planning for smallholders within an integrated rural development programme : a case study from Benin river basin development authority, Nigeria

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ABSTRACT

The analysis presented in this paper revolves around finding ways of improving the productivity of small farmers within an integrated rural development effort. Date derived from diverse sources are used to demonstrate the type of analysis required in establishing integrated rural development project in a typical rural area. It is shown that delibrate effort should be made through synthesis of land use and water resources planning in order to transform agriculture from the subsistence type to commercial type. The types of data needed for such planning are given and specific reference is made of a typical rural area in Ondo State of Nigeria — the Owo Local Government.

It is contended that the River Basin Development Authority is an appropriate body to monitor the implementation of the proposed integrated rural development provided adequate precautions are taken to overcome obvious constraints of implementation. Such

INTRODUCTION

An important feature of Nigerian agriculture has been described as cropping small parcels of land which vary between half an hectare and two hectares throughout the country. This situation has remained so with the development of only a few commercial plantations and livestock farms over the years. More than 70 % of the population are still engaged in agriculture and its contribution to Gross Domestic Product ranks next to mining and quarrying. It is to be expected that structural changes in sectoral allocation of labour within the economy will not occur for many decades unless delibrate efforts are made to raise productivity of the small farmers. By raising the productivity of the small farmers surplus labour in the agricultural sector could be released to the other sectors of the economy while food requirements of the country could still be met. This approach takes the position that agricultural progress is normally a pre-condition for industrial development.

In the development literature however, much controversy exists as to which is a better path for progress as between balanced sectoral and unbalanced sectoral growth and/or the relative magnitudes of sectoral allocations between agriculture and industry. The same controversy permeates most discussions on rural and urban growth rates, development and/or sectoral allocations (1). As far as providing guides to the establishment of planning goals and priorities in any nation is concerned, particularly as between agriculture and industrial development, I take the position of Nicholls. In his contribution, NICHOLLS believes, « the role of agriculture in economic development depends heavily upon the stage of economic history in which a particular nation finds itself and, especially at the time that economic progress first becomes a major social aspiration, upon the ratio of agricultural land to population. The relative emphasis which public policy gives to agriculture, and the particular forms which agricultural policies take, must therefore vary accordingly ».

From the above, it is obvious that land use planning should not be seen from the restricted view point of agricultural development per se, rather, land use planning for agricultural development itself should be viewed within an integrated complex of regional and rural development, landscape architecture, infrastructural and water resources development. Water resources planning for competing alternative uses which cut across domestic, industrial, institutional and agricultural requirements is the traditional purpose of River Basin Development.

Recently in Nigeria, the Federal Military Government established a number of River Basin Development Authorities to plan water resources use among its competing needs. Given the apparent food shortages in the country resulting in high prices of foodstuff, water requirements for agriculture hold premium among these needs. Among the various sources of water, namely, precipitation, oceans, seas, lakes, underground, river and springs, the rivers are usually of major focus in land use planning. This is because as water flows down the slope from its source, it increases in volume by receiving tributaries and so gradually evolves a system which occupies a basin or catchment area surrounded by a main watershed.

In a full appreciation of the functions of rivers and their importance to overall development of a given territory in biophysiographic, flora, fauna, human and occupance terms, river basin development has become the focus of attention. This is to serve as a hollistic and multi-pronged attack on problems of socio-economic development. River and land use planning in trying to achieve the socio-economic needs of rural people is the central thesis of this paper.

In order to provide basis for such planning a brief conceptual description of land use and water resources planning will be examined in section two of this paper, while section three will focus on a description of rural socio-economic features as typified by the Owo Local Government area of Ondo State. In section four, a planning strategy for integrated rural development in the Local Government area will be described. Section five will focus on policy and implementation considerations of the strategy while the summary of the paper will be presented in section six.

CONCEPT OF LAND USE AND WATER RESOURCES PLANNING

The term « planning » has assumed a ubiquity of interpretation due to the application of a stylish word to dynamic modes of thinking and behaviour that will continue to differ radically over time. Within the frame of this ubiquitous meaning, can be seen certain common elements which enable us to define three broad categories of planning. First, is the deductive planning which results in blueprints for future development in terms of recommended courses of action for the achievement of desired goals. Second, is utopian planning which results in ideas too gradiose for the practical world and thus tends into fantasy. Third, is inductive planning which is an attempt to coordinate public policies in several overlapping economic and social areas. It is in this sense, a pragmatic and piecemeal, and never comprehensive and complete, framework constitue compromise solutions of pressing practical issues.

Modern planning is a special kind of prose that is essentially different from the classic aims of blue-prints, the free verse of utopians and the prose of earlier bureaucratic operations. It, therefore, involves the process of moving from the present to a targeted future after a careful choice has been made among competing goals. The selection of goals in itself must be based on tested factual knowledge with adequate empirical base and a rigorous evaluation of the socio-economic implications of the competing goals.

With this broad concept of planning, land use planning is viewed as the rational process of formulating acceptable policies and practices on the efficient land utilization based on a synthesis of land evaluation and socio-economic analysis.

(1) For a full discussion on these, see DUDLEY-SEERS' exposition of the three fallacies : 1 the classical fallacies, 2 the infant industry fallacies and 3 the industrialisation fallacies as they relate to industry and economic growth. On the side of agriculture and economic growth, see JOHNSTON and MELLOR, and EICHER and WITT for description of the role of agriculture in industrial growth and see the three-fold analysis adopted by KUZNETS in considering the contribution of agriculture to general economic growth, viz., « product type contribution », « market type contribution », and « factor type contribution ».

Water resources planning is taken as essentially a developmental undertaking that seeks to improve human conditions through the optional harnessing of the productivity and supply potential of fluvial processes for use.

A DESCRIPTION OF RURAL SOCIO-ECONOMIC FEATURES : THE CASE OF OWO LOCAL GOVERNMENT AREA OF ONDO STATE

The first consideration before planning an integrated rural development is a thorough analysis of the socio-economic characteristics of the rural area in which the plan is intended to cover. Our choice of the Owo Local Government area for detailed study out of the seventeen Local Government areas of Ondo State is based on three main considerations. First, is the presence of a net-work of rivers evenly distributed over a large part of the area. Second, is the relative extent to which land and water resources have been harnessed to meet the agricultural production, domestic and industrial uses potentials of a particular Local Government area. Third, is the need to even out economic opportunities in different parts of the state. Although, these criteria are not completely deterministic in the sense that by applying similar criteria to other Local Government areas in Ondo State, more will be qualified, the final choice is made to describe a typical situation.

The discussion to be made subsequently in this section is based on analysis of available data derived from diverse sources, presentation of data needs, types of analyses to be made on them where data are either, not available or are not in analysable form for the purpose of this paper in order to show vividly the main characteristics of the study area.

Population

The estimated population densities, rural and urban populations of Owo Local Government areas for the years 1977, 1985 and 2000 projected at an annual growth rate of 2.5 % from 1963 census are presented in Table 1.

TABLE 1 : POPULATION PROJECTIONS OF OWO LOCAL GOVERNMENT OF ONDO STATE

Year	Rural population density (persons/km²)	Overall population density (persons/km²)	Rural population ('000)	Urban population ('000)	Total population ('000)
1963	43	71	109.4	80.4	189.8
1977	61	105	154.6	113.6	268.2
1985	74	128	188.3	138.4	326.7
2000	107	186	272.8	200.0	473.3

Source : Computed from Owena-Ogbese River Basin Pre-feasibility Studies, Final Draft Report. Vol. II.
Prepared for Benin River Basin Development Authority by NWANKWOR, NICHOLAS, O'DWYER and Partners, May 1978.

Geographical Description and Farming Activities

The total land area of Owo Local Government area is approximately 2,550 square kilometers. This is equivalent to 660,728 ha. If we assume that about 50 % of this area can be farmed, then about 0.33 million hectares in Owo Local Government area are arable. In actual fact, the total area farmed by rural farming households is less than 10 % of the estimated arable area of 0.33 million hectares. Considering the fact that the rural farming household produce over 80 % of the total agricultural out put of the LGA, the percentage of arable land that is being cropped in Owo LGA is below the average estimated for Nigeria. Out of the Nigeria total land area of 98.3 million hectares, about 71 million hectares are arable while only about 34 million hectares or less than half are under cultivation. Moreover, low productivity and low rate of land utilization attend the 34 million hectares under cultivation. This situation clearly shows the very low level of agricultural productivity in Owo Local Government area.

The figures in Table 2 are given to enable us see at a glance the suitability of Owo Local Government for growing most of the major crops of high domestic and export value in Nigeria. The rainfall, temperature and relative humidity will support such crops as cocoa, oil palm, plantain, yam, maize and cowpea. Data on temperature and relative humidity are taken from Ondo, the nearest location of similar ecological zone to Owo Local Government area since such figures were not available at the Local Government at the time of writing this paper. Figures on rainfall are derived from two locations within the Local Government area.

TABLE 2 : MEAN MONTHLY RAINFALL, TEMPERATURE AND RELATIVE HUMIDITY OF OWO LOCAL GOVERNMENT AND NEAREST SIMILAR ECOLOGICAL LOCATION OF ONDO STATE

Station/Item	Elev. (m)	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	An-nual	Nb. of years
Rainfall (mm)															
Owo Govt. School	321	11.7	33.8	84.1	138.2	157.2	176.0	185.7	141.0	234.9	140.2	39.6	19.0	1361.4	29
Ifon	122	0	34.5	74.2	141.2	134.1	206.5	204.0	227.3	193.8	182.1	12.2	5.1	1415.0	28
Temperature (°C)															
Ondo	287														
Max.		31.3	32.8	32.0	31.3	30.2	28.9	27.1	26.7	27.9	29.1	30.7	30.9	—	
Min.		21.6	22.2	22.3	22.2	21.8	21.4	20.9	20.7	21.2	21.2	21.9	21.4	—	
Mean		26.5	27.5	28.4	27.1	26.5	25.5	24.3	23.8	24.9	25.4	26.2	26.0		
Relative Humidity % (12.00 Hrs G.M.T.)															
Ondo	287	60	56	64	69	72	76	82	81	80	75	68	61	70	(ave.)

Source : Computed from Owena-Ogbese River Basin Prefeasibility Studies, BRBDA, Final Draft Report, Vol. II., May 1978.

Apart from the suitable climatic conditions for growing major food and tree (export) crops in the area under study, the socio-economic features of the farmers in relation to farming activities, available sources of water and its uses revealed during the investigator's visit that water resources was being rarely tapped for agricultural production. There was no irrigated farm. Most crops were rain-fed. Domestic water in the rural areas were obtained from small streams and wells. The streams which usually pass through many villages were already contaminated by the villagers. Such streams usually carry water borne diseases which when taken by farmers impair their health and lower their productivity.

Health facilities, Medical and Paramedical Personnel

While we are not able to present figures under this topic, casual observations show that the situation does not differ from what obtains in typical rural areas of developing countries. Generally, rural areas are traditionally isolated in terms of medical and health staff and facilities. Yet, the importance of adequate medical care and health facilities to the deve-

Education and Skill

Information on manpower, to be useful, must be carried out on a continuous basis. Such information cannot be restricted to part of a nation or political system. The national, regional and sectoral information on the education and skill levels of the population are needed to integrate policy and programmes of education and training in order to achieve optimal balance between supply and demand for labour.

This will involve the cross-tabulation of data and projections of school-age population and enrolment by sex, age, and level of schooling; of entrance into and departure from the labour force; of working-age population by sex, education, special skills, of admissions to, drop-out and graduation from all levels of education — formal, technical and informal.

Other Information

These should be related to the number of banks, cooperative, rural credit institutes, network of roads, schools, post offices, postal agencies and markets available in the study

paper is one that would be based on peoples' abilities and potentials for self development. In other words, we believe in a development process that puts very little reliance on what the Government can provide, but rather on what the system itself can generate for a continuous development. With the River Basin Development Authority as the coordinating institution a number of other institutional establishments could be brought to the area to provide different types of service functions. Such institutions will include financing institutions like the Bank and Agricultural Credit Corporation, Rural Electrification Board, Water Board, Health Services like health centres and maternity homes and dispensaries. Educational institutions like schools at different levels — primary, secondary and technical, commercial centres for shopping by different grades of people and a communication network for land and river travels where applicable, post offices, postal agencies and telephone systems, recreational centres and farm production areas. The figure given below shows a vivid picture of institutional network for such development. How these institution relate to one another will be a matter or details. What we are concerned with here is that the smallholders should be well fitted into the programme by leasing undeveloped farmland or irrigated land of manageable sizes to individual farmer or small size farmers of two to ten members and to ensure that available modern input technologies are used in farming. These measure would enable farmers raise productivity of such farm resources as land, labour and capital. The income of the farmer within the rural integrated programme could then be enhanced to make him benefit from the whole institutional framework of the system.

The plan puts the River Basin Development Authority as the coordinating institution with farm production units as its central focus. The principal roles of the Authority are in making the master plan, making contacts with the involving organisations and assisting them to establish in the new community. Where it is feasible, the Authority should make direct investment. In establishing a complex system like the one envisaged there are bound to be many problems of implementation. Some of such problems and ways of dealing with them are treated in the next section.

POLICY AND IMPLEMENTATION CONSIDERATIONS OF THE STRATEGY

As evident from the previous section, the strategy being proposed is a rather complex one involving many organisations and people. Some of the sensitive areas include :

1 Problem of inertia, that is, reluctance of people to adjust to changes.

2 Problem of providing sufficient economic incentives to justify investment by involving organisations in such development project.

3 Problem of poor internal organisation of the River Basin Development Authority, which may result from lack of foresight or lack of personnel in appropriate quantity and quality.

4 Unsteady flow of funds for the project where Government is being requered to provide additional infrastructure may cause frustration for participating individuals and organisation, and

5 The rate at which additional staff could be supplied to meet the increased administrative, professional and technical needs of participating organisations.

These sensitive areas form the platform for planning the project. The extent to which they can be adequately managed will determine the degree of success to be attained by the project. In this connection, such a project like this need to be backed by authority of governmental machinery. The establishment process should be worked into government policy. The whole process of policy formulation should involve relevant professionals such as economists, estate planners, agriculturists, accountants and lawyers.

The implementation of the policy to which the programme has been infused will be derived from the authority of government machinery. The type of authority envisaged has already been vested in the River Basin Development Authorities in Nigeria by decrees (2). One major common problem the River Basins are likely to face is that of ordering priorities of their activities. It appears that the scope of their activities enumerated in the said decrees is very wide. In order to provide proper sense of direction in implementing the type of integrated rural development programme described above, and other programmes of the River Basins presupposes that the Planning Department of the River Basin Development Authorities should be strong. Except this is realised and consciously done the River Basins would represent another type of « white elephant » projects which could be very wasteful on the limited resources of developing countries.

SUMMARY

Agricultural and indeed economic development in Nigeria requires structural changes in sectoral allocation of labour between the agricultural and industrial sectors. The necessary structural changes can be effected by proper planning of the use of land and water resources monitored through the River Basin Development Authorities.

Planning can be approached from three possible conceptual viewpoints, namely, deductive planning, utopian planning and inductive planning. However, modern planning should involve the process of moving from the present to a targeted future where selection of goals is based on tested factual knowledge with adequate empirical base and a vigorous evaluation of the socio-economic implications of the competing goals in a given geographical area. Land use and water resources planning should be seen from their multi-dimensional requirements and potentials for meeting such requirements.

Planning strategy for integrated rural development is a rather complex one involving many individuals and organisations. Some of these are Agricultural Credit Bank, Rural Electrification Board, Water Board, Education and Health Services institutions. The success of any integrated rural deve-

(2) For the full details of these decrees, see the Federal Government decrees Nos 25 and 31 on the River Basin Development Authorities of 1976 and 1977 respectively.

lopment will depend on how effectively the system can overcome problems of inertia, provision of economic incentives for participating organisations, poor internal organisation of the monitoring establishment, insufficient funds from the government and insufficient supply of administrative, professional and technical manpower.

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