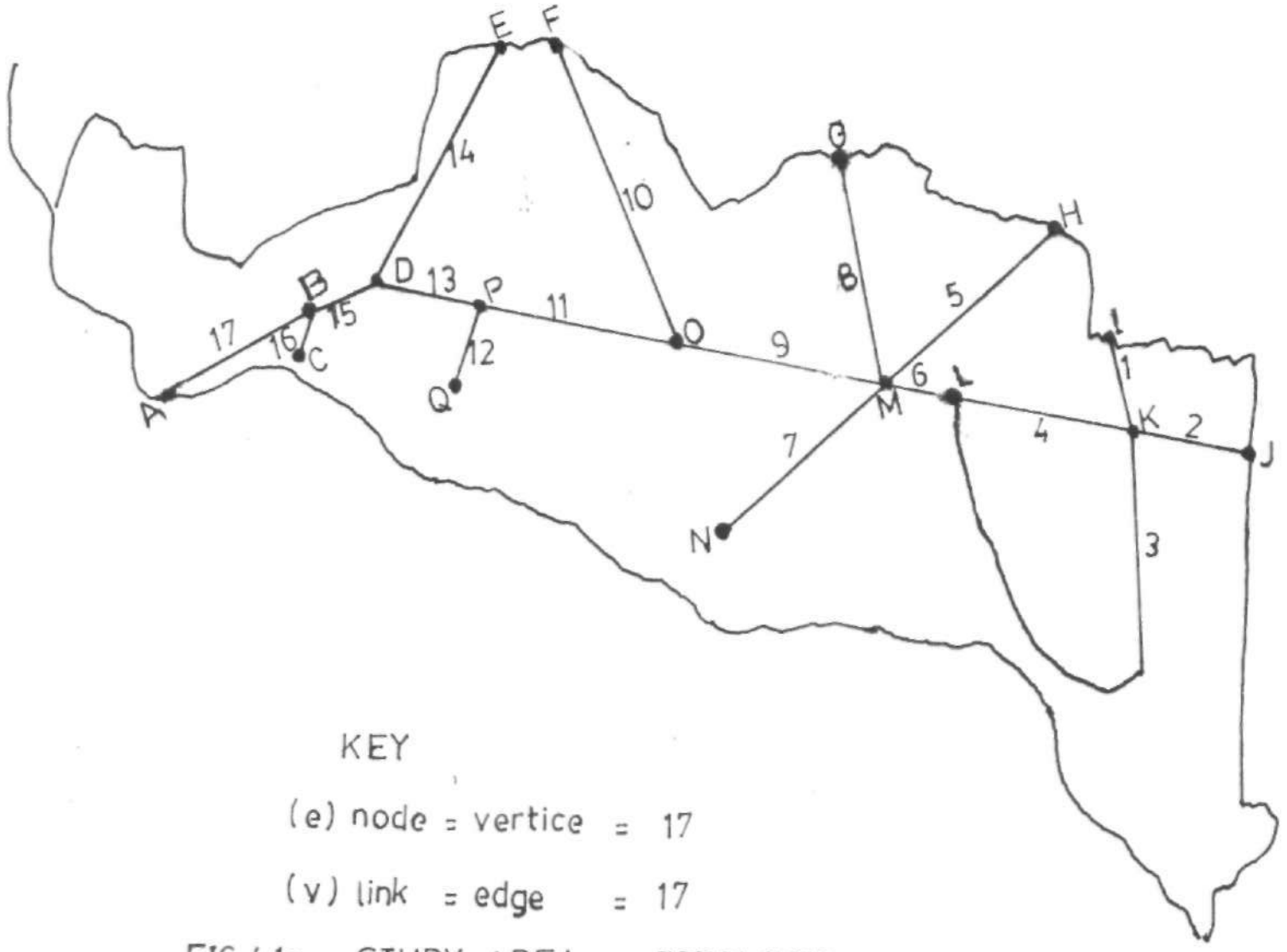
e is the number of links (edges) in the network (graph)

and

v is the number of nodes (verticles) in the network (graph).

Thus the connectivity coefficient of the road network structure of the study area before the ADP was introduced was

$$\& = \frac{e-v+1}{2v-5} \times \frac{100}{1}$$



KEY

(e) node = vertice = 17

(v) link = edge = 17

FIG 4.1a STUDY AREA: TOPOLOGICAL MAP OF ROAD NETWORK IN 1979

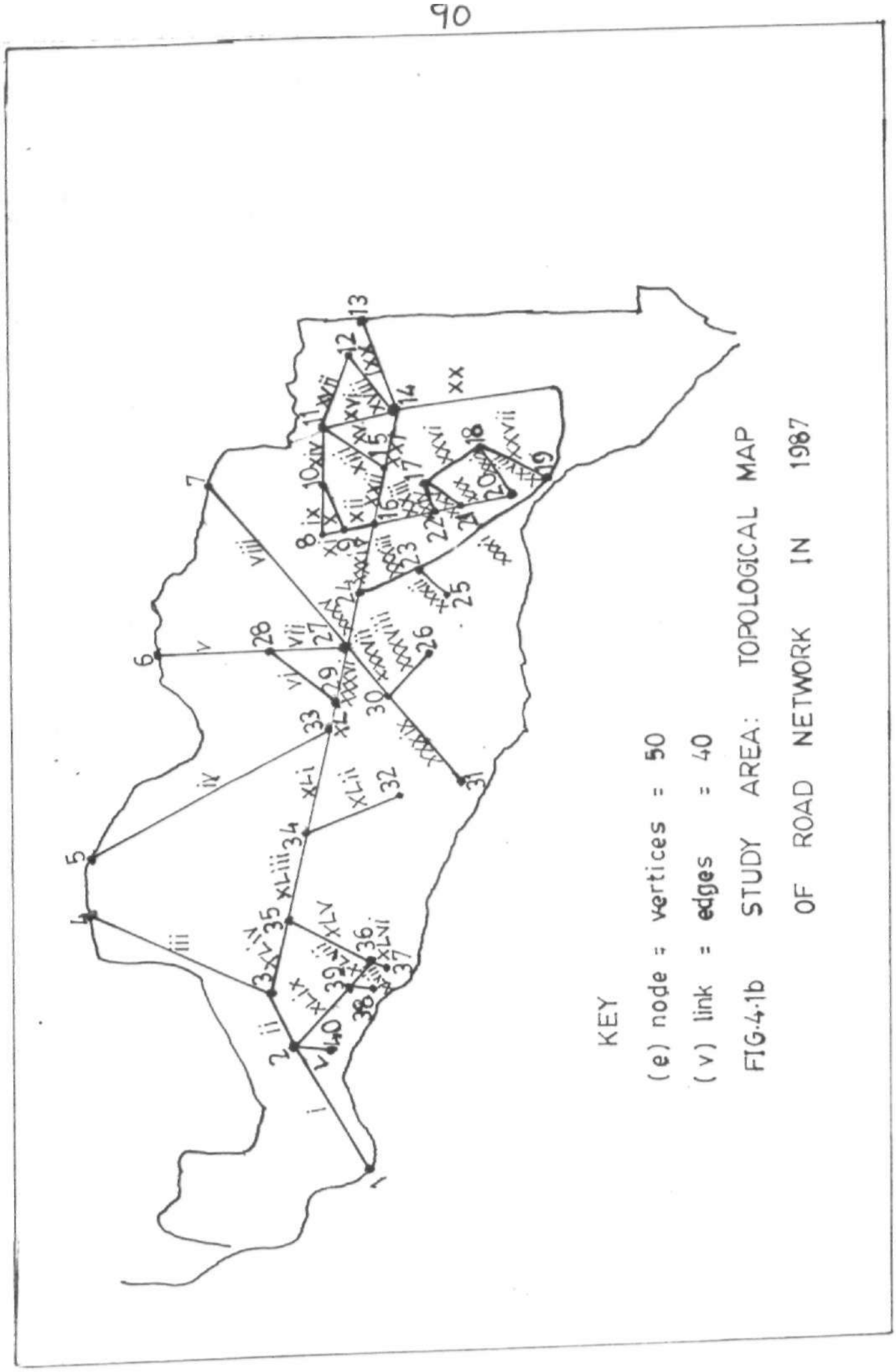


FIG.4.1b STUDY AREA: TOPOLOGICAL MAP OF ROAD NETWORK IN 1987

$$= \frac{17 - 17 + 1}{34 - 5} \times \frac{100}{1}$$

$$= \frac{1}{29} \times \frac{100}{1}$$

$$= 3.45\%$$

In 1987 the connectivity coefficient is:

$$\alpha = \frac{e - v + 1}{2v - 5} \times \frac{100}{1}$$

$$= \frac{50 - 40 + 1}{2 \times 40 - 5} \times \frac{100}{1}$$

$$= \frac{9}{80 - 5} \times \frac{100}{1}$$

$$= \frac{9}{75} \times \frac{100}{1}$$

$$= 12\%$$

Comparing the two road network structures we observed an increase in connectivity or accessibility of $12 - 3.45$

$$= 8.55$$

$$= \frac{3.45}{8.55} \times \frac{100}{1}$$

$$= 40.35\%$$

Thus the roads constructed have undoubtedly brought about the attainment of the goals behind them. Inputs became transportable to the villages which benefited from the programme and like-wise, evacuation of produce from the feeder roads became much easier.

The slow pace of road development was attributed to poor financial situations especially in 1982, inadequate construction equipment, and their constant breakdown for which spare parts were difficult to obtain.

4.2.2 Farm Service Centres and Area Development Centres:

Another important aspect through which impact of the project can be assessed is the establishment of a network of Farm Service Centres located at some selected central villages. Their assessment is important because these centres are designed to facilitate the distribution of farm inputs such as fertilizers, agro-chemicals, tractors and associated equipment to the farmers. Extension Service and credit facilities are also to be made available to farmers at these service centres for case of accessibility.

Sales of inputs mostly fertilizers took place from village stores, provided free by villagers, on scheduled days especially market days. However, with the completion of 52 Farm Service Centres and four Area Development Centres constructed between 1983 and 1984 sales started taking place there though it still continued in some villages.

The Farm Service Centres were constructed within the radius of 10km each to cater for an

average of 2000 farm families. They were all manned by project Staff until 1984 when dealership system was introduced. Under the dealership system, thirty dealers were appointed by the project and they dealt mainly in the sale of fertilizers. They were allocated some of the project's Farm Service Centres and as the benefit each derived from the business was a function of the sales made by them, Much more areas than could be covered by project staff were covered by them. Also, sales took place at anytime unlike in the case of project staff who might be absent for week-ends.

The dealers had the fertilizers transported to their places of operation by the project but the maintenance of the places rested on them as project staff were not posted to such places. The dealer also had the benefit of ₦20.00 commission on every tonne of fertilizer sold by him.

At appraisal stage it was envisaged that the fertilizer requirement for the project area for five years would be 22,515 metric tonnes. Actual sales have, however outstripped this figure. Between 1980 and June, 1986, a total of 84,560.85 metric tonnes of various types of fertilizers were received while 62,699.98 metric tonnes were sold (B.A.D.P. Monitoring & Evaluation Unit).

This huge success was not without its problems. Lateness in deliveries affected sales as certain types of fertilizers recommended by extension staff could not be delivered at the right times. Another problem was the inability of the Project to get the required types and quantities.

The four Area Development Centres are located at Bida, Kutigi, Agaie and Lapai. These centres are headed by Area Development Officers charged with the responsibility of the extension staff under their jurisdiction.

4.30 Economic Impact through Provision of Farm Inputs:

Since the project in a sense appears to be essentially structured as a delivery system, it was not surprising that much emphasis is placed on easy access to physical inputs to the farmers. In fadt like in other ADPS farmers in this area regard the project as essentially a supplier of agricultural inputs. These farm inputs include fertilizers, improved seeds, agro-chemicals, farm equipment (tractors and improved hand tools), storage facilities, credit facilities and extension services which are to be made available at accessible points to the rural population. These farm inputs constitute one of the most important ways by which the project planned to help the farmers to raise agricultural

productivity and to improve the quality of life of the rural inhabitants.

Perhaps among the most important farm inputs of the project, both in terms of volume and value, is the fertilizer. This is exemplified by the fact that between 1980 and June 1986, a total of 84,560.85 metric tonnes of various types of fertilizers were received while 62,699.98 metric tonnes were sold.

My field investigations in 1986 revealed that well over 80% of the respondents admitted their use of fertilizers to their crops in each local government area. In Gbako Local Government for instance, about 95% of respondents admitted their use of fertilizers.

To confirm the growing intensity of farmers, interest in the use of fertilizer, Table 4.2 reveals that the number of farmers purchasing no fertilizers declined and more and more farmers showed an increase in the bags of fertilizers purchased, especially between 1 - 10 bags and 11-20 bags a year.

Table 4.2 Fertilizer Purchased by Farmers in bags before 1980 - 1986. (n= 200)

NO. OF BAGS	BEFORE 1980	1980	1981	1982	1986
0	107	69	49	32	13
1 - 10	57	78	90	101	105
11 - 20	25	30	36	41	43
21 - 30	8	16	18	16	25
) 30	3	7	7	10	14
T O T A L:	200	200	200	200	200

Source: Anthor's Field Survey 1986.

This table reveals a very high rate of fertilizer adoption by the respondents. By 1986 only 13 out of 200 respondents indicated that they did not buy any fertilizer. They complained of lack of money, which shows, they might have adopted the innovation, but had no money to buy the fertilizer that year.

Using the information collected on quantity of fertilizer, extension staff visits, yield of maize in sacks and respondents average annual income, the following facts were established. Using a Linear correlation coefficient, we correlate quantity of fertilizer purchased and extension staff visits. Using Pearson correlation coefficient we derive "r"

= .8847

Convert r to student 't' using formula:

$$t = r\sqrt{\frac{N-2}{1-r2}} = .8847\sqrt{\frac{200-2}{1-17827}}$$

$$= .8847\sqrt{\frac{198}{0.2173}} = \sqrt{911.183}$$

$$t = .8847 \times 30.186$$

$$t = 26.705$$

We compare this with critical (theoretical value of t at α = 0.05.

Critical value of t = 1.645.

Since the number of degrees of freedom is 198, the 0.05 significant value, obtained from the table of t, is 1.645, confirming a strong positive corre-

lation between respondents use of fertilizer and extension staff visits. We can therefore conclude that in Bida Agricultural Development Project, extension services had increased the rate of adoption of new ideas and information about modern farming practices.

When the quantity of fertilizer purchased by the respondents and yield of maize in sacks were correlated, the same strong positive correlation was established.

$$r = .7843$$

Convert r to student t using formula

$$t = r\sqrt{\frac{N-2}{1-r2}}$$

$$t = .7843\sqrt{\frac{200-2}{1-.6151}}$$

$$= .7843\sqrt{\frac{198}{0.3848}} = \sqrt{514.553}$$

$$= .7843 \times 22.684$$

$$t = 17.791$$

Compare this with critical (theoretical) value of t at $\alpha = 0.05$

Critical value of $t = 1.645$.

The results here confirm that through the use of fertilizer and extension services, Bida Agricultural Development Project had been able to increase

the productivity and production of maize within the area. The average annual income of the respondents had also increased as a result of increase in output. This was established when quantity of fertilizer yield of maize in sacks and average annual income were correlated. A strong positive correlation was established to confirm that with the establishment of Bida Agricultural Development Project, the average annual income of the farmers within the area had increased.

" r " = 8887

Convert r to student 't' using formula

$$t = r\sqrt{\frac{N-2}{1-r^2}}$$

$$t = .8887\sqrt{\frac{200-2}{1-.7898}}$$

$$= .8887\sqrt{\frac{198}{0.2102}} = \sqrt{041.960}$$

$$= .8887 \times 30.691$$

$$t = 27.275$$

We compare this with critical (theoretical) value of t at $\alpha = 0.05$

Critical value of t = 1.645.

4.3.1 Improved Seeds and Chemicals

The commercial department of Bida ADP reported that the demand for improved seeds (maize, rice, groundnuts and guinea corn) has been low.

Table 4.3 Adoption Rates for Insecticides

n= 200, 72 from Gbako, 64 from Lavun, 36 from Agaie and 28 from Lapai Local Government Areas.

No. of adopters of Insecticides:

LGA	1983	1984	1985	1986	TOTAL:
Gbako	12	11	17	19	57
Lavun	4	7	5	11	27
Agaie	-	5	3	7	15
Lapai	-	3	7	4	14
T O T A L:	16	26	32	41	113

Source: Field Survey 1986.

Table 4.3 reveals that in each local government, the rate of adoption is low. In Gbako local government, where the adoption rate seems high, only 26.4% (19 out of 72 respondents) admitted using agro-chemicals. However before the establishment of the Bida Agricultural Development Project in 1980 only 3 and 1 respondents admitted using agro-chemicals in Gbako and Lavun local government areas respectively.

By June 1982 only 6.3 tons of improved guinea corn seeds and 50 tonnes of improved rice seeds were sold. This made the project skeptical about its targets supply of 2,000 tonnes of improved seeds within its life-span of five years. Similarly sales of agro-chemicals (insecticides, herbicides and

fungicides) have also been insignificant. The purchases have not matched expectation since within its life-span, the project planned to provide a quarter of a million naira worth of agro-chemicals. Reasons attributted to this low demand among others include their expensiveness (no government subsidy, scarcity, difficulty of application and its danger when used.

The bulk of the purchases were made by the large commercial farms which later sprang up here and there in the project area. In fact over 90% of the agro-chemicals issued out from the Commercial Department were used on demonstration farms rather than actually sold to farmers. The sales of seedlings, seeds, vegetables, cutting, etc had not been encouraging either. This means little impact as regards the introduction of new tree and vegetable crops in the area by the project. The overall picture revealed about the physical inputs distribution of this project is not anything different from what obtains in other similar projects operating in the country. This picture is that wide-spread adoption of technology is "patching" with majority of farmers willing and quick to take advantage of supplies of technology with which they are already familiar, especially fertilizer. That means they do not want to take risk. It is only the relatively larger farmers that take advantage of more surphisticated technology such as agro-chemicals and farm equipment. Generally therefore the attainment of targets and expectations of the project depends, to a large extent on the willingness and ability of farmers to obtain access to and

use inputs supplies to raise the overall technological base of the farming system.

In analysing the impact as regards the introduction of insecticides in the area by the project we used information on expenditure on insecticides and yield of beans in mudus to establish the correlation that exist between the two variables.

Using Pearson correlation coefficient we derive r = .9758

convert 'r' coefficient to student 't' value using the formula:

$$t = r\sqrt{\frac{N-2}{1-r^2}}$$

$$t = .9758\sqrt{\frac{41-2}{1-.9522}}$$

$$= .9758\sqrt{\frac{39}{0.0478}} = \sqrt{815.900}$$

$$= .9758 \times 28.564$$

$$t = 27.873$$

Compare with critical (theoretical) value of t at α = 0.05

Critical value of t = 1.684.

310631

These results show that there exist a strong positive correlation between expenditure on insecticides and yield of beans. The more the farmers spend on insecticide, the more beans they harvest from their farms. However there is a low demand for input, because of their expensiveness (no government subsidy) scarcity, difficulty of application and its danger when used.

4.3.2 Tractor Hiring Services

Another area through which the impact of the project can be assessed is in the provision of tractors and associated farm equipment to meet the increasing demand for their use. The project operates Tractor Hiring Units (T.H.U.) located in each Local Government Area and they provide mechanical land preparation services to all categories of farmers in the area. At its inception, the project inherited altogether 62 tractors from the Ministry of Natural Resources (M.N.R.), but only half of these were functioning. By 1983 there was a total of 35 operational tractors.

By 1981 about 4,000 farmers benefitted from tractor hiring services and this number rose rapidly to 5000 in 1982 showing an increase of 29% over that of 1981. Table 4.4 shows that the number of farmers who have access to tractors is on the decrease even among the local government areas. For instance the number of respondents who had access to tractors in 1983 in Gbako and Agaie Local Government Areas were 62 and 28 respondents respectively. But these figures dropped to 45 and 15 in the same local government areas respectively by 1986.

Table 4.4 Number of Users of Tractors by LGA

LGA	1983	1984	1985	1986
Gbako	62	58	53	45
Lavun	52	48	43	40
Agaie	28	20	18	15
Lapai	17	13	10	8
TOTAL:	159	139	124	108

Source: Field Survey 1986.

This shows that most of the small-scale farmers have not had the privilege to hire a tractor, because they just cannot afford it. The researcher was also well informed that even when a farmer can afford to pay, tractor roperators demand a "dash" and there is usually a long waiting list. The large scale farmers are benefiting enormously from the tractor hiring services because they can afford to pay for them, some have even bought tractors of their own.

By 1986, the total area (both fadama and upland in terms of harrowing, ploughing and ridging , worked out by the projects tractors amounted to 36, 016.9 ? hectares. On the other hand, the private hiring service worked out thousands of hectares of land by the same year (see table 4.5).

Table 4.5 Land Development in (Ha.)

Land Development (Ha)	1983	1984	1985	1986	CUMULATIVE TOTAL
Land Clearing/R-Plough.	344	38	215	671	1268
Rome Ploughing only	12	625	279 .8	887 .4	1804.2
Tractor Hire	7386	4703	3485	6519	16225.9
TOTAL:	7742	5366	3979 .8	2210 .3	19298.1

Source: BADP Monitoring and Evaluation Unit (1986).

The activities of the project in this aspect could not meet all the demand for tractor services due to

insufficient machinery. The Tractor Hiring Unit was further hit by the privatization scheme of the project which kept reducing the fleet since 1984. In an attempt to encourage individual ownership and operation of private tractor hiring services, 13 tractors were distributed to individual farmers by 1982 through the project loan scheme. Also in 1986, the "Back To Land"(BTL) Programme of the State Government affected the Scheme as some tractors were diverted for the scheme.

Other constraints experienced by the tractor hiring units include the number of available and serviceable tractors, maintenance difficulties and the lack of spare parts. The topographic conditions in West of the project area (South Lapai) and the hilly parts of Kutigi limits the use of tractors. The misuse of tractors for unrecorded and unaccounted private transactions are also some constraints on tractor hiring.

As part of our impact analysis of tractor hiring, we have used information (from our data) on hactares worked by tractors and Groundnut yield in sacks to establish if there exist any correlation between the two variables.

Using Pearson Correlation coefficient we derive "r" = .9487. We convert 'r' coefficient to student 't'.

Using formula:

$$t = .9487\sqrt{\frac{N-2}{1-r2}}$$

$$t = .9487\sqrt{\frac{108-2}{1-.9000}}$$

$$= .9487\sqrt{\frac{106}{0.1000}} = \sqrt{1060}$$

$$= .9487 \times 32.558$$

$$t = 30.887$$

We compare this with critical (theoretical) value of t at = 0.05

Since the number of degrees of freedom is 106, the number 0.05 significance value, obtained from the table of t, is 1,658, confirming the strong correlation between number of hectares worked by tractors and groundnut yield in Sacks.

This shows that those farmers who had access to tractors hiring servides had benefitted since they were able to increase the output of their groundnut production.

4.4 Impact through Extension Services

The effectiveness of this programme is difficult to assess directly and quantitatively but it can be possibly done indirectly through crop output and rate of adoption of new ideas and information about modern farming practices. In fact while it's relatively quick and easy to record the usage of inputs produced by the project, it is far more difficult to determine whether improved agricultural technology recommended by the extension service is being effectively applied and is achieving the intended objectives.

Extension Services in Bida Agricultural Development Project were divided into two categories - small holder extension and advanced farm management advisory service.

It was therefore planned that each of these two arms was to establish the category of farmers it would deal with. For small holder, a basic service package was to be made available while an advanced service package was to go to large-scale operators including group farms.

According to the appraisal the improved technology would involve:-

(a) The use of improved dressed seeds (except for bambara nuts and yams for which non is available).

(b) Appropriate fertilizer use.

(c) Insect, pest and disease control and improved cultivation (land preparation, water control, weeding, higher plant population, timely farm operations).

(d) Post-harvest practices.

In order to achieve the goals of pushing the above simple technology to the farmers therefore, the project planned to increase the effectiveness of extension coverage by ensuring that there is one extension worker per five hundred farmers as opposed to 1: 1,200 established by Ministry of Natural Resources. This was to be achieved through training more extension workers. By 1983 about 230 extension workers were trained but the number was so small to achieve the target.

Generally, there were two major techniques used in raising the technical know-how of farmers in relation to the proposed technology. Initially the demonstration (result/method) technique was used. Field days or farm visits were organised on the (demonstration) plots, while during the nights preceeding field days the mobile unit would organise a film show on various agricultural-related fields. Activities at the demonstration plots were Video taped and screened on television or aired over the radio.

Though field days on demonstration plots could be said to be one of the biggest achievements by the extension unit, it had some draw backs. Notable among them was the fact that only one farmer was contacted to establish the 30m X 30m demonstration plot. And it was the farmer who was in-turn called upon to lead the discussion on the field day; hence the extension worker lost the opportunity of teaching a large number of farmers while working on the plot. Thus at the beginning of 1985 Cropping Season a new approach was introduced.

With the introduction of the Training and Visit System coupled with the establishment of (comprehensive) group farms the extension worker was able to teach a large number of farmers all at a time.

All together about 100 field days were held between 1980/81 and 1986/87 cropping seasons while a total of 21489 group visits to demonstration/comprehensive plots were made between 1981 and 1986. The attendance by farmers recorded during these visits totalled 109,938.

Table 4.6 Number of Demonstration/Comprehensive Plots by Crop:

C R O P	1983	1984	1985	1986	TOTAL
Rice	14	40	18	9	81
G/Corn	51	35	22	43	151
Maize	33	25	12	16	86
Groundnut	37	35	10	27	109
Yam	--	--	--	--	--
Cassava	9	--	--	1	10
Cotton	5	--	3	12	20
Melon	--	--	--	2	2
Cowpea	25	--	5	--	30
Vegetable	23	17	21	--	61
Millet	--	--	--	4	4
TOTAL	197	152	91	114	544

Source: BADP Newsletter "UNUWORO" Vol.8 No. 2 Dec.86.

NB:

- 1983 - 84 = Demonstration plots
- 1985 - 86 = Comprehensive plots.
- Rice, Maize, and groundnuts had concentration because of the availability of improved seeds.
- Guinea corn though high in number had no improved seeds but local varieties were used to demonstrate the effects of other management practices.
- Yam, Melon, and Millet though popular had no improved technology to push.
- Cotton was a minor crop.
- Cassava, Cowpeas and Vegetables benefited most from the exposure.

4.5 Special Training Courses for Farmers:

The Bida Agricultural Development Project organises a services of special training courses for farmers. These courses were first introduced in 1981 and continued through to 1986. According to BADP Newsletter (1986) by 1983, when it became management policy to adopt the Training and Visit System attendance to these had begun to increase considerably bringing the total, by 1986, to 7,882. Contrary to this picture my findings revealed that out of 200 respondents only 40 (20%) admitted that they had ever been trained by the project.

Contact with Farmers:

The project is of the view that contact with farmers by staff of the extension unit was regular. The nature of such contacts is as shown in Table 4.7.

Table 4.7 Nature and Number of Contact with Farmers

NATURE	1983	1984	1985	1986	TOTAL
Group Meetings	2748	962	646	269	4625
Advisory Visits	5702	2367	1127	761	9957
At Farmers Fields	4701	3154	1890	917	10662
At Other Locations	1682	688	658	565	3594
TOTAL:	14834	7171	4321	2512	28,838

Source: BADP Newsletter "ENUWORO" Vol.8 No.2 1986.

From my field investigations, out of 200 farmers interviewed only 108 (54%) admitted to have been visited once in 1986, 47 (23.5%) were visited twice, 32

(16%) were visited thrice, 10 (5%) of them were visited four times and only 3 (1.5%) of them admitted to have been visited more than five times in 1986, as shown on Table 4.8.

Less number of farmers were visited more than once in a year. The table also reveals that the visits have not been impressive especially as the number of times the farmers were visited increases.

Table 4.8 Frequency of Extension Visits (1984 - 1986)

NO OF VISITS	1984		1985		1986	
"	NO.	%	NO.	%	NO.	%
1	86	43.0	98	49.0	108	54.0
2	59	29.5	52	26.0	47	23.5
3	28	14.0	30	15.0	32	16.0
4	17	8.5	13	6.5	10	5.0
)5	10	5.0	7	3.5	3	1.5
TOTAL:	200	100.0	200	100.0	200	100.0

Source: Field Survey 1986.

On types of advice given by extension workers, the farmers indicated that fertilizer application, ridge making and planting time are the main pieces of advice given to them. Table 4.9 illustrate this point very clearly. Advice on storage received little attention, even among local government areas. However storage practice needs to be accorded serious attention since

the ultimate outcome of these pieces of advice in terms of increased agricultural productivity depends largely on advice on adequate and effective storage methods. It has been confirmed that a great amount of agricultural output is wasted due to poor storage practices.

Table 4.9 Extension Advice by L G As and Incidence of types of advice

Tye of advice	Total No of farm-Visited		Gbako No. of farmers Visited		Lavun No. of farmers Visited		Agaie No. of farmers Visited		Lapai No Farmers Visited	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Fertilizer application	108	54	44	61.1	36	56.3	18	50	10	35.7
Ridge Making	102	51	44	61.1	30	46.9	16	44.4	12	42.9
Planting Time	99	49.5	38	52.8	32	50	18	50	11	39.3
Improved Seeds	68	34	27	37.5	21	32.8	11	30.6	9	32.1
Insecticides	18	9	10	13.9	4	6.3	2	5.6	2	7.1
Herbicides	11	5.5	5	6.9	3	4.7	1	2.8	2	7.1
Storage Practice	10	5.0	6	8.3	2	3.1	2	5.6	-	---

Source: Field Survey 1986.

The most effective channels of extension service when compared to other approaches is demonstration farms. These plots serve as open classrooms for learning and farmers could see and participate in the modern farming practices, as it is being demonstrated. By 1984-86, the project had established a total number of 786 demcnstration plots (Newsletter, 1986) planted with eleven different crops (See table 4.9).

Table 4.10. Further shows that 76% of the respondents admitted they were aware of the demonstration play and more than 8 90% of these farmers admitted that the crops on the demonstration plots were better than theirs and expressed their desire to have such plots, Although Gbako Local Government Area has the highest rate of awareness, as revealled in the table, all the Local Government Areas demonstrated high rates of awareness. This picture shows clearly that apart from proximity that can influence awareness, other factors such as observation tendency, mobility and location of the farms are equally important.

Table 4.10 Awareness of Demonstration Plots

LGA	NO OF respondents	NO OF farmers aware	%
Gbako	72	60	83
Lavun	64	48	75
Agaie	36	26	72
Lapai	28	18	64
TOTAL	200	152	76

Source: Field Survey 1986.

One common goal which underlies these extension service programmes is to raise agricultural productivity and to improve the living standard of the rural population through raising their incomes.

4.6 IMPACT THROUGH CREDIT FACILITIES.

The Bida Agricultural Development Project offers two main types of credit facilities to farmers-the medium term credit and seasonal loans. These loans are being provided to cater for the credit needs of the farmers. The primary goal is to provide the much needed capital for the purchase of farm inputs with a view to raising agricultural productivity and consequently the living standard of the rural populace.

The seasonal loan scheme was started by the Federal Government in 1981 under the Federal Rice Production Programme (FRPP). It was then restricted to rice growers within the in-land swamp irrigation development areas. After one year the Federal Government was unable to fund the programme and the project took over.

As from 1983, however, no seasonal loan was disbursed as all efforts made to secure on-lending credit facility from Nigerian Agricultural Credit Bank (NACB) were not successful. All the loans were given in kind and they were in form of tractor hiring seeds, fertilizers and herbicides. Others were rice drying floors construction, outgrowers/seed multiplication loans and the special fertilizer credit sale.

The small-scale farmers get the short term loan which is seasonal. The loans altracts an interest rate of 4% and enables the farmer to purchase farm inputs especially fertilizers. The large-scale farmer receives long term loans to undertake capital improvement on his farm and he is also eligible for seasonal loans.

The major institutions that provide these loans within the area are Bida ADP, Ministry of Rural Development and Co-operatives (M.R.D.C) of the state, Nigerian Agricutural and Co-operative Bank (NACB) and some commercial banks, for example, IBWA.

During the course of investigations it was discovered that small-scale farmers are being discriminated against as far as access to credit facilities are concerned. Only 35% of 200 respondents admitted that they had ever received credit from the project or the government. These 70 farmers indicated that the money given was too small for farming operations and that it was given to them at a wrong time. In fact some of them said they were given ₦5.00 as loan. However, over 70% of the respondents indicated their preference for Agricultural and Commercial Banks as sources of credit, while 25% of the respondents rejected the sources on the ground that it is not possible to borrow money from these banks as small-scale farmers.

This discrimination in access to credit facilities, according to the project is based on who has security or collateral. The project must be satisfied by the local government authorities or village head(s) that the applicant has the appropriate right to ownership or tenancy and must also have a farm plan prepared and approved by the project. The loans must be guaranteed by the local government authorities. This mode of operation of the credit scheme leaves the small scale farmers at the whims and caprices of local government, project officials, and village head(s).

Better access to agricultural credit is one of the basic conditions of increasing the productivity of small agricultural holdings. But when will the small-scale farmer ever be able to offer adequate collateral and free from exploitations by officials? Unfortunately even when the credit is obtained through the cooperatives there is the problem of collecting loans back from individual members. To worsen things the co-operatives have virtually become synonyms with mismanagement, embezzlement of funds by officials and sometimes outright theft. This situation arises mainly because illiterate or semi-literate peasant members too readily become victims of smart officials.

It is also on record that farmers use the loans for non-agricultural activities.

The medium term credit (MTC) according to the project was designed to help the heavy MTC loan beneficiaries after the 1983 drought which resulted in a lot of crop failure. All together the sum of ₦62,874.76 was disbursed both under the FRPP and project's seasonal loan. Of this, ₦60,028.93 (95.5%) has been repaid by the beneficiaries. On the seasonal loan M.T.C. back-up ₦6,467.41 was disbursed while only ₦1,996.70 (30.9%) has been repaid.

Medium Term Credit (MTC) also started in 1981. Disbursment in Cash was kept at a minimum to guard against misapplication and with the exception of the special credit sale of rice mills, all other MTC facilities attracted cash deposits.

Funds used by the project for the scheme were lent from other sources as on-lending facilities. The value of the loan had to be directly related to the needs of the borrowers and their capacity to repay.

Table 4.14 shows the amount of money involved in the disbursment as from 1983 to 1986.

TABLE 4.11 AMOUNT OF MONEY DISBURSED 1983-1986

YEAR	OPENING BALANCE	DISBURS-MENT ₦	INTEREST ₦	INSURA-NCE PREMIUM ₦	PAYMENTS ₦	CLOSING BALANCE ₦
1983	400,285.05	77,730.78	43,076.24	3,401.48	49,581.10	474,756.50
1984	474,756.50	95,054.01	51,595.81	-	-	559.313.15
1985	559,313.15	87,467.00	62,870.00	-	-	665,821.52
1986	665,821.52	-	-	-	-	-

Source: Bida ADP Newsletter (Enuworo) Vol.8 No.2 Dec, 1986

4.7 IMPACT ON AGRICULTURAL OUTPUT

The project sets as its primary goal the achievement of significant growth in productivity and total production. It was towards this goal that every other programme activity was directed. The effectiveness of the crop extension services and the distribution of mechanical and chemical imputs can be assessed to a large extend, from agricultural output.

Furthermore the future prospect of the project can also be as-certained through the trends in crop production. Therefore growth in agricultural productivity constitutes an important aspect of evaluating the impact of the project. In an attempt to achieve this goal the project planned to improve some of the existing crops (see table 4.6). There was no initial intention to introduce new crops. Initially nine crops were earmarked but later increased to 11 crops. The crops to be improved include rice, guinea corn, Maize, G/Nut, Yam, Cassava, Cotton, Melon, Cowpea, Vegetable and Millet.

The project proposed to use two levels of technology in this crop development prgramme. These are:-

(a) A Basic Service Package (B.S.P) in which simple improvements will be effected to the trditional farming system;

(b) Advanced Service Package (A.S.P.) which will bring about technological changes including changes in cropping system, use of chemical plant protection and machanised land clearing and preparation. It is anticipated that at least 42,000 (75%) of the farmers within the region will accept ASP'S recommendations. The total land to be brought under the improved cropping system is set at 50,800 ha. The project therefore anticipated the area under traditional cropping system to decrease while improved cropped area to increase over the years of its operation. The project hoped to bring about significant growth in productivity and total production through these levels of technology.

Generally, table 4.12 reveals thet for the seven years of the project operation, significant production results have been achieved while reducing the area under traditional cropping system and increasing the improved cropped areas. The exceptional crop is cowpea. For instance, Table 4.12 reveals that the anticipated target for guinea corn was put at about 50,000 metric tons but the actual cummulative total was 88,000 showing an increase of about 76%.

Table 4.12 Crop Production (Annual Average in tons)

CROPS	SAR/REVISED TARGETS	Y E A R 1980	1981	1982	1983	1984	1985	1986	CUMUL TOTAL :	% ACHIEVED:
GUINEA CORN	50,000	101,200	41,100	87,400	48,000	100,000	115,000	120,000	88,000	176
Yam	85,000	28,200	45,700	127800	58,500	100,000	98,000	100,000	80,000	94
Rice	49,000	75,600	94,500	73,000	14,000	70,000	58,100	80,000	66,000	135
Cassava	70,000	12,700	3,000	46,500	27,900	48,100	48,000	53,000	34,000	49
Groundnut	9,750	15,800	10,900	8,000	16,800	25,200	27,000	27,000	19,000	217
Maize	2,400	4,200	5,900	13,000	10,400	16,000	17,000	20,000	12,000	500
Millet	22,500	19,400	7,700	8,200	7,500	15,100	12,000	15,000	12,000	53
Melon	11,800	18,900	2,000	8,200	11,900	10,600	12,000	15,000	11,000	93
Cowpea	-	-	-	-	-	-	40	60	50	-

Source: BADP Evaluation Unit Report (1986)

Taking groundnut as another example the increase over the anticipated amount was over 100%. In fact on the whole the table shows an increase in agricultural production and consequently an improvement in the standard of living of rural population through an increase in income levels.

When the respondents were asked to estimate their annual income, 68% of them claimed incomes of between ₦1,000-₦2000; 20% claimed to have below ₦500, while only 12% claimed to have between ₦6000-₦10000. With these income levels the production achievements in the project area is significant although its real significance would have to be seen against the background of the total costs of the project and the pre-project levels of production in the area.

As part of our impact analysis the information on average annual income and yield of maize in sacks was used to establish linear correlation coefficient.

Using pearson correlation coefficient we derive 'r' = .9328

Convert 'r' coefficient to student t using formula: t=

$$r\sqrt{\frac{N-2}{1-r^2}}$$

$$t = .9328\sqrt{\frac{200-2}{1-.8701}}$$

$$= .9328\sqrt{\frac{198}{0.1299}} = \sqrt{1524.249}$$

$$t = .9328 \times 39.04?$$

$$t = 36.418$$

We compare this with critical (theoretical)

Value of t at $\alpha = 0.05$

Critical value of t = 1.645

These results show a strong positive correlation since the number of degrees of freedom is 198, and 0.05 significante value, obtained from the table of it, is 1.645, confirming that the respondents' level of income has increased as a result of an increase in maize production.

However within the project area, and particularly in the Mokwa,Kutigi, Jima/Doko, Lemu and Bida Districts, farmers both, small and large-scale, have other sources of income like fishing, hunting, trading and public sector employment of their sons and daughters. As such an increase in their living standard can not be wholly credited to the presence of BADP. There is need for more careful surveys to provide data for more accurate and reliable conclusions. There are also problems inherent in conducting such a socio-economic survey of rural house holds. This has to do with the customary reticence of respondents about the sources and level of income and standard of living. This makes prudent to treat data from such surveys with caution.

Commenting on the production figures in Table 4.12, the Evaluation unit of Bida ADP said, the period, was characterised by a lot of hazards including the drought of 1983 and the flood of 1985 hence the flunctuations in the figures. The Evaluation Unit also admitted that both the 1985 and 86 figures were estimated because the reports of the agronomic surveys conducted for them were yet to be produced or published. In which case one can assume that the production figures must have been raised, to give a good picture of the project's achievement.

Finally even if there had been noticeable increases which Bida ADP can claim credit for, it might have been due to the contribution of large-scale commercial farms owned by the large-scale farmers on whom project's resources are concentrated.

CHAPTER FIVE:

TOWARDS AN ALTERNATIVE STRATEGY OF RURAL DEVELOPMENT IN BIDA ADP.

The Bida Agricultural Development Project has demonstrated quite clearly a possible strategy of undertaking development in a predominantly rural society such as exists in Nigeria. The project's emphasis has been in making resources available in relatively ample quantities to rural areas. The resources of men, money, and material were poured in unprecedented amount into this and similar regions of the country where the strategy was being exploved and elaborated. Considerable attention was given to developing the infrastructure of roads, development centres, farm service centres, demonstration farms and seed multiplication centres. Extension workers were trained and it was their duty to distribute improved seedlings and other necessary inputs to the farmers and teach them as best they can new methods of cultivation.

It was all so visible and impressive. Yet, there was little evidence that the farmers were really "engaged" in any meaningful sense in the whole programme. The farmers within the project area could not associate any social change in their present circumstances with the operations of the project. Even where the in-come of the farmers have risen, many of them saw it as no more than the usual fluctuations of returns to agricultural endeavours to which they were quite familiar.

The project has produced no serious social tension, no dramatic strains and stresses on the web of social relations, arising from the birth of a new system of production relations. It was as if government through this strategy of ADPS wanted to be only tangentially involved with the rural population. In fact the small-scale farmers remain relatively "uncaptured" by the state apparatus. Both operate, as it were, within two parallel organisational systems, neither of which is very dependent on the other.

The farmers in Bida Project Area can in principle continue to reproduce themselves socially and materially without dependence on the "system". In other words, their dependence, on the system even after the end of the project, remains extremely weak and tenuous.

It is against this background that one must evaluate the various lessons from the Bida Agricultural Development Project and indicate lines along which any alternative strategy must be conceived.

The new alternative strategy will mitigate the disruptive legacies of past policies which were formulated as if rural and urban labour markets were seperate with no linkages, as if the rural resident was completely oblivious of observed rural-urban disparities in the availability of physical and social amenities and as if the rural sector were an inexhaustible source of one form of surplus or the other.

In broadening ADP concept to integrated Agricultural and Rural Development projects, it is recommended that as a second phase, Bida ADP should be expanded in concept and activities to include the following additional elements.

5.1 MARKETING AND PROCESSING FACILITIES

There is need for a capital grant and credit Scheme for a Rural network of processing facilities consisting of small scale and medium scale processing facilities with the ADP, to enable rural residents reap some of the value-added benefits currently being transferred to the urban economy.

There is also that need for an integrated supply of marketing facilities and services including; Physical market structures; market stalls with lock-up facilities; a capital grant and credit scheme for a vast network of privately owned on-farm and off-farm storage facilities in a Rural Storage Programme; well-timed market interventions by project management to provide necessary market support and protect farmers' confidence and well developed market information so that farmers can receive clear and correct price signals to guide their allocative decisions in food production and distribution.

5.2 THE PHYSICAL INFRASTRUCTURE.

One of the most important components of Bida ADP has been the development of rural infrastructures in the sense of roads, farm service centres and the area development centres the seed farms, the demonstration farms and the various training centres for the agricultural asistants and the farmers.

The roads constructed are designed for light traffic mainly in the dry season, and although some technical supervision is required in their construction, what is needed most is labour and plenty of it. And fortunately this is exactly what the farmers have enough of, at least during the annual slack season when agricultural activities on the farms are at their least demanding of labour.

This is why an alternative strategy would seek to be much more cost effective by involving the farmers more directly in the construction of the physical infrastructure needed for their own development. Such involvement will enable them to have a voice in the choice of design, technical specification, and completion time of those structures. It would also help to define the role of the authorities more clearly and restrict it, apart from overall supervision to supplying only those few materials which can not be provided directly by the farmers labour. Apart from the fact that this strategy is likely to get more done, it is also sure to evoke strong proprietary interests on the part of the farmers in the product of their effort.

There is also the related question of the maintenance of these infrastructures, once they have been constructed. At present, the project expects this to be undertaken by the local authorities or development boards. Consequently, it offered these bodies apportunities for training their staff and participating in the operational management of these facilities. There is however, madequate evidence as to how much response was got from the local administration in this regard.

What is clear is that even in the best of circumstances, the very scattered and diffused nature of most of these infrastructure would still require devolving much of the maintenance task to the local population.

We recommend that in this alternative strategy that training especially of Local Government Council personnel, needs to be intensified to ensure that the technical capabilityexists to shoulder the new responsibilities. The Local Government Authorities should also be provided with the required financial capability to shoulder the new responsibilities.

5.3 THE AGRICULTURAL INPUTS.

The dissemination of agricultural inputs has been one of the major successes of Bida Agricultural Development Project. The project pioneered the adoption and diffusion of new maize seedlings. More significantly it encouraged the farmers to accept the vital role of fertilisers, and to a less extent, insecticides and pesticides, in their agricultural practices. In all of this, a network of farm service cnetres proved very crucial as distribution points.

In spite of these successes, there are still some vital areas where more effort needed to be exerted. This is particularly so in the case of seedlings. So far, research activities have not been successful with regard to evolving high-yielding variety of millet and sorghum (Guinea Corn) the prestigious staple crops of the region.

Insecticides have been poorly adopted. Their costs are prohibitive, for the chemicals are not Subsidized. The use of insecticides and fertilizers on a large scale is not likely to occur until many of the farmers have attained a higher level of affluence. This is one of the areas where the project is expected to do a lot of extension work, especially by way of convincing farmers to use the improved seeds.

5.4 EXTENSION SERVICES

The role of extension services has to be redefined and re-determined in this alternative strategy of rural development.

In the present Bida Project, considerable emphasis was placed on training the extension workers. Training centres were established which undertook the training of not only the agricultural instructors but also of the farmers themselves. The major direction of extension activities was to show the farmers how to cope with the use of fertilisers, insecticides and so on and how to plant the new, improved seedlings being distributed.

However in Bida ADP, there had been some negative reaction on the part of some farmers to the rather youthful age of their extension agents. The question of age assumes a different dimension when it is remembered that extension workers in the project had to exercise selective judgement as between those who are to be regarded as "progressives" and "non-progressive" farmers. This responsibility placed tremendous powers in the hands of relatively young extension workers with all the temptations to official arrogance and haughtiness on the one hand or to infuriating paternalism on the other. Such selectivity in the dispensation of extension advice is very divisive in close-knit rural communities of the type encountered in this region of the world.

In any alternative strategy of rural development these criticisms of the existing practices have to be re-examined and, as much as possible rectified. It is therefore recommended that the relation between the farmers and the extension agents would be healthier and imbued with mutual respect if the farmers were to have a strong voice in the recruitment, remuneration and retention of their own extension agent. Certainly, such a prodedure will shift the locus of loyalty of the agent from the project to the farming communities which he is meant to serve. Moreover, such a procedure would make it difficult to take the easy way out of concentrating attention on a minority of so-called a progressive" farmers and ignoring the real needs of the majority of farmers.

5.5 THE FACTOR OF ORGANISATION

In Bida ADP, although there are many farmers' organizations, the project has not been dealing with them as recognized interest groups, because the project feels that is not part of their functions. However, if farmers come to the project as a group, the management may be ready to help.

In fact participation is conceived by the management only in terms of how the farmers benefit from the project's services. Even then, "the only services to reach a majority of farmers were the Farm Service Centres (in their input supply capacity) and the project radio programme.

Although it is possible that each extension worker was assigned to cater for defined group of villages and farmers these were themselves not seen or related to as an organised and mobilised entity. The organisation, in fact, was consistent with a view of the extension service as a one-way channel of information flow.

The project clearly organised the region but this was to a level less than adequate for closely involving the farmers in its activities and decision-making processes. Thus for effective participation and involvement in these decisions and activities which touch directly on the lives and livelihood of the farmers, a form of teritorial constituency organisation would appear crucial for an alternative strategy of rural development.

Territorial constituency organisation involves organsing the farmers in groups not too small to be effective in undertaking major public works needed for their own use and not too large to make interaction and decision-making remote, cumbersome and unwieldy,. It must be of a size just large enough to ensure a full "appreciation of perceptible interdependence" among all its members. Such an organisation can involve a single village or group of hamlets or isolated farmsteads.

In the latter cases, some attention must be given to distances separating the hamlets or farmsteads in the group to prevent individual having to walk long distances.

At any rate most of the farmers in the group must be made to understand that the development of the group, its individual members as well as its territory is their responsibility, individually and severally.

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 SUMMARY

The large income from petroleum export led to a depression of local food production and the deteriorating conditions in the rural areas of Nigeria. Unfortunately attempts to revamp the near moribund agricultural sector by massive investment of the oil revenue have not been successful. The cornerstone of the country's agricultural policy is the World Bank assisted and small-holder oriented Agricultural Development Projects. These projects are expected to cover the whole country, one for each of the nineteen states.

The projects are designed to improve rural life through transformation of the production system, institutional reforms, and the installation of basic social and physical infrastructures.

Bida Agricultural Development Project established in late October 1979, the project, like others appeared to have been founded on a simple philosophy of grafting on to the existing socio-economic system a basic infrastructure for a more effective delivery of agricultural inputs to the rural population. This was with a view to raising productivity and improvingtheir quality of life. Instead of radically transforming the existing modes of production, the project was planned to provide essential services and inputs to the existing system of production.

In our analysis, collected data based on production figures that were supplied by the project's management, questionnaire and interviews showed that the project had not led to any dramatic increase in crop production. In fact, rural differentiation is being exacerbated by selection of a few rich peasants who are termed "progressives" as direct beneficiaries of the project.

Bida Agricultural Development Project should take at least 15 years to mature and lend itself to a more objective and realistic evaluation. But the foregoing analyses of the immediate impact of the project have furnished us with some information which may be profitably used for the future planning and assessment of the project.

The project has performed well in the area of fertilizer distribution and use. For example between 1980 and June 1986, a total of 84,560.85 metric tonnes of various types of fertilizers were received while 62, 699.98 metric tonnes were sold. Insecticides have been adopted. Their costs are prohibitive, for the chemicals are not subsidized. The use of insecticides on a large scale is not likely to occur until many of the farmers a have attained a higher level of affluence.

Bida ADP's credit supply is grossly inadequate. Loans could not be given freely because of an increasingly poor rate of repayment. The project's credit facility requires a serious overhaul if it is to provide adequate service.

The story of improved seeds is not different. The project management is aware of the low rate at which improved seeds are being purchased. This is one of the area where the project is expected to do a lot of extension work, especially by way of convincing farmers to use the improved seeds.

Tractor service available to the farmers is far below their demand. One possible way out of this problem is the enlargement of tractor credit sales to farmers' groups.

Better results have been obtained in the sphere of infrastructural development. The roads project had been well executed but for the serious financial constraint, especially in 1982, inadequate construction equipment, and their constant breakdown for which spare parts were difficult to obtain.

The construction of the Area Development Centres and Farm Service Centres is equally commendable. Sales of farm inputs, especially fertilizers are effectively taking place in these centres. Thus these inputs have got to a large number of the people. Part of the praise for this good performance goes to the extension programme.

In conclusion, seven years after the start of the Bida Agricultural Development Project, no substantial improvement in the standard of life of the majority of the rural residents is evident. The future therefore depends partly on how swiftly the initial problems of organization of variable co-operative

bodies are solved. Also, as studies of other ADPS have shown, depends on the specific policies of resource allocation adopted.

6.2 CONCLUSION

In Bida Agricultural Development Project, despite the huge amount of money spent on their programmes, and the resources of men and material poured in unprecedented amount into the project area, defective project design, political interference in their implementation, the lack of administrative capacity and inadequate participatory role for majority of the small holder peasants have combined to adversely affect the impact of the project.

The major obstacle to rural development and food production in particular, is the inability to define and concretize what development is and what we intend to achieve in the formulation and implementation of our National plans. In fact looking at the organization and management of Bida ADP, one can conclude that Nigerian government has not yet taken a firm stand on the issue of not only rural development but also the type of develop-ment it wishes to see in its rural areas. To turn what is essentially a national crisis requiring the fullest commitment of the nation's brainpower and human and material resources over to the Ministration of foreign, World Bank Officials, however competent and empathic, is not only to misunderstand the nature of the crisis but also to fail to grasp the essence of the means needed to cope with it.

In Bida ADP, although there are many farmers' organizations, the project has not been dealing with them, as recognized interest groups, because the project feels that is not part of their functions. However, if farmers come to the project as a group, the management may be ready to help. Participation is conceived by the management only in terms of how the farmers benefit from the project's services. Even then, "the only services to reach a majority of farmers were the Farm Service Centres (in their input supply capacity) and the project radio programme.

This portrays a narrow purview of participation within the concept of the "top-down" approach.

In the ADPS, the project cycle and funding (identification of projects, preparation, appraisal, negotiations and implementation) take place without any regard for the small-scale farmers whom the projects are meant for. All he hears or knows is that the project has come to find solutions to his agricultural problems. Unfortunately these projects can not find solutions to the farmers' problems unless they (farmers) are involved from the initial stage of the planning and implementation process. It is only then that the farmers can appreciate and participate in the achievements and failures of these capital intensive concerns. In these ADPS the designers understood little about the social, cultural and political environment in which the project was to be implemented. There was also little consultation with the target population.

There is also that in herent danger in an agricultural policy which places too much emphasis on increasing production and productivity at the expense of fair resource allocation. This is one of the reasons that led to the failure of the ADPS. The projects are too capital-intensive instead of labour intensive and their resource allocation pattern places the small-scale farmer at a big disadvantage. The problem of food production is not primarily technical or even economical, but essentially a social and political issue. The real problem is finding a political will on the part of the ruling class and the ruled and good organizational structures to handle the planning and implementation of policies.

The World Bank is dominated by the united states of America and this has been used for actions that have far-reaching effects and certainly not always in the interest of Nigeria or Third World countries in general. The Bank is American because U.S.A. Contributes most of the funds and the staff are pro-west.

The food deficit in Nigeria is seen by the Bank more as an opportunity than a crisis.

The Bank's activities in Nigeria were stimulated by the new attention to agricultural development by a multitude of processing industries and products of modern farm inputs. This has created an opportunity for the agri-business organizations of the industrialised countries to make Nigeria a dumping ground for their products. Their obsolete hydraulic and electromechanical equipment now have easy outlets. This is an indication that Nigeria will continue to carry "the white man's burden!' This ADPS have accelerated the in corporation of the peasantry into the or bit of world-wide capitalist farming interest.

6.3 RECOMMENDATIONS

No realistic and self-sustaining development can take place in Nigeria without the mass of rural population being organised effectively to protect their own interests. Any alternative rural development strategy must therefore concentrate on the organisation and mobilisation of the rural population. People should be the end of development which must be appraised on the basis of how far it has been able to meet their basis needs and aspirations. Moreover, the peasant producer should be encouraged to rely more on enhancing his own ability to improve productivity.

The ADP concept should be broadened to integrated Agricultural and Rural Development Projects. What is recommended in this IRD strategy is an integrated Area Development concept which emphasizes: Functional integration of socio-economic activities covering health, education, farm production and distribution, rural non-farm production and distribution, mining, forestry, fishery etc. in place of the present limited sectoral approach.

A complete change in strategy and approach is also recommended. The present approach of the nation's agricultural establishment which essentially sees the rural economy as the source of surpluses (whether in the form of marketing board taxes of old vintage or present day requirements of market surpluses of food) should be

substituted with a rural development strategy with the rural man as the centre-piece. This new approach recognizes the rural resident as a human being capable of producing surplus foods for the urban economy but also equally worthy of the good things of life which his urban counterpart has access to; clean drinking water, health and medical care facilities, accessibility to the outside world, good schools for his children, etc.

The ADPs should include the promotion of equity as parts of their objectives. Although this hinges on the ideological stance of the particular state involved any project that exacerbates rural in equlity and favours the few priviledged rural "Kulaks" at the expense of the majority of small holders is bound to be suspecf. This is the more reason why the "trickle down" approach of the ADPS and their emphasis on the progressive farmers have contributed to the shortfall in their expected performance, as well as alienating the peasants.

It is also recommended that participatory democracy should be encouraged in the rural sectors through the ADPS. In this case, the small-scale farmers would have a say in matters that affect them. The project designers or "experts" can not help peasant farmers without the latter's assistance. Agricultural development strategies can only realize their full potential through the motivation, actual involvement and organization at the grass-roots level of rural people in conceptualizing policies and designing programmes.

Agricultural planning process should start from the village level to the district, to local government to state and finally to the Federal level. There should be committees at each level to articulate and identify problems associated with agriculture. The committee at the village level should organize agricultural activities and distribute farm inputs and credit facilities. Power-sharing and not just resource allocation, is thus central to any serious attempt at rural development.

To alleviate rural poverty, favourable prices for agricultural products and low prices for consumer goods and agricultural inputs are necessary. Therefore there is urgent need for the extension of co-operative marketing activities to food crops, especially now that the country is facing serious inflationary problems. Crops, such as yam, maize and cassava can be marketed co-operatively in the southern states while millet, gguinea corn, cowpeas, melon and beans can be marketed by the cooperatives in the Northern States. Some of the essential facilities which should be provided include storage and processing. These are very important because of the high degree of perishability of food crops. This type of arrangement would not only increase the farmers confidence in the market system, but it would reduce greatly his chances of being taken advantage of and this in turn would increase his willingness to produce a surplus for marketing. An input delivery system could be designed based on farmers' co-operatives.

Finally the introduction of improved farm technological package should consider the existing farming system and priorities of farming households. The technological packages for development touches the vexed issue of transfer of technology for development. There is no country that has developed by way of transferring alien technology. This is where we have to pause and ask ourselves whether technology already developed in one environment can be transferred to anohter and be beneficially utilized. We are of the opinion that alien technology (equipment and the skills) ean not be transferred. It has to be originated and developed within a given environment where it will be put to use. In this case, technology for agricultural development in Nigeria should focus on the needs of the rural farmers. This could be in the form of appropriate technology (improvement of simple hand tools [redacted]ines).

6.4 AREAS FOR FURTHER RESEARCH

The above recommendations must be backed by a purposeful research and development policy. The existing practice in which researchers choose their own problems and in which their findings are buried in academic journals must be balanced with more problem-oriented research and experimentation. The problem areas that require urgent research attention in Nigerian Agriculture are the improvement of farming tools, the development of energy-efficient storage and transport facilities the supply of fertilizer and water on a regular basis and in sufficient quantities, and effective family planning programmes to slow down the rate of population growth. Furthermore, attention should be paid to the dissemination of research findings in the languages and forms which are compatible to those who should benefit directly from them.

REFERENCES

1. Abalu, G.O. I;(1982) Major Rural Development Issue in Nigeria; Issues on Development: Proceedings of A seminar Held in Zaria Nigeria 21-22 Jan, 1982.

2. Abalu, G.O.I, and D'Silva.,(1980) Nigeria's Food Situation:Problems and Prospects. Food policy 5:1980.

3. Agboola, S.A. An Agricultural Atlas of Nigeria Oxford University Press, (1979).

4. Allahmagani, M.D.(1986): Community Participation As a Factor in Rural Development: A Case Study of Zango District in Kachia Local Government Area. Seminar Paper on Thesis Proposal Presented at the Dept of Geography A.B.U. Zaria.

5 Anthonio Q.B.O., (1976) "The Stagnant Sector in the Nigerian Economy". Bulletin Of Rural Economics and Rural Sociology 2,1976.

6. Ariyo D.(1982) Planning Implications of Agro-Industrial Development Strategy in Third World Countries. Working Paper No.9. School of Urban and Regional Planning; Faculty of Environmental Studies. University of Waterloo.

7. Aziz, S.(1978) Rural Development -Learning from China. The Macmillan Press Ltd, London 1978.

8. Baba, J.M. "Rural Development Strategies in Nieria, How far have we gone?" Paper presented on the Occasion of the Celebration of the 20th Geographical Week of Geography Society A.B.U. Zaria, Jan. 24th, 1983.

9. Baba J.M. (1984) "Developing Rural Nigeria through Capital-Intensive Irrigation Projects. A critique", Journal of Issues in Development (Centre for Social and Economic Research, A.B.U, Vol. 1. No.1(June).

10. Beckman, B. (1982) "Whose State: State and Capitalist development in Nigeria" Review of African Political Economy 23.

11. Chrisofferson. L.E.(1980) "The Bank and Rural Poverty" in the World Bank and World's Poorest Washington D.C. 1980.

12. Diejomaoh, V.P.(1972) "Rural Development in Nigeria: The role of fiscal policy". In Rural Development in Nigeria: Proceedings of the 1972 Annual Conference of the Nigerian Economic Society. Ibadan, 1973.

13. Dunmoye, B.A.(1986) The State and the Peasantry: The Politics of Integrated Agricultural Development Projects in Nigeria (unpublished P.HD. Thesis, Toronto University.

14. Ezedinma, F.B.C.(1980) Military Expenditure VS Food & Agriculture In Nzimiro, I. (1980) Economic and Social effects of (Military Arms Build-up in Nigeria; Implications for National development. New York: U.N.

15. Famoriyo, S(1983) A Review of the changes in Agricultural and Rural Development Strategies in Nigeria. Journal of Issues in Development(Centre for Social and Economic Research A.B.U. Zaria Vol.1. No. 1(June).

16. Feder. E.(1977) Capitalism's Last Ditch Effort to save underdeveloped Agriculture: International Agric business, the world Bank and the Rural Poor". Journal of of Contemporary Asia, Vo.7. No.1 1977.

17. Gana, J.A. (1983) "Regional Development Alternatives in predominantly Rural Societies". Journal of Issues in Development. (Centre for social and Economic Research A.B.U. Zaria Vol. 1. No. 1(June).

18. Henderson P.(1971) World Poverty, Worldwide Series Published by B.T. Batsford Ltd. London 1971.

19. Heyer, J. Roberts P. and Williams.G.(1981) "Rural Development in Tropical Africa" Macmillan Press Ltd. 1981.

20. Hopper, D.W.(1976) The Development of Agriculture in Developing Countries. Scientific American September 1976.

21. Igbozurike, M.(1976), Problems-Generating Structures in Nigeria's Rural Development Scandinavian Institute of African Studies, Uppsala.

22. Ijere, M.O. (1978) "Rural Development Problems and Prospects: Paper presented at the training programme for planning officers in Agriculture and Rural Development. Ibadan, July 10 to August 11, 1978.

23. Lele, U.(1975) The Design of Rural Development Lessons From Africa. Baltimore. The John Hopkins University Press 1975.

24. Mabogunje, A.L. (1980) The Development Process: A spatial perspective. Hutchinsons, London.

25 Mabogunje, A.L. and Jerry Gana. Rural Development in Nigeria. A Research Report to the U.N. Centre for Regional Development, Nagoya, Japan 1981.

26. Nzimiro, I. (1985) The Green Revolution in Nigeria or the Modernization of hunger Zim Pan-African Publishers OGUTA 1981.

27. Olatunbosun, D.(1975) Nigeria's Neglected Rural Majority. Ibadan: Oxford University Press 1975.

28. Olatunbosun, D(1975) Farm Settlements and Schools leaders profitability, resources, Use and Social Psychological considerations. Dissertation; Michigan State University.

29. Olukosi J.O.(1983) Agriculture in the Nigeria Economy: Paper prepared for Command and Staff College, Jaji, Kaduna in their Annual Lectures on Environmental Studies Nov.3, 1983.

30. Osuntogun, A(1980) Cooperatives and Small Farmers in Nigeria: An article in Nigerian Small Farmers Problems and Prospects in Integrated Rural Development Centre For Agricultural Rural and Development (CARD). University of Ibadan, Nigeria. Edited by S.Olajuwon Olayide, J.A. Ewekax V.E. Bello Osagie.

31. Roider W. Farm Settlement for Socio-Economic Development: The Western Case, Walt Forum Verlag Munchen 1971.

32. Saba, N.A.(1984), The Spatio-Economic Impact of Bida Agricultural Development Project on its influence Regions, (Unpublished M.SC. Thesis) A.B.U. Zaria 1984.

33. Sano. H.O. (1983), The Political Economy of Food in Nigeria 1960-1982. Uppsala: Scandinavian Institute of African Studies.

34. Schumacher E.F. (1973) Small is beautiful (a study of economics as if people mattered) 1973).

35. Shuaibu, S.S.(1986) Creating a new Rural Order to facilitate Development from Below: A case study of the Zamfara Area of Sokoto State. Seminar paper on thesis proposal presented at the Department of Geography A.B.U. Zaria 1986.

36. The Third National Development Plan 1975-80. Volume I & II.

37 Wallace, Tina(1979), Some issues raised in rural development by the World Bank Projects in Nigeria", Department of Research and Consultancy A.B.U. Zaria.

38. Williams. G. (1981) "The World Bank and the Peasant Problem". An article in Rural Development in Tropical Africa, by Heyer J, Roberts P., and Williams G. Macmillan Press Ltd.

39. Williams S.K.T., Rural Development in Nigeria. Ile-Ife: University of Ife Press 1978.

APPENDIX A

GEOGRAPHY DEPARTMENT

AHMADU BELLO UNIVERSITY ZARIA.

TOPIC: RURAL DEVELOPMENT THROUGH WORLD BANK ASSITED PROJECT. A CASE STUDY OF BIDA AGRICULTURAL DEVELOPMENT PROJECT.

QUESTIONAIRE ON SOCIO-ECONOMIC IMPACT OF BIDA AGRICULTURAL DEVELOPMENT PROJECT ON FARMERS WITHIN THE PROJECT AREA, TO BE ADMINISTERED TO THE FARMERS.

Enumerator's Name_____

Time started_____Time ended_____

Date of interview_____

INSTRUCTIONS: Put an x in the box against the correct answer or alternative where provided. Where no box is provided. Write the answer infront of the questions accordingly. e.g

What is your name? Kolo Tsado

Sex: Male [x] VFemale [ ]

1. What is your name_____
2. Village_____
3. Local-Government Area:_____
4. Sex: (a) Male [ ]
   (b) Female [ ]

   Age: (a) 0-20 years [ ]
   (b) 20-40 years [ ]
   (c) 40- Above [ ]

6. What ethnic group are you?
   (a) Nupe [ ]
   (b) Dibo [ ]
   (c) Others [ ] (Specify)_____
7. Marital status:
   (a) Married [ ]
   (b) Single [ ]
8. If you are married, how many wives have you [ ]
9. If married number of children alive.

Male		Female	
(a) None	[ ]	(a) None	[ ]
(b) 1-5	[ ]	(b) 1-5	[ ]
(c) 6-10	[ ]	(c) 6-10	[ ]
(d) 10-above	[ ]	(d) 10-above	[ ]

10. Level of formal Education attained:
    (a) No school [ ] (b) Adult literacy classes [ ]
    (c) Primary school [ ] (d) Koranic School [ ]
    (e) Post-Primary [ ] (f) Post-Secondary [ ]
11. In which of the following languages are you literate?
    (a) Arabic [ ] (b) Nupe [ ]
    (c) Hausa [ ] (d) English [ ]
    (e) None [ ]

.....P/2.

(e) Not interested in their activities ☐
(f) Others ☐ (Specify) _____

22. If you do belong to a co-operative society, what type?
(a) Production ☐
(b) Marketing ☐
(c) Consumer ☐
(d) Credit ☐
(e) Any other ☐ Specify_____

23. Can you tell me the number of fields that you work on?_____ Number
Now for each field could you give me some information?
Column 1 -Field name.
col. 2- Tehure of field a - purchased
b- Rent
c - Inherited
d - Pledged
e - Gift
f - Loan
col. 3-Number of years you have worked on this field.
Col. 4 - Persons working on this field:
a - Self
b - Family labour
c - Hired labour
d - Machinery/Tractors
e - Members of my co-operative Union
f - Any other
Col.5 - Type of farm -"Lati-efako"-a
b - Lati-Bucia
b - Bata -efako
d - Bata-Bucia
Col.6 -Has this field been measured Yes - a
No-b
Col.7- If yes in Col.6, how many acres.....
put 0 if the farmer does not know.
Col.8- How many days does it take to ridge this field-by hand
Col.9- How many years have you worked on this field?
Col.10-Crops grown last planting season on this field (list all crops).
Col11-If the field has not been planted, what crop or crops do you intend to plant? (list the crop of crops).
Col.12- Did you use fertilizer on this field last year?
a. None
b- Supa
c- Sulpha (Esangi)
d- Compound
Col.13- If you used fertilizer how much of each type did you use? (Specify quantity in terms of bags.) Bag (50kg).

Questions 23

.....P/4

	COL. 1	COL. 2	COL. 3	COL. 4	COL. 5	COL. 6	COL. 7	COL. 8	COL. 9	COL. 10	COL. 11	COL. 12	COL. 13	COL. 14
1.														
2.														
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														

24. If you wish to increase your farm acreage is land avilable in your village?

(a) Yes ☐ Why?_____

(b) No ☐ Why?_____

25. During the last five years have you been able to increase your farm acreage?

(a) Yes ☐

(b) No ☐

26. If yes, in question 25, how did you acquire the land?

(a) Purchased ☐

(b) Rent ☐

(c) Inherited ☐

(d) Pledged to you ☐

(e) Gift ☐

(f) Loan ☐

27. If No, Why?_____

28. What is the rough estimate of your annual income?

(a) Below ₦500 ☐

(b) ₦1000 ☐

(c) ₦5000 ☐

(d) Between ₦5000 and ₦10000 ☐

(e) More than ₦10000.

(f) No idea.

29. Out of this amount, what fraction of it do you realize from farmiing?

(a) All (b) 75% (c) 50% (d) 25%

(e) Less than 25% (f) Nothing.

30. Since when have you been a farmer?

(a) All my life ☐

(b) Since the inception of the project ☐

(c) 5 years ☐

(d) 10 year ☐

(e) More than 10 years ☐

31. Is labour available for hiring in your village.

(a) Yes ☐ (b) No ☐

.....P/5

32. If yes, where do the hired labourers come from?
    (a) Within the village ☐
    (b) Other villages in the project area ☐
    (c) Outside project area ☐
    (d) Other ☐ Specify

33. Do you sometimes works as a hired lablurer on others' fields?
    (a) Yes ☐ (b) No ☐

34. If yes, which of the following reasons, would best explain why you work as a hired labourer?
    (a) To meet up with financial family obligation ☐
    (b) To pay tax ☐
    (c) To buy food ☐
    (d) To engage myself during that period ☐
    (e) To buy any manufactured good of my choice ☐
    (f) Others ☐ (Specify)_____

35. Do you belong to any "dzoro" group?
    (a) Yes ☐ (b) No ☐

36. If yes, how many of you are in the group?_____
    Number

37. How many times in a year can you have this group to work on your farm?_____

38. Is "egbe" (Taimako labour) still being practiced in your village? (a) Yes ☐ (b) No ☐

39. If no, give reasons_____

40. Is there a farm Service Centre (FCS) in the village or area ?
    (a) Yes ☐ (b) No ☐

41. How far is the FCS from your compound?
    (a) ☐ miles
    or (b) ☐ minutes to walk.

42. How many times do you visit the FCS in a year?
    ☐ times a year.

43. For what reasons do you visit FSC?
    (a) Purchase fertilizer ☐
    (b) Seed dressing ☐
    (c) Herbicide ☐
    (d) Sprayers ☐
    (e) Tractors ☐
    (f) Purchase other imputs ☐
    ( ) Get information concerning purchases of crops by projects ☐
    ( ) Seek advice from the extension agent (A.I.) ☐
    ( ) Get information on time of fertilizer sales ☐
    (j) Visit demonstration ☐
    (k) Any others (specify)

44. Are you satisfied with the services provided by the FSC)
    (a) Yes ☐ (b) No ☐

.....P/6

56. If you own a tractor, do you rent it out to others?
(a) Yes ☐ (b) No ☐

57. If yes, under what arrangement?_____

_____

and for which operations?_____

_____

58. When did you first start using a tractor?
(a) Before the start of the project ☐
(b) After the start of the project ☐

59. Why did you start using tractors? Give your reasons_____

_____

_____

60. Do you use tractors for:
(a) all fields ☐
(b) some fields ☐

61. For what operations do, you use tractors?
(a) Harrowing /Ploughing ☐
(b) Ridging ☐
(c) Planting ☐
(d) Other ☐ Specify_____

62. Are you satisfied with agriculture as your occupation?
(a) Yes ☐ Why?
(B) No ☐ Why?

63. If you are not satisfied with agriculture as your occupation have you ever thought of changing your occupation?
(a) Yes ☐ (b) No ☐

64. If yes, specify the occupation that you would like to adopt?_____

_____

and why?_____

_____

65. Which of the following services has been provided by B.A.D.P. for your local government or village?
(a) Primary School ☐
(b) Roads ☐
(c) Irrigation Scheme ☐
(d) Electricity ☐
(e) Clinic or health centre ☐
(f) Others ☐ Specify_____

APPENDIX B

DEPARTMENT OF GEOGRAPHY
AHMADU BELLO UNIVERSITY,
ZARIA.

OUR REF: G/E/11 DATE: 4th September, 1986.

TO WHOM IT MAY CONCERN

This is to certify that Mr. Tsado Jacob Audu the bearer of this letter, is a bona fide postgraduate student of the Department of Geography, Ahmadu Bello University Zaria.

He is currently collecting data on Rural Development Through World Bank-Assisted Project: A Case Study of Bida Agricultural Development Project. Which will form the basis for his Thesis.

We shall highly appreciate any assistance given to him in the course of the exercise.

Yours sincerely,

(Sgd).
Prof. K.O. Ologe
Head of Department.