RESEARCH REPORTS

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1. Meyer-Heiselberg, R., Notes from Liberated African Department in the Archives at Fourah Bay College, Freetown, Sierra Leone. 61 pp. Uppsala 1967. (OUT-OF-PRINT)

2. Not published.


THE POLITICAL ECONOMY OF FOOD IN NIGERIA 1960-1982

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Hans-Otto Sano
THE POLITICAL ECONOMY OF FOOD
IN NIGERIA 1960-1982
A Discussion on Peasants, State,
and World Economy

The Scandinavian Institute of African Studies
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INTRODUCTION

The objective of this research report is threefold. Firstly, to analyse the evolution of the Nigerian food crisis, which emerged during the first half of the 1970s; secondly, to discuss the implications of the policies by which particularly the present civilian government has sought to respond to the crisis. Both of these analyses constitute the two main parts of the report. Thirdly, it is the objective to discuss a more general perspective of the option of alternative policies open to the government. In this concluding part of the report the food crisis in Nigeria is related to the economic transformation taking place in the country, and the political economy of food is studied as a case of the conditions under which a Third World nation is being incorporated into the global system.

Food production has moved into the centre of political concern in most of black Africa south of the Sahara. In most countries production per capita fell during the 1970s, having kept almost constant during the preceding decade. Food imports and domestic prices are generally rising. In the Nigerian context I have chosen to describe this situation as "the food crisis" instead of employing the term "the food deficits" used by, for instance, Lofchie and Commins in their article on the various approaches to rural development and increased food production in Africa. I have done this to denote the complexity of the situation, in which both food shortages, rising imports and rising prices are involved, as well as its gravity - contributing, as it did in Nigeria, to cases of malnutrition and famine, to a coup, and to an urge for new agricultural policies.

What is behind the emergence of the food crisis in Nigeria? It is claimed that it evolved out of more reasons than just the favouring of export crop production by the first governments of Independent Nigeria and their concomitant neglect of food production. Neither do the devastations of the civil war, the long-term degeneration of rotational fallow production systems, nor the Sahel drought suffice as adequate explanations. Apart from these factors, the crisis also has its roots in the gradual transformation of the Nigerian economy, which accelerated with the impact of the oil price increases during the 1970s. The food crisis is thus closely linked to the pace of
industrialization, urbanization and public development efforts in the country. Due to her oil wealth, the pace of economic transformation is disproportionately rapid in Nigeria compared to other African countries. This contributes to make the food crisis particularly grave and noticeable in Nigeria and hence also reveals the structural nature of the crisis, disclosing the link between economic growth and transformation and the falling level of food production. It is likely that the same underlying tendencies also cause the food deficits in other countries on the continent, although this proposition is not examined further in the present context.

The emergence of the crisis has compelled the leaders in Nigeria to alter the cast of their agricultural policies. It has caused not only a shift of emphasis from export crop production to food production, but also partly from the favouring of large-scale farming to peasant production. Whereas the federal civilian government was reluctant, as we shall see, to complete such a shift, the World Bank, which has become more active in Nigeria with the crisis, has used the country as one of the testing grounds for its smallholder approach. The different strategies pursued by both of these agencies are discussed in the Second Part of the report dealing with the implications of the new food policies. It is argued that even though the policies will enhance the growth of production, they will also create inequalities in the rural areas, increase the vulnerability of the system of production and intensify dependency of the economy in general on foreign states, corporations or agencies.

The ultimate logic of the transformation of the Nigerian economy, of which the attempts to increase food production form one part, is thus to bring the economy in closer contact with the world system. Hence, there are three problem areas on which the research report focuses, i.e., the peasants, the state and the global economy. While most of the report concentrates on the first two problem areas, the latter is included in the concluding analysis. In this final part the option of alternative policies to the ones pursued by the government is discussed. Criticism has too often been directed against rural development policies in Africa, for example, without considering the options and constraints of the governments. There are, however, and this is the basic
thrust of argument in the concluding part, weighty limitations restricting the freedom of action among the leaders. They are certainly not totally tied in their priorities, and one should be well aware of the possibility that an argument of this kind very easily may serve to excuse miscarried policies; nevertheless, at certain levels of action important choices impose themselves on the governments. In the concluding part, the fundamental impact of the integration of the Nigerian economy in the world economy is particularly focused on, putting the analysis of the main parts in a more general perspective. Hence, while the basic interest and scope of this study is an empirical analysis of the evolution of food policies in Nigeria, it ends with a discussion of the conditions under which a Third World country develops.

PART I AGRICULTURE AND THE NIGERIAN STATE 1960-1982

In the following chapters the evolution of the Nigerian food crisis is the main object of analysis. The analysis deals primarily with the 1970s, i.e., the period during which the food crisis surfaced. A short review of the preceding period is, however, also included in order to present a necessary background to the main analysis. Secondly, apart from these analyses, the chapters below also focus, albeit generally, on the transformation of the Nigerian economy and polity during the 1960s and 1970s. This process of transformation has a profound impact on the role of food production in economic development, I shall argue, and accordingly also on the character of the food crisis. The analysis of the process of economic and political transformation is primarily conducted by studying the Nigerian development plans and by discussing the changing role of the federal government which emerged after the civil war. Before entering into a discussion on these issues, however, a brief introduction to the Nigerian society, environment and agricultural systems is presented.

1. AGRICULTURE, THE PHYSICAL ENVIRONMENT AND THE STATE

Human culture and the rainfall are the main determinants of the physical environment in Nigeria. The temperatures are fairly constant throughout the year, ranging between 25° and 35°C during the middle of the day in most parts of the country. There are, however, wider variations of temperature in the north, where there is a distinct cold season during December and January with temperatures of about 20°C, and a distinct hot season during April and May with temperatures of about 40°C. The rainfall varies north-south with an annual precipitation of less than 500 mm in the north and more than 3000 mm in the south. The ecological zones of the country follow the rainfall pattern. The swamps and rainforests of the extreme south shift into wooded savanna with tall grasses, the so-called Guinea savanna. Further north, following the isohyets, the trees are more dispersed and the grasses shorter. This is the Sudan savanna, which in the extreme north shifts into the Sahel savanna with sandy soil supporting scanty bushes and small trees.
The ecological zones have created three types of agricultural production, no more distinct, however, than the graduation of the savanna zones themselves. In the south, roots and tubers like cassava, yams, and cocoyams dominate the subsistence production, but also cereal crops such as maize are grown in this region. The root crops almost extend as far north as to the Sudan savanna. Particularly during this century, the peasants have grown or reaped tree crops like cocoa, rubber palms or oilpalms to obtain cash in addition to their "subsistence income".

In the Sudan and Guinea savanna, cereals like millet and sorghum and pulses like cowpeas are the main staples. These crops have extended south of the River Niger and its tributary the River Benue. In the Guinea savanna the root crops of the forest and the cereals of the savanna thus overlap. This region is often termed the middle belt. In the savanna, however, groundnuts and cotton are the dominant cash crops.

The savanna or forest zones have been cultivated by scattered communities of human settlement. During recent centuries the peasants have practiced either a system of rotational bush cultivation or a system of permanent farming, depending on the population density. Although permanent ownership rights have permeated during this century, particularly in the densely populated areas of the north around urban settlements such as Kano, land is generally considered to belong to the lineage, the clan or the village on the basis of usufructuary rights. Hence, the alienation of land has either been prohibited or has required the consent of the group in which it has been vested.

The third type of agricultural production is also associated with the northern region, i.e., livestock rearing. It should be noted, however, that sheep, goats and poultry are increasingly kept by sedentary peasants even in the southern parts of the country. These animals constitute an important additional nutritive food supply to the starchy root and cereal crops. They provide, moreover, useful farm manure, which is particularly necessary in areas of dense population. Cattle rearing, however, is still mostly undertaken by semi-nomadic herdsmen. Attempts to introduce mixed farming were made during the colonial period, but
generally without success. Cattle rearing is almost exclusively restricted to the Sudan savanna due to the high incidence of tsetse-infestation in the Guinea-zone. Eradication campaigns against the fly and inoculation campaigns against trypanosomiasis have been undertaken since Independence in an effort to increase the area available for stock-rearing. The campaigns have reduced the incidence of trypanosomiasis by approximately 50 %,\(^6\) but cattle-herding is still mainly practiced in the Sudan savanna. In the following chapters I shall concentrate exclusively on the crop cultivation aspect of agriculture in Nigeria as the most important part of domestic agricultural production.\(^7\)

The natural geography of Nigeria is split into three parts by the southward bend of the River Niger and the eastern origin of her tributary the Benue. Since neither of the two main highland regions of the country, the Jos Plateau and the eastern highlands, are of insurpassable height (between 1000 and 1500 m), the Y-shaped flow of the Niger and the Benue forms the main natural boundary of the country.

This natural division has affected the cultural divisions of the country. It is generally considered that four main groups of people - the Yoruba-speaking, the Ibo-speaking, the Hausa-speaking and the Fululde-speaking - dominate Nigerian culture and political life. In actual fact, a far greater linguistic variety is characteristic but these groups are numerically the most important.

The Yoruba- and the Ibo-speaking groups mainly occupy the western and eastern territories respectively, south of the Y-fork. Their cultivation systems are determined by similar ecological zones (the forest and the Guinea savanna), although the soils of the eastern Ibo-speaking parts of the south are less fertile than those of the western parts.

Numerically, the Hausas dominate the northern region. They are often farmer-traders rather than exclusively cultivating peasants. The Fululde-speaking Fulanis are the dominant semi-nomadic people of the north, although sections of the Fulani-community have settled down as urban dwellers quite distinct from the cattle-Fulanis. This happened particularly after the Jihad of 1804, when the Fulanis overthrew the reigning Hausa-regime to acquire religious and political leadership of the north.
The great religious division of the country between the Islam of the north and the Christianity of the south follows the ecological boundary of the forest rather than the natural boundary of the Rivers Niger and Benue. About half of the Yoruba-speaking people are islamized.

Before the introduction of British colonial rule at the turn of the century there had been no unified state called Nigeria. The territory of the north had come under unified, but not very centralized, rule when the Fulanis at the beginning of the 19th century conquered the various scattered Hausa kingdoms of the north in their quest to reform and purify Islam. The caliphate, which was established in Sokoto, extended its influence south of the Niger and Benue to the forest zone. The territories of the forest, the west and the east, were at the time of the colonial conquest characterized by a variety of political and linguistic divisions.

The whole complex of ethnic, linguistic, economic and ideological divisions affected British and later indigenous attempts at nation-building, but these divisions were also strengthened by colonial rule. When the British amalgamated the northern and southern regions in 1914 and thus for the first time created a unified Nigerian state, they maintained a much more distant position to Islamic culture in the north. In this region they professed a true version of the model of indirect rule, while in the south they exerted a more direct form of colonial rule allowing, among other things, western government, culture and education to penetrate. At the same time they encouraged economic specialization of the regions by promoting cultivation of crops for export. Cocoa became the export crop of the west, cotton and groundnuts those of the north, palm products those of the south and rubber that of the mid-west in an predominantly Ibo-speaking area on the western bank of the Niger.

When, after the Second World War, some form of autonomous and subsequently independent rule was decided upon, a federal constitution was launched giving a large measure of self-government, e.g. in agricultural issues, to these three economically specialized regions of the north, west and east, each characterized by her dominant linguistic group. Later, in 1963, a fourth region of the mid-west was also created.
2. AGRICULTURAL POLICIES DURING THE 1960s. A REVIEW

The period of transition to Independence in Nigeria was started soon after the Second World War. A more active form of government policy than had characterized the pre-war colonial laissez-faire policies was initiated immediately after the war, to some extent due to nationalist pressures. Real attempts to introduce economic planning, however, were not started until 1955 following a report submitted by a World Bank Mission on the priorities of economic development. The initiation of planning coincided moreover with the introduction of the 1954 revised constitution which finally legalized the sub-division of the country into three regions.

The priorities adopted in this initial period of planning, however, did not mark any break-away from the priorities that had characterized earlier colonial economic policies. Resources were still concentrated on infrastructural development and on the attempts to introduce some basic form of social services in health and education, as evident from table 1.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Public Investment Programmes by Sector, 1955-80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Naira million</td>
</tr>
<tr>
<td>Nm</td>
<td>%</td>
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<tr>
<td>Primary prod.</td>
<td>37.8</td>
</tr>
<tr>
<td>Trade+industry</td>
<td>20.8</td>
</tr>
<tr>
<td>Transport+communication</td>
<td>264.6</td>
</tr>
<tr>
<td>Other economic investments</td>
<td>35.2</td>
</tr>
<tr>
<td>Education</td>
<td>47.8</td>
</tr>
<tr>
<td>Health</td>
<td>27.8</td>
</tr>
<tr>
<td>Water</td>
<td>37.0</td>
</tr>
<tr>
<td>Other social investments</td>
<td>45.6</td>
</tr>
<tr>
<td>Administration</td>
<td>93.4</td>
</tr>
<tr>
<td>Rest</td>
<td>30.2</td>
</tr>
<tr>
<td>Total</td>
<td>660.2</td>
</tr>
</tbody>
</table>

The first plan launched by the independent government, the First National Development Plan 1962-68, represented both a continuation and a shift away from these policies. Infrastructural works were still given nearly 40% of total allocations since the 15% under "Other economic investments" in table 1 conceals the major infrastructural work of the 1962-68 plan period, i.e., the construction of the Kainji Dam on the Niger for electrical power. The two subsectors of Primary production (agriculture, forestry, fishing and mineral development) together with Trade and industry, however, received 13.6 and 13.4% respectively of planned public outlays compared to a total of 8.9% earlier. The First Plan thus gave a new priority to the productive sector, which had been stepmotherly treated during the colonial period.

In the social sector Education was given priority over Health compared to earlier investments, but the sectoral allocation as a whole remained constant at about 24%. Part of the larger allocation for the productive sector was thus taken from the lower expenditure for Administration, which received only 7% in the 1962-68 programmes compared to 14% in 1955-60.

In its emphasis on the productive sector and the large-scale infrastructural works the plan aimed at modernization and transformation of the economy. When it came to implementation, however, it was characterized by considerable underspending in all sectors except that of Administration. In the economic sector underspending amounted to 43% in Primary production, and 48% in Trade and industry. Underspending in the economic and social sectors and overspending in the bureaucratic was to characterize all plans in Nigeria up to the present 1981-85 plan. It reflects the lack of absorptive capacity of the economy in general and the difficulties in making the planning process efficient in particular.

The transformationary ideology was reflected in the agricultural strategy. The three regional governments, which controlled most of the agricultural spending, diverted the bulk of resources to the establishment of plantations and farm settlements, primarily for export crop production. Both the peasants and staple food crops like cassava, yam, sorghum, millet and cowpeas, remained thus in the obscurity of national development concern. There were some attempts to improve the nutritional quality of the Nigerian diet by promotion of protein-rich foodstuffs like poultry, livestock, dairy and
rice, as well as attempts to introduce import-substituting crops like sugar and wheat. Investments in the production of these items were mainly undertaken in connection with the establishment of big ranches, farm settlements, irrigation schemes or government sponsored cooperative schemes. Apart from the northern region where some extension services were provided for, the food-producing peasants were left to cater for themselves.

In retrospect it is easy to criticise the politicians and planners for their subversion to the modernizing ideologies and for the continuation of the export-oriented agricultural policies, originating in the colonial period. But the policies were not entirely unjustified in economic terms. At the beginning of independent rule the export crops of cocoa, groundnuts, cotton, palm products and rubber provided more than 75% of total export earnings. During most of the 1960s they remained the strategic products of the economy, providing precious foreign exchange to pay for imports of capital and know-how. By the middle of the decade they still contributed more than 50% of the total export earnings although the value of petroleum exports in 1965 surpassed the export value of any single crop. The export crops, however, were also politically important as the earnings from them went almost totally into the treasuries of the respective regional governments, thereby contributing to their prosperity and positions of strength in the inter-regional rivalry which emerged after Independence.

There are no absolute figures available to illustrate the growth of food production. In table IIA indices and growth rates of production are presented. In table IIB a breakdown of the aggregate figures in IIA has been made to illustrate rates of growth of the staple food crops before the civil war and during the 1960s as a whole. According to the data in table IIA, food production was growing at an annual rate of almost 4% between Independence in 1960 and the outbreak of the civil war in 1967, well ahead of population growth at the assumed rate of 2.5-3%. Production declined of course during the years of the civil war, but not to any remarkable degree. Including these years in the average, the growth rate during the period from 1960/61 to 1970/71 was at 3.1%. Moreover, table IIB shows that it was mainly the root crops and maize of the southern forest and war zone, which declined during the war. The production of savanna crops was even increasing.
TABLE IIA  Indices and Growth Rate of Food Production  
1960/61 - 1974/75. 1964/65 = 100

<table>
<thead>
<tr>
<th>year</th>
<th>index</th>
<th>growth %</th>
<th>year</th>
<th>index</th>
<th>growth %</th>
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</thead>
<tbody>
<tr>
<td>1960/61</td>
<td>82</td>
<td>17.1</td>
<td>1968/69</td>
<td>80</td>
<td>-10.1</td>
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<tr>
<td>1961/62</td>
<td>92</td>
<td>12.2</td>
<td>1969/70</td>
<td>90</td>
<td>12.5</td>
</tr>
<tr>
<td>1962/63</td>
<td>92</td>
<td>0.0</td>
<td>1970/71</td>
<td>94</td>
<td>4.4</td>
</tr>
<tr>
<td>1963/64</td>
<td>103</td>
<td>12.0</td>
<td>1971/72</td>
<td>87</td>
<td>-7.4</td>
</tr>
<tr>
<td>1964/65</td>
<td>100</td>
<td>-2.9</td>
<td>1972/73</td>
<td>63</td>
<td>-27.6</td>
</tr>
<tr>
<td>1965/66</td>
<td>102</td>
<td>2.0</td>
<td>1973/74</td>
<td>72</td>
<td>14.3</td>
</tr>
<tr>
<td>1966/67</td>
<td>89</td>
<td>-12.7</td>
<td>1974/75</td>
<td>82</td>
<td>13.9</td>
</tr>
<tr>
<td>1967/68</td>
<td>89</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Note: Included in the table are crops like cassava, cocoyams, yams, sweet and Irish potatoes, plantains, maize, millet, sorghum, rice, cowpeas, palm oil, groundnut oil, vegetables, oilseeds, nuts and local wine.


<table>
<thead>
<tr>
<th></th>
<th>cassava</th>
<th>yams</th>
<th>sorghum</th>
<th>millet</th>
<th>maize</th>
<th>cowpeas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960/61 - 1966/67</td>
<td>3.0</td>
<td>5.7</td>
<td>4.8</td>
<td>9.9</td>
<td>11.5</td>
<td>7.1</td>
</tr>
<tr>
<td>1960/61 - 1970/71</td>
<td>-1.7</td>
<td>3.6</td>
<td>6.8</td>
<td>14.1</td>
<td>9.1</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: As table IIA

It should be noted, however, that all these figures are probably on the high side. By employing data presented earlier by the Federal Office of Statistics and by including fewer crops in his aggregate growth rate Dupe Olutunbosun arrives at a compound growth rate of 2 % for the whole decade.¹⁰

Relatively speaking, food imports remained constant at a level of 10 % of total imports throughout the decade. They consisted mainly of wheat, wheat flour, sugar, milk and fish, i.e., the products which planners and politicians sought to substitute by indigenous production.¹¹ Moreover, the level of food imports seemed sufficient to curtail inflation. Food
prices kept relatively steady during the whole of the 1960s (see table VIA below).

Hence, it is not altogether surprising that the growth of food production was believed to be a long-term question and that the politicians considered the provision of supplementary foods to be a more immediate problem. These views were also held by the foreign experts who began to influence agricultural policies, particularly after the middle of the decade. During the 1960s teams of foreign experts were called in to assess the problems and prospects of Nigerian agriculture and thus complement the rather sketchy outlines which had been presented in the First Plan. FAO published a comprehensive report in 1966 recommending production plans for both food and export crops and stressing the long-term problems of food production. Of greater importance were the policy recommendations of the various reports presented by the American Consortium for the Study of Nigerian Rural Development based in Michigan University. Research by the Consortium was undertaken into virtually all aspects of the rural economy - investment patterns, economy of food and export crops, agricultural research, extension and credit services, etc. In 1969 CSNRD published its final report based on the various parts of the study.

Two conclusions of the report are particularly worth mentioning. The attempts to restructure agricultural production by the establishment of large-scale plantations or farm-settlements which had characterized the agricultural policies of the regional governments, were rejected as uneconomic, whereas development efforts concentrating on the smallholder were emphasized. Secondly, it was held that lack of effective demand was a major restraint in expanding food production. Hence, the report recommended ongoing research activities into nutritionally superior foods like beef, poultry, eggs, milk, maize and beans, but stressed that, "since the production of the four major staples (sorghum, millet, cassava and yams) satisfies effective demand... there is little economic justification for Nigeria to launch major long-run food production campaigns in the 1970s to satisfy the domestic market at the expense of export crop production" (p 13).

It is striking to note that after so much careful examination and work, the Consortium made such blatantly incorrect recommendations. Only 3-4 years after the publication
of the report, it began to be realized that Nigeria needed a well-elaborated food policy and that food production would have to increase rapidly in order to curtail the steadily rising imports and prices. It casts a certain shadow over the value of economic predictions, and even today it is disturbing to note, how international agencies, e.g. the World Bank, which at that time held more or less the same views as the CSNRD, still prevail in their criticism of African agricultural policies, as evidenced in a report like *Accelerated Development in Sub-Saharan Africa* (1981).

Whereas the CSNRD experts argued for a maintenance of the export bias of the Nigerian agricultural policies, they recommended a change in the second pillar of the agricultural policies - the large-scale transformatory approach. This recommendation was only partly followed up by the military and later civilian governments, as we shall see, in spite of the recommendations by new teams of foreign experts.

3. THE STATE AND THE COMMODITY EXPORTS DURING THE 1970s

The civil war put an end to the issue of regional secession in Nigeria. Both the Northern and the Western regions had threatened to split up the federation earlier but it was by no means a coincidence that it was the Eastern region which finally attempted to achieve secession. It was to the Eastern region the oil revenues had begun to flow during the 1960s, and oil was to determine the future of the Nigerian economy, thus disturbing the interregional balance based on the incomes derived from agricultural exports.

The civil war paved the way for a new type of state. A strengthening of the power of the central government was necessary to distribute and invest incomes from the petroleum exports. Petroleum exports thus reinforced the tendencies inherent in economic growth towards centralization. Immediately before the outbreak of the civil war the military government under General Gowon laid the foundations of a new constitution by creating 12 states instead of four regions. The number of states was later (in 1976) increased to the present 19, but the issue of further sub-division is still alive in Nigeria.

The new constitution was introduced in 1979, and a civilian government was elected under President Shehu Shagari.
In comparison with the constitution of the First Republic modelled on the British parliamentary system, that of the Second Republic was modelled on the American system with fairly wide executive authority given to the president. It was, moreover, characterized by strong central control over the distribution of revenue.  

While petroleum prices remained almost constant during the 1960s, production increased from 5 mill. barrels in 1960 to almost 325 mill. barrels in 1970 and to more than twice this amount in 1980 (see table III). Earnings from oil exports increased accordingly from about N 9 mill. in 1960 to 500 mill. in 1970. Oil prices almost quadrupled between 1973 and 1974 from a level of $ 3.8 per barrel to a level of 14.7 per barrel. During 1979 and 1980 they increased almost 300 % from a level of $ 14.1 per barrel to $ 40 per barrel at the end of 1980.

| TABLE III Agricultural a) and Petroleum Exports 1960–1980. Quantity (in 1,000 tonnes and in millions of barrels), b) Value (in N million) and Percentage Share of Total Exports |
|---|---|---|---|---|---|
| Agricultural exports | quantity | value | share of exp's | Petroleum exports | quantity | value | share of exp's |
| 1960 | 1,218.0 | 251.0 | 75.8 | 5.2 | 8.8 | 2.7 |
| 1965 | 1,506.0 | 289.0 | 54.9 | 81.9 | 136.2 | 25.9 |
| 1970 | 799.1 | 253.4 | 28.6 | 324.5 | 510.0 | 57.6 |
| 1971 | 785.4 | 232.8 | 18.0 | 451.7 | 953.0 | 73.7 |
| 1972 | 629.6 | 155.0 | 10.8 | 541.2 | 1,176.2 | 82.0 |
| 1973 | 718.5 | 224.5 | 9.9 | 594.1 | 1,893.5 | 83.1 |
| 1974 | 494.7 | 254.1 | 4.4 | 607.3 | 5,365.7 | 92.6 |
| 1975 | 417.7 | 216.1 | 4.4 | 538.7 | 4,563.1 | 92.7 |
| 1976 | 529.8 | 261.0 | 3.9 | 604.2 | 6,321.7 | 93.7 |
| 1977 | 391.2 | 364.9 | 4.8 | 741.4 | 7,072.8 | 92.7 |
| 1978 | 285.8 | 408.4 | 6.7 | 604.0 | 5,401.6 | 89.1 |
| 1979 | 305.5 | 459.8 | 4.2 | 803.4 | 10,166.8 | 93.8 |
| 1980 | 240.1 | 337.7 | 2.4 | 729.5 | 13,523.0 | 96.1 |


a) Including cocoa, cotton, groundnuts and groundnut oil, palm oil and kernels, and rubber.  
b) The quantity of oil exports 1960–76 have been converted from tonnes to barrels. 1 tonne equals 6.3 barrels.  
c) and d) 1979 revised figures, 1980 provisional.
Export earnings increased thus from about N 1,000 million in 1971 to a level of N 13,000 million in 1980. The tremendous hike of the value of petroleum exports dwarfed the role of agricultural earnings in total exports. Whereas agricultural exports in 1960 accounted for 3/4 of the value of total exports they fell to a minimum of 2.4% in 1980, while petroleum exports moved in the opposite direction from a level of 2.7% of total export value in 1960 to a level of more than 95% in 1980. The scissor-like relationship between agricultural and petroleum exports was, however, not only due to upward turn of petroleum prices and production. Agricultural exports declined absolutely from the middle of the 1960s. After Independence the regional governments continued the policy started under colonial rule of extracting surpluses from the peasant export producers. Through monopoly trading institutions - the marketing boards - the governments controlled agricultural export prices and levied duties on the exports. The peasants were often only paid about half of the world market prices for their produce, while the rest accrued to the regional government. During the second half of the 1960s, when the oil revenue began to flow, peasant producer prices were raised. Finally, in 1973 a reform of the marketing board system was carried out, but at that time the peasants had already refrained from investing in new trees or production equipment, or had decided to shift to the production of food crops, the prices of which were rising. Exploitative government policies were, however, only partly responsible for the deterioration of agricultural exports. World market prices fell or stagnated after the middle of the 1960s, while at the same time the booming economy of the Nigerian home market during the 1970s demanded a growing share of the groundnut and palm oil production and the cotton produce. Moreover, plant diseases affected groundnut production in particular. Hence, while cocoa, rubber and palm oil exports were continued throughout the 1970s, groundnut, palm oil and cotton exports virtually stopped towards the middle of the decade.

Finally, the production of both food and export crops was affected by the rural-urban migration which became a dominant feature of the 1970s. Due to the civil war large sections of the younger population were uprooted, while at the same time the growing incomes from the oil earnings served to enhance the level of economic activities, particularly in the southern
regions of the country. There was thus an increasing demand for both skilled and unskilled labour. Many of those who had served in the army chose not to return home to a tedious and badly paid occupation in agriculture, but decided to go to the towns in the hope of getting a job or an education. Between 1970 and 1975 the urban population increased by 7% annually compared to a growth rate of 4.8% during the 1960s, whereas the proportion of the labour force in agriculture fell from 62% in 1970 to 56% in 1978.16 Hence, the rural labour force was drained from a section of the younger population, a fact which affected production adversely as we shall see in the next section.

The Second National Development Plan 1970-74 aimed primarily at the reconstruction and reconciliation of the Nigerian nation. The allocations for the economic sector were reduced in comparison with the First Plan, even if the infrastructural works on electricity, water, road and railway construction were given almost the same proportion of plan investments as in the First Plan (see table I).17

Particularly during the last years of the Second Plan period there was a intensification of economic activities, for instance when foreign investors began to realize that the Nigerian market was safe and expanding. Investments were made in car assembly, chemical combines and textile mills. Foreign investors even got a share in the booming construction activities and in the infrastructural works.

The transformation which the political economy underwent found expression in the Third National Development Plan 1975-80. Public investments in this plan were increased almost 10-fold in comparison with the Second Plan. For the first time in the whole planning era allocations for Primary production and Trade and industry were given priority over infrastructural works. Altogether, the economic sector received almost 2/3 of the total allocations, reflecting the attempts to exploit the new sources of wealth and embark on a rapid course of industrialization.

With the launching of the Third Plan and the attempts to realize the potential of the oil wealth, the political role of the military governments seemed to have come to an end. When General Gowon in October 1974 announced his intention of extending military rule for an indefinite period beyond the originally fixed date of a return to civilian government, a
coup was staged against him (in July 1975) by a group of military officers including his successor Murtala Mohammed. Soon after the take-over the new government stated its intention to prepare for a return to civilian government in October 1979.

The military had proved effective in laying the foundations of a new state. It failed, however, to consolidate this framework, and to carry out constructive domestic policies. After the civil war the Gowon regime proved incapable of dealing with both old and new problems of government. As had been the case with the civilian government of the First Republic, it failed to carry out a trustworthy population census, and did not succeed in curbing corruption within its own rank and file. It failed also to deal effectively with the emerging economic problems of the oil-rich state, as for instance the food crisis - not even Gowon's military successors were able to cope with these problems, as we shall see in chapter 5.

4. THE FOOD CRISIS

In its agricultural policy the military regime of General Gowon seemed to follow the recommendations of the CSNMD. In the Second Plan some of the large-scale projects - the settlements schemes in particular - which had taken a prominent place in the First Plan, were quietly discarded. At the same time the regime did not appear too worried over staple food production, but continued to promote import-substituting production or crops for exports. Altogether, export crop production and production for industrial use, the so-called "Major crops", took 23 % of planned agricultural expenditure, while non-irrigated food production received 18 % of planned agricultural outlays. Irrigated production, mainly import-substituting crops like wheat, rice, sugar and vegetables, received 15 % of planned outlays. The major staples of Nigerian agriculture were thus given a rather low priority, especially as the programmes of non-irrigated production were of a general and unspecified nature, which were only half-heartedly implemented, as were indeed many of the agricultural programmes of the plan. 18

If the authorities had thought that the Second Plan would bring about a return to prewar price stability and growth of
TABLE IV  Acreage, Yield and Production of Major Food Crops 1969-70 - 1974/75

<table>
<thead>
<tr>
<th></th>
<th>cassava</th>
<th>yams</th>
<th>millet</th>
<th>sorghum</th>
<th>maize</th>
<th>cowpeas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area in 1,000 ha, and percentage variations</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>1969/70</td>
<td>906</td>
<td>1292</td>
<td>4251</td>
<td>5835</td>
<td>1315</td>
<td>4018</td>
</tr>
<tr>
<td>1970/71</td>
<td>920</td>
<td>1222</td>
<td>-5.4</td>
<td>4905</td>
<td>15.4</td>
<td>5643</td>
</tr>
<tr>
<td>1971/72</td>
<td>899</td>
<td>-2.3</td>
<td>1197</td>
<td>-2.0</td>
<td>4788</td>
<td>-2.4</td>
</tr>
<tr>
<td>1972/73</td>
<td>844</td>
<td>-6.1</td>
<td>788</td>
<td>-34.0</td>
<td>3692</td>
<td>-22.9</td>
</tr>
<tr>
<td>1973/74</td>
<td>861</td>
<td>2.0</td>
<td>855</td>
<td>8.5</td>
<td>5651</td>
<td>53.3</td>
</tr>
<tr>
<td>1974/75</td>
<td>815</td>
<td>-5.3</td>
<td>671</td>
<td>-21.4</td>
<td>4787</td>
<td>-15.3</td>
</tr>
</tbody>
</table>

Yield in kg/ha, and percentage variations

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969/70</td>
<td>11320</td>
<td>9466</td>
<td>718</td>
<td>699</td>
<td>948</td>
</tr>
<tr>
<td>1970/71</td>
<td>12625</td>
<td>11.5</td>
<td>7992</td>
<td>-15.6</td>
<td>630</td>
</tr>
<tr>
<td>1971/72</td>
<td>11318</td>
<td>40.4</td>
<td>8159</td>
<td>2.1</td>
<td>592</td>
</tr>
<tr>
<td>1972/73</td>
<td>7478</td>
<td>-33.9</td>
<td>8871</td>
<td>8.7</td>
<td>648</td>
</tr>
<tr>
<td>1973/74</td>
<td>8066</td>
<td>7.9</td>
<td>8111</td>
<td>-6.6</td>
<td>671</td>
</tr>
<tr>
<td>1974/75</td>
<td>8631</td>
<td>7.0</td>
<td>10656</td>
<td>31.4</td>
<td>1160</td>
</tr>
</tbody>
</table>

Production, Index 1965/65 = 100, and percentage variations

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969/70</td>
<td>64</td>
<td>77</td>
<td>123</td>
<td>96</td>
<td>111</td>
</tr>
<tr>
<td>1970/71</td>
<td>65</td>
<td>1.6</td>
<td>84</td>
<td>9.1</td>
<td>124</td>
</tr>
<tr>
<td>1971/72</td>
<td>56</td>
<td>-13.8</td>
<td>67</td>
<td>-20.2</td>
<td>114</td>
</tr>
<tr>
<td>1972/73</td>
<td>32</td>
<td>-42.9</td>
<td>47</td>
<td>-29.9</td>
<td>96</td>
</tr>
<tr>
<td>1973/74</td>
<td>36</td>
<td>12.5</td>
<td>48</td>
<td>2.1</td>
<td>153</td>
</tr>
<tr>
<td>1974/75</td>
<td>45</td>
<td>25.0</td>
<td>49</td>
<td>2.1</td>
<td>224</td>
</tr>
</tbody>
</table>

Source: See table IIA.

Note: Altogether, the acreage of these crops account for more than 80% of the total acreage under food crops.

food production, they were disappointed by the tendencies which were revealed soon after the war. The Sahel drought of 1972-1974, which even affected large areas of the Sudan and Guinea savanna, caused severe production set-backs at least during 1971/72 and 1972/73 as evident from table IV. But even during the entire six-year period from 1969/70 to 1974/75 production of cassava, yams and maize declined generally, while the production of millet and sorghum recovered after the Sahel crisis to a level above or equal to that before the drought. Production of cowpeas generally declined, too, apart from
1974/75, when climatic conditions were more favourable than during the 1971-1974 period. Total food production fell 0.5 % annually between 1969/70 and 1974/75 according to calculations based on table IIA. Apart from the Sahel drought, what factors contributed then to the decline in production?

Firstly, it is important to note that the drought was not only a phenomenon of the 1972-74 period. Apeldoorn stresses that conditions of drought existed in various divisions of the north as early as in 1969 and 1970. The situation of drought and famine was thus already building up and had its aftermath in the sense that the peasants lacked seeds for planting or money for buying inputs. The whole period covered by table IV is thus partly affected by the drought, and in order to make a conclusive analysis of the causes of the emerging food crisis, more data than are available on rainfall and regional production would be necessary.

Apart from the drought, however, it is clear that other factors explain the downward trend of food production. After all, the drought was mainly a phenomenon of the north.

According to table IV the area under cultivation was decreasing during the period. Between 1969/70 and 1974/75 the acreage of the crops recorded in the table declined by 18 %. Only the area under millet increased, while that of yams fell to about half of the 1969/70 level.

Growth of yield rates, particularly in 1974/75, made up for the losses induced by falling acreages so that the growth rates of both millet, sorghum and cowpeas were positive. Since the growing yield rates apply especially to the last year of the table, while productivity is generally falling between 1969/70 and 1973/74, we may conclude that falling acreages in particular, but also stagnating yield rates, contributed to the decline in food production after the war.

Why did this occur? The devastations of the war in the southern parts of the country and the long-term ecological stress as a result of the growing population densities and increasing cultivation intensities might explain both the decline of acreage under cultivation and the stagnating productivity. And the devastations of the war in the south combined with the impact of the drought in the north might explain why the food production declined after 1970. There is, however, also another explanation which seems even more applicable in the context of the 1970s. It is natural to
relate the emerging food crisis to the booming oil economy and the growing rural-urban migration. The impact of the oil economy was particularly strong in the southern root crop growing regions, where the declining acreages were manifest. It is likely that the growing rural-urban migration affected both the area under cultivation and the yield of production since the distribution of ages in the rural areas was skewed towards the unproductive generations as the young and strong moved into the towns and cities.

The rural urban migration explains also why it was difficult to revitalize export crop production despite rising producer prices. The new generation thought they had even more to earn from an urban job or education, and rightly so, in many cases.21

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Imports</th>
<th>Food Imports</th>
<th>Percentage Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>756.4</td>
<td>57.8</td>
<td>7.6</td>
</tr>
<tr>
<td>1971</td>
<td>1078.9</td>
<td>87.9</td>
<td>8.1</td>
</tr>
<tr>
<td>1972</td>
<td>990.1</td>
<td>95.1</td>
<td>9.6</td>
</tr>
<tr>
<td>1973</td>
<td>1224.8</td>
<td>126.2</td>
<td>10.3</td>
</tr>
<tr>
<td>1974</td>
<td>1737.3</td>
<td>154.8</td>
<td>8.9</td>
</tr>
<tr>
<td>1975</td>
<td>3721.5</td>
<td>297.9</td>
<td>8.0</td>
</tr>
<tr>
<td>1976</td>
<td>5148.5</td>
<td>440.1</td>
<td>8.5</td>
</tr>
<tr>
<td>1977</td>
<td>7093.7</td>
<td>736.4</td>
<td>10.4</td>
</tr>
<tr>
<td>1978</td>
<td>8211.7</td>
<td>1020.7</td>
<td>12.4</td>
</tr>
<tr>
<td>1979*</td>
<td>7472.5</td>
<td>766.5</td>
<td>10.3</td>
</tr>
<tr>
<td>1980*</td>
<td>9658.1</td>
<td>1091.0</td>
<td>11.3</td>
</tr>
</tbody>
</table>


The fall of food production and the growing urban demand led to heavy increases of food imports. At the end of the 1970s the level of food imports was about 15 times higher than at the beginning of the decade (table V), though relatively speaking, the share of food imports to total imports kept steady around 10 % as during the 1960s. Whereas food imports
during the former decade had been effective in curbing inflation, prices rocketed during the 1970s to unprecedented levels. During this decade inflation became a phenomenon of the economy in general; but food inflation kept ahead of the general price index as shown in table VIA+B, rising by more than 100 index points between 1974 and 1977.

TABLE VIA  Consumer Price Index. All Items and Food.  
1960-1977. 1960 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>all items</th>
<th>food</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1961</td>
<td>106.4</td>
<td>109.8</td>
</tr>
<tr>
<td>1962</td>
<td>112.0</td>
<td>118.0</td>
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<tr>
<td>1963</td>
<td>108.9</td>
<td>106.6</td>
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<tr>
<td>1964</td>
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<td>105.7</td>
</tr>
<tr>
<td>1965</td>
<td>114.4</td>
<td>110.5</td>
</tr>
<tr>
<td>1966</td>
<td>125.5</td>
<td>133.1</td>
</tr>
<tr>
<td>1967</td>
<td>120.8</td>
<td>119.3</td>
</tr>
<tr>
<td>1968</td>
<td>120.3</td>
<td>112.6</td>
</tr>
<tr>
<td>1969</td>
<td>132.3</td>
<td>133.9</td>
</tr>
<tr>
<td>1970</td>
<td>150.6</td>
<td>164.5</td>
</tr>
<tr>
<td>1971</td>
<td>174.7</td>
<td>211.4</td>
</tr>
<tr>
<td>1972</td>
<td>179.6</td>
<td>216.6</td>
</tr>
<tr>
<td>1973</td>
<td>189.3</td>
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<td>214.6</td>
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<td>1975</td>
<td>285.4</td>
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<td>1976</td>
<td>348.1</td>
<td>464.7</td>
</tr>
<tr>
<td>1977</td>
<td>423.1</td>
<td>592.2</td>
</tr>
</tbody>
</table>

TABLE VIB  Consumer Price Index. All Items and Food.  
1978-1980. 1975 = 100

<table>
<thead>
<tr>
<th>Year</th>
<th>all items</th>
<th>food</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>176.0</td>
<td>196.3</td>
</tr>
<tr>
<td>1979</td>
<td>195.3</td>
<td>210.2</td>
</tr>
<tr>
<td>1980</td>
<td>217.9</td>
<td>235.5</td>
</tr>
</tbody>
</table>


Note: The index 1960-1977 covers low income urban groups, while the index 1978-1980 covers all urban income groups.
Moreover, the pattern of food imports changed. While a proportion of commodities such as sugar and milk was reduced somewhat in the food import basket, commodities like fish, meat (not included in table VII), oils and fats grew in importance. Even though the proportion of cereal imports to total food imports remained constant during the 1970s, the cereal imports were, however, the object of most concern to the Nigerian authorities. Wheat had already been imported during the 1960s, but still constituted only about 23% of the total value of food imports around 1965. With the Sahel drought the imports of wheat increased tremendously as can be seen from table VII, though part of the imports were granted as relief supplies. The wheat imports fell after 1973, but soon rose again. In a recent report the World Bank estimated that the quantity of wheat imports increased to 1.3 million tonnes in 1978. Hence, the 7.6% in the table representing the proportion of wheat imports to total imports that year is probably a gross under-estimate. During 1980 and 1981 the wheat imports were estimated at about 1 million tonnes and more than 1.3 million tonnes respectively. While the wheat imports began to rise after 1975, increasing quantities of rice were also imported. The volume of rice import increased 7 times between 1975 and 1976 and almost 10 times between 1976 and 1977. In 1977, and probably also in 1978, the imports of "other cereals", mainly maize, also grew markedly.

The cereal imports caused political concern not only because of the immediate problems of food inflation and the drain on the balance of payments, but also because they were difficult to combat. Restrictions and tariffs on rice imports were imposed in order to keep rice out of the Nigerian market, while the governments were more open to and even subsidized wheat imports. Particularly in the growing urban centres, however, the consumers got so accustomed to these grains that shortages of rice resulted in hoarding, price increases and corruptive dealings with import licenses, which could be traced as far as the federal legislative assembly itself. At the end of 1980 the civilian government had to give up the restrictions on rice imports and allow almost free market imports.

Both rice and wheat were imposed on the Nigerian market by outside traders - and in the case of wheat, even by outside relief organizations - and inside importers. But while the
TABLE VII  Imports of Principal Food Commodities 1970-78. Quantity (1,000 tonnes) and Percentage Share of the Value of Total Food Imports

<table>
<thead>
<tr>
<th></th>
<th>milk Q</th>
<th>milk %</th>
<th>sugar Q</th>
<th>sugar %</th>
<th>fish Q</th>
<th>fish %</th>
<th>oils+fats Q</th>
<th>oils+fats %</th>
<th>wheat Q</th>
<th>wheat %</th>
<th>rice Q</th>
<th>rice %</th>
<th>other cereals Q</th>
<th>other cereals %</th>
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<tbody>
<tr>
<td>1970</td>
<td>52.8</td>
<td>22.5</td>
<td>90.5</td>
<td>19.8</td>
<td>6.6</td>
<td>5.0</td>
<td>3.1</td>
<td>1.4</td>
<td>258.7</td>
<td>26.7</td>
<td>1.7</td>
<td>-</td>
<td>44.9</td>
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<td>64.7</td>
<td>24.9</td>
<td>138.1</td>
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<td>3.1</td>
<td>3.1</td>
<td>0.8</td>
<td>359.0</td>
<td>23.7</td>
<td>-</td>
<td>-</td>
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<td>11.6</td>
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<td>5.6</td>
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<td>...</td>
<td>10.4</td>
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<td>17.2</td>
<td>...</td>
<td>9.2</td>
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* Includes relief supplies, which were not paid for.

** Quantities on imports in 1978 are not available. The percentage share for this year is based on provisional data on the value of imports.
various governments had kept the door open for wheat imports, they were struggling to limit the rice imports. In both of these cases, however, the consumers played an important role as they accepted these new commodities, thus adopting part of the consumer culture known from the urban centres of the developed world. Hence, during the period when the Nigerian economy underwent a transformation of rapid urbanization and attempts of industrialization, it was also integrated into the world market for food grains. This endangered the self-sufficiency capacity of the economy as it became dependent on foreign foodstuffs, and it had important repercussions on the agricultural policies pursued, as we shall see. However, it also had immediate political implications.

5. FOOD POLICIES IN THE MAKING

In 1974 the Udoji Commission appointed by the military government after the civil war to present recommendations on the structure of the civil services and the public salaries issued its report. The report sparked off a series of wage demands and strikes by groups both within and outside the public services, and the government had to concede to most of the claims. The Udoji wage awards, as they were termed, thus added fuel to the inflation to which they were supposed to respond. They were partly responsible for the soaring of food prices and imports after 1974, and they were among the issues which prompted the coup against Gowon in July 1975.

The food issue was thus also among those issues with which Gowon's successors, Murtala Mohammed and after his assassination in February 1976, Olosegun Obasanjo, had to deal. It is worth noting that during the period from 1975 to the civilian take-over in late 1979 attempts to introduce a policy specifically aimed at raising food production were made for the first time in the history of independent Nigeria.

The extent of the food crisis was only partly recognized in the Third National Development Plan 1975-1980. Agriculture was only allocated 5% of the total expenditure in the plan, while Mining and quarrying under Primary production, i.e., investment in oil production, received 8.2% of the total investments (see table I).
Of the agricultural investments, non-irrigated food production was for the first time given an edge over industrial and export crop production - 12.4% compared to 11.4%. Despite this, the fact remained that in its whole approach to food production, the Third Plan was remarkably undramatic in tone. To an even greater degree than in the Second Plan the authorities sought to promote irrigated import-substituting production. Altogether, irrigation projects, mainly launched under the federally controlled, so-called River Basin Development Authorities, were allocated 28% of total agricultural spending. Obviously, the plan was worked out during the years of the drought, and the authorities responded to the crisis correspondingly. They did not in their priorities recognize the structural nature of the food deficits and relate them to the impact of the oil wealth and urbanization. The failing realization of the structural character of the crisis appeared also in the emphasis on import-substituting crops over the domestic food crops. The plan concentrated, however, not only on production, but also on improving the institutional infrastructure in the rural areas in order to enhance the absorptive capacity of agriculture, among other things. Programmes for the establishment of grain reserves, food marketing and rural credit institutions were thus outlined, to which I shall return below.

If the food issue was not dramatized in the plan, the attempts of the military government to deal with the issue after the coup brought it right into the centre of politics. Operation Feed the Nation (OFN) was an ill-prepared nationwide campaign launched under General Obasanjo one year after the coup. It was modelled on a similar campaign in Ghana in 1972 (Operation Feed Yourself), and as in Ghana its objective was two-fold. The chief objective was to make the troublesome urban working and middle classes aware that something was actually being done to improve the food situation. By the same token it sought to restore the respectability of farming to the peasant communities in order to make the rural youth abstain from migrating into the towns. The urban dwellers were thus encouraged to take up back-yard farming, and programmes were initiated to transfer students during vacations to the rural areas to assist the peasants.
Secondly, the Operation aimed at raising production and productivity by distribution of fertilizers and seeds to the peasants. As a rural development strategy, though not as a public relation enterprise, the OPN was a failure. Bottlenecks in fertilizer distribution, inadequate extension systems and insufficient planning impeded the programme, and the peasants soon thought the students more of a liability than an asset. After a few years the programme was abandoned.25

In concordance with the plan proposals the government sought to improve the institutional infrastructure in the rural areas. The systems of credit, food marketing and storage and fertilizer procurement were included in these efforts. In 1977 the Agricultural Credit Guarantee Scheme was created under the aegis of the Central Bank of Nigeria in an attempt to mobilize private bank capital for rural producers. It guaranteed loans from the private banks to the peasants, while at the same time the banks were required to establish a certain number of branches in rural areas and commit a minimum of 6% of their loans for agricultural purposes. By the end of 1978 the banks had only been able to commit 4.9%, but the civilian government pushed the requirements on the banks even further. The agricultural lending ratio was raised to 8%, and the banks were required to increase the number of rural branches by an additional 260 before the end of 1983.

The Nigerian Agricultural and Credit Bank had been founded already in 1973. However, with only a few branches all over the country and with rather strict procedures for the issuing of loans, the NACB did not get a very wide reach during the plan period. It benefitted primarily agri-industrial firms or big farmers who were able to present collateral against the credit obtained. In order to liberalize the lending policy of the NACB a Smallholder Direct Loan Scheme was introduced in early 1981 whereby the federal government guaranteed the loans of the peasants who had earlier been unable to present the ordinary security required by the bank, thus allowing them to approach the bank directly without the prior consent of the local state authorities.26

In 1977 the Nigerian National Grains Board and the Nigerian Tuber and Root Crops Board (from 1979 the functions of the latter were under the Nigerian Root Crops Production Company) were established in a reform which also put the
marketing boards of the export crops under the control of the federal government instead of under the individual state. The immediate objective of the two food marketing boards was not, however, to establish a government monopoly in domestic food sales, parallel to the monopoly already existing for the export crops. There were obvious difficulties in controlling domestic food sales, characterized, as they were, by long traditions of private marketing and well-established intermediaries. The objective of the boards was the more modest one of buying up surplus food products for buffer stocks and thus influencing food prices by means of trading policies. The boards were, moreover, required to build up national grain reserves. It is significant, however, that as the government involvement in food production expanded under the civilian government, food marketing in the various government sponsored projects was linked to the Grains Board and the Roots Production Company.27

In 1978 a Fertilizer Procurement and Distribution Division was set up under the federal government with the purpose of increasing the consumption of fertilizers. Earlier, the various state governments were responsible for fertilizer procurement and distribution - a system which meant that there were big price differentials between various states and that fertilizers were often in short supply. By centralizing both procurement and distribution it was hoped to create a uniform price system, more efficient procurement from international or domestic sources and improved distribution. To make the peasants buy fertilizers huge subsidies of between 75 and 80 % of the retail prices were introduced.

The most significant piece of agricultural legislation introduced by the military government during the 1975-80 period was the Land Use Decree bringing the existing systems of land tenure under one common law.

The issue of land tenure had been sensitive since Independence. The constraints of traditional land tenure systems on an effective exploitation of the land resources were already mentioned in the First Plan in accordance with the transformatory spirit of that document (p. 14). Characteristically, it was finally during the Third Plan period, where active preparations for a new food policy were made, that something was actually done. The government had

Customary land tenure in the southern regions of the country vested land rights in the nuclear family, the lineage or in the village elders or chiefs. Hence, the alienation of land through sale or pledging was not allowed without the prior consent of the village or lineage authorities. These practices were still complied with, but in areas of intense commercialization, as for instance the cocoa growing regions of western Nigeria, it had become common to engage in transactions of land without obtaining the consent of the authorities in which the land was traditionally vested. In the northern region the British had, in concordance with what they thought to be the traditional system, vested all land in the state. The authority of the state as regards the approba- tion of land transfers had, however, seldom been enforced, and particularly in the densely populated areas of the north where competition for land was hard, a system akin to permanent individual ownership rights had developed.

The customary systems of tenure were thought to inhibit agricultural growth as they encouraged the fragmentation of land between many members of a family. They prevented, moreover, the alienation of land and often made it difficult for the authorities to consolidate big holdings for large-scale farming projects.

The Land Use Decree vested all lands in the state, thus applying the system, which in principle had been ruling in the north, to all of Nigeria. The makers of the Decree did not venture to let the occupants of land acquire individual ownership rights as this did not comply with traditional practices in the southern regions, in particular, but preferred to create a system where the individual had occupancy right over the land, while the state retained the ultimate control and formal ownership. The latter provision would also enable the state to control the distribution of land more easily, thus allowing it to regulate land holdership according to the changing needs and demands of public agricultural policy.

The Decree regulated both urban and rural access to land. With respect to the rural areas, which is the concern of this report, the newly created local governments were to exercise the land rights on behalf of the state, and persons
or corporations who wished to acquire or transfer land had to approach them for approval. The Decree confirmed the existing occupancy rights provided the land was used for agricultural purposes, but introduced four fundamental changes in the system of tenure in accordance with the principles mentioned above.

Firstly, it instituted individual tenure instead of communal tenure, i.e., occupancy in the name of single persons (or institutions) instead of families or lineages. Secondly, it prohibited the transfer, mortgage or sublease of land without the prior consent of the local government. Thirdly, it prohibited the fragmentation of land among several heirs without the consent of the local government. Fourthly, it laid down that occupancy rights could be revoked if the land in question was required for public purposes.30

In practice the new provisions were not strictly complied with immediately after the issue of the Decree. Particularly in the southern states customary law continued to play a dominant role. That the authorities intended to adhere to it, however, whenever the new agricultural policies required so is shown by the following quotation from the Guidelines for the Fourth National Development Plan 1981-85. It is stated,

"The land tenure system has long been a bottle-neck in the establishment of large-scale farms by private operators. With the implementation of the recent Land Use Decree... private sector involvement in large-scale agricultural activities should receive a boost during the next plan period... The reform should promote better security of tenure and also encourage consolidation of holdings and large-scale operation. It should be easier to attract foreign entrepreneurs and foreign capital into agricultural production."31

The consolidation of holdings for large-scale projects is thus strongly emphasized in the section quoted. The aim of the Decree was hardly only the creation of large-scale farms, however, the privatization of lands (i.e., the abolition of communal tenure) which is also mentioned in the quotation, together with the introduction of state control over the distribution of land were also important objectives of the new land legislation.

The Decree was one element in the package of rural development efforts introduced under the Third Plan to pave the way for a new food and agricultural policy. Its objectives
were to make land transferable and available for expropriations in order that it could be used for the flexible purposes of a dynamic agricultural policy. By retaining public control over land and yet tie it to individual persons the authorities combined the advantages of private ownership with the safety (as seen from the point of view of public agencies) of securing strong public control over land.

The detailed elaboration of the new food and agricultural policy was one of the problems facing the civilian government at the end of 1979 after the take-over. However, different sets of new programmes, partly on a pilot basis, had already been started at the beginning of the Third Plan. At the end of the plan period, after 4-5 years of implementation, they gave some indications as to how to proceed.

The irrigation projects have already been mentioned. Besides the projects run by the federal government under the 11 so-called River Basin Development Authorities, other irrigation and large-scale farming projects were started by the various states during the Third Plan period or even before. Production of import-substituting crops like wheat, rice, sugar and vegetables was the primary object of all these projects and involved the planning of large-scale mechanization of farming operations. At the time of the civilian take-over, production had barely started in any of the projects apart from one of the River Basin Development Projects in Kano state, but large amounts of capital had been spent on the building of dams, levelling of lands, and on the removal of peasants from lands which were later going to be irrigated. According to various estimates, more than ₦ 1 billion had been spent on three of the River Basin Development Projects in the northern parts of the country, equaling about 2/3 of the originally planned outlays for agriculture in the Third Plan. Thus the total costs of establishing all projects of the 11 River Basin Development Authorities was expected to run far above the anticipated ₦ 2 billion of the Revised Third National Development Plan. 32

Among the programmes for non-irrigated production a "prerequisite for a Green Revolution" had been introduced under the label of the National Accelerated Food Production Plan (NAFPP). Through the provision of inputs like high-yielding varieties, fertilizers and pesticides the programme aimed at increasing the productivity of both staple and
import-substituting food crops like rice, maize, sorghum and cassava. Distribution of inputs was to be undertaken from so-called agro-service centres set up in the rural areas. The programme, moreover, also emphasized the provision of extension and credit services. Administration of the individual projects was to be undertaken by the various states.

Apparently, the programme met with all the problems a rural development project can encounter: Lack of supervision by the responsible authorities, shortages of competent staff, late arrivals of inputs, reluctance on the part of peasants to adopt the recommended packages and logistical problems.34

Very similar to the NAFPP-projects in their general approach, but more ambitious in scope, were the so-called Agricultural Development Projects (ADPs) introduced as joint projects between the World Bank and the federal and state governments. In 1975 specific areas in the three northern states of Sokoto, Kaduna and Bauchi, each comprising between 60-90,000 households, had been selected for the implementation of pilot projects.

The projects aim at distributing inputs and services to the peasants, by developing the rural infrastructure and services. A number of farm service centres are built in the project areas to put the peasant within reach of commercial services. Much in the same way as the agro-service centres of the NAFPP-projects, the farm service centres distribute inputs and provide extension and in some cases credit services. Demonstration farms are established near the centres, which also run tractor-hiring services or provide other large-scale equipment for larger farming operations. Each project runs a seed multiplication farm in which research on farming methods and seed multiplication is carried out. Rural feeder roads are built to connect the service centres with the main roads in the area and to facilitate transport and communications with the peasants. The projects comprise water development divisions aiming both at general water supply and minor irrigation facilities, training divisions for education of project staff, and livestock, forestry and fishery programmes. Apart from emphasis on general water supply, which does not appear to have been very widely implemented, the primary objective of the projects is thus production; they are not "integrated" in the sense that they include programmes for general education and sanitation.
An Executive Committee appointed under the state Ministry of Agriculture holds the ultimate authority in project affairs. The project management and staff is, however, fairly autonomous in running the project. The appointment of senior staff is subject to approval of the World Bank, and as the senior staff are recruited internationally the Bank has fairly close control over the selection of personnel and the administration of the project.

By the end of the plan-period three projects in Plateau, Benue and Kwara states had been added to the three pilot projects under implementation and several more were under preparation. In the first projects, production with improved or high-yielding varieties of maize had made good progress. Apart from the emphasis on maize, however, which was included in all projects, particular crops were not singled out for special attention. Each project sought to improve the production of crops grown in the area. In the northern projects attempts were thus made to increase the productivity of both cotton and groundnut production.

In comparison with the large-scale irrigation projects, the costs of implementing both the NAPFPs and the ADPs were low. In the Third Plan N 13 million were allocated for the NAPFP programme. In the Revised Third Plan the total allocation had risen to N 23 million. The three pilot ADPs were allocated a total of N 26 million in the Third Plan and 44 million in the Revised Third Plan, while the World Bank lent N 43 million ($ 69 million) for the three projects for the first five years.35

At the time of the civilian take-over there were thus three more or less different strategies for increasing food production under implementation. The government was not necessarily bound to exclude any of these from its policy but it was important to develop a policy by which production would actually increase. Elaboration of a consistent food policy and not just introduction of programmes on a trial and error basis had become an imperative assignment of the civilian government. Hence, it was not surprising that President Shehu Shagari, only one month after his instalment, proclaimed a Green Revolution in Nigerian agriculture.
6. THE GREEN REVOLUTION AND THE CIVILIAN GOVERNMENT

When the actual contents of the food policy of the civilian government were to be determined, it was clear that the ADP-strategy and the large-scale approach of the irrigation projects were of major interest. The NAFPP programme had not been particularly successful and could be left out of serious considerations. The ADP-approach had, however, given results which impressed the authorities. In the Funtua project, the most successful among the three pilot-projects, the output of maize in particular, but also of sorghum and other crops as groundnuts, had increased significantly due to both area expansion and to increase of yields.

As regards the large-scale irrigation projects, they were only in the first stages of implementation and no impressive results could be presented. There is no information to indicate whether there were any conflicts in the government over these very expensive projects. The fact remains that they were continued and absorbed more than 70% of the total budgeted agricultural expenditure in 1980, while the ADPs received only 4% of the total agricultural spending during the first budget year of the Second Republic.

<table>
<thead>
<tr>
<th>TABLE VIII</th>
<th>Capital Appropriations for Agriculture in the Budgets of the Civilian Government 1980 and 1981. N' 1,000</th>
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<tbody>
<tr>
<td></td>
<td>Appropriation 1980</td>
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<tr>
<td>Irrigation and large-scale* Food Projects</td>
<td>613,161</td>
</tr>
<tr>
<td>ADPs</td>
<td>34,432</td>
</tr>
<tr>
<td>NAFPPs</td>
<td>4,000</td>
</tr>
<tr>
<td>Other agricultural expenditure</td>
<td>191,480</td>
</tr>
<tr>
<td>Total appropriations for agriculture under the Federal Ministries for Agriculture and Water Resources</td>
<td>843,073</td>
</tr>
</tbody>
</table>


*Excluding 63,200 1980 and 50,100 1981 for sugar plants and estates under the Federal Ministry of Industries.
Why did this occur? The irrigation projects had already in 1980 proven to be very expensive. The increased potential of the 440-500,000 ha of the north, which would come under irrigation when the projects were finally completed in 1990 as scheduled, or more likely, in an even more distant future, had not been estimated by a coordinate appraisal of all the projects. One thing could be appraised, however, without even undertaking a larger study: one ha of land under the ADPs would yield more per naira invested than one ha of land under the irrigation projects. Hence, the answer must be that the authorities were not preoccupied with efficiency - probably for four reasons.

Firstly, the irrigation schemes represented some kind of continuation of the transformatory approach, which had characterized rural development projects earlier. The "grand scale" approach appealed to the politicians, as the idea of irrigating the arid areas of the savanna demonstrated to the public their determination and resourcefulness. Secondly, due to the high level of the oil prices during 1979 and 1980 the government could afford lavish budgets. Thirdly, as the imports continued to rise unabatedly, it was politically desirable to continue the policy of import-substitution. Fourthly, the irrigation projects were already so expensive that they had become self-perpetuating. To stop them would imply the outbreak of a political scandal.

If the Nigerian authorities were not very preoccupied with efficiency, the representatives of the World Bank were. In the course of the 1970s the Bank had become more and more involved in Nigerian agriculture and had replaced US AID as the largest foreign contributor to agricultural development. \(^{36}\)

The Bank was very critical of the irrigation projects and pointed out that they were out of tune with the government's stated objectives of promoting economic and social equality, as the vast majorities of the Nigerian peasants would not benefit from the projects. In consonance with the approach adopted in the ADPs, which had been devised by the Bank itself, the Bank advocated that priority be given to what was termed "the rainfed smallholder". Thus while the government partly continued to apply transformatory approach adopted in the First Plan, the World Bank adhered to a strategy similar to the one advocated by the CNSRD whereby the focus was on the peasant producers.
When the budget for 1980 was presented at the beginning of the year the government had however, not yet decided what course to follow in its agricultural policies. The budget appropriations of 1980 did not represent the priorities of a new policy, but only the intermediate position of the government on the issue.

To settle the issue of the future food policies a Food Strategies Mission was appointed by the government in January 1980 to consider the matter. The Mission comprised Nigerian and World Bank officials and apparently the standpoints of the World Bank prevailed. The conclusive report of the Mission emphasized the role of the "Nigerian smallholder as the centrepiece of incremental food production during the Fourth Plan period" and stressed the importance of the ADP-approach. Hence, the expansion of rural feeder roads, minor irrigation schemes, improved extension systems and encouragement of the "evolution of the medium-sized farms" were stressed in the report. Mechanization of farming operations was recognized as an important "substitute for human energy"; but the small farmer was again claimed to be the "centrepiece of mechanization programmes", and it was stressed that "large-scale mechanization schemes have compelling engineering and technical appeals but are of limited relevance to the recommended smallholder strategy".

In line with the well-known position of the World Bank and in opposition to the attempts of both the former military and the civilian governments to regulate food marketing and procurement of inputs (fertilizers, for instance), the report emphasized "private sector handling of input procurement and distribution", and "minimum reliance ... on government companies and parastatals in direct production and distribution of food.37 The report was submitted to the federal Minister of Agriculture, Ibrahim Gusau, in June 1980. In the autumn that year the minister stated that the federal government, impressed by the success of the ADPs, planned to establish similar projects in all 19 states of the country by 1983.38 The government was thus adopting the ADPs as the vanguard of its Green Revolution and planned to establish projects with a greater speed than even the World Bank had envisaged.39 Hence, the Green Revolution became synonymous with the agricultural policies as a whole, but primarily with the World Bank projects. By 1980, 8 projects were being
implemented in Sokoto, Kaduna, Bauchi, Plateau, Benue, Kwara, Niger and Oyo states. In the second half of 1981 every state was either partly or totally covered by project planning. In the course of this period the pilot projects in Kaduna and Bauchi states, the Puntua and Gombe projects, were planned to be extended to state-wise coverage. Similarly, a state-wide project was started in Kano state, and state-wide projects were planned for Sokoto and Borno states. A project was planned for part of Gongola state. In the south projects were being planned for the whole of Bendel, Imo, Rivers and Lagos states, and for part of Cross Rivers, Anambra and Ogun states.

The projects were financed jointly by the World Bank, the federal and the state governments. The World Bank financed usually between one-third and one-half of the total project costs for the first five years, while the federal and state governments split the remainder. By January 1982 the World Bank had lent US$ 510.5 million (approx. N227 million according to the 1980 exchange rate) for 11 projects. An indication of the government's will to push the development of ADPs even further was its commitment of N2.3 billion for the programme under the Fourth Plan 1981-85. 40

The government's adoption of the ADPs as a main element in its food development strategy is evident from the appropriations of the 1981 budget, where the amount allocated for the ADPs was more than doubled (see table VIII). It is worth noting, however, that the ADPs got only 1/10 of the amount allocated for the irrigation projects and the large-scale food farms. In fact, the share of these projects in the total agricultural expenditure increased to 76%. They were not as publicised as the ADPs as there were hardly any results worth publishing, and as conflicts with the peasants arose at one of the project sites, as will be discussed later. Nevertheless, they were certainly not disregarded by the authorities. In the Fourth Plan they were allocated about the same amount as the ADPs, N2.1 billion. 41

In the Fourth National Development Plan 1981-85, which was only presented in outline at the beginning of 1981, the goal of national self-sufficiency in food production by 1985 was proclaimed. An annual rate of growth of food production of 4% was consequently to be achieved. 42 During the latter half of 1981 oil prices fell, however, to about US$ 32-35 per barrel and production fell from an annual average of more
Agricultural Development Projects, 1982

Ongoing or appraised projects

Projects under preparation
than 2 million barrels/d in 1980 to an average of 1.4 million barrels/d in 1981. Hence, the revenue of the government fell sharply and a series of austerity measures which affected the projects under the Fourth Plan were introduced.

The appropriations for the large-scale irrigation projects were expected to be cut to N 219.6 million in the 1982 budget according to various sources, even though the total amount allocated for the projects under the Fourth Plan would be maintained.43

At the same time the government had to modify some of its ambitions of expanding the ADPs. The World Bank was reluctant to follow the rate of expansion demanded by the government, claiming, for example, that there was a shortage of administrative capacity in Nigeria to run the projects. One example of the problems which arose over project management was the conflict between the Kaduna state government on the one side and the World Bank and the federal government on the other over the extension of the Funtua project into a statewide project. The Kaduna state government wished to appoint a Nigerian staff for the project, responsible to the government itself, while the World Bank wanted to continue with the organization of the former Funtua project of an internationally recruited staff, mainly responsible to the World Bank.44

The official enthusiasm for the projects met also with reactions from the public, very similar to the reactions to the Green Revolution strategies known from elsewhere. Researchers and students were discussing the projects critically. At Ahmadu Bello University a national seminar was held in the autumn 1981 on the Green Revolution, where it was claimed, for example, that the funds spent on the projects were going in the wrong pockets. This was also the general view given in Professor Mabogunje and Dr. Jerry Gena's report from the University of Ibadan on the Funtua project. The report stated that the project enhanced inequality in the rural areas and, moreover, described it as World Bank directed, and not World Bank assisted.45 Criticism of the projects had earlier been launched at the universities, but it is doubtful whether it influenced the government. It is significant to note, however, the criticism was referred to in the newspapers and that during 1982 a number of articles emerged professing critical views on the projects.46
Similarly, at the beginning of 1982 a number of planning and development commissioners from the states governed by other parties than the ruling National Party of Nigeria (NPN) also declared that the Green Revolution programme had failed and called for diversification of agricultural investments and for increased attention to be paid to agro-based industries.  

The shortage of revenue and foreign exchange and the reluctance of the World Bank to support a rapid expansion of the ADFs forced the government to look elsewhere for resources to promote food production. It did so by seeking to mobilize private foreign capital for investments in agriculture, among others for the large-scale food farms which were being established in connection with the irrigation projects.

Wheat, rice, sugar, fruit and vegetables were the principal crops of these farms or estates. They were often established in combination with milling or processing units, as for instance in the case of sugar. Three projects for sugar production and refining were under development - the Sunti and Lafiagi projects in Niger state and the Savannah project at Numan in Gongola state. The latter was the largest and had already been started in the middle of the former decade under the management of the British Commonwealth Development Corporation, which moreover had a minor financial stake in the project. A sugar plant was built and planned to be supplied with cane from a nucleus estate employing several thousand plantation workers and outgrowing peasants. The project would, when completed, have a capacity of refining 100,000 tonnes of sugar, but by 1980 had only produced 23 tonnes due to delays in the completion of the Kiri irrigation dam under the Upper Benue River Basin Development Authority, and due to conflicts over finance between the state authorities and the federal government. I shall return to this project below.

Several large-scale rice farms were started during 1980 and 1981, both in connection with the River Basin Development Projects and as individual projects. According to the Department of Agriculture, 466 cooperative rice farming groups were assisted with landclearing for farms of at least 50 acres (20 ha) each. The groups were supplied with tractors, ploughs, harrows, planters, rice threshers and rice harvesters. Thus, a lot of farm machinery was imported during these years. Finally, a number of large-scale wheat
and vegetable farms were also established, mainly in connection with the irrigation project.

The government sought to motivate foreign, particularly American, capital to invest in these projects or to establish new ones. Already in 1978 a relaxation of the restrictions on foreign investments in agriculture had been introduced. Foreign companies were allowed to own 60% of the equity in agricultural enterprises compared to 40% earlier, and a number of measures providing tax holidays, tariff exemptions and special credit facilities to foreign agribusiness had also been introduced. These measures were particularly advertised by the government during 1981. Following Vice-President Mondale's visit to Nigeria in July 1980 a Joint Agricultural Consultative Committee (JACC) had been formed to redress the negative US trade balance with Nigeria, caused by the oil imports, via the promotion of American exports of agricultural hard- and software. In June 1981 a meeting was held in the Committee, where the Nigerian government succeeded in pushing American investments in agriculture. In August 1981 the Nigerian vice-president Ekueme revealed that 11 major joint ventures had been agreed upon with American agribusiness firms. A discussion on the foreign investments is given in a subsequent section.

Hence the civilian government was continuing both a small-scale and large scale approach to enhance food production, whether by domestic resources or by foreign. The ADPs remain, however, the most important projects of the food policies, both as objects of government interest, and as the projects by which most peasants are affected by the government policies. Despite the recent attempts of the government to mobilize resources for the large-scale food farms, the 1982 budget cut in the irrigation projects indicates that the government is aware that these projects absorb too many resources in the light of the present revenue situation. Hence, in the ensuing discussion on the implications of the present food policies, I shall concentrate on the ADPs, although the large-scale projects will also be included.

Previous discussions on the implications of the food policies have been given by researchers with the point of departure in their field work on one individual project - often the Funtua project in Kaduna state. Tina Wallace has done research on two of the irrigation projects in the
north, but her work is of a rather early date. Björn Beckman and Gunilla Andrae have done research on all the three pilot ADPs as well as on some of the irrigation projects, but the results of their research has yet only been published in incomplete or mimeographed form.

No official evaluations of either the irrigation projects or the ADPs are available to me. A host of quarterly, mid-term and final reports on the various ADPs have been published by the World Bank; but these reports have a restricted distribution and are not meant for public debate or criticism.

In the sections below I shall discuss the implications of the policies under implementation with the point of departure in the material I collected in connection with a visit to the Lafia Agricultural Development Project in November 1980, together with the material made available by other researchers and by various journals and publications. The purpose of the discussion is not to present a detailed evaluation of the impact of the policies under implementation, but to make four general propositions plausible: 1) The policies will enhance the growth of production over the mid-term or long-term range; but not in the short-term range of the Fourth Plan period as envisaged. 2) The policies will also enhance inequality and differentiation of lands and incomes in the rural areas. 3) They will moreover make Nigeria more dependent on the capitalist world and the world economy at large, and 4) They will increase the vulnerability of the cultivation practices in the country.
PART II  THE FOOD POLICIES OF THE 1980s AND THEIR IMPLICATIONS

In Part I two trends of development have been followed - one, represented by the emergence of the food crisis during the 1970s, the other, represented by the transformation of the Nigerian economy and polity during that same decade, particularly taking place with the increase of oil exports and prices. These trends originate independently - the food deficits in the colonial indifference to food production and laissez faire policies, the transformation of the political economy mainly in the public development efforts during independent rule. They develop, however, not independently. The food deficits, although shortly brought to surface during the civil war, are only a latent problem during most of the 1960s. They develop, however, into a state causing a permanent crisis, when the pace of economic transformation is hastened during the 1970s. Hence, these trends converge gradually and fuse together in a demand for a new food policy implemented under a new constitution by a government which is also mandated to institutionalize and speed up the pace of economic transformation. The character and determination of these requirements on the civilian government will be discussed in Part III. In the present Part the implication of those policies by which the civilian government has sought to fulfill its assignments as regards food production are considered.

1. GROWTH. THE POTENTIAL OF THE IRRIGATION AND AGRICULTURAL DEVELOPMENT PROJECTS

Wheat, rice and sugar production and the prospects of import-substitution

The gap which the Nigerian producers have to close between imports and domestic production of wheat is still very large. While the imports of wheat have hovered around 1-1.5 million tonnes during recent years, the Nigerian producers have grown between 20 and 25,000 tonnes in the irrigation schemes.

Wheat has not been cultivated traditionally in Nigeria, apart from small quantities cultivated for festive occasions in the north, and it is already now clear that it is an uneconomic crop to grow.\footnote{5}

Wheat is a temperate crop which can only be grown during
the dry season and then under irrigated conditions. The late planting of wheat interferes with the planting of traditional food crops, such as sorghum; hence, the peasants are reluctant to grow it. Characteristically, part of the irrigated area prepared for wheat cultivation in the schemes has been left fallow by the peasants. Yield rates have also been rather low; while a yield of 4 tonnes per ha was expected in the Kano River Project, only an average of 1.9 tonnes per ha materialized according to Tina Wallace.\(^{52}\) Provided that one million tonnes of wheat, corresponding to the level of imports at the end of the 1970s, was to be produced domestically with an average yield of 2 tonnes per ha, 500,000 ha would have to come under irrigation, equalling more than the total acreage expected to be irrigated in the northern areas. Presently, 15,000 ha are under cultivation according to a rough estimate by FAO.\(^{53}\) Whatever strenuous efforts the government and the River Basin Development Authorities are undertaking, it is likely that the acreage, yield and production of wheat will continue to be low, and the imports correspondingly high, unless alternative grains are found to substitute the consumption of wheat flour.

While red rice has been cultivated in Nigeria for centuries, white rice, which is consumed today, was introduced by the British at the beginning of this century. Rice was then regarded as a high cost prestige food, which was mainly consumed in the urban areas.

At the beginning of the 1970s it was only grown in scattered pockets all over the country. Provided the soils are not too sandy and soil moisture is sufficient, there are no important limitations on the expansion of rice cultivation. Soil moisture (and culture) have been the main hindrances to expansion of the rice acreages earlier, and hence the provision of irrigation is vital if the production of rice is to expand.

Imports of rice have increased from about 400,000 tonnes in 1977 (table VII) to above 500,000 tonnes in 1981 according to West Africa.\(^{54}\) During the same period the production of rice more than doubled from roughly 500,000 tonnes in 1978 to 1.2 million tonnes in 1981. There are no estimates of the acreage under rice or of its productivity, apart from the ones given by FAO. According to these, the acreage increased from 300,000 ha in 1975 to 528,000 ha in 1979, i.e., an increase of 76 %, while the yield per ha increased from 1717 kg in 1975
to 1894 kg in 1979, i.e., a growth of 10%.

Employed in the limited manner as indicators of magnitudes, these figures indicate that the doubling of rice production was mainly due to increases of acreage, and it is natural to relate this fact to the expansion of irrigated areas. Thus, it seems that there is a positive correlation between the expansion of irrigation and the growth of rice production. The attempts to replace imports of rice by local production might very well be a success story. Nigeria is today Africa's third biggest producer of rice after Madagascar and Egypt. The issue of rice production, however, needs to be studied more, not least the forms of irrigation (whether small-scale or large-scale) under which rice production becomes economical.

What about sugar? Apart from the plants and farming estates under establishment the home market is already supplied by the Bacita plant and estate in Kwara state. It was founded in the early 1960s with a capacity of 30,000 tonnes. Traditionally, sugar was also grown by peasants in the north, but mainly as a luxury crop supplied in small quantities.

**TABLE IX. Imports and Production of Sugar 1978-1980, 1,000 tonnes**

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<tr>
<th></th>
<th>imports</th>
<th>production</th>
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<tr>
<td>1978</td>
<td>594.5</td>
<td>30.0</td>
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<tr>
<td>1979</td>
<td>529.7</td>
<td>35.0</td>
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<tr>
<td>1980</td>
<td>709.2</td>
<td>35.0</td>
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Source: AED 18 June, 1982, based on figures from the International Sugar Organisation.

Between 1977 and 1980 the imports of sugar increased from 363,000 tonnes to 709,000 tonnes. This was the background of attempts by the government to speed up the production of sugar. The Bacita plant served as a model for the establishment of refining plants in Niger and Gongola states but so far these plants have made very little headway. The Savannah project in Gongola state fell short of the planned goal of producing 50,000 tonnes of sugar by 1980. Actual production reached only 23 tonnes that year and 10,000 tonnes in 1981 as only 2 - 2,500 ha of the planned 10,000 had been planted with cane. At the same time project costs have risen from the originally planned N 71 million to N 500 million.
Why did the project run into such difficulties? The problems were mainly organizational, involving huge problems in coordinating one large-scale project such as the building of the Kiri Dam on the River Gongola with two others: the preparation of 10,000 ha for cultivation of a crop, which had only been grown in smaller quantities in the area before, and the completion of a refinery to process the crop. These problems are illustrative of the problems which characterized the other large-scale irrigation projects. The projects involve such magnitudes of manpower and resources that they required coordination and strict management. This is particularly difficult in a situation such as the sugar project, where widely different categories of manpower are involved, e.g.

a) the foreign management and contractors

b) the Nigerian federal government and its representatives, mostly belonging to the ruling party of the country, the National Party of Nigeria (NPN)

c) the Gongola state government and its representatives with affiliations to the ruling party of the Gongola state, the Great Nigerian People's Party (GNPP)

d) the peasants, who might disagree with the other three groups on the superior value of sugar production and irrigation compared to production for subsistence with practices that have proven well over centuries

In the actual case all groups were involved in the problems that arose. Rivalry between the federal and state governments caused delays in the flow of finance, while at the same time the Commonwealth Development Corporation, the foreign manager, was anxious to conceal the delays as long as possible, to avoid more or less well-deserved accusations of inefficiency. Finally, the peasants protested against being dispossessed of their lands, which were being expropriated for the plantation and the irrigated fields. In May 1982 the government terminated the contract with CDC and the federal Ministry of Industry took over the management of the project.56

Not all the irrigation projects will encounter such grave problems as the Savannah project but one may imagine the range of problems that can occur in connection with wheat farming, which in contrast with sugar cannot be economically grown. Hence, even though reliable data are not available, we may conclude that the prospects of attaining self-sufficiency in wheat and sugar are still very small. Wheat will never be produced in sufficient quantities to make this possible - sugar
may be at some future date more distant than the termination of the Fourth Plan period, but at costs which may run very high with the type of large-scale technology involved. Among the crops under review, rice has come nearest to the goal of self-sufficiency, but as yet too few data are available to evaluate at what cost.

The ADPs and the production of staple crops

According to estimates presented recently by the Central Bank of Nigeria, the growth of staple food production has fluctuated between 0.3 and 2.5% during 1978-1980. Production does not seem to have recovered in 1981 as the growth rate of agricultural production as a whole is estimated at only 1% this year. The fact that food production has not recovered since it started to stagnate at the beginning of the former decade is, however, hardly attributable to a poor performance of the agricultural development projects. The five projects, which had been running for more than two years in 1980, i.e., the three pilot projects and the Lafia and Ayangba projects in Plateau and Benue states respectively, covered only a limited part of the total area under staple food production. The Funtua and the Lafia ADPs cover only 10 and 17% of the total area of Kaduna and Plateau states respectively.

Detailed data on the achievements made in the projects under implementation are only partly available. In the discussion below I shall take up the impact of the ADPs on the growth of production with my point of departure in the material available on some of the early projects.

The World Bank has recently claimed production gains of more than 5% annually for crops like maize, millet and sorghum in the three pilot projects. A positive rate of growth in the Funtua project is confirmed by D'Silva and Raza as well as Björn Beckman, who has been following all the three northern projects. While the latter does not quantify his estimate, it is evident from the analysis of D'Silva and Raza that the production of sorghum increased on average by more than 30%, while that of maize increased by almost 190% during the first three years of implementation of the Funtua project. It is furthermore evident that the positive rate of growth was primarily due to the expansion of acreages under cultivation but even the increase of maize yields was impress-
ive. The analysis is, however, based on data collected from the Quarterly Reports of the project evaluation unit and according to Beckman, these estimates are generally "dubious and fraught with all sorts of methodological problems". Nevertheless, there can hardly be any doubt that the three first projects made substantial progress, particularly of maize production, but also of sorghum and millet production. A compound rate of growth of 5% annually as claimed by the World Bank is by no means impossible.

If some success was recorded in the three pilot projects, this contrasted with the achievements of the Lafia project, which I visited in November 1980. The project had then been running for almost 2 1/2 years but no figures had yet been made public on the growth of production. The evaluation unit of the project was convinced, however, that no significant progress had been made.

Sorghum, maize, yams and millet were the most important crops in the area. Intercropping or relay cropping was widely practiced. In a sample survey made by the evaluation unit only slightly more than 2% of the total area under maize was monocropped. Maize was mixed with yams and with other crops such as cowpeas or vegetables. These practices had traditionally been followed by the peasants to secure a nutritionally balanced diet and to maximize the returns on their inputs of labour.

The project extension efforts concentrated particularly on improved maize, which had recorded such good progress in the northern projects, but included also sorghum - the most important staple in the area - cassava, cowpeas and rice. No improved or hybrid variety of yam, the other dominant staple of the region, had been developed at the time of the visit. The cultivation of yam, millet and other crops in the area was thus left to benefit from the introduction of general input services and amenities in the region.

The prevalence of traditional methods caused the project administration some problems. The improved TZB varieties of maize had been developed for mono-cropping and dense plant populations and did not give good results when sparsely interplanted with other crops. Moreover, the interplanting of crops made difficult to determine the optimal package of inputs. At the time of my visit experiments were being carried out at the seed multiplication and research unit of the pro-
ject with the mixing of maize and cassava, while at the same time the project extension officers sought to persuade the peasants to take up mono-cropping.

There were, however, also other problems which prevented the peasants from adopting the project varieties. Both the improved TZB variety of maize and the tall ML 4 variety of sorghum were particularly vulnerable to attacks from the stemborer, against which the administration had no cure. Moreover, the project variety of sorghum did not suit the taste of the peasants.

The sale of fertilizers at a subsidized rate has been a dominant feature of all the ADPs under implementation. In contrast to the impression gained from reports on the northern projects, the crops in the Lafia project did not respond very well to the application of fertilizers. This might have to do with the fact that land-scarcity was not so serious in the Lafia region as in some of the northern project areas. Hence, when the project started, new and fertile lands, which were generally unresponsive to the application of fertilizers, were cleared and brought under cultivation. The problem might also have concerned special factors such as the general unresponsiveness of the traditional varieties of sorghum to fertilizers.

Nevertheless, fertilizers were after all the input offered at the farm service centres which attracted the greatest interest among the peasants. The two farm service centres visited reported only a limited interest of the peasants in improved or hybrid seeds, pesticides and herbicides, whereas the interest in fertilizers was greater. The 20-odd farm service centres seemed thus primarily to function as retailing points of the latter commodity and not as multi-functional units for dissemination of extension advice and new technology. These tasks were primarily undertaken from the project headquarters in Lafia town by the extension officers there, who consequently had to cover fairly large numbers of peasants. In the whole area it was estimated that 20-25% of the peasants had bought fertilizers or other inputs from the farm service centres. Lack of faith on the part of the peasantry in the benefits to be derived from the adoption of the recommended practices and seeds introduced is probably not the only explanation of the low rate of adoption. Resource constraints, particularly labour constraints, may also explain the reluctance of the peasantry in adopting the project package wholesale. The existing system of cultivation was adapted to the employment
of family or exchange labour. There was only a limited labour market and hired labour was considered to be expensive. The expansion of acreage, which often followed the adoption of new crops, or the intensification of cultivation, which followed the application of new methods, required additional inputs of labour beyond the capacity of the household members, or beyond the social norms (e.g., Islam, in the case of some groups) regulating the employment of female labour. Peasants who wished to adopt the whole package of recommended inputs thus demanded credit to pay for hired labour — a demand which the project administration resisted. Hence, according to the evaluation unit of the project, it was often only the more resourceful farmers who managed to benefit fully from the project inputs and services.

Even though the project had only been running for half of its full period at the time of the visit, there was a striking contrast between the caution and pessimism which characterized the Lafia staff and the optimistic results reported from the northern projects. At the end of 1980 the greatest achievement of the Lafia project did not seem to be the progress of production, but the completion of 300 kms of feeder roads out of a planned total of 600 kms for the whole project period ending 1982.

I have attempted to illustrate, using the limited information available on the Lafia project, the possible contrast between the success of the northern projects and the projects under later implementation. It is likely that the former projects, being pilot projects, have benefitted from better allocation of resources and personnel in comparison with the projects under later implementation, but also other reasons may explain the different achievements. In the present context, however, it is important to note that the northern projects have served as examples of the achievements of the ADP approach as a whole. The assumptions on the potential of the approach, which lies behind part of the government's Green Revolution strategy, rest on the achievements of these projects, the results of which are the only ones to have reached the public.

If point of departure is taken in the pessimistic outlook which characterized the Lafia project at the time of my visit, and if that project is not altogether unrepresentative of the non-pilot projects under implementation, it is hardly likely
that the 5% growth rate claimed by the World Bank will manifest itself in all the projects during their first years of implementation. This, taken together with the dubious performance of many of the irrigation schemes, makes the goal of a 4% annual rate of growth of food production claimed by the government for the Fourth Plan period look very unrealistic. Although there is a potential for growth in the ADPs it is hardly likely that this goal will be achieved for all of Nigeria in the course of the next few years, even if every state has an ADP under implementation by the termination of the plan period.

My pessimism as to the overall growth potential of the projects in the short run is also due to a fact already touched upon in connection with the Lafia project: at least during the first years of implementation only a fraction of the peasants will actually benefit fully from the inputs offered in the projects. In the Lafia project only about 20-25% of the peasants bought any form of input at all, and the purchase of inputs like seeds and pesticides were at a rather low level. Even though the peasants were interested in fertilizers, which often were in short supply, they generally retained their traditional crops and cultivation methods, either because they lacked resources for adopting the new methods or because they preferred the traditional methods, which fitted their subsistence needs better. Those among the peasants who adopted the new methods on a full scale were either big farmers or group farmers, among whom village headmen or dominant persons could often be found. Among the larger farms, I visited a farm of 40 ha, the whole area of which was exclusively devoted to project maize, cultivated under close project supervision with the help of female labour. Without any doubt the project administration made far better progress with the resourceful and influential persons in the villages - these persons were, however, also in focus of the whole project strategy. It is a selective approach, the scope and implications of which I shall discuss in the next section.

The case of the 40 ha farmer receiving major attention from the project extension service relates to an issue which has been focused upon especially by the critics of the Green Revolution in Nigeria as well as in other countries, i.e., the growing differentiation among the peasantry.

Even though the World Bank in its original project outlines emphasized the "small-holder" or the "rural poor" as the principal beneficiaries of the rural development projects, the project staffs have, when implementing the projects, selected a minority among the peasants as the primary target group - the "progressive farmers". In the Lafia project a group of "progressive farmers" had not explicitly been singled out at the time of my visit; but there were nevertheless certain resourceful farmers on whom the project extension concentrated, and who got special privileges with respect to fertilizer distribution and credit. In the Funtua project the staff distinguish even between the "progressive" and the "large-scale farmers", the latter being those with holdings above 100 ha, the former those, who might have small holdings; but who are responsive to project extension advice.62

In 1978/79 almost 20,000 farmers were included in these categories in the Funtua project, while the rest, the so-called "traditional farmers", who received minor attention from the project extension service, numbered about 67,000 peasants. That year the large-scale and progressive farmers received 61 % of all extension visits and were similarly favoured with respect to fertilizer distribution and credit, according to D'Silva and Raza. In 1979/80 the traditional peasants received on average 150-250 kgs of fertilizers, while considerably larger quantities were reserved for the other groups. The progressive farmers received between 2.5 and 5 tonnes of fertilizers per farmer, while on average 10 tonnes of fertilizers were reserved for each of the 200 large-scale farmers.63

Jan van Apeldoorn who also visited the Funtua project during the late 1970's writes,
"I watched a sale of a limited quantity of (heavily subsidised) fertilizer at Funtua. The line of "farmers" hoping for an allocation was long and moved slowly. Yet, two "farmers" could drive their trucks in, walk straight into the office, obtain allocations of over 100 bags each, have it loaded and depart, before the line had moved significantly."  

In both the Funtua project and in the Lafia project, credit was only given for the purchase of agricultural equipment such as sprayers (for pesticides) or ploughs, and not as seasonal loans for inputs or labour. As the project administrations were seriously concerned about the risk of defaults, credit was primarily given to groups of farmers or to the better endowed ones.

The bias of the project policies has led Gavin Williams to conclude,

"the project explicitly aims to provide massively subsidised inputs on credit to two categories of farmers, the large and the larger... progressive farmers are defined by their wealth, political*influence, commercial activities, and amenability to outside advice and subsidies... The profitability of their farming depends on their ability to acquire large areas of land, ... to employ cheap female labour, and to get large allocations of fertilizers. The viability of capitalist maize farming depends on the precarious supply of fertilizers by the government and rain by Allah."  

When asked in an informal context, the staff at the Funtua project conceded that there was a certain bias of the project policies, but explained it in the following manner,

"We prefer the trickle-down approach from farmer to farmer, accepting that some will thereby benefit more than others. - As a consequence of this preference, we concentrate on our notorious "progressive" farmers. For organization and administrative reasons we must choose a reasonably small section at first."  

In the more official statements made by the World Bank, more cautious formulations are used,

"The projects also did not ignore larger farms, which had political clout and provided an informal channel to the Government for reporting successes, obstacles and failures. Eventually, the larger farmers provided a demonstration (over the fence) to smaller farmers. This trickle-down theory worked because the larger farmers proved to be the greatest risk-takers and thus were more innovative."
It is hardly surprising that a number of researchers and students have cast doubts on the actual "rural poor" orientation of the projects; but how does the strategy actually affect the rural resource distribution and class formation? And in connection with this question: what is the reasoning behind its introduction?

Neither Gavin Williams nor Björn Beckman, who have dealt with these issues most thoroughly - Williams particularly with the latter question in his work on the World Bank and the Peasant Problem - envisage capitalist farming as the principal outcome of the introduction of the strategy. Williams explains that the growing inequalities which became apparent as a result of the Green Revolution in India, were among the reasons why the World Bank changed its rural development strategy from the former large-scale approach to the present "rural poor" orientation. The aim of the present strategy is "to increase the production of the poor without loss to the rich". It is an ideology of a "benevolent technocracy", the logic of which it is to "intensify the compulsive involvement of the small farmers in the market". The point of departure in Williams' analysis is thus the subordination of agricultural production to the capitalist mode of production. The World Bank intervenes to facilitate this process, but Williams is ambiguous as to the possible formation of a specific class structure in the rural areas along with the process. In Williams' analysis the World Bank, rather than seeking to promote unequal development in the rural areas, is trying to smooth out some of the contradictions and by-effects which naturally arise from the process of subordination.

With the point of departure in observations in the project areas, Beckman describes how a certain process of concentration of land and other resources takes place in the project areas with the enhanced commercialization of agricultural production and with the growing level of public investments in the areas. A class of kulak farmers and proletarianized peasants is emerging. The kulak farmers operate a wide array of farming and non-farming enterprises investing or reinvesting in commercial food production. They do not necessarily have a background in agriculture, but are often former businessmen or bureaucrats with good connections to the decision-makers and with well developed communication lines.
to the respective project staff. It is hardly coincidental that the 40 ha farm I visited in the Lafia project area was owned by a senator in the federal assembly.

In his analysis of the background to the introduction of the projects, Beckman stresses that the strategy is also "a political strategy for the regulation of the class struggle in Nigeria"; but the capitalist farmers are not the primary target of the World Bank, he claims. The Bank needs to prove its strategy by getting quick results, and neither the small peasants, who are too difficult to reach, nor the capitalist farmers, who are too few, are in the centre of the strategy. Reliance on the capitalist farmers would moreover enhance the risks of polarizing the classes in the rural areas. For these reasons the Bank prefers to direct the bulk of resources to the "progressive farmers", the middle peasants, whom Beckman defines accordingly,

"In terms of the size of holdings most will be found within the top quarter but not necessarily organized on capitalist lines. Most in fact would have a large element of family labour and owners would play an active part in actual production."

Hence, there is close accordance between both of these analyses, although the relation between the agricultural policies and the formation of a specific class structure is stressed more in the work of Björn Beckman. Enhanced differentiation of the peasantry is taking place as a result of the introduction of the ADPs but capitalist development in agriculture is not necessarily the principal outcome of the process. The World Bank seeks to eke out too great disparities by trying to support a stratum of middle peasants, classified as the "rural poor" in the terminology of the Bank. At the bottom of the emerging rural hierarchy a process of proletarianization of the peasants, who are not alert to the new opportunities, is taking place.

This seems a convincing analysis. One point should be stressed, however, particularly in connection with Björn Beckman's emphasis on the class issue. The formation or promotion of a class of middle peasants was not, in my view, what prompted the World Bank to move into Nigerian agriculture - and in relation to this point, the background of the whole set to new food policies is not "class struggle". The policies are introduced in response to the
food crisis and to the transformation of the Nigerian economy during the 1970s. It has become necessary to subordinate that part of the agricultural production, which during the colonial and the early independent period has been left almost untouched by public policy, if not by the market forces, i.e., food production. One may say that at the present juncture of Nigeria's road to becoming a fully-fledged industrialized nation, it has become essential to integrate and subordinate food production to the needs of the industrial economy. This is the stage where the World Bank moves in to alleviate the process of subordination and test its new agricultural policies under favourable conditions. The fact that the Bank relates to the middle peasants is interesting, because it highlights an essential feature of a strategy which is (going to be) applied elsewhere in the Third World. Nevertheless, it should be kept in mind that the formation of a class of middle peasants is not the "motive force" of the strategy, it is rather the "means by which" the overall goal of the strategy is achieved, i.e., enhanced food production for an industrial and urban economy.

What about the role of the Nigerian state in this process? We may analyse this problem with the point of departure in the socio-economic implications of the large-scale irrigation schemes. Unfortunately, there are no up-to-date analyses of these projects. Tina Wallace has, however, given some vivid accounts of the early (late 1970s) developments of two of the northern irrigation projects, and Gunilla Andrae and Björn Beckman touch also on the issue. 72

The irrigation schemes involve such large-scale alterations of the utilization of land and technology that they disrupt the existing systems of land use not only in the centre of the irrigated areas, but also in the periphery. In the periphery of the irrigation sites, especially downstream of the dams, the peasants who have been benefitting from the flooding of their lands by the rivers have lost some of their dry season farming opportunities as the damming of the rivers prevents or reduces the floods. In the Bakalori scheme in Sokoto state, Tina Wallace estimates that the productivity of 20,000 ha of fadama (dry season) land has been reduced significantly. When completed, 24 - 26,000 ha of land will
come under irrigation, but in 1980 only 1,000 ha had been prepared, whereas 20,000 ha of fadama land were lost or affected by reduced productivity. In the Kano River Project in Kano state the farmers living downstream of the Tiga dam in the Hadejia Valley started to move out of the area as they had lost their dry season farming and their fishing opportunities.72 These peasants were not paid any compensation, whereas the peasants living in the centre of the irrigation sites, who lost their farms as they were removed from the area to make room for the construction of the dams and the channels, were compensated either with new lands or with a sum of money per acre lost for the purchase of new lands. Nevertheless, these peasants were the most seriously affected by the schemes as they were uprooted from their former lands and often resettled in less fertile areas. At the Tiga dam in Kano state 13,000 people were resettled, while at the Bakalori dam 15,000 people were to be removed according to Wallace. At the sugar project in Gongola state 50,000 people were disposessed in connection with the construction of the Kiri dam and the establishment of the sugar plantation.73 In the Kano project the peasants who had lost their lands had to buy new lands themselves with the small amount of money they had been given - a task which in some cases proved impossible as land prices were rapidly rising in the densely populated area. In the Bakalori project every peasant was reallocated irrigated land, which however, had undergone dramatic changes. All trees had been felled and the land had been levelled with laser beam technology, which resulted in the blowing away of the topsoil. According to Wallace,

"The soil has, temporarily at least, lost much of its fertility. The area... closely resembles the Sahara desert - totally flat, not a tree, not a shrub, the wind blowing the sand and dust in a constant harmattan. Tractor drivers wear masks over their faces. Dotted in the midst of this wasteland are small settlements, surrounded by barrenness, cut off by channels."74

Many peasants simply refused to do any farming on the scheme. Only 1,000 ha out of 3,500 constructed were planted in 1979/80. Since the beginning of 1980 the peasants started to obstruct the work on part of the project and eventually all work was brought to a halt. At least 19 peasants (official
estimate) were shot dead by the police in the riot that followed.

While initially the authorities debated the possibility to run all the irrigation projects on a tenant basis, it was only in one of the northern projects, where this was actually done - in the South Chad Irrigation Project in Borno state. In this project the authorities retained stronger control over the distribution of lands and over the process of production. In the two projects dealt with by Tina Wallace, the authorities also sought to enforce the cultivation of specific crops with pre-ordained methods, but apparently have not tried to interfere with the distribution of lands - at least not at the time of her research during the late 1970s. In principle this would have been possible according to the regulations of the Land Use Decree, but the peasants did rent, sell or pledge their lands without interference of the authorities. Consequently, a certain process of concentration was going on in the projects as the poor peasants decided to rent out or sell their lands because, among other reasons, they could not afford to cultivate them with the methods demanded by the project authorities.76

The drive by the authorities to create large-scale farms at the irrigation schemes, which we have seen took place during the first years of the 1980s, might also be due to the difficulties they encountered of actually controlling production, distribution and ownership in the projects. At any rate, as a result of the establishment of a number of large-scale plantations and farms, a group of farm labourers or tenant-farmers, operating their farms on an outgrower contract, is emerging. Their labour-time remains under close supervision of the authorities.

Creation of new relations of production and enforcement of cropping patterns and practices by the authorities are thus ensuing from the establishment of the irrigation projects. These projects presuppose a much more radical transformation of the rural society than the ADPS. It is worth noting that it is the federal government and not an international agency like the World Bank that is pursuing these policies. I have already discussed the economic and political reasons for the government to continue with the large-scale approach, but I shall also seek to analyse the
general background of the intervention of the state and relate it to the analysis above of the intervention of the World Bank.

The Bank operates as an agent of international capitalism and economic growth. Its approach to development is characterized by the ideology of the benevolent technocracy, the objective of which it is to incorporate potent Third World nations in world development at large, i.e., in international trade and accumulation. It seeks to do so as efficiently as possible, i.e., at the smallest possible costs, on the basis of experience over several years of development efforts in the Third World.

The Nigerian government is acting as an agent of indigenous growth and industrial transformation. It is a task much more difficult than that of the Bank. The latter is giving obstetric aid to a birth, which anyhow seems inevitable, while the former is feeling the pains itself. In contrast to the role played by the state in the developed capitalist nations during the first phases of industrialization, the state in the Third World is the single most important initiator of change. It is a mediator between a global system and a local system. At the present juncture the task of the Nigerian state is to initiate a process of profound change, which will affect the 60% odd of the population directly involved in agriculture. This is no easy task as it involves the subordination of the local system to the global, while at the same time the issue is over food. The state must cope with both the fundamental conflict inherent in the process of finally subordinating agricultural production totally to the technology reigning in the global system, and with the time pressure inherent in the issue of food. These difficult tasks might explain why the state is trying to assume the greatest possible control over the process started, and why it is more concerned with the speed of economic transformation rather than with its costs.

The political leaders are forced to accept their role as mediators of a system of industrialization and growth - this role is fundamental to the existence of the state in the Third World today, but they may do this to different degrees, as we see in the context of certain Third World nations adopting a socialist ideology. The Nigerian rulers have almost accepted this role unreserved. Since the launching of the First Plan, through the Third and now the Fourth Plan, they have
embarked on a course aiming at the fastest possible transformation of the economy by means of the technology reigning in the global system. Hence, we can observe that there is no fundamental conflict between the two agencies, the state and the World Bank, as they pursue the same course of development; there are only conflicts among them over the means by which to arrive at the common goal. The fundamental conflicts lie in the present context between the state and the World Bank on the one hand and the peasants on the other. We can see aspects of these conflicts at the irrigation sites, and less overtly, at the ADPs. Large-scale farmers, however, ally themselves with the authorities, and the progressive farmers adopt the strategy eventually. Hence, we see sub-dramas of the basic conflict between the progressive and the large-scale farmers on the one hand and the marginalized peasants and labourers, the victims of inequality, on the other. But the basic mould of the system introduced persists. The local system is finally subsumed, and the marginalized continue to eke out a living - or is it not so? I shall return to this question in the last part of the report.

3. DEPENDENCY. FROM FOOD DEPENDENCY TO DEPENDENT FOOD POLICIES

Even though the authorities have accepted the integration of the Nigerian economy and polity into the global system, they are doing so with the aim that Nigeria herself should become emancipated within that system. They are seeking membership of a system dominated by capitalist nations with the aim that Nigeria herself should become a capitalist nation. Similarly, they are struggling to bring the country out of a weak economic position, where imports of manufactured and technologically advanced goods have to be traded off with exports of primary products such as agricultural produce and petroleum, and where it is essential to attract foreign investments. Such a position is purporting dependency, and the authorities sought already to fight it during the 1960s in their endeavours to modernize the economy and lay the foundations for an industrial transformation. During the 1970s, however, the implication of dependency has become even more impending as the country became almost solely dependent on oil exports, while large volumes of
agricultural produce had to be imported, as we have seen.

The paradox of the present food policies is, however, that even though they might be instrumental in reducing the level of food imports in the course of the next five to ten years, they will increase Nigerian dependency on foreign-manufactured commodities and know-how. In this sense they illustrate the mechanisms which have worked all over the Third World since the achievement of Independence: the harder they struggled to free themselves of the bonds which tied them to the developed world, the stronger they were bound to them.

While the production of wheat will not reach such proportions as to reduce the need for imports, the production of rice, sugar, and maize will probably increase significantly in the course of the next 10 years, reducing the dependency on foreign grains. Consumption of rice and maize might even substitute some of the consumption of wheat, and a growing availability of domestic staples at the market might also be instrumental in reducing the need for imports.

Both the ADPs and the irrigation projects are highly import-demanding, however. Imports of inputs like fertilizers, pesticides and agricultural machinery accompany the introduction of these projects. Consumption of fertilizers declined during the civil war from the pre-war peak of 65,000 tonnes in 1967 to 7,000 tonnes in 1970/71. In 1979/80, however, consumption had risen to 85,000 tonnes, and in the 1981 budget ₦ 100 mill. were allocated for the procurement of 900,000 tonnes of fertilizers - more than 10 times the volume of the 1979/80 consumption. However, during 1981 the Fertilizer Procurement and Distribution Unit of the Federal Ministry of Agriculture must have met with difficulties in distributing the total volume imported as there were still stocks in supply at the end of the year. Hence, appropriations for fertilizer were reduced to ₦ 10 mill. in the 1982 austerity budget.

With the expansion of the ADPs and the irrigation projects the consumption of fertilizers will increase further. Total annual requirements are estimated to increase to 10 million tonnes - a level of consumption that will hardly be reached within the period of the Fourth Plan. Production of wheat under the conditions prevailing in Nigeria is highly fertilizer-demanding. According to Beckman, recommended rates of applica-
tion of fertilizers equal almost 1/3 of the weight of the crop output,\textsuperscript{79} i.e., with 25,000 tonnes of wheat produced about 8,000 tonnes of fertilizers - 1/10 of total consumption in 1979/80 - are required, if the recommendations are to be followed. Fertilizer-use in the three World Bank pilot projects in Sokoto, Kaduna and Bauchi states accounted for 11 % of total fertilizer consumption during the last part of the 1970s, while these projects covered less than 2 % of the total acreage under cultivation according to Abiodun Falusi's research.\textsuperscript{80}

The growth of demand applies also to pesticides and agricultural machinery, although there are no data available to substantiate this proposition. According to figures from FAO the value of imports of these items stood at \$ 193 mill. in 1978 equalling N 125 mill.\textsuperscript{81} If this amount only doubled between 1978 and 1981, which is not unlikely given the policies pursued, the value of the total imports of agricultural inputs and machinery would reach a level of N 350 mill. that year (N 100 mill. worth of fertilizers and 250 mill. worth of pesticides and machinery) equalling about 1/4 of the total value of food imports estimated at about 1.5 billion in 1981.

With the expansion of the food production programmes it is even likely that these items will absorb a growing share of the import bill. European and American transnationals like the Swiss Ciba-Geigy, the Dutch-British Shell, the British ICI, the American Pfizer, and Occidental Petroleum and Whittaker are presently queuing to win contracts on fertilizer, pesticide and seed sales to the ADPs and the other food production projects.

The same applies to agricultural machinery and equipment. Each state is importing equipment, which is either sold or hired to the peasants (tractors, for instance), or employed in the state agricultural programmes of land-clearing or other large-scale operations. One of the most comprehensive contracts was awarded by Plateau state, where the Lafia project is located, to the US company International Harvester at the end of 1981. The deal included 528 tractors (of which 400 would be sold to the peasants at a subsidized rate), combine harvesters, motor, trucks and bulldozers. The contract also included product-support and after-sales service and the building of a central workshop in Jos, the state capital. Total costs amounted to N 18 mill. - about the same amount lent by the World Bank for the Lafia project over the initial five-
year period. 82

A characteristic of the food policies is thus to push the problems of dependency from food imports to imports of inputs and machinery. They form a secondary frontier of dependency, but even a tertiary frontier of dependency is appearing. To alleviate the growing levels of imports of inputs and machinery, the government is seeking to establish manufacturing plants in the country, i.e., it is inviting foreign investments and transfer of technology.

While there are no plans under implementation to start indigenous production of pesticides, there are projects under way to start manufacturing fertilizer in the country. One plant producing superphosphatic fertilizers has already been established in Kaduna. The plant had originally a capacity of 40,000 tonnes, but the actual production will be increased from 35,000 tonnes in 1981 to 70,000 tonnes in 1982 according to Business Times. 83 Two other plants are now in the first phases of implementation. A contract for the Onnenitrogenous and compound fertilizer plant at Port Harcourt in Rivers State was signed during spring 1981 by the Nigerian Ministry of Industries and a consortium of American and Japanese agro-business firms led by the American M.W. Kellogg and including the US Jacobs Engineering Group and the Japanese Marubeni Corporation, Kawasaki Industries, and Nissho Iwai Corporation. The US Export-Import Bank will provide a loan of $ 246.3 mill. while total costs are estimated at $ 340 mill. (= N 216.6 mill.) after severe cuts in the budget. The project was originally suspended in 1980 after allegations of corruption against certain senators in Nigeria and accompanying criticism of the total costs, but after American pressure it was finally contracted in 1981 with a revised budget. The plant will have a capacity of 700,000 tonnes of fertilizers when finally completed in 1985. 84

Another project was launched in early 1982 in the neighbouring Imo State under a contract between the state government and private Nigerian interests and the UK based Devtec International. While the private interests will take 45% of the equity, the remainder will be split between the state government (30%) and Devtec (25%). Total costs are estimated at N 120 mill., and the project will have a capacity of more than 100,000 tonnes of compound fertilizers in five years. 85
Generally, however, the foreign investors have taken a cautious attitude to investments not directly invited by the government. Fiat and Steyr, the latter being also agent for Ford, have set up two large tractor assembly plants in the north, but even when invited by the government to set up joint ventures under the Joint Agricultural Consultative Committee, American firms have acted with some caution. The president of the US firm Multinational Agrisystems revealed recently in an interview with Africa Economic Digest that his firm preferred to invest in smaller schemes and "spread the risk over a number of projects, rather than have one big splash with a big expatriate team ... A World Bank project in a particular state could be an ideal way for firms to get their feet wet and get to know the problems. Only if we had a couple of projects under our belts would we approach something involving a sizable cash outlay."87

Despite the caution, however, a number of joint ventures have been agreed upon and are going ahead under the JACC arrangement. Most of these are in direct food production and processing like the Beatrice tomato project in Plateau state. In June 1981 when the meeting of the JACC was held Beatrice Foods announced its plan to set up a 8,300 ha tomato farm and processing unit in Plateau state for the processing of tomato paste. The project was a joint venture between the state government and Beatrice Foods and would cost between $100-150 mill. (₦ 53-80 mill.). Included in the tasks of the state government would be the building of a dam to provide irrigation for the estate.88

Apart from this project, 6 other US-Nigerian joint ventures are now going ahead. These include large-scale poultry and pig farms, an animal feed venture using cassava, a rice-based pasta project and a big soybean farm (10,000 ha).89

Apart from the American ventures, some British investments are also taking place in food production and processing. Mention has already been made of the interests of the British Commonwealth Development Corporation in the Savannah sugar project in Gongola state. The British Tate and Lyle is also managing agent of the Bacita sugar processing unit at Ilorin and holds a share in this refinery. The company also runs other sugar processing units in Lagos and is, furthermore, involved in the government's future plans for sugar production.90
This is no exhaustive list of the foreign investments presently taking place in food production and processing. Some foreign ventures will be examined further in Andrae's and Beckman's work on the agro-based industries, such as the Scandinavian interests in dairy production or the Brazilian in cattle ranching. My concern here is to show that the attempts to increase food production are accompanied by growing levels of imports of other commodities and by growing foreign intervention and investments in the country.

The food policies under implementation are hardly unequivocal in the sense that the costs of introducing them (imports of inputs and machinery, interest and dividends to be paid on the foreign capital invested in combination with tax exemptions and other forms of preferential treatment of foreign investments) will totally absorb the potential of the measures introduced. Nevertheless, it should be stressed that the costs of importing the technical and managerial package of the new food policies are so substantial that they will tax the increment of production considerably, at least in the period before manufacturing industries producing inputs and possibly machinery have started production in the country itself. It is impossible to say to what degree these costs will significantly reduce the gains of production, but the fact that the costs of importing inputs and machinery may amount to 25% and more of the value of the total food imports indicates a fairly heavy rate.

Even though at least the ADPs are economically viable in the longer run, there is an unquantifiable element of foreign control associated with the reliance of foreign technology and manpower. Indigenous plants of fertilizer production might be established. Nevertheless, it will take a number of years before Nigerians, and not foreign managers and technicians, are in a position to control fertilizer processing entirely. Similarly, seed multiplication for the ADPs and the irrigation projects might be undertaken at research centres or at the project sites in Nigeria. The International Institute of Tropical Agriculture, for instance, is located in Ibadan, and the various projects are actually benefitting from this fact, as I have noted in the case of yams. A vital and sophisticated part of the genetic and micro-biological research on seeds is, however, being carried out in transnational corporations like Ciba-Geigy,
Sandoz, Pfizer, Upjohn, Monsanto, Union Carbide and Royal Dutch/Shell, some of which are trying to get an edge in the Nigerian market. These corporations also deal in the "global seeds", notably wheat, rice and maize, which are so important to the Nigerian policies of import-substitution.

The control of the package of technologies and practices may allow the foreign dealers and investors an upper hand in their negotiations and conflicts with the Nigerian administration. The most obvious example of this problem is the conflict presently taking place between the World Bank/the federal government and the Kaduna state government over the extension of the Funtua project to cover the whole state of Kaduna. The World Bank and the federal government are now simply withholding their loans of N 150 million (out of the planned total costs of N 234 mill.) for the extension of the project over a five-year period to make the state government comply with the Bank's demands that the project is run by foreign expertise. The state government claims that the salaries of the 45 experts proposed by the Bank will cost N 60 mill. over the five-year period, requiring 2/3 of the total loans furnished by the Bank. Moreover, the state government is dissatisfied with the previous administration of the Funtua project, claiming that contracts on machinery and equipment were primarily awarded to foreign firms at overvalued prices, even when the items were available in Nigeria, and that the training of the Nigerian staff in the project was insufficient to enable it to take over the project.

The result of this conflict, which, to my knowledge, has not been concluded, will probably have important repercussions on the other projects under implementation. Essentially, the conflict is over dependency and foreign intervention. It demonstrates the fact that while Nigeria is struggling to free herself of the bonds of the food crisis, she is facing other forms of dependency as she is forced to import the technology and standards of the industrialized world and to comply with the people, who convey them. The struggle to combat food dependency thus implies integration into the industrialized world on unequal terms.
4. VULNERABILITY. ENVIRONMENTAL IMPLICATIONS

While the traditional systems of cultivation in Nigeria were primarily geared towards the greatest possible stability of food production and risk-aversion, the system presently introduced is primarily geared towards growth of production and productivity. The food projects aim at a break-away from the methods of cultivation which the peasants have adapted to the tropical environment over centuries. It aims at permanent, in some cases irrigated, individualized mono-cropping of the land as opposed to a system of multiple fallow cultivation by peasants working in larger groups or family units. In its basic orientation the new system is characterized by methods practised in the temperate regions of the world, and even though it serves to increase productivity, it endangers also the stability of production under tropical conditions. This is partly recognized by the authorities introducing it. As we have seen in the context of the Lafia project, experiments with various crop mixtures were carried out, despite the fact that the package of modern technology had been devised for mono-cropping.

Fundamentally, a system of permanent farming as the one introduced greatly enhances the risks of cultivation, as lands of marginal productivity, which have earlier been left fallow, are enclosed under cultivation. The soils of Nigeria are generally only moderately fertile and are susceptible to erosion and degeneration. They have a variable moisture and organic matter content and are subject to leaching. When the canopy of the bush or the protective cover of the forest is removed, the burning of the sun hastens the biological activity of the covering plants and reduces moisture, leaving a dead layer of topsoil with poor nutrient contents to be washed away by the torrents of rain or carried away by the wind. In densely populated areas of Nigeria permanent farming has been practiced on compound lands with the application of farmyard manure, but even in these areas fertility has degenerated. In parts of eastern Nigeria and the middle belt the soils can no longer sustain an annual crop of yam after one century of increasingly intensive cultivation.

Soil conservation methods and fertilization under the new agricultural programmes might restore the fertility of the land under continuous cultivation, but even with elaborate
conservation programmes and well measured application of fertilizers, the balance of permanent farming with the tropical environment is difficult to attain, especially as several millions of peasants are involved.

The introduction of large-scale irrigation and new technology such as the plough or the new varieties of seed has also environmental implications. Large-scale irrigation is a new phenomenon in Nigerian agriculture, which needs expert management and continuous supervision. Salinization or silting may over a period of just 10-20 years decrease the fertility of the irrigated lands if the channels are not kept in repair or if adequate systems of drainage are not introduced. The government may already now, when some of the large-scale irrigation projects are in their first stages of implementation, hire the (foreign) consultancy firm to supervise the maintenance of the schemes.

In most Subsaharan Africa the plough was not employed before this century, due among other things to the fragile texture of the tropical soils. Deep ploughing enhances the risks of erosion as the topsoil is turned and left at the mercy of the vagaries of the rains and winds. The selling of the plough at the ADPs enhances thus the risks of erosion, which are already inherent in the introduction of a system of permanent farming. If the plough is used extensively, new measures of erosion control must also be introduced.

The new varieties of seed also increase the vulnerability of the cultivation system. They contribute higher yields than the varieties traditionally used but are also more susceptible to pests and diseases as they are not adapted to the environment in which they are sown. Especially when single crops are cultivated over large areas of land as is done under modern systems of farming, diseases and pests easily spread. Spraying is, therefore a necessary component of the introduction of the new seeds, a task which must be undertaken, either by the peasants who then are to accept the practice and risks of spraying, or by the managing and supervising authorities on a large-scale basis. In the South Chad irrigation project the project management is now planning to spray the fields from the air at a high cost. In the ADPs we have seen how the peasants are reluctant to adopt the practice of spraying as the immediate benefits are not obvious and the costs of buying the inputs are prohibitive.
Apart from the problems of adopting the practice of spraying, it is also difficult to identify the correct type of pesticides. While the agricultural scientists are struggling to adapt the new varieties and the accompanying types of pesticides to the environment in which they are used, the environment itself adapts partly to the new technology. Insects develop resistance against certain types of pesticides and new fungi appear to feed themselves on new varieties. A virtual battle with the tropical environment is thus introduced in which the objective of the agricultural scientist and project manager is ultimately to render the environment inorganic on all other points than where the new seeds are growing.  94

With the slow dying of the tropical environment the raw material for the development of new seeds is also disappearing. This is what Pat Roy Mooney has drawn attention to in a recent work. As the new improved or hybrid varieties are introduced, they replace the traditional varieties, and encroach on the habitat of these plants. African rice is now in the process of disappearing due to the introduction of the international varieties of rice on the continent. In Kenya the peasants have been seeking to rejuvenate the traditional varieties of maize as they found that the high-yielding varieties were too expensive. As the global trade and research into seeds is increasingly monopolized, a declining number of seeds are actually used all over the world. The uniformity and standardization of methods accompanying the green revolution technologies cause "genetic erosion" - as FAO has termed the outmoding of certain plants - thereby ultimately reducing the number of species available for the breeding of new varieties and thus combating the new diseases, which are sure to emerge. A number of seed banks have been established to conserve botanic wealth artificially, but so far these have been located in the industrialized world under public or private corporate control. 95

This kind of global perspective may seem far from the reality of the Nigerian peasants today. How far, however? It is into the reality of the global system of agriculture that the Nigerian food producers are being drawn. Its logic is economic growth through the application technological sophistication,
division of labour and standardization. The variance and stability of tropical agricultural systems are hardly compatible with it. These systems begin to degenerate as we have seen, when they come in contact with the systems of accumulation and eventually the need for growth and development imposes itself on the tropical economy. How are the contradictions between growth and the implications of inequality, dependency and vulnerability, as discussed in the last three sections, best faced? Are there any alternatives to the policies presently pursued by the Nigerian government? I shall discuss these problems in the concluding parts of this report.
PART III CONCLUDING DISCUSSION. STRUCTURAL DETERMINANTS AND ALTERNATIVE POLICIES

1. STRUCTURAL CHANGE AND THE PROCESSES OF INTEGRATION/SUBORDINATION

In the foregoing discussion I have sought to outline the evolution of present Nigerian food policies and discussed their implications. These policies can be seen as a response to the stagnating level of food production and the crisis caused by the Sahel drought during the first half of the 1970s. Such explanations would, however, only describe the incidental causes of the intervention by the government in food production. They would not explain why the present require the constant attention of governments towards food production. In other words, more complex changes of a structural nature, which in themselves might explain part of the incidental background to the food crisis, have precipitated government intervention in food production.

The Nigerian economy and society is undergoing a process of transformation during the period under review - not least during the period of vast petroleum price increases and growing exports. The result of this process, which both relates to changes in the economic base of the Nigerian society, as well as to political changes, is best conceptualized as the formation of a political economy of an industrialized society. It is characterized by the attempts to develop an infrastructure of communication and power lines, by efforts to establish manufacturing industries, by extension of education and health facilities and by urban growth. In the centre of most of these activities we see the federal government initiating them through its development plans and its general expenditure. However, the efforts of the government to facilitate industrial transformation comprise not only activities appearing under the development plans or in the annual budgets. Also endeavours to unite and effectively harmonize the various groups of people with more or less strong traditions of autonomy, brought together under one rule by the colonial power, are part of the efforts to build a "modern nation". The civil war provides one extreme example of the difficulties and tensions involved in these efforts. The centralization of power and the cessation of
regional self-government being some of the results of the war tell their tale of the conditions of harmonization under the process of industrial transformation.

The issue of food is structurally linked to the political economy of the industrialized society. Increased food production becomes essential with population growth - among other things being the result of the efforts to improve the conditions of health - and with an increasing part of the population engaged in non-agricultural sectors. The very nature of subsistence production (production primarily for own use) is, however, also in conflict with the logic of the industrial economy, characterized, as it is, by the spread of market relations and the extension of state power. The Land Use Decree provides one important example of how the state assumes control over rights previously vested in the rural communities to make land transferable according to the needs of the industrial economy. By this measure the ultimate control of the distribution and use of the most important means of production of the subsistence economy, i.e. land itself, is passed on from the producers and their immediate and local authorities to more distant authorities with a wider spectrum of interests.

With the formation of the industrial economy the need to link and subordinate food production to the development of the economy at large becomes steadily more urgent. In the Nigerian case this became particularly necessary with the sudden rise of petroleum prices and the increase of the value of exports. Also in other countries on the African continent, however, the same tendencies may be discerned, albeit perhaps on a lesser scale, as they are now in the process of creating the preconditions for industrialization after an initial period of releasing themselves from the fetters of the colonial economy. Hence, the food deficits or crises, which have occurred during the 1970s in several countries on the continent, might partly be explained by the structural transformation of the African economies. The neglect of food production by the authorities, characterizing the first phases of independent rule in many African states, is only partly responsible for the food crisis which is now emerging in several countries. The priority earlier given by the authorities to export crops over food crops, which is often used to explain the present food deficits, accounts only for
part of the reason for the present emphasis on food production. The process of industrial transformation itself enhances the demands on agricultural production, while at the same time draining the agricultural workforce of some of its manpower.

In Nigeria there are thus both ecological (long-term deterioration of the soil-fertility ensuing from increasing population pressure and cultivation intensities), climatic (the vagaries of the rains), political (disregard of food production) as well as structural (economic transformation) causes behind the food crisis. The structural causes are particularly in focus throughout this report because they are often disregarded or inadequately explained in other analyses dealing with the food problem, and because they have important repercussions on the sort of policies that are actually warranted in combatting the crisis. In the following the structural dynamic underlying the crisis in Nigeria is therefore spelt out in greater detail.

In discussing the transformation of the Nigerian economy and its impact on food production it is necessary to focus on two interrelated processes of integration/subordination. One is the inclusion of food production and of semi-autonomous peasant systems in national economic development and accumulation. This process has already been outlined above, but a few additions are relevant here.

The process of incorporating food production into national economic development represents the completion of a process of incorporating peasant production and peasant political systems into economies of accumulation. This process had already begun when part of the peasant produce, e.g., export production, was appropriated by the colonial traders and rulers. The authorities of independent rule have continued, as we have seen, to intervene in the sphere of export crop production, seeking to raise the productivity of production, while food production was left untouched by political intervention during the first decade of Independence. During these phases of export promotion the autonomy of the peasant systems has been continuously eroded, while not being totally dissolved, however, as evidenced by the persistence of traditional land rights. The process of incorporating food production completes the process of breaking down the autonomy
of the peasant systems. Hence, the importance of the process we study lies also in its bearing on the emergence of a nationally integrated economy.

The second process of integration/subordination is of a more general nature and relates only indirectly to food production. This is the incorporation of the Nigerian economy itself into the world economy. This process also took its point of departure, as is well known, in the promotion of agricultural exports during the colonial period and in the corresponding imports by the colonial economy. It still relates during the present period to a one-sided pattern of primary produce exports with petroleum constituting 94-96% of total export value and agricultural produce accounting for the remainder, but to a diversified pattern of imports consisting of foods, crude materials, manufactured goods, machinery and know-how.

The one-sided pattern of exports and the low capacity to produce manufactured goods and food render the Nigerian economy vulnerable and dependent on her outside suppliers and markets. As it has already been noted in the case of food under the discussion of Dependency, the Nigerian leaders must respond to this situation by building up a capacity of self-sufficiency. In other words, like any other Third World state dependent on her raw materials and primary produce, the Nigerian economy must industrialize. In building up the infrastructural and industrial capacity and in uprooting part of the work force from its rural background and educating it according to the needs of industrialization, the Nigerian leaders must rely to a certain degree on the outside world for vital raw materials and goods, technology and know-how. Thus, in their efforts to become self-sufficient to the greatest possible degree they must import, acquire and copy the commodities and technologies of the industrialized world, emulating the industrialized economies. Hence, the lesson of this second process of transformation is that of making the Nigerian economy an integral part of the world economy.

As already noted, this process of combatting dependency on primary produce exports/foods and manufactured imports by seeking to acquire the technology of the economies on which the Nigerian economy has primarily been dependent for her exports and imports, i.e., the capitalist world, also creates
new relations of dependency. This is due to the fact that during this phase of building up her own industrial capacity the Nigerian economy can hardly do without the industrialized world, while the latter more easily can do without the primary produce of Nigeria, despite the fact that she has oil to offer. Hence, the process of integration is also a process of subordination, since it is the Nigerian economy which is succumbing to the technological regime of the world economy. The dynamic of integration and subordination lies not only in the underdeveloped nature of the Nigerian economy, however. Also the agents of the world economy itself, whether states, corporations, or supranational agencies like the World Bank, approach the Nigerian economy in the search for raw materials, markets, cheap labour, spheres of political influence, and in their efforts to facilitate the incorporation of the Nigerian economy into the world system. 

What is then the nature of this system into which the Nigerian economy is drawn, whether by her own impetus or by the efforts of others?

2. THE GLOBAL SYSTEM OF ACCUMULATION AND THE TRANSFORMATION OF THE NIGERIAN ECONOMY

It is not possible here to discuss at length the character of the world economy and the general relationship between African economies and the developed world. There is a whole debate on these issues among marxists, primarily, and it would take us too far to seek to outline the various positions here. There is, however, one basic and controversial point which I cannot refrain from mentioning here, albeit in a preliminary manner, as it has received insufficient attention earlier, and as it is guiding part of the concluding discussion.

A fundamental requirement of what is understood as development in the present world system is accumulation, i.e., economic growth based on technological change. It seems to me that this law is inescapable to the Third World countries becoming integrated in the world system. It is impossible to stay "inside" the world system, i.e., to trade or to interact politically or culturally without building up economies of accumulation. This law is so
generally applied that it can be observed in every Third World country today. It is the very meaning of economic transformation. Hence, there is a law of the world system which requires the Third World countries to restructure themselves in the image of the advanced capitalist countries dominating the world economy. They are not necessarily required to introduce capitalism, but they are required to implement economic change in order to accumulate. Hence, they have to industrialize.

This is the law of motion which we see applied in Nigeria. The transformation of the economy is conditioned upon the world system in the sense that the pattern of economic growth is modelled on it. Nigeria under economic transformation is changing her basic economic structure and political institutions to emulate those of the accumulating societies dominating the world system. A number of implications follow upon this proposition, of which the ones of relevance to food production will be considered here.

During the period under review we can observe two parallel and interlinked processes of integration/subordination. Regarding the Nigerian economy as a whole we see the efforts to emancipate it from its colonial legacy and from its dependent status. These efforts result in new forms of dependencies and in a pattern of economic transformation which is modelled on the economic structure of the world system. Within this wider process of integration/subordination, and as a result of it, we see a similar process of integrating/subordinating food production to the needs of the accumulating economy. There are thus close hierarchical links between these processes in the sense that the attempts to raise and reorganize food production are conditioned upon the integration of the Nigerian economy into the world system of accumulation. In other words, given that there had been no civil war, that there were no incidences of drought or even no deterioration of soil fertility, food deficits, which would require the intervention of the Nigerian authorities in the sphere of food production, would certainly emerge in a not too distant future due to the requirements of accumulation and the dynamic of integration. In economic terms these requirements might be described as demands to equalize the productivities of rural and urban labour as much as possible, thus also equalizing the remuneration of
labour, whether in the form of actual payments or in the form of social services, to avoid an ongoing process of excessive rural-urban migration.

These structural determinants raise important questions of the range of policy options open to the government. Is "everything" determined by the logic of accumulation, or are there any possible alternative policies to the ones pursued now in Nigeria? To what extent is a Third World government like the present Nigerian one really "free" in its choice of policy? This discussion is of fundamental importance, not only in the Nigerian context, but also in the context of a general development discussion. Below, however, I shall seek to conduct it primarily with a point of departure in the Nigerian food policies in order not to step outside the framework of the present report.

3. A DISCUSSION OF ALTERNATIVE FOOD POLICIES

To sum up the previous analysis, the price to be paid for the growth of food production is increased inequality, dependency and vulnerability. In discussing whether it is possible to escape these tendencies by a new policy two levels of analysis may be brought into focus, i.e., the general or fundamental level and the specific level of food policies in Nigeria.

Regarding the fundamental level, the process of accumulation itself enhances both inequality and class differentiation as well as dependency and vulnerability. Surplus labour extraction is a necessary condition of accumulation. A process of differentiation necessarily forms an element of a process of surplus labour extraction, presupposing, as it does, the control and remuneration of labour by specific groups or classes. Differentiation and inequality is, however, furthermore enhanced by the division of labour accompanying technologically advanced systems, and the allocation of resources through individual credit-worthiness and monetary transactions. Concerning dependency, it has been argued above how dependency in the Third World context of Nigeria is accompanying the quest for economic transformation, and it may equally be argued that vulnerability is an accompanying feature of this process, since
the disturbance of the ecology of the environment forms an integral part of the attempts to enhance technological development.

The Nigerian government, or for that matter many other Third World states, are thus caught in this fundamental dialectic between economic transformation and social, economic and ecological underdevelopment. The government is, however, not altogether tied. Moving from the general to the specific level, there are many ways in which the leadership may relate to the requirements of transformation and its impact. This is illustrated below partly by an albeit superficial, discussion of strategy options of the Nigerian food policies, partly by a more general discussion finalizing the report.

There are different strategies of approaching the peasants by the state and of mixing the technology by which the productivity of their production is raised. The government and the rural development agencies may put varying degrees of pressure on the peasants to make them accept new practices, or they may, as we have seen, select only a fraction of the peasantry and favour them in their distribution of resources. Similarly, the package of soil and water programmes, improved or high-yielding varieties, pesticides, and implements and machinery may be mixed differently according to the goals and bias of the rural development policies.

In the Nigerian context the irrigation projects represent a radical form of agricultural modernization in which the peasants are nearly forced to cultivate new crops on new lands with new techniques. The ADPs represent a more moderate form of modernization in which the peasants are persuaded to introduce new techniques through economic incentives and demonstration efforts. In both of these strategies the Green Revolution inputs of seeds, fertilizers and pesticides are introduced, while large-scale mechanization and irrigation are specifically applied in the irrigation projects.

While I have already expressed doubts about the economies of the large-scale technology in the form it is being introduced in the irrigation projects, the Green Revolution package needs to be considered in more detail. Admittedly, the package of seed, fertilizer and pesticide technology has a potential for raising the productivity of farming under
certain conditions as we have seen in the case of the Funtua project, but it is an open question whether the application of the package is the only, and the most appropriate, way of raising the productivity of farming in Nigeria at the present juncture. It is impossible here to answer this question conclusively. It requires a detailed examination of the potential of specific alternative strategies analysed in the context of the various agricultural regions in Nigeria. I shall discuss some alternative policies and strategies generally, however, in order to evaluate the strategy of the Green Revolution against a concrete background.

The Green Revolution is hardly the right starting point for a process of agrarian transformation. It is a foreign technology requiring imports and foreign investments as outlined above, and it is not primarily adapted to African conditions. A more appropriate starting point for a process of agrarian transformation would be to take departure in the existing cultivation practices and technologies in Nigeria, seeking to improve them.

This is also one of the important points made by Andrew Pearse in his discussion of the Green Revolution. In some of the Asian countries where the strategy was successfully implemented - in Japan, China and Taiwan - it was not introduced as a first stage of agrarian transformation. Emphasis was put on labour-intensive land and irrigation improvement in a stage preceding the introduction of the Green Revolution. The land and irrigation system was thus better prepared for the introduction of the new technology, which consequently yielded better and more stable results.99

The same methods are not directly applicable to Nigeria, of course, as Nigerian agriculture is neither characterized by labour surpluses nor by irrigated production to any big degree. A period of intensive consolidation of fragmented holdings and of preparation of minor irrigation works might have given better results in the long run, however, than the rash introduction of new technology. Apart from these measures more radical changes of the cultivation practices could also be introduced without necessarily breaking entirely with the former agricultural traditions. Below I shall deal with two strategies that are both, albeit differently, characterized by a less pronounced emphasis on foreign technology compared
to the Green Revolution package, while at the same time aiming at the continuation of elements of the cultivation system already in use in the country.

Mixed farming strategies, i.e., the attempts to integrate animal husbandry with crop cultivation, is now being carefully examined by researchers in other African countries. In some areas of Tanzania, for instance, Finn Kjaerby thinks that such a strategy, which previously only has received half-hearted support by the authorities due to their preferences for more advanced methods, might represent a viable alternative to the strategies mainly based on fertilizer application which were implemented in connection with the Villagization Programmes. Kjaerby argues that the production of ox equipment is not constrained by world market terms of trade in contrast to fertilizer production. It can be produced locally and does not imply similar ties of dependency on foreign agents as the imports or even production of fertilizers. Once the process of feeding the oxen and of manuring is kept going at an increasing rate, it is possible to raise both the productivity of land and labour. Moreover, the application of manure raises the moisture retention capacity of the soil, thus reducing the effect of erratic rainfall. \(^{100}\)

I shall not here discuss the feasibility of mixed farming in Nigeria as the problems surrounding the strategy need careful examination with the point of departure in concrete analyses. One general note is relevant, however.

The fact that mixed farming was tried in Nigeria during the colonial period without much success as mentioned in Part I should not lead to the total discarding of the strategy. It was then introduced in connection with cash crop farming, and the conditions of agricultural production are, moreover, radically changed now. The trypanosomiasis eradication campaigns have intensified and a larger area is now open to animal husbandry. The institutional and physical infrastructure of the rural areas has been extended, and there are presently more widespread extension and credit services. There are also more experiences on mixed farming to draw on, and there is a wider choice of techniques as several more types of ploughs and other equipment types are now available.

I shall deal more thoroughly with the strategy of zero-tillage or minimum-tillage farming as it is presently object
of research in Nigeria at the International Institute of Tropical Agriculture (IITA) in Ibadan. This strategy also provides one example of research being implemented with a view to development and adaptation of the existing systems of cultivation instead of introducing entirely new ones. During the last decade experiments have been carried out at IITA to find methods that would allow permanent farming to be introduced as an alternative to the degenerating systems of fallow production, while at the same time increasing productivity. The research is thus taking its point of departure in the immediate problems of Nigerian agriculture and represents an attempt to combine some of the advantages of fallow farming (soil conservation) with the demands of an industrializing and population-dense economy.

The research has concentrated on zero-tillage farming and covering of the fields with an organic mulch. These techniques reduce the risk of erosion, retain soil moisture and minimize weed growth according to Bede N Okigbo who is in charge of the experiments at the Institute. In the absence of plowing the weed seeds are not exposed to the sun and germinate less easily, while at the same time the risk of erosion is reduced. The protection of the soil by an organic mulch also prevents erosion, retains soil moisture and lowers surface temperatures, which benefits certain plants at the seedling stage.

According to the reports from IITA experiments have been carried out with maize, cowpeas, soybeans, pigeon peas and cassava, and the yield of zero-tillage crops have compared favourably with conventional tillage control crops over several years. Fertilizers and herbicides are also supplied to the zero-tillage crops; hence, while benefits are to be derived from the methods in terms of reduced erosion, possibly less weeding and higher yields, they do not exclude the use of chemical inputs, although the level of fertilizer application might be reduced compared to production with conventional methods.

Until now, cultivation with these methods has only been carried out on an experimental basis, and it remains to be seen if they can be applied economically by ordinary peasants. The growing of an extra crop as a live mulch or just the leaving of the old crops as a residual mulch might cost the peasants extra inputs of labour and require a certain
rotation of crops, which might neutralize the benefits obtained and thus adversely influence the peasants' choice of technique. Sawdust, rice husks or groundnut shells, which are often mixed in the mulch at the research station will, for instance, hardly be available to all peasants in sufficient quantities.

Nevertheless, there is a potential in these techniques which should not be ruled out in a discussion of alternative policies. The endeavours to reduce soil erosion, which on a long-term basis might be the gravest problem of all described in this report, should not be underrated. As the government has recently approved the country-wide testing of the techniques, it is to be hoped that these attempts to enhance production and environmental security will be considered and supported as seriously as were the pilot ADPs earlier.

There is thus research into other methods of increasing the productivity of farming and reducing soil erosion which should be taken seriously. A shift of emphasis from temperate European and American practices of tillage farming to tropical and traditional African practices of minimum tillage would, if implemented, at least reduce the risk of a growing vulnerability of the system of cultivation. Similarly, a strategy of mixed farming, being closer to traditional practices of organic fertilization and of employing more simple technology, would reduce the dependency on imports and foreign technology. These strategies may not display as spectacular a growth of yield rates as the Green Revolution, but they may represent a more appropriate first step of embarking on a process of agrarian transformation. In the long run, strategies of the above nature may prove cheaper as they entail less imports and as they are more easily adopted by more peasants. It should be emphasized, however, that none of the strategies discussed above actually excludes the introduction of the Green Revolution technology. It has already been mentioned that the strategy of zero-tillage farming requires the application of fertilizers and particularly of herbicides, and it does certainly not exclude the introduction of hybrid or improved seeds. Similarly, the strategy of mixed farming does not exclude the application of fertilizers, new seeds or pesticides, though the level of fertilizer consumption can be reduced significantly
under this strategy. There is hardly any economically viable long-term agricultural strategy in the Third World countries which is excluding elements of the Green Revolution package entirely. The question is, however, where to put the emphasis during the first phases of agricultural transformation. Envisaging the process as "a Revolution" and not as an accelerating process of economic growth implemented in various sequences may turn out a failure, exhibiting higher costs than a more incremental approach.

It is also with this insight in mind that the practical application of the Green Revolution technology should be discussed. At the present stage, when the foreign technology has been introduced, it is hardly feasible to abandon it. It should, however, be applied with an open eye to other and more simple forms of technology and to the possibilities of adapting foreign technology to indigenous ones in order to arrive at the most appropriate packages under local conditions. The research being conducted on the various methods of intercropping at the time of my visit to the Lafia project was a positive response by the authorities to the experiences they had. Similarly, the emphasis of the various ADPs on domestic seed multiplication and research is also in a positive vein. Finally, regarding the two alternative strategies mentioned above, it can be hoped that even though the Green Revolution has already been introduced in Nigeria - not least in the consciousness of politicians - it will not restrain the serious search for other and perhaps more appropriate strategies. It is not possible to predict whether the strategies mentioned above will turn out viable in Nigeria. The general thinking behind them, however, is correct, and even if they cannot be successfully implemented, other strategies of a similar nature may still prove to be more efficient ways of increasing food production than the spread of the Green Revolution technology to every state and local government authority.

The alternative strategies to increasing the productivity of farming may significantly reduce the problems of inequality, dependency and vulnerability as they presuppose less industrious and enterprising peasants, reduced dependency on foreign inputs, and eventually improved
methods of soil conservation. They will hardly remove these tendencies entirely, however. Regardless of the nature of the strategy introduced, the cultivation system will still depend to a certain degree on the infusion of external resources and on the aptness and resourcefulness of the peasants to make use of them. More important, however, it will still remain an integral part of a system of accumulation, implying, as I have argued, that it is hardly possible to avoid these tendencies entirely.

In order to complete the discussion of the option of alternative policies, the policies by which the peasants are incorporated by the state and the rural development agencies should also be analysed. I shall briefly discuss the smallholder approach in the form it is being implemented in Nigeria against the background of the experiences of other strategies for organizing the process of production in Africa.

In Part I it was demonstrated how attempts to create large-scale farms or settlements failed in Nigeria. In other African countries similar attempts, or efforts to introduce forms of cooperative production, seem equally disappointing. Cooperative production schemes or even cooperative marketing or credit schemes fail, according to the analysis made in Rural Development in Tropical Africa, because the government seek to persuade peasants to do "what is essentially against their own interest" (p. 10). Analyzing cooperative efforts with a less critical view to government policy, John M Cohen writes, "The intriguing unanswered question is whether the real problem is not bureaucratic or ideological but rather the result of simple peasant preference for individual farm holdings". In any case, it might be argued that cooperative ventures are more likely to turn out a success under population-dense conditions, where it will actually release some forces of production. Hence, whether cooperative farming is possible (given population densities of a certain measure, or given the right policies) or not (due to its incompatibility with peasant preferences), the approaching of the peasantry by the public agencies with a minimum of interference with the unit of production and with rural tenure, as is presently attempted in the ADPs, seems to stand the test of increased food production and general acceptance.
in the rural areas better than the cooperative ventures so far introduced in various African countries. The smallholder approach introduced in the ADPs may presently constitute the most trustworthy option of public policy towards the peasantry. There are, however, also problems of implementing it.

As has been shown in part II, there is a tendency that the smallholder approach is becoming a farmer approach. This development is not a unique phenomenon only occurring in Nigeria; it is also taking place elsewhere under smallholder schemes. In the work quoted above, Andrew Pearse writes that the Green Revolution strategy in most Asian countries has contributed to the increased economic polarization of rural populations; there are, however, alternatives to this development, he thinks - "China, Japan and Taiwan have all followed strategies that can be describes as 'peasant-based' in the sense that they were able to carry the peasant majorities with them while closing the doors to a possible rival agriculture class constituted by a large commercial farm sector" (pp. 238-39).

The World Bank projects in Nigeria are characterized by failure on the part of the project administration, to carry the peasant majority with them, despite the fact that the strategy adopted is peasant-based in theory. In their implementation of the projects the World Bank staffs and behind them, the federal government, are in the process of opening the doors to a monopolization of resources by a minority of the peasants and farmers. This is done with reference to efficiency and to the benefits of the trickle-down theory, as we have seen above. This policy can, however, hardly be justified on economic grounds, while at the same time it is also in open conflict with the stated objectives of the World Bank and the federal government of catering to the needs of the rural poor.

Even though it is true, as has been pointed out, that stimulation of economic growth enhances differentiation, there is little truth in the opposite notion that stimulation of differentiation enhances economic growth. In an initial project phase there may be some sense in concentrating the scarce resources of, for example, extension officers on a few peasants, and there may also be sense in the focusing on the peasants who are most
motivated to adopt the new methods. But what is happening in the ADPs is more than this. By trusting in the trickle-down theory and in the communications of the peasants "over the fence", and by ignoring the constraints inhibiting the majority of the peasants from becoming motivated (and progressive), the project administrations are on the verge of strengthening the vicious circles which, during the first phases of project implementation, serve to create differences of motivation and response. By continuing to concentrate extension advice, scarce provisions of fertilizers, credit and possibly machinery in certain groups among the peasants which have been categorized for favourable treatment, the authorities are discriminating against the majority of peasants in a way which may lead to a waste of scarce resources on account of the farmers and well-to-do peasants possibly not investing productively or not economizing scarce resources.

Instead of reserving fertilizers for the large-scale and progressive farmers, who anyhow command resources and connections to obtain scarce commodities, special provision could be made to ensure that increasing numbers of poor peasants got fertilizers and the necessary information to apply them. As the latter group holds the greatest part of the total acreage in the project areas, efforts made to overcome the constraints inhibiting their participation in the project activities will pay off in the longer run.

Apart from the fact that a less selective approach would be in accordance with the declared goals of the government and the World Bank of benefitting the rural poor, there is also an economic potential in including the majority of the peasants in the efforts to increase food production. Such a policy might even be effective in curbing the rural-urban migration, which is among the principle factors behind the stagnation of food production.

4. STRUCTURAL DETERMINANTS AND ALTERNATIVE POLICIES.
CONCLUDING REMARKS

Despite its genuine smallholder orientation a policy like the one outlined above will not remove the tendency towards inequality. Generally, there is hardly any policy measure that will eradicate completely the tendency to inequality or
those of dependency and vulnerability resulting from the policies of growth. They are unintended associates of the growth-enhancing policies which will continue to work as long as these policies are pursued. Ultimately, then, only a constant urge and determination of the rulers to combat the ill-effects of growth and accumulation will bring about alternative policies of a lasting nature.

This is the conclusion we can reach from the point of departure in the above discussion. The option of alternative policies lies in a continuum in which the consciousness of the rulers or the strength of the ruled (or others) to influence the rulers determines what sort of policy is implemented. There is no measure, except the rejection of integration in the global system of accumulation - a very difficult or impossible option - that will transcend the limitations of this continuum. Hence, more important than a policy of a specific cast and ideology is the nature of the relationship and dialogue between those who administer the requirements of economic transformation and those who provide the surplus for it.

Though not of decisive importance, the nature of political ideology is however not unessential. In the Nigerian case, with a well-established tradition of capitalist enterprise and close relations to the Western world, we can observe that the government seems somewhat indifferent to the impact of its food policies with the exception of their impact on the growth of production. This is in tune with the laissez-faire attitude and the belief in the regulating forces of the market which still characterize the capitalist ideology, even in the midst of vast public intervention to transform the economy that has taken place in Nigeria. In Nigeria there is a strong tradition of liberalism and even conservatism, and there is a corresponding lack of consciousness with the socio-economic and environmental problems arising from the quest for growth. It is one of the aims of this report to draw attention to these problems in order that a more just, self-reliant and environmentally healthy food policy may emerge.
NOTES

1. On the continent as a whole, food production per capita declined 0.7% annually between 1961 and 1970, and 1.1% between 1970 and 1978 according to estimates presented by FAO in its Regional Food Plan for Africa. 1980, p. 8. These figures are, however, estimates including a large measure of inaccuracy. In its estimates, the World Bank thinks that there was an even wider difference of food production per capita during both of these decades, although it does not quantify the assessment exactly. See Accelerated Development in Sub-Saharan Africa. 1981, p. 47.


3. This report does not deal with the impact of the food crisis on the general health and nutrition situation in Nigeria. For closer examinations of these problems, see G Jan van Apeldoorn: Perspective on Drought and Famine in Nigeria. 1981. See also Bob Shenton and Mike Watts: Capitalism and Hunger in Northern Nigeria. Review of African Political Economy no. 15/16, 1979, pp. 53-62.

4. A distinction is made in the report between "peasants" and "farmers". Peasants are understood as predominantly agricultural producers, mainly employing family labour for the production of goods or commodities, primarily consumed by themselves. Peasants control or own their means of production (land and implements); despite the basic subsistence orientation of their production, they produce also for exchange and wider markets. Farmers are distinguished from peasants by their integration in an economy of accumulation. They produce mainly for the market, they own their land and implements, they seek to enhance the scale of their production by investments in modern technology, and they may employ wage labour. A farmer mainly relying on wage labour for "his" production may be defined as a capitalist farmer.


17. The large allocation for Administration in the Second Plan includes military spending, i.e., the costs of demobilizing the army after the war.

18. Whereas about N 268 mill. were allocated for agricultural spending in the plan only slightly more than 173 mill. were actually spent. See Third National Development Plan, 1975-1980, vol. I, 1975, pp. 25 and 27.


21. Income differentiation discriminating against the rural population is also the argument forwarded by Willy Okowa to explain the falling level of export crop production in his theses at the University of Uppsala: The Distributional Impact of Public Policy in Nigeria. A Dualistic Approach. 1982.


28. Sara S Berry: *Cocoa, Custom and Socio-Economic Change in Rural Western Nigeria*. 1975, p. 100 ff.


33. Strictly speaking irrigation does take place in these projects. The term "non-irrigated" production is applied to distinguish these projects from the projects where large-scale irrigation works are constructed, or, eventually, where large-scale mechanization is introduced.


36. Apart from the ADPs, the Bank supported also export rehabilitation programmes. See Tom Forrest: *Agricultural Policies...* 1981, p. 242.


39. The Bank originally planned to reach a nation-wide coverage with ADPs by 1990, but had to revise its scheduling following the intervention of the Minister of Agriculture. See *Africa Now*, October 1981, p. 182.


42. According to one source this would not close the food gap. A growth rate of 6.5% annually would be required to achieve self-sufficiency by 1985. See *New African*, January 1982, p. 73.


45. Unfortunately, the report is not available to me. It is referred to in *Business Times*, February 1, 1982.


51. Carl Eicher and Doyle Baker write in their recently published research survey of rural development efforts in Sub-Saharan Africa that, "Nigeria appears to be pushing ahead with large-scale irrigated wheat production in its northern region in advance of sound economic analyses of irrigated wheat versus other crops or imported wheat". See Research on Agricultural Development in Sub-Saharan Africa: A Critical Survey. 1982, p. 121.


54. 3 May, 1982, p. 1199.


61. Only recently has a hybrid variety of yam been developed at the International Institute of Tropical Agriculture in Ibadan. See Business Times, March 8, 1982, p. 22.


63. Ibid., pp. 287 and 291-92.

65. The World Bank and the Peasant Problem. In Rural Development in Tropical Africa. 1981, p. 23. Williams must, however, have been misinformed as to the distribution of credit in the projects.

66. Letter from project evaluation officer to staff at Ahmadu Bello University, quoted by D'Silva and Raza: Food Policy, Nov., 1980, p. 289.


70. Public Investments... 1982, p. 8 ff.


76. Ibid., pp. 67-68.


79. **Public Investments...** 1982, p. 17.


88. *African Business*, December 1981, p. 67, and *AED*, Nigeria Special Report, May 1982, p. 26. According to the former source the total acreage to be cultivated amounts to 80,000 acres = 32,000 ha, while the latter and later source relates the 8,300 ha mentioned in the text. Both of these pieces of information may be correct as an expansion of the total acreage under cultivation is planned for. This is, for instance, the case with the soybean farm mentioned below in the text.


91. The corporations listed are dominating the global seed business. See Pat Roy Mooney: *Seeds of the Earth. A Public or Private Resource?* 1979, p. 56.


94. The seriousness of this battle may be illustrated with an example from India where a new fungi disease *"nevassa indica"* has recently infected up to 43% of the high-yielding wheat samples taken in the northern parts of the country, and it was even feared that the fungi would spread to other parts of the country. See *International Foundation for Development Alternatives, Special TN Service no. 420, 1*, December 1981.
95. See Pat Roy Mooney: Seeds of the Earth... 1979, and also Maria Elena Hurtado: Life line for the World's threatened seeds. South, March 1982, p. 48.

96. Göran Hyden thinks the peasants of Africa are unique in the sense that they are uncaptured by the market economy and by the state power representing the market economy. I do not disagree that examples of peasant retreatment into the subsistence economy are still occurring in Africa. This is but one example of the fact that the process of integration/subordination has not been completed. I disagree, however, that this process has still a long way to go, being only in its "incipient stage". As we have seen in the case of Nigeria, which, despite her oil wealth, is not altogether unrepresentative of other African states, the peasant is hardly allowed "to secure his reproduction without significant dependence on others", but is integrated in various agricultural schemes as well as generally affected by public efforts to improve, for instance, the conditions of health or change the system of education. See Beyond Ujamaa in Tanzania. Underdevelopment and an Uncaptured Peasantry, 1980, pp. 9-37.


98. In the perspective of the global system of accumulation outlined in the text, I am closer to Bill Warren's view that during the present period capitalism tends to remake societies in its own image than to, for instance, the view of the dependency theorists that capitalism must generally develop through the creation of underdeveloped societies. However, as evident from the discussion in the text I do not use Warren's framework of analysis of "Imperialism as a World System", and the point is not to relate to a debate of whether capitalism is progressive or retrogressive. The point is primarily to stress one crucial law of the world economy which, though easily observable, is mostly rejected as unwarranted. See Bill Warren: Imperialism, Pioneer of Capitalism. 1980.


102. See also the articles by Coulson, Roberts, King and Adams in the volume.


104. Cohen mentions, however, interesting examples of block farming in Egypt, where the advantages of large units of production and of labour teams are coupled with the alleged benefits of individual or semi-individual tenure. See *Agricultural Development in Africa*, pp. 369-373.
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