Agriculture Sector Memorandum
Zaire: Toward Sustained Agricultural Development

September 26, 1988
Agriculture Division
South-Central and Indian Ocean Department
Africa Region

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Document of the World Bank

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Currency and Exchange Rates 1/

Currency = Zaire (Z)
100 Z = US$0.51
1 US$ = Z 197

Weights and Measures

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Government Fiscal Year

January 1 - December 31

Preface

1. This report is the first systematic effort by the World Bank to review the agriculture sector in Zaire since 1981. Its principal objective is to highlight the basic constraints on agricultural growth, to make recommendations for action, and to propose a strategy for future Bank assistance to the sector. The report focuses on areas or subsectors where the Bank has accumulated some knowledge and experience, and where joint donor and Government action can have a noticeable impact on agricultural growth in the short to medium term. As such, its coverage of sectoral issues is not exhaustive. The report draws extensively on previous work by the Government, the Bank and other donors. Its main findings and recommendations were discussed with technical level personnel of the Ministries of Plan, Agriculture, Rural Development, Scientific Research, Lands, Environment and Conservation of Nature and with other donors during a series of seminars held in Kinshasa in November 1987. Suggestions made at these seminars were incorporated in the report which was subsequently discussed at the policy-making level in the concerned ministries in July 1988. The recommendations, which are outlined in the Executive Summary, focus on short and medium to long term actions to revitalize agriculture through private sector initiatives and support for the strengthening of key agricultural services.

2. The report is organized in four chapters. Chapter I looks at the role of agriculture in the economy. Chapter II examines sectoral performance. Chapter III discusses causal factors in this performance and major problems facing the agriculture sector. The fourth chapter focuses specifically on Bank strategy including the broad orientation of possible operations in the next 5-6 years.

3. The report is based on the findings of sector missions which visited Zaire in May and November 1987. The missions were led by Kevin Cleaver and Ngozi Okonjo-Iweala, respectively. Mission members were Christopher Trapman (Economist, budget, credit, perennial crops), Armand de Largentaye (Agricultural Economist, extension, inputs, livestock), Eimert Los (Senior Agronomist, research, foodcrops), and Jacob Meerman (Principal Economist, macroeconomic issues). The mission received assistance from the Ministry of Agriculture's Service d'Etude et de Planification (SEP). Adrian Otten made valuable contributions to the report, of which the principal author is Ngozi Okonjo-Iweala. Joan Collier-Von Eden and Virginia Ocampo provided secretarial support.
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ZAIRE

Agriculture Sector Memorandum

Executive Summary

A. The Status of the Sector

1. Zaire is among the richest sub-Saharan African countries in terms of its agricultural potential. It has the largest tropical rainforest resource left in Africa, covering about 50% of its territory, as yet practically untouched. Its vast Zaire river basin and its lakes provide abundant fish resources, less than a third of which are currently exploited. Outside the rainforest areas, the wood and grass savannas offer a climate favorable to cropping and livestock-grazing, with droughts largely absent; a relatively high percentage of adequate-to-good quality soils; and a surplus of unused or underutilized lands. Less than 3% of Zaire’s land area is cultivated, and only about 1.5% of it is used for grazing.

2. Yet, since independence in 1960 and until the early 1980s, agricultural production has basically stagnated. During these years, annual growth of output varied between -1.7% and 2.3%, well below the average population increase of between 2.5% and 3%. Within the sector, food output also stagnated while industrial and export crop output declined. This has resulted in an increase in food imports from zero (1960) to 20% of total imports (1985), and in a reduction of the share of agricultural exports from 41% (1960) to a low of 8% of total exports (1985). Rising food imports mostly compensated for reduced domestic food production and kept the per capita per year availability of calories virtually constant during this period. The factors that contributed to this long and steady decline of the sector are well known and are discussed extensively in this and other reports, including those of the Ministry of Agriculture. In summary, they are (a) the disinvestment that took place especially in Zaire’s export crop sector since the zairianization measures of 1973, reflecting a loss of private investor confidence which has not yet been restored; (b) the macroeconomic policies applied by the Government until 1983, which led to a strongly negative protection of the agricultural sector. These were, in short: a policy of intervention in marketing and price controls combined with cheap food imports in order to keep food prices down, a gradually increasing overvaluation of the currency, diminishing competitiveness vis-à-vis world markets and leading to extensive smuggling practices, and a complex system of taxation weighing heavily on agricultural produce; and (c) the severe deterioration of Zaire’s interior transport network as well as of its support services to agriculture, notably research and extension, which, in combination, caused a fallback towards poor agricultural practices and cultivation essentially for subsistence.

3. The liberalization measures of 1982/83 marked the first step away from this serious decline. The measures affected agriculture primarily in two areas: price and marketing controls were removed, and the exchange rate was adjusted to more realistic levels and has since been floating downward as domestic inflation accelerates, albeit with some lags. The result has been a limited supply response, but a response nevertheless, from the agricultural sector. Food output growth in the ensuing four years increased slightly to around 3% per annum, or about the same rate as population growth. The
increased growth mainly came from an increased production for the urban market of traditional crops, notably maize, cassava and rice, for which prices rose in real terms. Increased coffee exports due principally to a drawdown in stocks contributed to a rise in the share of agriculture in total exports to 18% in 1986.

4. It is important to analyze why the supply response has been so limited, given the expectation that the liberalization measures, through a freeing of market forces, would bring about greater farmer incentives to increase production, and a broader return of private investor confidence. What appears clear now is that the lifting of market and price controls only eliminated a few of many bottlenecks inhibiting private investment and production incentives in the sector. First, the continued deterioration of the interior road network has raised marketing costs as a percentage of the retail price in real terms, thus inhibiting producers to increase marketed output. Second, the continued absence of improved technology to farmers meant that they could only respond to better price signals with traditional crops and with the only resource readily available to increase production: an expansion of cultivated area. Third, a host of macroeconomic constraints restraining production were still kept in place or appeared afterwards. Cheap imports, especially of wheat, fish and meat, continued unabated; domestic credit ceilings limited the availability of marketing capital for traders; the system of regional and export taxation on marketed agricultural produce was essentially kept in place, leading to a continuation of smuggling practices; and soaring budget deficits reduced even further the Government's contribution to public agricultural sector expenditure from an average of about 3% of total public expenditures in 1981-83 to 0.9% in 1984-86.

5. Yet, the liberalization measures have contributed to a more promising outlook for the agricultural sector in the medium to longer term. The strong devaluation has made Zaire again significantly competitive on world markets for its traditional export crops such as rubber, coffee, cocoa, high quality tea and cinchona; also, it has made import substitution economically viable again for previously important cash crops, such as palm oil, cotton and tobacco. Furthermore, within the framework of the Structural Adjustment Program of 1986, a start has been made in tackling the remaining macroeconomic constraints. The main result so far has been better planning and implementation of the public investment budget, and a significant increase in the share of agriculture in that budget (to 6% in 1987). However, Zaire needs to maintain this direction if it is to reap the harvest of these efforts in terms of accelerated agricultural growth.

B. The Strategy for Sector Development

6. Within the context of the five-year development plan (1985-1990), Government's objectives are to achieve food self-sufficiency and to promote increased production of raw materials for local industry and for export. To achieve this, the Government plans to concentrate resources on development poles, i.e., areas already having minimal infrastructure or proven potential. The Government has further indicated its intention to create a favorable framework for--and promote to the maximum--private investment in the
sector. To sustain development, it wants to rehabilitate the internal transport network as well as agricultural research and agricultural extension. However, well aware of severe budget constraints, it will rely to the maximum on private resources, on non-governmental organizations and private companies to implement programs and help recover costs wherever feasible. Finally, while the Government has long considered agricultural development as the "priority among priorities", it is now prepared to shift upward the very low share of its investment budget for agriculture, to levels approximating 9%.

7. The Government appears to have had great difficulty so far in implementing what appear to be fundamentally sound principles of agricultural strategy. A basic problem is the weakness of the public administration in services related to agriculture. First, responsibility for the sector is shared among four different ministries: Agriculture, Rural Development, Lands, Environment and Conservation of Nature, and Scientific Research. This requires a significant amount of managerial resources already in short supply in Zaire. In the most important ministry, Agriculture, there is a need to ensure continuity in decision-making and to maintain agriculture's visibility as a pressure group in the competition for scarce budgetary resources. Second, by all standards, civil service salaries are extremely low. The consequences are low morale, lack of career development opportunities, and absenteeism. Third, with the severe budget pressures, the recurrent budget has suffered the most, and this has worked strongly to the detriment of agricultural services, the efficiency of which critically depends on a sufficient coverage of recurrent expenditures. Late release of both the recurrent and investment budgets has compounded the problem. Although part of the slack is taken up by externally-financed projects, donors have generally tended to by-pass the public administration by setting up autonomous project authorities, thus leading to overlapping and a dispersion of effort. Fourth, administration weaknesses have contributed to a less than fruitful dialogue between the private sector and the public sector in agriculture leading to a preference to by-pass the public agricultural administration, on one side, and to a suspicion by the administration of private sector intentions, on the other. The situation has somewhat improved through the effort of the Zairian business association, ANEZA, which has on several occasions engaged successfully in dialogue with Government on behalf of its members.

8. The rebuilding of agricultural services (i.e., the transport network, research and extension) to a higher state of effectiveness is a daunting task, but is nevertheless the basic recommendation of this report. Without it, public administration will increasingly be seen as a hindrance rather than a positive force in agricultural development; private investment will continue to be sluggish; and Zairian farmers will be increasingly disadvantaged in competing for the domestic and export market. The task calls for short- and medium-term action programs specifying both the objectives and the means to achieve them.
9. With regard to objectives, the first priority is a rehabilitation of the transport network and, in particular, the river navigation and rural roads network. Its deterioration has strongly reduced the Zairian farmers' share of the market price, in many cases to the point where the farmer loses interest in producing for the market altogether. The importance of communications is increased by Zaire's geography where both urban markets and export routes lie at the periphery, far from production centers in the interior. The second priority lies in the rehabilitation of agricultural research. Apart from the work in varietal selection carried out by the national foodcrop programs, there has been a long period of standstill. This has meant that work on new varieties or on adapting improved varieties existing outside Zaire has not taken place. In most cases, available selection material has deteriorated. This is crucial in the Zairian context, because for many future rehabilitation investments the availability of good renewal planting material would be essential to obtain higher yields (e.g., in oil palm, rubber, tea, cotton). The third priority would be restructuring of the existing government extension service. Such a restructuring, however, would need a careful focusing on priorities in view of the constraints on research support, relevance of research content, and financing. It may, for instance, be necessary to allocate more extension staff towards activities where a fee can be charged for their services, to offset the inevitably higher cost of financing a sufficient level of operating expenditures. This would imply a basic move away from the present situation where the operating costs of extension services are financed only if a donor-funded project exists. It would also involve a careful scrutiny of the relevance of extension messages in the context of different farming systems. Furthermore, it would critically rely on coordination with non-governmental organizations acting in extension, at the regional level.

10. With regard to the means of achieving these objectives, several actions impose themselves with equal importance. In the short term, attempts already under way to improve coordination between the four agricultural ministries should be continued and strengthened. The demands on management resources to run the agricultural public administration need to be reviewed and streamlined. Better programming and financial control of expenditures should be accorded high priority with complementary efforts to improve budget release mechanisms. Under the structural adjustment program, special funds for the financing of agricultural activities were suppressed on the assumption that the normal budgetary process would improve. These improvements have largely not been made. Unless the pace of change is quickened, agriculture could, in fact, be penalized by what are essentially sound reforms. The importance of donor aid, which at present finances close to 70% of the investment budget underscores the need to attempt a far-reaching improvement in donor coordination. This is made more urgent by the realities of public finance which dictate at best only a slow improvement in the availability of counterpart financing. In fact, donors would need to be persuaded to move away from autonomous project financing towards coordinated support for service strengthening at the national and regional levels. This may initially meet with a great deal of skepticism and will only succeed if the Government moves decisively in support of the proposed strategy. The Bank can engage in a sustained dialogue to delineate areas of interest, coordinate financing plans, and help define training requirements and investment priorities.
11. In parallel with sector specific actions, a continued improvement in macroeconomic management is of critical importance to achieve lasting results. In the end, strengthening of agricultural services can hardly succeed without overall civil service reform, for which studies are now starting. Also, improvement in the investment and operating budgets cannot be realized without continued effort to increase fiscal revenue as well as improve financial control on revenue collection. Several actions in this area are now under way or being contemplated such as unification and rationalization of export taxes and rationalization of the more than 200 taxes at regional and local levels of government, increases in fuel taxes and utility tariffs, and rationalization of import taxes with a view to their reduction. Finally, the recent decision on the revaluation of company assets with reduced corporate taxes on what are essentially paper profits is a positive move towards the restoration of private sector confidence. Because of the high corporate tax that would be levied, inflation accounting is not applied in Zaire, where inflation levels in the past three years have been close to or in excess of 50% per annum. With the new move, many companies can now undertake financial restructuring and raise credit for new investments.

**Recommendations**

12. The modest upswing in agricultural growth can only be sustained and broadened if: (a) progress in macroeconomic and public finance management continues; (b) private and public investment in the sector, which is among the lowest in sub-Saharan Africa, can be increased; and (c) a long-term program of restoring agricultural services and rural infrastructure in the interior can be activated and pursued, backed up by improved coordination, programming and implementation/financial control on execution at the central level. The pursuit of these goals is expressed in a number of recommendations for action in the short and medium to long term as listed below.

**In the Short Term**

**Investment Promotion:**

(a) Examine the means to increase the flow of investment funds to agricultural enterprises.

(b) Establish a private investment promotion task force with representatives from Government and the private sector. The principal aim of this task force would be to explore ways to facilitate private investment and to make proposals to solve existing bottlenecks. One of the priority issues to be looked at could be the causes of and remedies for the labor shortage in agriculture. The recently created Export Facilitation Committee (EFC) could become a subset of this task force charged initially with reviewing the recommendations of the
recently completed (March 1988) study of administrative procedures for exports and with monitoring their implementation. The EFC could further finalize work begun on the simplification and reduction of export costs for coffee and wood.

(c) Improve the flow of information to the private sector and to civil servants in Kinshasa and the regions on recent policy reforms as well as reforms in export procedures. This could be done through regular information channels or through specially organized seminars. Reforms under the structural adjustment program are not well understood or universally applied by government agents. A better flow of information would address this problem.

Credit
(d) Review the foreign exchange risk issue with suggestions for covering large agricultural enterprises engaged in production for the domestic market and/or involved in long-term investments. The Government is taking steps to establish a foreign exchange risk guarantee fund but this will cover only small and possibly medium-scale enterprises. Sources of financing for the Fund are still to be determined.

(e) Finalize the framework for strengthening of COOPECS (Central Cooperative for Savings and Loans) and improving their links to the formal sector.

(f) Review the terms and conditions of short, medium and long-term credit, and increase the availability of short-term marketing and long-term investment credit by an infusion of financing through commercial banks and a combination of financing and institutional strengthening of BCA, the Agricultural Credit Bank.

Administration:
(g) Review civil service salaries and incentive structure as intended, starting with the agricultural sector.

(h) Support and strengthen efforts at coordination already begun by the four ministries working in agriculture. Maintain the Regional Inspectorates of Agriculture as a unified field service.

Transport
(i) Adapt procedures for award of contracts under the Emergency Rural Roads Program to local conditions and begin implementation of road works. Review possibilities for improving the difficult financial situation of Office des Routes to enable it to continue its maintenance of secondary and national roads.
Donor Coordination (j) Promote coordination of aid to the sector. This could be done at two levels: (i) within the framework of the Government’s own donor coordination mechanism in the Ministry of Plan, the Government can outline its priorities and lay down specific guidelines for agricultural development; (ii) among donors, and with Government participation, meetings of local donor representatives can be organized to discuss special topics in agriculture. Such meetings can also be held at the level of the Consultative Group (CG).

Enterprise Reform (k) Review recent recommendations to revitalize the cotton subsector and decide on their applicability. Develop an agenda for implementation of specific actions in the subsector. Examine the possibilities for a reorganization and restructuring of OZACAF (the Zairian Coffee Agency) and of ONDE (National Office for Livestock Development) including recommendations for total or partial privatization of their activities.

In the medium term

Transport (a) Support and strengthen the priority investment and maintenance program for rural roads with linkages to principal production areas.

(b) Develop a program to improve river and rail transport in the interior. Define modalities for intervention including measures to encourage greater participation of the private sector in river transport and measures for strengthening the institutions involved in this area. Determine priority areas for intervention including rail track renewal, investments in loading/off loading facilities, storage warehouses, navigational aids and repair, and improvement of quaysides. The Government is taking steps to improve the river and rail transport under the IDA-funded River Navigation and Transport Rehabilitation projects. These initiatives should continue and should be further expanded.

Research (c) Reactivate agricultural research. The organizational decisions to restructure and unify the existing research establishment have been made, and preparation of a master plan, and action programs, are now starting.
Extension  
(d) Develop an extension system with a light management structure at the national and regional levels to coordinate and supervise extension implementation by NGOs, the private sector and others. Reactivation of extension should be based on clearly-defined technical messages, field job descriptions and supervision and technical support mechanisms. At the regional level, the focus should be on the regional inspectorates which should be restructured to play the coordinating role. Provision of the financial and physical means to make this possible will be of prime importance. Pilot operations should be initiated to test the proposed extension management system.

Budget  
(e) Closely monitor the investment budget allocation process to ensure that the proposed allocation to agriculture of about 9% of the total investment budget from local and external sources is adhered to and the funds released on time.

(f) Strict adherence to the public investment program (PIP) in preparing the investment budget.

(g) Agreement on a public expenditure program (PEP) for agriculture to ensure an adequate recurrent budget for the different services which exist or are planned.

Regional Finance  
(h) Review regional and local public finance: rationalize the more than 200 taxes (many of them on agriculture) that exist at subnational levels; discourage the tendency to develop additional, often informal taxes on agricultural products; improve the revenue generation and expenditure patterns of the regional and local governments.

Input Supply  
(i) Study the major input supply bottlenecks and the role of cash inputs in different farming systems. This will provide the basis for a policy on input supply including modalities for the sale and distribution of donor supplied inputs and the division of labor between Government and the private sector in input supply.

NGOS  
(j) Strengthen interaction with the numerous NGOs.

Foodcrops  
(k) Implement pilot extension projects closely linked with improved delivery of inputs (primarily selected seeds, tools, fertilizer), starting in selected priority regions to increase food production. In line with the objectives of the PRAAL (Action Plan for Food crop Promotion and Food self-sufficiency) and with agreed priorities, the pilots would aim at providing extension to more farmers and would test a new extension management system (para d) designed to coordinate and support extension efforts by NGOs, donors and the private sector.
sector. If successful, the pilots could be replicated over a wider area. Increase availability of fuel and spare parts in the interior to facilitate marketing. Improve storage and food processing facilities.

**Forestry**

(1) Develop a forest management and protection plan which should provide the basis for the rational use of the forest resource, sustained forest management, and protection of areas of unique fauna and of environmental importance. Future development of Zaire's forest resource will depend critically on improved transportation (particularly in the Kinshasa-Matadi corridor). A forest sector study is now underway which should be followed by an action plan and feasibility studies. The action plan should incorporate suggestions (including needed investment) to ease the transport bottleneck for forest products.

(m) Strengthen the capacity of the Ministry of Lands, Environment and Nature Conservation for planning, programming and budgeting in the area of forestry. This will involve some technical assistance and increased training with an improvement of the incentive structure to make sure that people trained stay on the job. Canada has made major contributions in this area. The IDA-funded Agricultural Management and Institutional Development project will undertake some institutional strengthening.

(n) Review and adjust export prices for forest products (mercuriale) and establish a mechanism for regular review of prices. Review constraints on private investment in forestry and produce an action plan with suggestions for improvement. This could be done within the framework of the proposed private investment promotion working group.

**Livestock**

(o) Rehabilitate veterinary services and strengthen extension to the traditional sector. The emphasis should be on the transfer to the maximum possible extent of as much as possible of the animal health care and input supply services to the private and cooperative sectors.

(p) Promote small-stock development around Kinshasa and other major cities and cattle (dairy and meat development) in Kivu. The main vehicle could be a line of credit to livestock producers for medium term investment. The conditions under which such credit would be acceptable to lenders (Commercial banks, BCA) and borrowers would have to be studied.

13. These recommendations form the basis for a broad action plan for the Bank on several fronts within the sector. In the short-term, measures will aim at increasing private investment in agriculture in order to boost production. Specific actions will include increasing foreign exchange availability for the
purchase of inputs, assisting Government with policy and institutional reforms aimed at improving the investment climate, and easing other production and marketing constraints. In the medium to long term, improving essential agricultural services will be key. These are basically transport, research, extension, and credit. Assistance will also be provided to Government to strengthen its policy formulation, planning and programming capacity. Details of the action plan are provided in Chapter IV of the report.
CHAPTER I: THE ROLE OF AGRICULTURE IN THE ECONOMY

A. The Agricultural Environment

1.01. Far from being constrained by a poor natural resource base, Zaire is probably the richest country in sub-saharan Africa in terms of its land, forest, water, and ecological resources. The country extends over an area of about 2.3 million km² (230 million ha) of which 80 million ha or 35% is thought to be suitable to agriculture. Of this area only 10 million ha or less than 15% is under cultivation or grazing. A variety of food and cash crops, principally beans, manioc, potatoes, maize, bananas, coffee, cotton, cocoa, rubber, oil palm and tea are grown. Livestock (cattle rearing for dairy and beef and small stock) is also important. Land use is described in Annex A, Table 1.

1.02. In addition to its unexploited agricultural potential, Zaire has tremendous potential in forestry and fisheries. The country possesses over 176 million ha of natural forest, most of it untouched. These forests represent about 10% of total world resources in tropical forests and over 50% of the tropical forests in Africa. Zaire produces an estimated 150,000 metric tons of fish a year from its marine, riverine, and lake fisheries. The potential for production from these fisheries has been put at about 700,000 mt/annum leaving significant room for expansion.

B. Agriculture in the Economy

1.03. Zaire's population is still predominantly rural despite the country's rapid urbanization in the last two decades. About 60% of the estimated 31 million population live in rural areas. Agriculture provides employment for over 70% of the labor force but contributes only 30% of GDP. Agriculture's role and evolution in the economy is shown in Table 1.1. The sector's relatively modest contribution to GDP coupled with the large numbers of people dependent on agriculture results in a low rural per capita income in the order of US$80 per annum (1985). This is about 50% of the national level and among the lowest in sub-saharan Africa. Agriculture's contribution to export earnings has declined noticeably over the years. Although mining has traditionally been the major export earner, the contribution of the agricultural sector was substantial in the early sixties. From a high of 41% of the total value of exports in 1960 agriculture's share dropped to 8% in 1985 (Table 1.1).
Table 1.1

Zaire: Agriculture's Role in the Economy

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<td>Agricultural (Food) Imports as share Total Import %</td>
<td>22.0 b/</td>
<td>20.0</td>
<td>19.0</td>
<td>20.0</td>
<td>19.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Situation actuelle de l'Agric. zairoise, janvier 87, p. 23
Banque du Zaire Rapport annuel 1987 page 47.

The decline is due to the decrease in or virtual disappearance of some traditional agricultural exports such as palm oil, rubber, and tea (Table 1.2). Coffee remains the major agricultural export accounting for about 65% of the total value of agricultural exports. Coffee exports increased sharply from an average 64,000 tons (1980-1985) to 132,000 tons in 1986 due to a draw down of stocks. The increase accounts for the rise in agriculture's share of the value of exports to 18% in 1986.
### Table 1.2

**ZAIRE: Major Agricultural Exports**

* (thousands of tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Palm Oil</th>
<th>Rubber</th>
<th>Coffee</th>
<th>Tea</th>
<th>Cocoa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>167.0</td>
<td>35.5</td>
<td>59.0</td>
<td>5.0</td>
<td>5.2</td>
</tr>
<tr>
<td>1970</td>
<td>123.5</td>
<td>31.4</td>
<td>69.5</td>
<td>3.1</td>
<td>6.0</td>
</tr>
<tr>
<td>1971</td>
<td>118.0</td>
<td>39.9</td>
<td>72.2</td>
<td>4.1</td>
<td>6.0</td>
</tr>
<tr>
<td>1972</td>
<td>87.0</td>
<td>37.7</td>
<td>74.0</td>
<td>6.4</td>
<td>6.0</td>
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<td>1973</td>
<td>69.7</td>
<td>32.2</td>
<td>78.4</td>
<td>6.9</td>
<td>4.9</td>
</tr>
<tr>
<td>1974</td>
<td>62.4</td>
<td>28.2</td>
<td>80.7</td>
<td>5.3</td>
<td>4.7</td>
</tr>
<tr>
<td>1975</td>
<td>53.0</td>
<td>24.2</td>
<td>49.0</td>
<td>4.7</td>
<td>5.3</td>
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<td>1976</td>
<td>79.7</td>
<td>21.1</td>
<td>85.1</td>
<td>5.4</td>
<td>4.3</td>
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<tr>
<td>1977</td>
<td>21.5</td>
<td>27.6</td>
<td>90.7</td>
<td>4.2</td>
<td>3.9</td>
</tr>
<tr>
<td>1978</td>
<td>9.6</td>
<td>26.1</td>
<td>71.2</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>1979</td>
<td>-</td>
<td>17.9</td>
<td>63.8</td>
<td>2.7</td>
<td>3.5</td>
</tr>
<tr>
<td>1980</td>
<td>10.0</td>
<td>14.5</td>
<td>62.5</td>
<td>1.5</td>
<td>4.2</td>
</tr>
<tr>
<td>1981</td>
<td>6.1</td>
<td>18.5</td>
<td>66.0</td>
<td>2.1</td>
<td>4.5</td>
</tr>
<tr>
<td>1982</td>
<td>4.2</td>
<td>14.9</td>
<td>66.6</td>
<td>3.0</td>
<td>4.1</td>
</tr>
<tr>
<td>1983</td>
<td>16.0</td>
<td>13.8</td>
<td>67.5</td>
<td>2.6</td>
<td>4.5</td>
</tr>
<tr>
<td>1984</td>
<td>26.2</td>
<td>14.6</td>
<td>64.8</td>
<td>3.3</td>
<td>4.3</td>
</tr>
<tr>
<td>1985</td>
<td>18.9</td>
<td>11.0</td>
<td>65.9</td>
<td>3.0</td>
<td>4.4</td>
</tr>
<tr>
<td>1986</td>
<td>1.9</td>
<td>14.2</td>
<td>132.4</td>
<td>2.3</td>
<td>6.3</td>
</tr>
</tbody>
</table>


### 1.04

Imports of agricultural produce, mainly food, have grown considerably. This results from Zaire's relatively large and rapidly growing urban population combined with poor agricultural production performance and difficulties in internal trade due to a deteriorating transport network and fuel shortages in the interior. Statistics on food imports, like all other agricultural statistics in Zaire, are notoriously weak. There are high unrecorded imports from neighboring countries such as Zambia. It appears that food imports amounting to about US$250 million in 1986 accounted for about 19% of the total value of imports. The major items imported are cereals—maize, rice and wheat (Table 1.3). Meat and fish are also imported. Maize imports have declined from an average 140,000 tons per year in the 1970s to about 58,000 tons in 1986 due mainly to increased domestic output. Rice, wheat and fish imports continue to be important.
Table 1.3

Imports of Major Food Items

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>0.02</td>
<td>64.0</td>
<td>115.0</td>
<td>152.0</td>
<td>180.0</td>
<td>141.0</td>
<td>119.0</td>
<td>89.0</td>
<td>51.0</td>
<td>38.0</td>
<td>35.0</td>
</tr>
<tr>
<td>Rice</td>
<td>2.5</td>
<td>25.0</td>
<td>20.0</td>
<td>14.0</td>
<td>35.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
</tr>
<tr>
<td>Wheat</td>
<td>-4.0</td>
<td>90.0</td>
<td>125.0</td>
<td>120.0</td>
<td>120.0</td>
<td>104.0</td>
<td>109.0</td>
<td>107.0</td>
<td>157.0</td>
<td>157.0</td>
<td>157.0</td>
</tr>
<tr>
<td>Sugar</td>
<td>13.0</td>
<td>12.0</td>
<td>9.0</td>
<td>24.5</td>
<td>9.0</td>
<td>5.5</td>
<td>8.5</td>
<td>6.0</td>
<td>9.0</td>
<td>35.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Meat</td>
<td>4.8</td>
<td>11.7</td>
<td>17.0</td>
<td>12.0</td>
<td>17.0</td>
<td>10.0</td>
<td>8.5</td>
<td>6.1</td>
<td>12.0</td>
<td>23.0</td>
<td>31.0</td>
</tr>
<tr>
<td>Fish</td>
<td>-1.0</td>
<td>8.0</td>
<td>2.4</td>
<td>n.e.</td>
<td>8.0</td>
<td>6.6</td>
<td>6.5</td>
<td>8.0</td>
<td>8.0</td>
<td>2.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

(Thousand tons)


C. Structure of the Agricultural Sector

1.05. At independence and until the 1970s, there was an important dichotomy in Zaire between the traditional sector, consisting of 3-4 million small farmers and contributing about 60% of agricultural GDP, and the modern sector. There is now a growing class of technically more advanced farmers who produce mostly cash crops for the market but also increasingly food crops such as maize, legumes and in smaller areas, cassava. The production of 20% of the robusta coffee, 80% of the arabica coffee, over 50% of the cotton, 70% of the tea and possibly 10% of the marketed palm oil are in the hands of this class, consisting of about 150,000-400,000 farmers. Traditional farms most often practice primitive slash and burn agriculture. Average farm size is 1.5 ha. While males are typically in charge of land clearing, female labor is important for sowing, weeding, and harvesting and is often a constraint to expanding areas. The modern sector contributes about 40% of agricultural GDP. It consists of large corporation-owned plantations which use modern techniques of production, mainly in the oil palm, rubber, sugar, and coffee subsectors. Average plantation size is about 300 ha. In addition, there are smaller individually owned commercial farms and ranches using poorer production techniques. These range in size from about 5-100 ha. The modern sector has declined largely as a result of the zairianization measures. The total number of holdings dropped from about 1,200 in the 1970s to 900 in the 1980s. Most of these holdings do not operate in a well-organized manner. The decline of the modern sector is the major reason for the decrease in the production and export of industrial crops.
1.06. An important issue for Zairian agriculture is the increasing scarcity of labor in the rural areas (See Working papers on Zaire’s Agriculture Sector, No 14). The relatively low returns to family labor in traditional agriculture, the sometimes uncompetitive wages in the modern plantation sector and the lack of wage goods in the interior contribute to a rapid out-migration of young (particularly male) labor to the urban areas or in some instances to other rural areas where they engage in non-agricultural activities. Returns to family labor vary considerably from Z 15-30 per labor day for small farmers under poor conditions to Z 30-50 per labor day under better conditions. This can be compared to returns in gold prospecting of more than Z 95 per labor day on average. Returns to petty trade and other informal sector activities in urban areas can also be 2-3 times higher than that in agriculture. Although the minimum wage at end 1987 was Z 20 per man-day, enterprises aiming to assure a constant labor supply pay more (about Z 30-60 per man-day). Many provide social services such as housing, meals, medical care, transport to and from work, schools and supply of consumer goods on a cost basis. When these services are included, wages range from Z 60-100 per man-day. For many workers, this is still not attractive enough to keep them in the rural areas particularly given the stigma attached to some field activities, e.g., cane culture. This means that rapid out-migration continues. To cope with labor shortages, productivity per unit of land and labor in agriculture will need to increase. This will in turn require structural changes with an increasing shift in the traditional sector to sedentary agriculture to facilitate the introduction of labor-saving technology and greater use of modern inputs. The use of animal traction could be important in reducing the labor bottleneck for land preparation, while permitting an increase in the cultivated area.

1.07. The government, donors, NGOs, foreign and local agro-business enterprises, and tradesmen are also active in the agricultural sector. The agro-industrial sector is important, contributing about 30% of value added in the manufacturing sector. Most enterprises are foreign-owned with some government participation. Agro-industries are dominated by vertically integrated enterprises in the sugar, cotton, rubber, oil palm, coffee and wood subsectors. The agro-industrial enterprises suffer from aging and badly maintained equipment. There is a reluctance to invest in the rehabilitation of equipment because of the general lack of confidence in the economy coupled with other financial and managerial problems. Many of the factories produce under capacity because of the decline in production of crops which serve as their principal raw materials. Cotton is a case in point where capacity utilization is currently not more than 50%.

1/ Introduction of new technology requires improved agricultural services -- roads, marketing and extension. Without these services, use of such technology is often difficult to justify financially and economically. The introduction of new technology may lead to shifts in the male/female division of labor and to changes in the control of family income, which may affect women adversely. Such shifts need to be carefully monitored.

2/ Tractors could be used to bring more land under cultivation. This, however, entails greater risks related to lack of fuel, spare parts and management and should be encouraged only where these constraints are not significant and mechanized farming is efficient and financially attractive. Some enterprises in Zaire have been able to overcome many of the problems by developing their own supply network in Europe.
1.08. The Government intervenes in the sector mainly through its Agriculture and Rural Development ministries as well as the regional inspectorates of Agriculture (para. 3.66). These branches of government are responsible for planning and policy formulation, for the administration of agricultural services such as applied research, extension, rural roads, veterinary services, rural water supply and a variety of rural development projects. They also provide support services in agricultural statistics, cooperatives, credit and marketing and are in theory responsible for the coordination of government, donor and NGO activities in the field. Government institutions also provide agricultural credit (SOFIDE, Banque du Credit Agricole), and monitor and supervise agricultural exports and imports.

1.09. Donors fund a variety of rural development, commodity and subsector specific projects. The main bilateral donors are the United States, Belgium, France, Italy, West Germany, Canada and Japan, while the multilaterals comprise mainly the World Bank, African Development Bank, European Development Fund, UNDP and FAO. Donor funds account for the major proportion of the public investment program for agriculture. Donor funding accounted for 74% of agricultural investment in 1986 and is expected to constitute about 65% of the core public investment program in agriculture for 1988-91.

1.10. Non-governmental organizations (NGOs) are commonly acknowledged as one of the most important forces in Zaire's development. NGOs have been mainly involved in the education and health sectors but are increasingly becoming a factor in the agricultural sector. Most of the NGOs are religious organizations and in Zaire a large proportion are Belgian. NGOs are involved in direct agricultural production and processing, provision of extension services, input supply, livestock development, marketing, road maintenance and the supply of consumer goods to the rural community. It is difficult to quantify their contribution to the agricultural sector, but it is well-known that NGOs have been successful in providing agricultural services and in some cases, recovering part of the costs. In recognition of this the government and donors have begun to rely increasingly on them to help implement agricultural projects. The success of the NGOs often derives from the presence of a dedicated, oftentimes charismatic leader, the ability to mobilize grassroots participation and the commitment of the local population. To these can be added the availability and intensive use of free expertise in the form of expatriate volunteers, a long term vision of the process of development, and the provision of other basic services -- education and health -- important to the local population. Some of the ingredients of this success make it difficult to replicate NGO activities over a wide area or on a national scale. Indeed, NGOs in the agricultural sector tend to operate over small, well-defined geographical areas and often in isolation from national or regional agricultural policies. NGOs will continue to be of prime importance in the agricultural sector and should continue to receive government and donor support. However, because of their intrinsic limitations, their activities will necessarily be complementary to, and not a replacement for, the responsibilities of national institutions and structures.

CHAPTER II: AGRICULTURAL SECTOR PERFORMANCE

A. General

2.01. Despite weak statistics on agricultural output, certain conclusions can be drawn about agricultural sector performance. Whereas the agricultural sector performed strongly prior to independence in 1960, agricultural output
declined drastically and agricultural marketing and distribution channels were disrupted following independence and internal upheavals which had a particularly severe effect on the mostly foreign controlled industrial and export crop sector. Despite a small upsurge in the growth of export crops (in response to favorable world market conditions) from 1970-1973, the overall picture for the agricultural sector in the 1960s and early 1970s is one of negative growth (Table 2.1). The period of the mid-seventies to 1980 was one of severe macro-economic crisis for the country with high budget deficits, spiralling inflation, over-valued exchange rates, foreign exchange scarcity resulting from low copper prices and a high debt service burden. Added to these problems was the serious impact of the zairianization measures of 1973 which further disrupted production, processing and marketing in the modern sector. As a result, the upsurge in growth which began in 1970 was dampened and the agricultural sector grew at an average annual rate of 1% between 1973-80.

### Table 2.1

**ZAIRE: Contribution of Agriculture to Growth in GDP**

<table>
<thead>
<tr>
<th>Percent of GDP growth directly caused by Agricultural growth</th>
<th>Actual</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Rate of Growth of GDP</td>
<td>3.9</td>
<td>-2.0</td>
</tr>
<tr>
<td>Real Rate of Growth of Agriculture</td>
<td>-1.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Percent of GDP growth directly caused by Agricultural growth</td>
<td>12</td>
<td>46</td>
</tr>
</tbody>
</table>


1/ Calculated as (rate of growth of agriculture X % of GDP contributed by agriculture divided by rate of growth of GDP.)

2/ Based on low scenario of latest macroeconomic framework (May draft of PFP).

2.02. In 1982, the government assisted by the IMF, began a series of radical reforms aimed at restructuring the economy. The measures included trade liberalization, liberalization of agricultural prices and a two-tier foreign exchange market culminating in a flexible exchange rate regime. The Bank is further assisting the government with its macro-economic reforms through a structural adjustment program begun in 1986. These reforms appear to have had a positive impact on economic performance in general and the performance of the agricultural sector in particular, although the sectoral response has been weaker than expected. Agricultural output grew at an average annual rate of about 2% from 1980-84 increasing to about 4% in 1985. The proportion of GDP growth directly attributable to agricultural growth increased from 12% in 1980-84 to a high of 46% in 1985 (Table 2.1). It dropped to 31% in 1986, and with the exception of a projected temporary increase in 1988, is expected to remain at about the thirty percent level during the next five years based on a scenario
in which agricultural growth slightly exceeds overall GDP growth and the estimated population growth rate of 3% per year.

2.03. The performance of Zairian agriculture since the early 1980s compares favorably with that of other low income sub-saharan African countries (Table 2.2). From a position in which output growth lagged behind that of other countries it is now more than five-fold. This is due in part to the changed macroeconomic environment and to Zaire's rich natural resource endowment.

2.04. Despite these gains and the projected future increases in agricultural output present agricultural growth rates can barely keep pace with population growth. To increase the ability of agriculture to feed the rapidly urbanizing population, provide employment, foreign exchange earnings and raw materials for domestic industry, efforts must continue to remove macroeconomic constraints while impediments beyond the macroeconomic ones and related to the highly deficient state of agricultural services will also have to be removed.

Table 2.2
Growth Rate of GDP and of Agriculture
Zaire and Other Low Income Sub-Saharan African Countries

<table>
<thead>
<tr>
<th></th>
<th>Zaire</th>
<th>Other Low-Income Sub-Saharan African Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Agric.</td>
<td>0.5 b/</td>
<td>2.5</td>
</tr>
</tbody>
</table>


a/ Average for 14 countries.
b/ World Bank Zaire Structural Adjustment Credit, President's Report 1987.

B. Food Crops

2.05. Available evidence on foodcrop production in Zaire points to stagnation in per capita output. Official statistics indicate an annual increase in the value of foodcrop production from 1970-1982 at 2.8% per annum in constant prices. The growth of foodcrop production has slowed from about 3.2% per annum during 1950-1955 (a period in which statistics are fairly reliable). From 1982-1987, growth in the output of food crops has increased slightly to about 3% per annum. Table 2.3 shows the evolution of food crop production in quantity terms.

Table 2.8

Production of Major Food Crops

(Ton thousand tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Maize</th>
<th>Paddy 1/</th>
<th>Sorghum</th>
<th>Manioc</th>
<th>Sweet Potato</th>
<th>Beans</th>
<th>Peanuts 2/</th>
<th>Plantain 3/</th>
<th>Wheat</th>
<th>Beans</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>333</td>
<td>165</td>
<td>-</td>
<td>7,214</td>
<td>316</td>
<td>72</td>
<td>175</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1960</td>
<td>335</td>
<td>124</td>
<td>-</td>
<td>6,845</td>
<td>374</td>
<td>68</td>
<td>175</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1965</td>
<td>282</td>
<td>49</td>
<td>-</td>
<td>7,785</td>
<td>192</td>
<td>76</td>
<td>137</td>
<td>447</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1970</td>
<td>429</td>
<td>179</td>
<td>48</td>
<td>16,349</td>
<td>425</td>
<td>115</td>
<td>267</td>
<td>1,215</td>
<td>8.4</td>
<td>-</td>
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<tr>
<td>1971</td>
<td>486</td>
<td>184</td>
<td>48</td>
<td>16,329</td>
<td>432</td>
<td>121</td>
<td>279</td>
<td>1,255</td>
<td>2.2</td>
<td>-</td>
</tr>
<tr>
<td>1975</td>
<td>630</td>
<td>222</td>
<td>31</td>
<td>12,566</td>
<td>324</td>
<td>168</td>
<td>334</td>
<td>1,378</td>
<td>8.6</td>
<td>1.1</td>
</tr>
<tr>
<td>1980</td>
<td>580</td>
<td>234</td>
<td>32</td>
<td>12,884</td>
<td>333</td>
<td>162</td>
<td>339</td>
<td>1,406</td>
<td>8.7</td>
<td>1.7</td>
</tr>
<tr>
<td>1981</td>
<td>656</td>
<td>248</td>
<td>30</td>
<td>13,170</td>
<td>343</td>
<td>164</td>
<td>347</td>
<td>1,408</td>
<td>3.9</td>
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</tr>
<tr>
<td>1982</td>
<td>666</td>
<td>261</td>
<td>34</td>
<td>14,184</td>
<td>353</td>
<td>111</td>
<td>349</td>
<td>1,487</td>
<td>12.1</td>
<td>3.6</td>
</tr>
<tr>
<td>1983</td>
<td>673</td>
<td>271</td>
<td>35</td>
<td>14,661</td>
<td>363</td>
<td>150</td>
<td>366</td>
<td>1,496</td>
<td>16.1</td>
<td>n.a.</td>
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<tr>
<td>1984</td>
<td>784</td>
<td>286</td>
<td>38</td>
<td>15,937</td>
<td>373</td>
<td>164</td>
<td>375</td>
<td>1,526</td>
<td>9.3</td>
<td>4.4</td>
</tr>
<tr>
<td>1985</td>
<td>721</td>
<td>297</td>
<td>37</td>
<td>16,286</td>
<td>382</td>
<td>168</td>
<td>424</td>
<td>1,795</td>
<td>6.0</td>
<td>n.a.</td>
</tr>
<tr>
<td>1986</td>
<td>729</td>
<td>274</td>
<td>-</td>
<td>16,692</td>
<td>-</td>
<td>443</td>
<td>1,984</td>
<td>n.a.</td>
<td>4.7</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Agriculture Congolaise en tableaux statistiques 1959-1968

1/ There is about a 60% conversion rate from paddy to rice.

2/ Unshelled.

3/ Banana production is 300,000 to 400,000 tons/annum.

2.06. The slight increase in the output of food crops in the last four years has come about mostly through expansion of cultivated areas in the modern sector. Mechanized farming has been an important factor in large modern enterprises. Government and donor support for investment projects focusing on food crops (maize in particular) has also been important. Countrywide, yields of most food crops remain low and substantially below their potential (Table 2.4). There is clearly room for improvement through greater emphasis on the use of improved seeds and planting materials, better cultural practices and where financially justified, the use of modern inputs such as fertilizers. This, however, implies considerable input from research and extension as well as better transport, input distribution and marketing services. These need to be strengthened to play the required role.
### Table 2.4

<table>
<thead>
<tr>
<th>Crop</th>
<th>Present Average Yields (1987)</th>
<th>On-Farm Potential 1/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>0.8</td>
<td>1.5 - 3.5</td>
</tr>
<tr>
<td>Manioc (Tubers)</td>
<td>7.0</td>
<td>12 - 15</td>
</tr>
<tr>
<td>Rice</td>
<td>0.5</td>
<td>0.8 - 1.5</td>
</tr>
<tr>
<td>Beans</td>
<td>0.6</td>
<td>0.8 - 1.0</td>
</tr>
<tr>
<td>Wheat</td>
<td>1.7</td>
<td>n.a</td>
</tr>
<tr>
<td>Groundnuts (shelled)</td>
<td>0.5</td>
<td>0.8 - 1.0</td>
</tr>
<tr>
<td>Sugar</td>
<td>4.8</td>
<td>8 - 9</td>
</tr>
<tr>
<td>Plantains</td>
<td>4.5</td>
<td>8 - 10</td>
</tr>
<tr>
<td>Palm Oil</td>
<td>1.4</td>
<td>3 - 4</td>
</tr>
<tr>
<td>Banana</td>
<td>3.7</td>
<td>10 - 20</td>
</tr>
</tbody>
</table>

**Source:** Ministry of Agriculture  
1/ World Bank Staff estimates.  
n.a. = not available, under experimentation

2.07. Food imports, for sale largely in the urban areas, have made up for shortfalls in domestic supply over the years (para. 1.04). Food aid, principally from the United States and Canada, is important and, in some years and for some crops, has accounted for up to 50% of the quantity imported. In 1984, out of total wheat imports of 137,000 tons, 68,000 tons came in through the U.S. food aid program. This rose to 97,000 tons in 1985 or about 60% of total wheat imports for that year. With the exception of maize, Zaire appears to have become increasingly dependent on food imports as Table 2.5 shows. This phenomenon is usually the outcome of sluggish agricultural growth and is one that Zaire can little afford given the scarcity of foreign exchange.

### Table 2.5

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>44</td>
<td>14</td>
<td>16</td>
<td>6</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Rice</td>
<td>3</td>
<td>9</td>
<td>2</td>
<td>16</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Meat</td>
<td>15</td>
<td>10</td>
<td>7</td>
<td>19</td>
<td>33</td>
<td>21</td>
</tr>
<tr>
<td>Sugar</td>
<td>26</td>
<td>32</td>
<td>30</td>
<td>37</td>
<td>29</td>
<td>32</td>
</tr>
<tr>
<td>Fish</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31</td>
<td>31</td>
<td>53</td>
</tr>
</tbody>
</table>

1/ Calculated as the ratio \( \frac{M_i}{(P_i + M_i)} \times 100 \)  
where \( M_i \) = Quantity Imported of Product \( i \) and \( P_i \) is quantity marketed domestically of product \( i \).  
**Source:** Etude de la Competitivité de l'Agriculture Zairoise, Vol. 1, June 1987.

2.08. Prior to 1982, food imports were used as a deliberate tool of government policy for keeping the food prices to urban consumers low. Officially mandated
Retail price controls were difficult to implement and imports of cheap food were used successfully to achieve the same result as is shown by the retail food price index in Kinshasa from 1969 to 1984 (Table 2.6). During the first period 1969-1974, retail food prices remained relatively constant in real terms, suggesting no serious imbalance between local production plus imports and demand. Official prices had no impact.

### Table 2.6
**Retail Food Price Index**

<table>
<thead>
<tr>
<th></th>
<th>Period 1</th>
<th>Period 2</th>
<th>Period 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereal</td>
<td>103</td>
<td>96</td>
<td>86</td>
</tr>
<tr>
<td>Starchy foods</td>
<td>78</td>
<td>88</td>
<td>85</td>
</tr>
<tr>
<td>Pulses</td>
<td>98</td>
<td>98</td>
<td>95</td>
</tr>
</tbody>
</table>

**Source:** INS, 1984

What did have an impact were imports of cheap cereals which depressed not only retail cereal prices, but through substitution in consumption, depressed retail prices of starchy foods and pulses. During the second period, 1975-78 there was an increase in real food prices in Kinshasa following the disruption caused by the zairianization and nationalization measures. Price controls had no effect. Cereal prices were dampened by massive cereal imports (Table 1.3). During the third period, 1979-82, the fall in the real price of food crops is explained by most observers as the result primarily of a rapid fall in the purchasing power of the urban population and hence demand, rather than an increase in supply or to price controls. By 1982, real salaries in the private sector were about 45% of the 1975 level. In the public sector 1982 salaries were 20% of the 1975 level in real terms. The most recent period which has followed the liberalization measures in 1982 has witnessed an increase in the real price of food at the retail level. This resulted from the removal of price controls combined with urban demand growing faster than supply from production and imports. Imports of wheat and rice have remained at very high levels.

2.09. The performance of the food crop sector is usually closely linked to the level and quality of nutrition in most low-income countries. In Zaire, however, this link is masked by the high food imports which have helped to maintain calorie supply per capita per day at relatively constant levels over the past two decades. From about 2,188 in 1965, per capita per day calorie supply rose to 2,302 in 1973. It decreased to 2,154 in 1985 and is now (1987) estimated at 2,151. This is better than the average for other sub-Saharan African countries estimated at 2,024 (1985) (Annex A, Table 2). The country has
done less well with per capita protein supply which has stagnated over the past two decades and at 33 grams per capita per day remains substantially below the estimated (1987) average for low-income countries world-wide of 55 grams. Furthermore, pockets of malnutrition persist in Zaire as a result of regional variations in food availability. In parts of Kivu, loss of soil fertility coupled with high population density have led to substantial decreases in the quantity and quality of food available.

2.10. Zaire has, thus far, managed to feed its population only by increasing its dependence on food imports. Imports have also served to satisfy changes in taste (toward cereals) which tend to occur with urbanization. While this strategy may be tenable for a high or middle income country with the ability to generate sufficient foreign exchange, it is questionable whether Zaire can afford to continue to nourish its people this way. A reduction in the level of food imports and an efficient pricing policy for (or careful targeting of food aid) are difficult political issues. Cheap imports benefit a powerful and vocal segment of the population namely urban dwellers and create rents for a small, but important group of importers. A long-term view of food production and consumption strategy dictates, however, that the balance of decision-making should tip in favor of domestic food production. In the context of its macroeconomic reforms, Zaire has made an important move in this direction by liberalizing agricultural prices. Further, recent studies suggest that with the generally low levels of nominal and effective protection proposed for the economy under the Structural Adjustment program (10-50%) the foodcrop sector can compete with most food imports. The issue in Zaire is not so much the country's ability to feed itself in a global sense (a problem that can be solved once constraints are identified and dealt with) but rather the regional variations in food availability which will continue to exist even when sufficient food is being produced. There is also the question of the nutritional balance of food intake. The average diet in Zaire is disproportionately based on cassava (about 60% of the per capita daily energy supply) with relatively low amounts of protein. Issues of nutrition and of food security, including interregional food distribution, and the place of food aid merit greater attention and a clearer definition of strategy. Attention should be focused in particular on the improvement of infrastructure, the distribution network, and adequate storage systems to enable supplies to be brought into the food deficit areas from food surplus parts of the country.

C. Industrial and Export Crops

2.11. Except for sugar and coffee, production of industrial and export crops has stagnated or declined --Table 2.7.

4/ This is based on preliminary results using 1986 exchange rates and present levels of technology. The results are subject to verification of base data. Competitiveness is a dynamic concept, and with introduction of improved technology and a favorable macroeconomic environment, production of most food crops should continue to be competitive.
Table 2.7

Production of Industrial and Export Crops
(thousands of tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar</td>
<td>48.0</td>
<td>44.0</td>
<td>48.0</td>
<td>48.0</td>
<td>47.0</td>
<td>52.0</td>
<td>52.0</td>
<td>61.0</td>
<td>58.0</td>
<td>61.0</td>
</tr>
<tr>
<td>Coffee</td>
<td>68.8</td>
<td>75.0</td>
<td>87.0</td>
<td>89.0</td>
<td>83.0</td>
<td>83.0</td>
<td>84.0</td>
<td>89.0</td>
<td>90.0</td>
<td>95.0</td>
</tr>
<tr>
<td>Cocoa</td>
<td>4.5</td>
<td>6.0</td>
<td>8.2</td>
<td>4.2</td>
<td>4.6</td>
<td>4.5</td>
<td>4.2</td>
<td>4.4</td>
<td>4.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Tea</td>
<td>7.3</td>
<td>7.3</td>
<td>4.8</td>
<td>4.4</td>
<td>4.8</td>
<td>4.8</td>
<td>4.7</td>
<td>5.0</td>
<td>4.8</td>
<td>4.7</td>
</tr>
<tr>
<td>Tobacco</td>
<td>-</td>
<td>-</td>
<td>1.6</td>
<td>1.9</td>
<td>2.9</td>
<td>2.8</td>
<td>2.6</td>
<td>1.9</td>
<td>2.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Seed Cotton</td>
<td>49.0</td>
<td>58.0</td>
<td>19.0</td>
<td>29.0</td>
<td>21.0</td>
<td>24.0</td>
<td>27.0</td>
<td>21.0</td>
<td>22.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Rubber</td>
<td>35.0</td>
<td>41.0</td>
<td>22.0</td>
<td>21.0</td>
<td>18.0</td>
<td>17.0</td>
<td>16.0</td>
<td>14.0</td>
<td>13.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Palm Oil</td>
<td>178.0</td>
<td>178.0</td>
<td>98.0</td>
<td>99.0</td>
<td>106.0</td>
<td>94.0</td>
<td>95.0</td>
<td>93.0</td>
<td>89.0</td>
<td>86.0</td>
</tr>
<tr>
<td>Quinine</td>
<td>-</td>
<td>-</td>
<td>6.0</td>
<td>5.9</td>
<td>6.0</td>
<td>5.9</td>
<td>5.2</td>
<td>4.7</td>
<td>4.8</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Sources: - "Annuaire des Statistiques Agricoles" 1979-1986
- DÉpartement de l'Agriculture, June 1986
- Etudes sur les Cultures Perennes au Zaire, Sept. 1987, SOCFINCO/ZTE.

1/ Coffee exports may be higher than production in a given year because of stocks.
2/ Excluding village production.
3/ Tons of bark.

The biggest declines have been in oil palm and rubber—two crops experiencing serious structural constraints as well as the usual economic and transportation problems. Cotton has also suffered serious decline as a result of managerial and pricing problems and inadequate support services. The average age of the oil palm plantations is about 16 years and well above the prime producing age of 12 years. In 1987, about 16% of the plantings were older than 25 years while 25% were older than 15 years. In the rubber sector more than 50% of production comes from trees which are over 25 years old. Planted area has declined by more than 40% since independence due to the abandonment of plantations following the zairianization measures of the 1970s or due to insufficiency of labor. The current rates of replanting are insufficient to offset the fall in production resulting from aging and abandoned plantations. Virtually all of the industrial and export crops have experienced declines or stagnation in quality and in yields (Annex A, Table 3). Only an expansion in the area cultivated of some crops (e.g. coffee) has kept total output from declining in the past few years. Response to the price liberalization measures from the export crop sector has been virtually non-existent unlike the food crop sector where there appears to have been some response. Structural, regulatory, and marketing constraints which weigh more heavily on the more readily controlled plantation sector have contributed to the lack of a supply response. Issues related to a supply response are discussed in more detail in para. 3.21.
2.12. Agricultural exports have declined with production as is evident from Table 1.2. The exception is coffee where production and exports remained stable or increased slightly in the 1980s. Data from the Banque du Zaire show a decline in the value of agricultural exports from 1977 to 1983, in constant prices, at 2.7% per annum. For both export and industrial crops demand does not appear to be the limiting factor. The problems are on the supply side where policy-related, structural and economic constraints have led to the poor performance of the subsector. Despite the gloomy picture, the outlook for Zaire's export and industrial crops is fairly promising. Recent studies have shown that despite low world prices Zaire can compete in the development of coffee, high quality tea, cocoa and rubber for the export market and oil palm and cotton for the domestic market. The exception is sugar, the production of which is, at present, inefficient and expensive. Under the present liberal foreign exchange regimes; the domestic resource cost of producing most of these crops appears favorable (Table 2.8). Investors, however, continue to be reluctant to invest because of the general lack of confidence in the economy, the significant lags in returns from some agricultural investments, and the serious structural supply side constraints. If these constraints on the supply side can be removed, Zaire's ability to produce the crops at competitive prices would improve enormously.

Table 2.8

Domestic Resource Costs (DRCs) of Foreign Exchange Saved or Earned in Certain Agricultural Activities 1/

<table>
<thead>
<tr>
<th>Product</th>
<th>DRCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber RSS3</td>
<td>0.592</td>
</tr>
<tr>
<td>Oil Palm</td>
<td></td>
</tr>
<tr>
<td>- Artisanal Production and Processing</td>
<td>0.363</td>
</tr>
<tr>
<td>- Mini-huilerie (small scale processing)</td>
<td>0.410</td>
</tr>
<tr>
<td>- Industrial Production and processing 2/</td>
<td>1.177</td>
</tr>
<tr>
<td>Tea</td>
<td></td>
</tr>
<tr>
<td>- High Quality Q3 - Q1 3/</td>
<td>0.446 - 0.366</td>
</tr>
<tr>
<td>- Medium &quot; M3 - M1</td>
<td>0.782 - 0.527</td>
</tr>
<tr>
<td>- Poor Quality P3 - P1</td>
<td>12.083 - 1.548</td>
</tr>
<tr>
<td>Cinchona</td>
<td></td>
</tr>
<tr>
<td>(For 3 qualities exported)</td>
<td>0.553 - 0.263</td>
</tr>
<tr>
<td>Coffee Robusta 4/</td>
<td>0.399</td>
</tr>
<tr>
<td>Cocoa (high quality)</td>
<td>0.390</td>
</tr>
</tbody>
</table>

1/ The DRC (calculated here at 1986 exchange rates) is an indicator that measures the cost in domestic resources of earning or saving a unit of foreign exchange. If the DRC for a given product is less than unity the economic cost of domestic resources, used in this activity is less than the economic value added created and the country has a comparative advantage in its production. Conversely, if the DRC is greater than unity, the economic cost is greater than the value added and the country has no comparative advantage. The DRC is measured at a point in time and in a dynamic situation can change. Maintenance of realistic exchange rates and improvements in agricultural services should keep Zaire competitive in the production of these crops. For more details on the estimation of the DRCs and a technical formulation of its definition see ZTE/Sofinco, Etude sur les Cultures Perennes Analyse des DRCs.

2/ DRC for industrial production based on the present average cost structure of enterprise still to be fully rehabilitated. With adequate rejuvenation the DRC would probably drop below unity. Possible oil substitution can be found in cotton oil (DRC 0.317), soya oil (DRC 0.663). Expansion in these areas are, however, tied to other factors, which make rapid expansion unlikely.

3/ About 25% of Zaire's exports are of high quality tea. The balance is medium quality. Poor quality tea is sold on the domestic market.

4/ Preliminary estimates.
D. Livestock

2.13. With its vast areas of grass and tree savannas Zaire has considerable potential for livestock development estimated at between 30 and 40 million head of cattle. The country presently has a national herd of about 1.3 million head (two-thirds of which are in the traditional sector, the balance being in the modern ranching sector), and about 3.6 million small ruminants. The performance of the livestock subsector has improved over the last ten years with the support of donors, especially in the eastern regions (Ituri and Kivu). By financing livestock input supplies (veterinary medicine and sera, minerals and acaricides) and technical assistance to organize and manage cooperative distribution systems, donors have improved animal health care significantly, leading to a surge in the size of the cattle herd in the eastern regions. On the other hand, the decline of ONDE, a ranching parastatal in Shaba supported by the World Bank until 1984, illustrates the critical dependency of the cattle ranching sector on foreign exchange and skilled management. Since the 1983 liberalization measures, producers selling on the Kinshasa market suffered severe competition due to reduced tariffs and dumping practices on the international meat and fish markets. Poultry operations around Kinshasa have collapsed for lack of reliable feed supply and sanitary supervision. Presently, annual domestic production of livestock products estimated at 82,530 tons covers about 66% of the country's consumption. The balance of 34% is covered by an unquantified amount of local game, and by imports in the order of 43,000 tons of meat per annum. Declining incomes have reduced per capita per year meat consumption to about 4.2 kg. The addition of unquantified amounts of family production and game probably improves the picture. Meat consumption is among the lowest in Africa and is certainly way below the recommended FAO norm of 25 kg per capita per year. In Kinshasa, consumption is estimated at 14.3 kg per person per year. Most of this derives from meat imports. Fish is used to supplement or substitute for meat in both rural and urban areas. Annual production is supplemented by imports—of deep frozen fish in the order of 105,000 metric tons per year. The potential exists to more than double annual domestic fish production, from Zaire's abundant surface water resources within the next five years. Logistical problems which hamper production—shortage of boats, lack of spare parts and fuel and marketing—lack of transport, storage facilities, and credit would have to be overcome.

2.14. The future performance of Zaire's livestock industry depends on the country's ability to improve its input supply and animal health system as well as livestock extension in the traditional sector. The weak public administrative environment suggests that the development of private and cooperative structures may well be the best way to achieve these improvements. In Ituri and Kivu, livestock producers' associations developed with donor support have proven to be an effective means of delivering support services to producers; also they offer so far the only promise for sustainability.

E. Forestry

2.15. Of Zaire's total forest area of 170 million ha about 80% or 139 million ha is considered exploitable and capable of producing 5m3 of industrial wood per ha per year for a total of about 700 million m3 per year. At present only about 0.5 million m3 per year is produced due mainly to infrastructure and transport problems. About 40% of the forest area is still inaccessible. Shipment of logs for export is slow and difficult particularly in the Kinshasa-Matadi corridor where rapids make navigation on the Zaire river difficult. Most logs have to be
transported on roads not designed for such heavy traffic. In addition there are
the usual fuel, spare parts and other transport difficulties. Further problems
impeding the development of the forest resource are difficulties for forestry
enterprises in obtaining finance and lack of trained labor, equipment, fuel and
spare parts at key production periods. Most of the wood produced is consumed
domestically. Only a small part of production is exported. Wood exports
represent about 1% of the total value of exports. This proportion has remained
about the same since 1978. Zaire exports far below its potential with less than
0.5% of the international market in logs and barely 3% of the total wood exports
from Africa.

2.16. In contrast to the low production of industrial wood Zaire's forests
play a significant role in the provision of firewood and charcoal which supply
about 86% of the country's energy requirements. An estimated 25-30 million m³
is presently consumed of which 99% is for domestic energy needs, the balance
being used in small industries for brick and cement making and other artisanal
manufacture. Firewood and charcoal (used mostly in the urban areas) will
continue to be the primary sources of energy in the coming years. Charcoal
consumption is expected to increase from 300,000 tons per year in 1986 to
400,000 tons by the year 2000. Communal tree planting and agroforestry will
need to be encouraged to bolster supplies from the natural forests particularly
as these increase in distance from the urban centers.

2.17. The forests contain one of the most important reserves of wildlife in
the world, some species of which are endangered. Examples are the mountain
gorillas, okapi and dwarf chimpanzees. This resource is at present not
adequately protected. Information on endangered ecosystems is also inadequate.
An important issue is how to reconcile exploitation of some of the forests with
forest protection and conservation of wildlife. This is an area that merits
further study. A joint Government-multi donor review of the forestry sector is
envisaged beginning end 1988 aimed at mapping out approaches to some of these
issues. The country has thus far set aside seven national parks with a total
area of 82,600 km². Together with the hunting reserves they represent 8% of the
national territory. Three additional parks are planned that would bring the
total protected area to 12-15% of the national territory. This represents a
significant potential for the further development of tourism.

2.18. Soil protection and maintenance of the country's hydrological system
are other important functions of the forests. In some areas of fragile soils
where the forest has been cut away for agriculture there has been severe soil
erosion exacerbated in areas of high population density by shorter fallow
periods. The forests also provide some export products e.g., rauwolfia, and
supply the local population with important products--medicinal plants and herbs,
protein, honey and other edibles. The value of these products is difficult to
quantify but there is no doubt that the forests form an integral part of the
lifestyles of some of Zaire's peoples. Future use of the forests must therefore
be based on the formulation of management plans which take into account
protection of the important resources which these forests contain.
CHAPTER III: PROBLEMS AND CONSTRAINTS IN THE AGRICULTURAL SECTOR

A. Introduction

3.01. The performance of Zairian agriculture to date leads to a picture of a sector which has "imploded" in the sense of a general retreat from markets and enhanced production for subsistence. Thus, agricultural exports have dropped substantially, while the trend of food imports is now at roughly a fifth of merchandise imports. The principal causal factors in this implosion are well known and are the macroeconomic and agricultural policy environment, which until recently was highly unfavorable, the remarkable deterioration in agricultural services -- the transport network, research, extension, input supply, credit and agricultural education and the increasing public finance constraint. Other important factors are the lack of government commitment to agriculture coupled with the effects of specific measures such as the zaïrianization/nationalization of the 1970s, weak government and donor agricultural development strategy and the weak organization and management of the agricultural administration. Failure to take corrective action in the past led to a worsening of the constraints and the consequences have been an almost complete loss of investor confidence, which has yet to be restored. The private sector has not risked significant new investment in agriculture in the past decade. It is only likely to do so in the future if the right economic and political environment is created. This implies continued macroeconomic and agricultural policy reforms and strengthened agricultural services. Even then, direct incentives may be required in some cases to induce investors to risk new money. After a consideration of the impact of world prices on agriculture, the constraints on agricultural development are discussed in detail below. Policy related issues are considered first, following which is a discussion of more structural factors principally the state of agricultural services. The diagnosis in each section is followed by a summary of the reform measures recently proposed or underway.

B. World Prices and their Impact on Production

3.02. Zaire, like most third world countries in the 1980s, has seen a decline in the price of its principal agricultural exports and, as a consequence, a decrease in foreign exchange earnings from agriculture. This has contributed to a poor balance of payments situation. The fall in world market prices, although contributory, cannot, however, explain the serious decline or stagnation in the production of most export crops. During the same period, Zaire liberalized agricultural prices and producer prices at the farmgate increased substantially in real terms (para. 3.21). There was no corresponding response from the export crop sector. This, and the nature of the problems confronting agriculture (para. 3.01) seem to point to supply side constraints as the principal factors impeding agricultural export growth. Short-run commodity price projections by the World Bank show deterioration in the prices of coffee, cocoa and rubber reflecting abundant world supply. Prices for other products are projected to increase in real terms. Analysis in Section 2.12 shows that even at depressed 1986 prices and with the present low levels of technology most agricultural exports are competitive. Demand for Zaire's export crops, which constitute a small part of total world output, does not appear constraining. Major markets are the European community (coffee, tea, cocoa, rubber, timber), USA and Japan (coffee). Zaire can remain competitive if exchange rates are kept at realistic levels and domestic inflation brought under control. Better roads, improved technology and better extension and research will give agriculture an edge.
C. Government and the Agricultural Sector

3.03. Many of the problems in Zaire's agricultural sector have been identified in Government reports and have appeared in various planning documents. Seemingly convincing solutions have been advanced. In plan period after plan period agriculture has been cited as the "priority of priorities". Unfortunately, until recently, these plans, objectives and proposed solutions have not been supported by effective government action in the form of a reasonable budget (see para. 3.26), or improved agricultural services.

3.04. The most recent five-year development plan, 1985-1990 again accords agriculture the highest priority. The main objective for agriculture is to achieve food self-sufficiency, and concurrently provide support to projects designed to increase the production of raw materials for local industry and for export. The strategy to achieve these objectives is based on the concentration of resources on "foyers de development" (development poles) that is, areas already having existing minimal infrastructure or proven potential - a useful principle in light of the country's vast size and weak infrastructural base. The private sector, including non-governmental organizations, is to play an important role in providing and managing financial resources for agricultural development and implementing projects. The agricultural development plan contains a number of investment projects, some of which are already underway and others of which are intended for implementation over the coming five years. While some of these investments are important and merit support, others are difficult to justify on financial, economic and even social grounds and represent little more than a drain on public resources. The existence of these projects reveals the weakness in Government's capacity to prepare viable projects or once prepared to follow through on implementation.

3.05. As part of a major effort to achieve foodcrop self-sufficiency, the Government has recently prepared an outline plan for the promotion of food crop production (Plan d'Action pour le Promotion Vivrière et l'Autosuffisance Alimentaire (PRAAL)). This plan was prepared with a view to mobilizing the resources of the Ministries of Agriculture and Rural Development not already tied up in specific project activities. The justification for the PRAAL is based on the contention that there is a large proportion of rural producers who are not covered by specific project support or extension and an equally important number of agricultural staff who have had no financial or physical means over past years to provide support services or agricultural extension to farmers. The program has attracted significant political attention and a large proportion of the Investment budget for 1987 and 1988 has been voted in its support. This is a marked change from the earlier lip service paid to agriculture in the budgeting process and indicates the degree of Government commitment to the program. Early implementation has suffered from inadequate preparation and uncontrolled distribution of project funds, with many activities taking place outside of the existing framework of project planning, administration, budgeting and financial control. Detailed preparation of individual program components has been lacking and little use has been made of the specialized services of the Agriculture ministry to participate in the elaboration of a realistic program. Estimates of benefits and the timing of such benefits are wildly overoptimistic, given the rundown nature of the services on which the program is based. Recent attempts have been made to redress these shortcomings. So far, funding has been provided uniquely from Government sources and little attempt has been made to generate cofinancing for
the program. To take advantage of the strong interest in this program, it is important that its design be consistent with overall development strategy of the Ministries of Agriculture and Rural Development and that more use be made of economic criteria in the definition of the individual sub-components.

3.06. The need for regional development is also a recurring theme of the Government's strategy for agricultural development. This is understandable and necessary given Zaire's large geographical area and weak administrative capacity. Yet little attention has been paid to resolving the serious financial and fiscal problems of decentralized government entities, a prerequisite to making them effective partners in the development of agriculture (para 3.74). In summary, Government has made significant progress in identifying the problems facing the agricultural sector. Some attempts have been made to respond to these problems through the planning process and through support for investment projects or programs, some of which have yielded fruit in the area of food crop production. An overall assessment of Government's actions in the agricultural sector leaves one, however, with an overwhelming impression of crisis management. This may be changing as some commitment builds up to a long-term process of restructuring the sector.

3.07 Certain Government measures have in the past resulted in severe setbacks to the agricultural sector. The most important of these was the zairianization/nationalization measures of 1973/74, referred to in previous sections, in which foreign agricultural interests were confiscated nearly overnight and given to Zairians. Arrangements for the compensation of former owners from the Government and from private Zairian owners have never been completed although a government commission is now looking at the problem. Their job is complicated by the existence of unpaid loans in some of the enterprises. Government's arbitrary action during this period has left a lingering lack of confidence in Government policy by potential investors. This lack of confidence manifests itself in a reluctance to invest in new activities or even to rehabilitate old investments. The Government has made remarkable policy improvements since 1983 and has begun the difficult task of rebuilding investor confidence. This will take time. Presently, the private sector has yet to respond in a significant manner but may yet do so given some constancy in Government's approach.

D. Government and Donor Agricultural Development Strategy

3.08. After two decades of government and donor support for agricultural development projects, agricultural sector performance is still extremely weak and there remains a dearth of institutions capable of providing needed agricultural services or managing sectoral development in the long term. Admittedly, projects have functioned in an adverse institutional and macroeconomic environment. Some were developed and implemented by donors outside the framework of Government agricultural policies and plans. Many are still ongoing and the verdict on them is not yet in. However, there are grounds for questioning the impact in the short-term and the appropriateness in the long-term of the agricultural development strategy inherent in these projects and followed by the Government, the Bank and other donors.

3.09 The pattern of lending for agriculture by the Bank in the past has been characterized by two major types of operations. Firstly, there were projects which provided credit for the rehabilitation of specific commodities notably sugar, cotton and oil palm. Each of these projects ran into the same fundamental problem. Project implementation took place either during or just
after a period of major macro-economic reform (liberalization and devaluation of the zaire currency) - with the result that the potential beneficiaries either incurred far heavier debt servicing obligations than had been foreseen or else, in anticipation of the threat of similar results, simply refused to draw down the credits (the case of the most recent Cotton project, Cr. 1264-ZR). For this type of operation to make a more positive impact in the future, it will be necessary to prepare carefully the onlending agreements (maturities, lending in foreign exchange only when producing for export, etc.) and to mould these to the realities of the prevailing economic environment.

3.10. The second type of operation was in support of rural development, foodcrop and livestock production and was designed with the underlying assumption, shared by projects financed by other donors, that the existing zairian administration was too weak to be able to absorb this type of project or to respond to the management demands. The result was a series of free-standing projects pursuing multiple rural development objectives with financial autonomy and a management structure outside the permanent structure of the Ministry of Agriculture or Rural Development. The project management units set up to run these projects often operated with substantial expatriate support and significantly higher pay and benefits for local staff. On balance, the free standing projects by taking away resources from the normal Ministry structure may have contributed indirectly to a further weakening of the administrative service. During the initial investment period several of these projects have been relatively successful. The maize production efforts of PMKO and the USAID-funded North Shaba project resulted in increases in maize production. Livestock and foodcrop production in the Ituri project area has flourished during project implementation. The PRODALU experience in Kasai Occidental is still too young to evaluate, but promises well. In each of these examples, however, the common and fundamental questions remain: (a) are these projects replicable; (b) how can the existing Ministry of Agriculture presence in the project area be reconciled with the existing project organisation and how will the project be integrated with the permanent Ministry structure over time; and (c) how can institutional and financial sustainability be assured for the project when outside donor funding ends. These questions are not limited to projects in Zaire, but are relevant to integrated rural development projects elsewhere in Africa. Answers need to be formulated before new projects are started and the implications should be incorporated in the project design. An effort in this direction will avoid the type of post-project vacuum created by the termination of the North Shaba project at Kongolo. The absence of adequate funding from the Conseil Executif for projects for which outside funding has terminated has resulted in the perpetration of skeleton project units, bereft of means to continue operating satisfactorily, whose main preoccupation is to undertake income-generating activities to enable them to meet the recurrent costs of local staff. Examples of such projects include the ex-FAC financed project at Mbanza-Ngungu or the ex-EDF project at Mweka (CEDERIM). The ex-Bank financed CODAIK risks falling rapidly into this category following the inconclusive attempt between the Bank and the Government to agree on a second phase of the project.

3.11. One of the most successful IDA-supported projects to-date is that funding the expansion of the Bureau National des Semences (BUNASEM). The key for the long-term success of this project is based on the promotional nature of BUNASEM's involvement in seeds production and the longer term objective of an independent Seeds Certification Office, with self-generated revenues. The structure of the BUNASEM project incorporates participation of the private sector in basic production functions while maintaining a coordinating and supervisory role for Government. The Ituri Livestock Development project Cr.
697-ZR. and the follow-up Northeast Rural Development Project Cr. 1325-ZR have successfully developed effective livestock producers associations that retail veterinary products, manage dips and communal pastures. Although still dependent on Canadian aid for financial and management support, these associations offer real hope for sustaining project activities after the investment period. Both the BUNASEM and Ituri projects serve as important models with elements that can be incorporated into the design of future projects.

3.12. The experience of both Bank-financed and other donor-financed projects in the sector demonstrates clearly the need to include sustainability in project design. There is a need for an evolution in thinking from the "isolationist" strategy to the development of a long-term approach that strengthens the ability of the Zairians to manage their own development. Such an approach, in the context of Zaire, will of necessity have to be flexible. It will, however, have to follow certain principles.

a) To stimulate increased private sector investment and hence production, government will need to reinforce and often recreate basic agricultural services, the most important of which are transport (roads, waterways), research and extension. It will need to strengthen the framework for the delivery of financial resources (credit) to the sector.

b) Wherever possible, producer organisations should be created and non-governmental organizations, where they exist, should be assisted to take care of actual delivery of services and inputs. Only where there is no private sector interest, and the area is deemed a priority for agricultural development should Government deliver these services.

c) The Government's role should be principally that of planning, policy formulation, coordination and supervision. However, given the present weak administrative capacity, agricultural institutions and structures will have to be strengthened to play this role.

d) To achieve maximum impact and to assure sustainability, the strengthening of institutions at the national level should have secondary priority over similar efforts at the regional and local level. The strengthening of local and regional capabilities will facilitate decentralization and make actual supervision of the provision of services on the ground much easier.

The approach described is basically one of institution building designed to create a light government coordinating and supervisory structure at the central level and a stronger one at the field level, and in addition, strengthen planning and policy-making capabilities. This approach lies at the heart of the proposed World Bank strategy for the agricultural sector, details of which are presented in Section IV. It implies the need for donor coordination in support of the development of key services. There is a need to pool resources to assist Government to develop a planning and budgetary framework for the services, to coordinate their provision, and finally supervise and evaluate implementation.

E. The Macroeconomic and Agricultural Policy Environment

3.13. The package of price, tax, trade and exchange rate policies which Zaire, like many African countries, adopted after independence had on balance
detrimental effect on the agricultural sector. The essential features of this package were:

(a) an overvalued exchange rate;
(b) high export duties on agricultural commodities;
(c) heavy external borrowings, in the early 1970s and the subsequent high debt service burden resulting in a foreign exchange crunch;
(d) low official producer prices for foodcrops;
(e) subsidized consumer food prices;
(f) official producer prices which were the same countrywide and remained fixed throughout the year;
(g) myriad internal local taxes on production and marketing of agricultural produce;
(i) non-existent recovery charges on Government’s agricultural services (e.g. veterinary services).

3.14 An inventory of taxes on agricultural exports and imports indicates that prior to 1983 there were about 700 taxes collected by the Government and public institutions at the central level, and 200 taxes at the regional and local level. Preliminary results from a recent study suggest that the total effect was a negative effective protection on agriculture up to 1983.

3.15 The main objectives of the pre-1982-83 package were to:

(a) furnish cheap food to the poor and to the urban population;
(b) minimize price inflation by keeping food prices down;
(c) keep prices the same everywhere and throughout the year for administrative simplicity, easy monitoring and the appearance of equity;
(d) keep imported items needed by Government and business cheap in local currency; and
(e) provide Government revenue through taxation of agricultural exports.

3.16 Farmers, agro-industry and commercial agents took measures to avoid these taxes by smuggling export crops across the border, smuggling needed imports into Zaire, trading food crops on the widespread parallel market, and trading foreign exchange on the parallel market. As a result, the dampening effect of policy on production was somewhat lessened. The policy impact of the overall package is discussed below.

Impact of Policy on Producer Prices and Production of Foodcrops

3.17. A tendency existed among tradesmen to set the official producer price as the maximum price. This practice meant that official price policy did restrain food prices at the farmgate, as implied in Table 3.1 which shows real producer prices for maize, rice and peanuts to have declined by nearly 50% from 1975-1981. This was strengthened by the many cereals, sugar, and meat imports during the period, which dampened any market tendencies for prices to increase. Further, the Ministry of National Economy also planned and regulated food crop marketing. This was done by determining when local markets could operate by requiring marketing agents to obtain a license and by imposing a tax on them. Due to the limited transport network in Zaire, transport of food to the cities could be easily monitored and taxed, although the inefficiency of the administration mitigated this somewhat.

3.18. In May 1982, price and marketing controls were removed. In real terms, producer prices at the farmgate immediately increased by significant amounts, as indicated in Table 3.1 (despite continued imports of foodstuffs). Scrutiny of Table 2.2 suggests that the corresponding increase in recorded foodcrop production was not as significant.

Table 3.1

<table>
<thead>
<tr>
<th></th>
<th>ZAIRE: Real Producer Prices (Zaire/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(deflated to 1975 prices)</td>
</tr>
<tr>
<td></td>
<td>Preliberalization</td>
</tr>
<tr>
<td>Maize</td>
<td>7.0 6.8 3.9 4.9 3.8 3.7 3.5 10.5</td>
</tr>
<tr>
<td>Rice</td>
<td>8.0 6.3 3.9 3.6 5.5 5.2 4.4 10.1</td>
</tr>
<tr>
<td>Cassava</td>
<td>2.0 5.8 3.2 4.9 3.8 3.7 3.5 10.5</td>
</tr>
<tr>
<td>Peanuts</td>
<td>8.0 7.9 4.9 5.6 5.5 5.2 3.9 7.3</td>
</tr>
<tr>
<td></td>
<td>Liberalization</td>
</tr>
<tr>
<td>Maize</td>
<td>5.8 5.0 5.0 3.0</td>
</tr>
<tr>
<td>Rice</td>
<td>7.0 11.0 7.0</td>
</tr>
<tr>
<td>Cassava</td>
<td>7.2 10.7 8.0</td>
</tr>
<tr>
<td>Peanuts</td>
<td>n.a. n.a n.a</td>
</tr>
</tbody>
</table>


3.19. Farmers who marketed their products were of course considerably better off as a result of the real price increases, and theory suggests that the supply response should have been observable. Reasons for the poor response include the shortage of marketing credit which also came with the 1982/83 reform measures. This reduced working capital to buy farmers crops. Secondly, marketing costs greatly increased. Fuel and spare parts were scarce particularly in the interior. Thirdly, the transport network had deteriorated to such an extent that significantly large volumes of food would have been difficult to move to the cities. Fourthly, local Governments continued to impose taxes and administrative impediments to food crop marketing. The result appears to be that farmers did produce more but this extra production was not purchased due
largely to the financial and transport constraints encountered by marketing agents.

**Impact of Policy on Prices and Production of Industrial and Export Crops**

3.20. As with food crops, industrial and export crops were submitted to Government determined price and marketing regulations up to May 29, 1982. The negative impact of these regulations was more pronounced than for food crops because of the structure of production and marketing, which for most crops is dominated by plantations and private companies that are relatively easy to regulate. Mandated official prices were low by world standards. In the case of cocoa, for instance, producer prices were about 34% of the world market price just before the liberalization. When combined with the over-valuation of the zaire the low prices had a negative impact on production and encouraged smuggling.

3.21. With the removal of price controls starting in 1982 and the devaluation of the currency by 78% in 1983, prices increased rapidly in nominal terms as Table 3.2 shows. In real terms, prices also increased substantially, the rate of price inflation (retail price index in Kinshasa) increasing by 539% over the 1981-87 period. Production data in Table 2.7 indicates stagnation or a continuing downward trend in output for most crops despite these real price increases. This lack of a supply response is due to several possible reasons the more important of which are structural. Tree crops dominate the industrial and export crop sector. Most of the tree crops in Zaire are over-aged (para. 2.11) and thus response in terms of additional production will of necessity be limited. Substantial increases in production will require replanting or rehabilitation and, in any case, will not show up for another few years. The marketing constraint is particularly important especially for highly perishable export crops such as tea. The deterioration of the transport network, the increasing scarcity of fuel and high cost of spare parts has meant increasingly high transport margins for exporters. Transport costs constitute more than 20% of the export value of some crops. The lack of wage goods in the interior may serve as a disincentive to small farmers to increase output. This is linked to the difficult transport conditions and poor marketing network in the rural areas which make provision of these goods difficult and expensive. In fact, in areas near the border, smuggling of crops in exchange for goods (building materials in particular) is common.

**Table 3.2**

<table>
<thead>
<tr>
<th>ZAIRE: Industrial and Export Crops</th>
<th>Producer Prices at farmgate (Z/kg)</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabica Coffee</td>
<td>5.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Robusta Coffee</td>
<td>1.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Cocoa</td>
<td>3.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Seed cotton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st quality</td>
<td>1.2</td>
<td>1.8</td>
</tr>
<tr>
<td>2nd quality</td>
<td>0.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Tea (greenleaf)</td>
<td>0.15</td>
<td>0.28</td>
</tr>
<tr>
<td>Palm fruit</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

1/ For northern region only.

3.22. Despite the liberalization, exports are still heavily regulated and this contributes to the lack of a supply response. A multitude of Government agencies (up to fifteen) intervene in the export process. These agencies may require up to fifty-two different documents and procedures. In addition, there were five to six different export taxes paid on agricultural products, as well as separate export charges and levies, which could amount to 20% of the export value of some commodities. Some of these taxes have recently been suppressed and this should improve the situation. However, there is still considerable confusion in the minds of government agents and the private sector about actual application of new measures. In addition, remaining administrative and fiscal obstacles continue to constrain exports and hence production. They also encourage smuggling.

3.23. Recent efforts have been made to improve the policy environment for agriculture and to increase the chances for a response from both export and food crops. These efforts under the structural adjustment program are described below.

The Structural Adjustment Program

3.24. The policy reforms begun in 1982 have continued with World Bank support under a structural adjustment program (SAP). The first structural adjustment credit approved by the World Bank Board in June 1987 aimed at addressing constraints at the macroeconomic level remaining after the liberalization decisions. The initial focus of the SAP is (a) maintaining the key orientations of macro-economic management—exchange rate, interest rates, price liberalization, and tariff regime; (b) improving the efficiency of credit markets and strengthening the supervision function of the Central Bank; (c) strengthening control of public expenditures, as well as changing their composition in favor of high priority capital expenditures; and (d) improving the performance of key sectors notably agriculture and transport.

3.25. Specific measures which have been adopted in support of the above and which are expected to improve the policy environment for agriculture are:

(a) preparation of a core investment and public expenditure program by the Executive Council and the Bank and respect of this core program in the annual budget approval process;

(b) fiscal reform procedures which include the adoption of a more uniform set of import tariffs over time, the objective being to obtain an overall level of nominal protection of 30%, and, at this modest level, reduce incentives for importers to circumscribe the procedures for payment of import taxes thus increasing global revenues;

(c) reform and simplification of export procedures. Creation of a committee to facilitate exports and suppression of certain taxes notably, the turnover tax on exports (CCA), statistics tax, and the Fonds Agricole tax;

(d) improvement in investment conditions including introduction of regular revaluation of company assets and elimination of the taxation on asset revaluation.

(e) encouragement of a competitive environment through steps to abolish continuing ex-post price controls by the Ministry of the National Economy;
(f) improvement in the mechanisms for funding agriculture. The Central Bank has delegated responsibility which it held over recent years to the commercial banks for the distribution of agricultural and medium term credit and defined a minimum proportion of commercial bank portfolios which should be devoted to agriculture and medium-term lending. The preferential rates for agricultural credit have been removed and the turnover tax (CCA) on agricultural credit suppressed. To encourage the BCA to make a greater contribution to the provision of agricultural credit, its capital is to be opened to third parties in addition to Government, presently its sole shareholder;

(g) initiation of a project to improve the management of the public administration.

(h) liquidation of special Funds in agriculture which were poorly managed;

(i) signing of the Multilateral Investment Guarantee Agency (MIGA) to insure private investors against political risks. (Ratification is expected to follow shortly.)

3.26. Implementation of the structural adjustment program has begun. Areas of progress include public enterprise reform - a list of enterprises to be privatized has been published; public investment programming - the quality of public investment planning has improved; and civil service reform - over 8,000 notional employees have been eliminated from the Government's payroll. Weaknesses persist, however, in overall economic performance notably a continuing high budget deficit, a high rate of inflation averaging about 100% for 1987; negative real interest rates, overvaluation of the currency, and a markedly weak response of the private sector to the economic reforms. In addition, purchasing power is declining as real incomes are eroded by inflation. These problems necessitate strong action by the Government to reduce the budget deficit, control inflation and maintain realistic exchange rates, if it is to continue to provide a policy environment conducive to agricultural growth.

F. The Public Finance Constraint

3.27. Public finance statistics are very weak in Zaire and budget figures have to be interpreted with caution. However, based on available information, agriculture appears to have rarely been allocated more than 3% of total public expenditure (Government's own funds) since 1970. (Annex A, Table 4) While the very limited volume of resources is the most pressing problem, there are also problems with the budget preparation and execution process. The budget preparation process, though based on well-documented procedures, a clearly defined timetable, and institutional rules, is involved and time consuming. As a result, the timetable which calls for transmittal of the draft budget to the Executive Council in September, with forwarding of the final draft to the Legislative Council in October, is rarely respected. The final budget for the past two years has not been adopted until early in the year to which it applies, and the first releases have been made until some months later--June in 1986 and May in 1987. These delays are particularly hard on the agricultural sector which operates on a given calendar.

7/ There is pressure from within Government to reintroduce the preferential
3.28. An important deficiency of the budgetary system is the proliferation of independent funds based on para fiscal taxes. These funds, often created out of frustration with the inadequacies of the central budget mechanism, are managed separately by the ministries under whose authority the taxes are collected. Their existence has exacerbated the inability of the formal budget approval and appropriation process to take into account and allocate rationally all available government resources. The most important of these Funds in the agricultural sector was the Fonds Agricole raised as a tax on agricultural exports. It represented about three times the resources for the agriculture investment budget in 1986 (Z 183 million as against Z 64 million actually released). Under the structural adjustment program, the agriculture export tax which represented the revenue for the Fonds Agricole has been eliminated. The proceeds of most discretionary Funds have been centralized and their allocation is now subject to a common set of criteria. Two special Funds directly financed from para fiscal taxes still remain in agriculture. They are (i) the National Reforestation Fund which accommodates the proceeds of a tax levied on logging by forestry companies. This tax currently represents one of the primary sources of development funding for the Ministry of the Environment. At Z 66 million in 1988, it is equivalent to 47% of the investment budget allocated to the Environment Ministry; and (ii) the rural roads maintenance tax levied on the sales of motor fuel from the petroleum companies (expected to reach Z 1,200 million in 1988). This parafiscal tax is similar to the roads tax which is raised to finance the activities of the Office des Routes. In principle, there is no reason why the proceeds of these taxes should not be returned to the central treasury and subjected to the same performance and management criteria as other public Funds. It is important for agriculture, however, that the conventional budget approval and allocation process under the control of the Ministries of Finance, Budget and Plan be made to function effectively, failing which little benefit will have been derived from the centralization of the receipts from the discretionary Funds. Other problems with the budgetary process which have mitigated against the agriculture sector include the lack of a proper framework for linking development priorities with resource allocation, the lack of commitment on the part of senior government officials to control expenditures and to respect budgetary procedures, and the absence of clear guidelines or criteria for deciding which projects should be in the investment budget or the recurrent budget.

The Public Investment Program (PIP)

3.29. Some measures have been taken recently under structural adjustment and other efforts to increase the volume of funds available to agriculture and to improve the budgetary mechanism. More remains to be done. Government has adopted a three year rolling public investment program (PIP). Provisional figures for the 1988-91 period include an allocation of Z 20.9 billion for agriculture or about 9% of the total investment program over the three years (Table 3.3). In 1987 about Z 730 million, or 6% of the total projected PIP for that year, was actually spent on agriculture. The mobilization of external financing for the PIP has been favorable. In 1987 up to 87% of the projected donor financing for the PIP that year was subscribed. Government has stated its intention to ensure that the annual investment budget is consistent with the priority investment program and that counterpart funding for donor-financed investment projects is available.
Table 3.3

Core Public Investment Program 1988-91 (Provisional)

(million Z)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Local Financed</th>
<th>External Financed</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>6,398</td>
<td>14,548</td>
<td>20,946</td>
<td>9.2%</td>
</tr>
<tr>
<td>Mines</td>
<td>34,582</td>
<td>34,903</td>
<td>69,485</td>
<td>30.7%</td>
</tr>
<tr>
<td>Energy</td>
<td>2,183</td>
<td>19,351</td>
<td>21,534</td>
<td>9.5%</td>
</tr>
<tr>
<td>Transport</td>
<td>18,540</td>
<td>46,053</td>
<td>64,593</td>
<td>28.5%</td>
</tr>
<tr>
<td>Water</td>
<td>6,016</td>
<td>15,263</td>
<td>21,279</td>
<td>9.5%</td>
</tr>
<tr>
<td>Telecom</td>
<td>1,265</td>
<td>6,054</td>
<td>7,319</td>
<td>3.2%</td>
</tr>
<tr>
<td>Education</td>
<td>3,051</td>
<td>2,865</td>
<td>5,916</td>
<td>2.6%</td>
</tr>
<tr>
<td>Health</td>
<td>2,928</td>
<td>3,627</td>
<td>6,555</td>
<td>2.9%</td>
</tr>
<tr>
<td>Urbanism</td>
<td>1,665</td>
<td>985</td>
<td>2,650</td>
<td>1.2%</td>
</tr>
<tr>
<td>Other</td>
<td>2,673</td>
<td>3,384</td>
<td>6,057</td>
<td>2.7%</td>
</tr>
<tr>
<td>Total</td>
<td>79,301</td>
<td>147,033</td>
<td>226,334</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.30. The total core public investment program for agriculture in 1988-91 comprises about 66 projects (and some funds for studies) under the control of the Ministries of Agriculture and Rural Development and a global figure of Z 1,413 million (US$12.6 million in 1987 terms) for undefined projects under the Ministry of Lands, Environment and Conservation of Nature (Forestry) and Scientific Research. The allocation of funding for these two ministries, at less than 7% of the total funds for the sector, is low, given the importance of agricultural research and forestry development. In part, this is due to the marginal participation of the two ministries in the preparation of the original five-year Plan (on which the PIP is based). It is also due to the fact that the two ministries have few projects which have been clearly identified or prepared and which can be readily submitted to donors or the Government for funding. This is expected to change with support to strengthen programming and planning capacity in the Ministry of Environment under the proposed Bank-financed Agricultural Sector Management and Institutional Development Project (or Second Technical Assistance Project) and to provide in conjunction with bilateral partners, assistance to INERA and the Ministry of Scientific Research in research planning and programming.

3.31. A breakdown of the agriculture PIP (See Working Papers on Zaire's Agriculture Sector, No. 2) shows that 30% of the funding for projects under the Agriculture and Rural Development ministries is for food crop production. This is in line with Government's stated objective of moving towards food self-sufficiency. Other major areas of support are for livestock projects, (8% of funding), cash crop projects (12%), infrastructure, mainly roads (11%), rural water supply (10%), preparation of studies, staff training, promotion of cooperatives and small and medium scale agricultural enterprises (10%), and research and seed production 11%. The rest is spread between various initiatives involving agricultural inputs, credit and technology. Within the Ministry of Agriculture, the amount and proportion of funds allocated to applied research and seed production is encouraging compared with allocations to the Ministry of Scientific Research. Support for veterinary services and for
extension is incorporated in the various livestock, cash and foodcrop projects. Attempts to palliate deficiencies in extension services have in many instances resulted in the design and implementation of capital-intensive projects which the Government has difficulty in funding once external sources expire. In the foodcrop subsector, the traditional formula for development projects is not easily replicable (para 3.10) and relies on significant injections of external funding. When this funding ends, as in the case of the USAID's North Shaba project or the Bank-supported PMKO project, the demands on local recurrent funding to maintain the existing structure is out of all proportion with the financial resources available to the sector from domestic sources. The consequences are that (i) either the external donor has to continue to support the project— the case of PMKO or (ii) the standard of services provided to farmers in the project area falls sharply— the case of North Shaba.

3.32. A weakness of the investment program for agriculture is the large number of small projects with limited capacity for making a contribution to agricultural growth. Over the three year period of the PIP about a third of the projects have been allocated an investment of less than Z 100 million (about US$890,000). Some of these projects have been abandoned by donors for lack of counterpart funding (e.g., CEDERIM) and yet others are maintained as little more than political gestures. In terms of supervision and monitoring by the Ministries' limited staff, such projects make heavy demands on scarce resources. The large number of projects in the investment program will seriously stretch the administration's supervisory capacity. Many are designed with the same objective to provide support for extension, applied research, infrastructure development, and veterinary services. It may be possible to achieve some streamlining and husband supervisory resources by bringing them together under the umbrella of programs to strengthen key agricultural services.

3.33. There have been recent attempts to introduce into the core investment program so-called "secteurs productifs" (directly productive) projects. By far the most important of these is Mushie-Pentane in support of sugar development. At over Z 16 billion (US$148 million in 1987 terms), it corresponds to 80% of the planned investments in agriculture in the core PIP. Feasibility studies of the project show that it is of questionable economic and financial viability. Projected capital costs are high. Sugar would be produced at a cost 60-100% higher than that in comparable sugar projects elsewhere in Africa (e.g. in Malawi, Uganda, Swaziland). Location is poor— far away from its market in Shaba and far from a reliable labor pool. In summary, the project would represent a very poor use of scarce Government financial resources. Support for future sugar production should be provided within the context of a rational sugar subsector strategy. Assistance could be provided to the Ministry of Agriculture to develop such a strategy in the context of the proposed IDA-financed credit to assist the industrial and export crops subsector. Investments in projects such as Mushie Pentane would best be left to the private sector in the event that there are companies which exhibit interest.

3.34. A high proportion of the global core investment program (35%) is expected to be funded from domestic resources. For the agriculture sector, this figure stands at 30% and, although lower than the global figure, still represents a much higher proportion of counterpart funding than Zaire has been able or required to fund in the past 10-15 years. An increase in the proportion of the investment budget which can be funded from external sources will depend directly on the capacity of the ministries involved to prepare convincing and viable projects for submission to the donor community. This again underlines the importance of strengthening the capacity of each ministry in this regard.
3.35. The concept of a core public investment program now needs to be expanded to that of public expenditure programming to ensure the availability of recurrent funding for projects after the investment period. This is of particular importance to agriculture where services often require maintenance and salaries can be an important cost item post-project. Attempts are underway to improve the public expenditure programming capacity of the Ministries of Plan, Finance, Budget, and Portfolio through the Bank financed Economic Management and Institutional Development project. With regard to agriculture, a Bank-funded technical assistance project approved in 1982 has made a start in improving budget programming capacity and project planning, monitoring and evaluation ability. A second technical assistance project under preparation will continue to strengthen these areas in the Agriculture ministry.

G. The State of Agricultural Services

Research

3.36. With few exceptions (in varietal selection) there has been little or no agricultural research in Zaire since 1960. Prior to that date, the country possessed a national agricultural research institute of world-wide repute—the Institut National pour l'Etude Agronomique au Congo (INEAC), which maintained twenty-six research stations and institutes, had a staff of over 300 professionals covering virtually all fields of agricultural research in a wide variety of ecological areas in the country. With the civil unrest at independence and after, many of the expatriate staff left the country. INEAC, now renamed INERA (Institut National pour l'Etude et la Recherche Agronomique), declined rapidly and has become ineffective. In the absence of agricultural research it has been difficult to maintain yields or increase agricultural productivity. Yields for many crops have stagnated (Volume 2). The poor state of agricultural research is one of the basic factors behind the poor performance of the agricultural sector.

3.37. There are three basic problems with agricultural research—the lack of a viable institutional structure, the shortage of human resources, and the shortage of financial resources. Since the return to civil order, the Government has made repeated attempts to rehabilitate INERA as a national research institute. These attempts have failed because of excessively ambitious plans modelled on the size of INEAC which the Government can no longer afford even with donor support. With INERA moribund, several commodity programs sprung up in the 1970s under the aegis of the Ministry of Agriculture to respond to specific problems such as cassava pests, and deficits in maize and rice. These programs assisted by IITA and CIMMYT ground to a halt in 1980 due to a lack of funding. They have been revitalized beginning 1985 as a result of the establishment of the RAV project (Recherche Agricole et Vulgarisation) supported by USAID with IITA technical assistance. The coordination between INERA and the commodity programs as well as the services downstream, such as extension and seed multiplication, requires improvement. Multiple changes of the supervising ministry have not helped INERA's already weak organizational structure.

3.38. Zaire's research establishment, such as it is, is critically short of researchers. Out of a national total of 200 persons with a research background, only 43 work at INERA. Most of these do not hold doctorate degrees. Productivity is low and quality research publications limited.
3.39. Financial resources have been inadequate to maintain research facilities since the 1970s. In real terms INERA's budget is 75 times smaller today than it was prior to independence. A high proportion of the institution's budget (75%) is absorbed by salaries. INERA's budget declined by half between 1983 and 1987 from US$2.7 million (Z 34.4 million) in 1982 to $1.1 million (Z 124.8 million) in 1987. Most of the non-salary expenditures covered by this budget were for activities unrelated to actual research.

3.40. Realizing the critical state of agricultural research, Government established a high-level inter-ministerial working group assisted by ISNAR in 1984 to study the problems of research and make recommendations. The working group submitted its recommendations in September 1985, and proposed the development of a comprehensive, coordinated, time-bound and sustainable National Agricultural Research Program (Plan Directeur) which would encompass all agricultural research efforts, and develop priority crop research programs. To achieve the above, the study recommended restructuring the institutional framework, principally reform of INERA to better define its responsibilities, establish a new management, and set up a Programming and Evaluation unit to define crop research programs. Other recommendations were to institutionalize relations between INERA and the ministries, improve terms of service and career prospects for researchers, establish an effective accounting system, separate research and commercial activities at INERA, and reduce costs by selling off redundant research stations and transferring the headquarters of INERA from Yangambi to Kinshasa. In addition, increased training in disciplines related to specific research programs was recommended as was the allocation of a sustainable budget share for research, the encouragement of foreign assistance, and contributions from the private sector.

3.41. After a long delay, Government has begun to implement some of the above recommendations under the structural adjustment program. INERA's headquarters have been moved to Kinshasa, a new board has been appointed, the number of research stations is being reduced from twenty-three to nine and the restructuring of the organization is underway. Donors are supportive and are prepared to coordinate their assistance. These recent developments offer an excellent opportunity to assist INERA in a meaningful way and to reestablish agricultural research in Zaire. The Bank's strategy for the sub-sector (para 4.11) is based on these developments.

Extension

3.42. Zaire's extension system comprises a series of multiple services ranging from the largely moribund government field service, to extension components of development projects, services provided by NGOs and by large private companies such as the cotton and tobacco companies. Many of these services compete in the same geographic areas or regions—while elsewhere extension services hardly appear to exist. From the field, the organization of extension looks patchy, uncoordinated, and generally ineffective in improving farmer performance or raising agricultural production.

3.43. There is a regular government extension service under the supervision of the regional agricultural inspector in each region. Below him are sub-regional and zonal inspectors. At the regional level, the inspector is supported by four offices—Studies and Planning, Crop Production, Animal Health and Production, and Rural Development. This set-up is repeated at the sub-regional and zonal levels. The zonal inspector is directly responsible for supervising the extension agents whose number vary from zone to zone. There are currently 5,900 extension agents in the country.
3.44. The Government field service is largely ineffective because it lacks means with which to function. Most regional services have no vehicles or supplies. Their operational budgets are negligible. About Z 9 million (approximately $180,450 at the 1985 average exchange rate) was voted for seven regional agricultural services in 1985. Most of this was not even disbursed and many regional services received only $200-$300 for their operations that year. Pay for extension agents is extremely low (about Z 2000 or $18 a month, 1987 prices) for a front line extension agent. This, coupled with the lack of means to carry out tasks, results in low morale and absenteeism. Because of the ineffectiveness of the regular Government service, rural development projects, agro-industries, and non-governmental organizations have developed their own extension systems often in parallel to the government service. Some of these extension services have apparently obtained good results and have garnered Government and donor support. The existence of parallel extension services nevertheless results in some duplication, and wastage of human and financial resources.

3.45. The present extension services are faced with several problems. There is the problem of a difficult economic and commercial environment. Without adequate marketing facilities and the limited availability of farm tools and improved seeds, the impact of an agricultural extension service is seriously compromised. Agricultural production is dispersed and the farmers' fields are typically at significant distances one from another, adding to the problem facing the organization of local extension services and increasing the unit cost of providing such services. In a financial environment where the Government has great difficulty in making resources available, providing extension to farmers requires considerable innovation, flexibility, and a complete restructuring of the existing Government service. Above all, it requires attention to means for recovering costs of services provided. Management, supervision, and monitoring of extension services are generally deficient, even in projects with a focus on extension (e.g., the World Bank funded PMKO project). Many low-cost high-benefit extension messages exist but are insufficiently broken down into impact points, extension agents are inadequately trained and supervised and they have multiple tasks including input supply, marketing and credit. In addition, the adoption of extension messages by farmers is not adequately monitored. There is still a distrust of extension agents by farmers because historically the extension services in Zaire were used to impose cultivation systems (cultures imposées). Since independence, the system of cultures imposées has persisted in many areas as has the idea of superficie cultivee minimum, i.e., that farmers should cultivate a given minimum area.

3.46. In 1987, FAO completed a study on the extension system and recommended the restructuring of the existing government service, with a fundamental change in the management of agricultural extension workers and animal health assistants. The restructuring would include remotivation of workers through increased salaries and improved means of work and retraining. The study also recommended the improvement of coordination and information distribution among all extension services; removal of obstacles to improved production such as imposed cultivation; improvement in the transport network and input supply and distribution system; encouragement of development activities based on the active participation of farmers; reactivation of agricultural research so that it can truly support extension; and introduction of mechanisms enabling extension to redirect research programs according to the needs of agriculture. Of importance will be attention to the recovery of costs for services provided. This will be easier for cash than for foodcrops; NGOs and private companies have been known
to recover the costs of extension successfully. Such efforts should be strongly supported wherever possible.

3.47. The recommendations for a revamping of the extension service provide a basic framework for Government and donors to restructure Zaire's extension system. A strategy for achieving this is discussed in Chapter IV.

Transport

3.48. A major constraint to the marketing of food, industrial, and export crops, and the supply of inputs and consumer goods to the interior is Zaire's poor transport and communication network. The difficulty with evacuating goods acts as a strong disincentive to increased production. The high transport costs result in lower prices to producers and increases prices for consumers. With its vast area of 2.3 million sq km, Zaire's road network is 145,000 km in length of which the rural road network is 104,000 km. The national and main regional roads are maintained by Office des Routes, an autonomous public agency under the authority of the Ministry of Public Works. Rural roads are maintained by local authorities who have neither the resources nor the organizational capacity to carry out the task. Resources for rural road maintenance have always been a constraint. The peak allocation was reached in 1984 when Z 100 million (equivalent to US$2.8 million at the time) were provided in the budget. Even that amount was insufficient when compared with the estimate of approximately US$6 million per year considered necessary to maintain a 30,000 km network. Furthermore, the release of funds allocated in the budget became increasingly difficult and resources dried up completely in 1986.

3.49. The Government has, of late, adopted an emergency rural roads improvement program under the structural adjustment program. An initial target of 10,000 km of roads to be maintained per year and 3,000 to be rehabilitated has been agreed upon and appears realistic. A total of Z 400 million has been budgeted for this work in 1987 and 1988. To this should be added about Z 300 million which will be collected from a new rural roads tax. Thus, a total of Z 700 million (about US$6 million) will be available to start an emergency roads program. Further, the Government has created an Agricultural Roads Service (Service National des Routes de Desserte Agricoles, or SNRDA) within the Ministry of Rural Development to take charge of all rural road rehabilitation and maintenance. The SNRDA will contract with the Office des Routes for local level technical supervision, control and payment of works which will in turn be contracted out to local companies or organizations with satisfactory capacity to undertake contracts. An important issue is the need to mobilize local labor for road rehabilitation and maintenance. Although some of the funds for the emergency road program have been released, actual implementation of road works has yet to begin. The whole process has been bogged down by complicated contracting procedures. These are now being reviewed and amended. Further, Office des Routes is experiencing financial difficulties which have affected its ability to maintain the national and regional road network. These problems have yet to be resolved.

3.50. In addition to the road network, river and rail transport play an important part in the transport of agricultural produce and the movement of goods to the interior. There are 145,000 km of navigable rivers. A parastatal enterprise ONATRA is the dominant river transporter with an agricultural transport capacity of 150,000 tons per annum. The railway SNCZ has a transport

8/ World Bank Transport Sector Memorandum, August 1986.
capacity of 80,000 tons of agricultural produce per annum but this capacity has deteriorated over time. Whereas increasing attention is being paid to developing the rural road network, very little attention has thus far been paid to rural river and rail transport. The pressing need is to develop a policy framework for intervention and to strengthen the institutions involved in this area. Some institutional strengthening is foreseen in the proposed World Bank-financed Transport Rehabilitation project.

**Agricultural Inputs**

3.51. Statistics on the use of key agricultural inputs—seeds, farm tools, fertilizers, pesticides and, veterinary medicine are scanty. However, there are indications (from the trend of imports and the trend of production in commercial agriculture), that the use of inputs has declined significantly since independence. The trend is widespread affecting industrial and export crops, food crops and livestock production. Fertilizer use is limited. Consumption in 1985 was 25,000 tons and 15,000 tons in 1986 (OFIDA). Agricultural tools are difficult to come by in the countryside because of a poor distribution network and limited access to foreign exchange to import them. Degenerated seeds and cuttings are an important problem for agricultural production. Although the national commodity and foodcrop programs continue to produce base seeds and cuttings, multiplication and distribution have become a serious bottleneck.

3.52. The decreasing use of agricultural inputs is both a cause and symptom of the decline of agriculture. Most industrial and export crops, particularly coffee, suffer from the lack of improved seeds and chemical treatments. Maize production in Kasai suffers from a lack of adequate fertilizer and livestock is generally in need of veterinary medicines for the control of diseases. As a result the modern sector, which is traditionally the big user of inputs, has reverted increasingly to extensive methods of production requiring few inputs with the consequent low yields and low productivity.

3.53. The constraints on the use of inputs are pervasive. They range from limited foreign exchange and credit availability to transport and technological constraints. Most inputs are imported, transported to remote areas and immobilize capital over significant amounts of time. For these reasons, they are vulnerable not only to the foreign exchange and credit problems but also to ineffective customs (involved administrative procedures, collection of "ransom" for the passage of goods) and the absence of an effective network for the distribution of the inputs. Transport is a problem for bulky inputs, such as fertilizer, cattle feed and fuel. Technological problems relate to cases where users do not know the appropriate application of the input. Examples are fertilizers applied at the wrong time, or applied to the wrong plant population, pesticides inappropriately applied, or acaricides used during the dry season on local breeds. Such misuse results in continued low yields often, making input use financially unattractive to the farmer. This, coupled with high distribution costs, has in turn an impact on the level of prices that distributors can charge for the inputs.

3.54. A few non-governmental organizations have been successful in distributing inputs at a profit. These organizations are characterized by a high degree of vertical integration. One of them has its own river and road maintenance facilities, organized clearance of imported goods through customs, a procurement unit in Europe, good political connections in the country, and engages in production of an export crop to generate the foreign exchange necessary for purchase of its inputs. Obviously, very few organizations can
match this, and, thus far, government efforts to promote private trade have met with limited success.

3.55. The Government has made some progress in the area of seeds. Under a World Bank supported seeds project, designed to create a national seeds service, a Bureau National des Semences (BUNASEM) has been established with the responsibility of (a) coordinating the supply of base seed to the nurseries; (b) promoting and coordinating the multiplication and distribution of seeds; (c) training nursery managers; and (d) ensuring the control of the quality of seeds. BUNASEM has met with a measure of success. Its long term objective is to demonstrate the profitability of seed production and distribution and thereby encourage the private sector to take over these activities. With regard to fertilizers, there are a few major private suppliers, e.g., Hoechst and BASF, but they serve only large clients such as GECAMINES and PLZ. Some fertilizer is available as grant aid from donors. There are complaints that this has introduced an element of unfair competition for local suppliers. To demonstrate the impact of fertilizers, Government has set up, with FAO assistance, a National Fertilizer Program (Programme National Engrais PNE). PNE has become involved in commercial and distribution activities and has thus exacerbated the problem of lack of interest by private suppliers to distribute fertilizer to small farmers. The poor management by PNE of fertilizer distribution (delays with port clearance and accounting practices) have resulted in de facto subsidization of fertilizer by as much as 30%. In the face of this, it is no surprise that the private sector feels at a disadvantage.

3.56. With the exception of seeds, there is no national policy on the supply and distribution of inputs. The thrust has been to encourage the private sector to undertake these activities. The liberalization of trade and credit is supposed to have made this more attractive, but so far there has been little interest, most probably because of the transport, technological, and other non-macroeconomic related constraints mentioned above. The new policy of reintroducing import duties on agricultural inputs has, however, had a further discouraging effect on suppliers. The level of such duties is currently under review.

Credit

3.57. Although the need for credit is often over-emphasized in many developing countries while savings mobilization is largely ignored, in the case of Zaire, the shortage of credit is a chronic and widespread problem particularly for the modern sector leading to reduced agricultural growth. In the present inflationary environment, available credit is increasingly directed towards trade financing where turnover is faster and profit margins higher. Credit for productive activities is increasingly squeezed out. Credit for agriculture is available from three main sources: commercial banks of which there are eight with a network of 116 branches, the Société Financière de Development (SOFIDE) an IDA supported development finance corporation which is presently the only real source of medium and long term credit, and the Agricultural Credit Bank (BCA). Some parafiscal funds--Fonds de Convention de Developpement, and Fonds Agricole, as well as some rural development projects have provided a source of credit to agriculture during recent years.

3.58. Demand for credit is varied. Demand from the modern sector for seasonal crop credit and for medium and long term investment credit certainly exceeds supply. Applications for agricultural credit from the BCA represent more than ten times its lending ceiling, which is admittedly limited by the low
size of its capital. The current IDA credit for SOFIDE was fully subscribed 18 months ahead of schedule. Demand from small farmers is thought to be limited except for those covered by an agricultural development project, (10% of all small farmers) or working with agro-industrial companies in cotton, tobacco, coffee, rice, maize and wheat. Although a review of lending between 1982-86 reveals an impressive 40% of total lending activities from banking institutions going to the agriculture sector, most of this lending goes to the few enterprises that can offer satisfactory guarantees in the cotton, coffee, foodcrops and sugar subsectors.

3.59 Mobilization of rural savings by formal institutions is not significant. However, there has been a significant increase over the past eight years in the number and turnover of the rural and peri-urban savings and loan cooperatives (COOPECs and COOCECs), suggesting a propensity for financing local investments in the interior. Deposits with the COOPECs exceed Z 800 million or 7-8% of total bank deposits in Zaire. Deposits have been growing at rates of over 50% per annum over the past eight years keeping pace with inflation at least up to 1984. The success of the COOPECs in this regard is due to their accessibility, acceptance of small-scale deposits, involvement of members in decision making and the general confidence they generate in members. Lending to members is limited due to distrust in ability to recover such loans. Also, many of the cooperatives have little experience with formal credit management. The financial situation of the COOPECs is almost universally characterized by a predominance of members' savings as the bulk of COOPECs liabilities; low levels of equity, and a predominance of liquid assets and investments compared with member loans. A large proportion of the COOPECs make little or no profit on the management of their funds despite the wide margins which they obtain between members' savings (remunerated at 4-6%) and bank deposits and treasury bonds (current remunerated at 35-45%). This is due largely to high fixed costs of operations for a small volume of business and the erosion of equity by recent high rates of inflation.

3.60. The COOPECs are not currently subjected to the regulation and control of the formal banking system although the central Bank issues intermittent "instructions" to ensure prudent management of members' savings. Officially, they come under the jurisdiction of the Ministry of Rural Development which is responsible for the promotion and support of cooperatives. More formal arrangements are underway for joint tutelage of the COOPECs by the Central Bank and the Ministry. Furthermore, no effective centralized institution exists to ensure a rational use of the excess savings of the COOPECs. Such an institution should have the role of ensuring redistribution of such savings to other cooperatives and could be the official link between the COOPECs and formal banking sector. The BCA is negotiating to play this role. Whether it can fulfill this role adequately will depend on its development over the coming 2-3 years and the nature of the agreement which it reaches with the COOPECs and COOCECs. Logically, such a role would contribute significantly to the impact of the BCA as an agency serving the interior of the country.

3.61. The BCA was created in 1982 to increase the availability of agricultural credit. Its capital was set at Z 5 million at incorporation and a further Z 125 million was made available from public funds. At the time of its creation, this represented the equivalent of almost US$22 million. As of end 1986, the equity of the BCA stood at Z 133 million, the equivalent of little more than US$ 1 million. As a result of this limited capital and shortage of resources, the BCA's performance in agricultural lending has been less than impressive, representing for 1985 only a modest 4% of all credit made available
to the agricultural sector. Furthermore, with a single agency in Kinshasa, the ability of the BCA to attract deposits from the agricultural community has been equally limited. The Bank continues to be supported principally by public funds although successful negotiations with the COOPECS could change this and could enhance its ability to mobilize rural savings and extend credit to the agricultural community.

3.62. Credit to the agricultural sector has increased fivefold in nominal terms in the past five years (Table 3.4). This represents a doubling of credit in real terms. Much of the increase has gone to seasonal crop marketing which remains the principal type of credit extended by commercial banks to the agricultural sector. Despite this increase, crop marketing credit is still inadequate and credit for production is in very short supply. Prior to changes in July 1987, short term credit from commercial banks was subject to an interest rate ceiling of 28% compared to 40% for other sectors and 40% for medium and long term lending (the BCA charged 26% for both short, medium and long term loans and SOFIDE 15.5% for its medium and long term loans). There were no special discount facilities with the Central Bank to encourage lending to agriculture at the preferential rate. For this reason, commercial banks concentrated their lending on clients producing or trading export crops, whose subsequent foreign exchange dealings would make up for lending at subsidized rates. Since July 1987, the preferential interest rate for agricultural credit has been abandoned, in favor of a higher uniform rate which would encourage commercial banks to lend to agriculture on the same criteria as applied for other clients. In order to mitigate the negative impact of this increase in the cost of credit to the agricultural sector, the 18% turnover (CCA) tax on interest paid on agricultural credit has been suppressed. Despite this, there is pressure from some parts of Government to reintroduce preferential rates for agriculture.
Table 3.4

Estimate of Credit to the Agriculture Sector 1986-1987

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<tr>
<td><strong>of which food crop credit</strong></td>
<td>376.3(814)</td>
<td>455.9(765)</td>
<td>647.6(785)</td>
<td>1868.5(785)</td>
<td>1774.2(641)</td>
<td>2101.1(713)</td>
<td>3624.4(825)</td>
</tr>
<tr>
<td><strong>Banque de Credit Agricole</strong></td>
<td>45.9</td>
<td>55.9</td>
<td>240.9</td>
<td>535.6</td>
<td>1676.6</td>
<td>1397.2</td>
<td>1882.1</td>
</tr>
<tr>
<td><strong>Fonds de Convention de Développement</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.9</td>
<td>58.1</td>
<td>115.2</td>
<td>225.6</td>
</tr>
<tr>
<td></td>
<td>44.4(103)</td>
<td>87.1(143)</td>
<td>119.1(143)</td>
<td>255.1(173)</td>
<td>693.0(255)</td>
<td>447.0(153)</td>
<td>494.0(113)</td>
</tr>
<tr>
<td><strong>Fonds Agricole</strong></td>
<td>44.4(103)</td>
<td>87.1(143)</td>
<td>119.1(143)</td>
<td>255.1(173)</td>
<td>693.0(255)</td>
<td>447.0(153)</td>
<td>494.0(113)</td>
</tr>
<tr>
<td><strong>SOFIDE</strong></td>
<td>13.7(352)</td>
<td>11.3(235)</td>
<td>14.1(235)</td>
<td>16.4(313)</td>
<td>169.5(655)</td>
<td>193.1(655)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>26.2(583)</td>
<td>26.2(583)</td>
<td>26.2(583)</td>
<td>26.2(583)</td>
<td>26.2(583)</td>
<td>26.2(583)</td>
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<tr>
<td></td>
<td>460.6</td>
<td>554.3</td>
<td>820.6</td>
<td>1482.9</td>
<td>2944.7</td>
<td>3086.4</td>
<td>4665.4</td>
</tr>
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1/ Including BCA.
2/ Crop purchase credit authorized by the Banque du Zaire till June 1987/figures from DMPCC for food crop marketing campaign.
3/ not including ADF line of credit.

5.63. Medium and long-term credit is scarce and, the conditions under which this credit is provided are not satisfactory to investors on two counts. First, there is no period of grace to take account of the long maturing period of some agricultural investments (oil palm, coffee, tea, rubber, and ranching) and second, the foreign exchange risk is unacceptable to borrowers who are increasingly producing for the domestic market (cotton companies, oil palm plantations, producers of sugar, ranches). The problem of foreign exchange risk stems from the fact that prices are still controlled ex-post by the Government and domestic prices cannot adjust to take account of changes in the foreign exchange rate. This was exacerbated, until recently, by companies failing to revalue their assets to take account of depreciation of capital, because of taxes on such re-evaluation. The Government is taking steps to establish a foreign exchange risk guarantee fund which will initially cover small, and possibly medium-scale enterprises. The problem of large enterprises producing for the domestic market has yet to receive attention. It is not yet clear where monies for the Guarantee Fund will come from.

3.64. Under the structural adjustment program, measures have been taken to start improving the credit situation. A new law is under preparation to improve
the management of COOPECs, as is an ordonnance establishing the BCA as a mixed capital company, and opening the subscription of its capital to others including foreigners. This latter measure, coupled with attempts to establish links between BCA and the COOPECs should strengthen the BCA considerably and increase its lending resources. To complement these efforts, further assistance should be provided to the BCA to improve its organization and operating procedures. Such assistance may be incorporated in the proposed Bank efforts to help increase production and improve marketing of industrial and export crops. Efforts are continuing to define further measures to strengthen financial sector performance. To increase the impact of credit on agricultural sector performance, these macro measures should be combined with micro-level efforts to better define agricultural credit policy, better target the demand for credit, and further strengthen agricultural credit and savings institutions. Since credit by itself is ineffective without accompanying services—inputs, extension, marketing--action will need to be taken simultaneously to reduce the constraints facing these services.

H. Organization and Management of Government Agricultural Administration

3.65. The organization and management of agricultural administration reflects the weak administrative capacity of Zaire. Staff are poorly paid and poorly motivated. Managerial resources are limited and the few trained and available staff are over-stretched. Such a state of affairs is not conducive to good sectoral performance. There is a lack of continuity in the implementation of policies which makes effective management of the sector difficult.

3.66. Four ministries deal with agriculture and related activities. The Ministry of Agriculture has six directorates: General Services, Studies and Planning, General Project Administration, Livestock, Crops, Markets and Credit. The recently created Ministry of Rural Development includes two directorates: Rural Infrastructure (rural roads and irrigation), and Rural Promotion (cooperatives). Forestry and fisheries are under the Ministry of Lands, Environment and Nature Conservation, and agricultural research (INERA) is under the Ministry of Higher Education and Scientific Research. In addition, the Regional Inspectorates of Agriculture promote agriculture and rural development activities in the field (except for centrally supervised development projects), and are administratively responsible to the regional governors. Coordination among these agencies is improving. Further improvements in communication channels should be supported in the interest of increased efficiency in sectoral management.

Training and Technical Assistance

3.67. Despite training components in many donor-supported technical assistance projects, lack of trained manpower continues to be a major bottleneck in the institutions responsible for agricultural development. This is partly due to poor remuneration for trained personnel (para 3.70), who frequently leave for more lucrative private sector jobs. The Ministry of Agriculture has concentrated most of its efforts over recent years in improving the skills of its staff through higher level training programs (Bachelor, masters and doctoral degrees) abroad, financed largely with donor support. However, within the Ministry, lack of coordination of training offered by various donors has often led to a duplication of effort. The last Consultative Group meeting (in 1986) concluded that a training unit should be set up to coordinate all training efforts in the department. This still remains a priority and will be incorporated as part of the proposed World Bank financed Agricultural Management
and Institutional Development (Second Technical Assistance) project under preparation for 1988.

3.68. Technical assistance programs suffer from four major weaknesses. First, donor interventions are frequently fragmented and therefore unable to make a sufficient impact. Second, lack of coordination among donors results in overlapping and competitive technical assistance, causing waste and confusion. Third, a shortage of full-time competent nationals with adequate technical skills prevails in all public agencies and ministries. Hence, expatriate technical staff often have few if any counterparts to train and hand over to. Fourth, the profile of technical assistance provided often does not correspond to the needs of receiving agencies. Foreign experts have often been hired for their technical skills in specific operational areas, whereas the problems confronting the receiving agencies tend to be organizational and strategic rather than technical. Technical assistance is less effective in such cases. Existing technical assistance programs need to be reviewed, not in isolation of one another according to donor source but in view of the overall needs of Zaire’s agricultural sector.

Civil Service Remuneration

3.69. The decline in the level of remuneration in the civil service over the last ten years is one of the causes of its poor motivation and ineffectiveness. Without a reform of the service and an improvement in its remuneration, attempts to improve and strengthen agricultural services will fail. The level of civil service salaries is linked to Zaire’s tight budgetary constraints and limited ability to generate revenues. These problems will have to be dealt with in order to provide a basis for improvement in salaries. In real terms, the average salary in the civil service in 1983 was a sixth of the level in 1975, and it is no higher now despite the increase of June 1986. The gap between remuneration in the public service compared to non-government enterprises has widened in the last four years.

3.70. The civil service has borne the brunt of the Government austerity plan. From 53% in 1975, the share of the budget absorbed by salaries fell to 30% in 1983, and to 16% in 1986, while the service of Zaire’s external debt soared from 40% in 1983 to about 65% in 1986. At 16%, the proportion of the national budget absorbed by salaries is the lowest in sub-saharan Africa, except for Equatorial Guinea. Civil servants also suffer from poor promotion prospects. Piecemeal solutions have been attempted to redress this situation. Donors for example, motivate qualified staff by offering preferential bonus packages. This leads to de facto "competition" for the best staff. Ongoing projects are locked in a position where they are unable to increase their levels of remuneration in the mid-term and thus risk losing their better qualified staff to new projects. Some donors are unable to participate in such bonus schemes and are similarly placed at a relative disadvantage.

3.71. A UNDP-financed study/project, under World Bank execution, is currently reviewing the Government’s personnel management and incentives system with a view to recommending improvements under the structural adjustment program (para. 3.25). This study should be followed with a comprehensive review of salaries with specific recommendations for improvement starting with one or two key sectors such as agriculture.
Agricultural Field Services and the Regional and Local Governments

3.72. Because of its size, its diverse agro-ecological and socio-economic characteristics, issues of regional and local organization are particularly important to the development of Zaire's agriculture sector. Unfortunately, the regional and local administrations to whom the agricultural field services are responsible have had little positive impact on the sector because of severe budgetary and fiscal problems. These administrations are often so short of revenues that they may divert centrally disbursed funds for agriculture and other services for their use.

3.73. Although the regional and local governments have the authority to raise revenues through local taxes, their finances are in chaos. There are far too many taxes on very narrow tax bases. Very little revenue is effectively raised, and of that raised only a trickle is directed toward productive activities. Tax sharing with the national Government is a myth in many regions, as funds are not released from the central budget and what is released has little impact in comparison with needs.

3.74. The potential exists for regional and local government to fund the provision of certain agricultural services (local roads, extension services). However, very little support can be expected from these governments until their finances are straightened out. The workings of the regional financial system are not well known even by those operating within it. No one has an overview of revenue and expenditure flows within the region. The available information on revenues raised at the regional, subregional, and national levels is scattered over many offices in any one region and the same goes for expenditures. In such circumstances it becomes very easy to camouflage information.

3.75. The regional and local tax system seriously penalizes agricultural production and marketing. There are a total of about 200 taxes levied by the regions. Many of them are on agriculture. A study of regional taxation of marketed foodcrops in six regions concluded that the system of regional taxes is anarchic with wide variations in the number, rate, and incidence of taxes across regions and even within the same region. The study listed about nine different taxes levied at different levels of government on the same economic operator for marketing a given agricultural product. Complaints about the multiplicity of taxes are frequent in the private sector. Almost everyone loses in this disorganized system. Traders find their margins squeezed. Producers are faced with lower farmgate prices and consumers with higher retail prices as, depending on the price elasticities of supply and demand for given marketed crops, some, if not all of the taxes are passed onto producers and consumers. A study of regional finances is planned under the structural adjustment program. The study is to lead to recommendations for a reform of the regional financial system starting perhaps with a pilot region.

I. Land Related Constraints

3.76. Despite the large amount of land available in Zaire, localized scarcity of good cultivable land and insecurity of tenure are problems in some areas of high population density.

3.77 The issue of land rights in Zaire is a complicated one on which there is relatively little up-to-date information. As in most sub-Saharan African countries, there are two systems of land tenure—modern and customary. The customary system continues to be the effective one in most parts of the country and many people are unaware of or do not understand the modern system. As a consequence most people do not have title to land and cannot offer it as collateral for bank credit. Under the modern system, all land belongs to the state. Land titles or land use rights can be accorded to individuals by the state and duly registered by the Ministry of Lands, Environment and Nature Conservation (DAFECN). Titling and registration procedures are complicated and an up-to-date land register is difficult to maintain. The indigenous system varies from one part of the country to the other but is mostly one of ownership by groups be they lineage, clan or village groups. The group or its appointee allocates land for occupancy and for farming. Land farmed continually and over a period of time by a family is recognized as belonging to that family. Individuals may not sell land in the traditional system, but land is alienable and can be transferred to "strangers" or other groups for use.

3.78 Under the modern land tenure system the state has granted large concessions to companies, church groups and individuals in areas of high population density. In densely populated Bas Zaire (Bas Fleuve) concessions on the most productive land have squeezed the local population and forced shorter fallow periods resulting in local tension which could worsen if the land shortage and tenure situation is not dealt with. The first step is to put together information on the existing situation and trends to provide a context for action.

3.79 In Kivu, the land tenure problem results from the indigenous system. Unlike other parts of Zaire, land ownership in parts of Kivu is usually vested in a traditional chief who grants land for occupancy and farming in exchange for gifts and services rendered. Access to and use of land is subject to great uncertainties as decisions depend on one individual. Intense competition for land in the densely populated highlands is coupled with reluctance to invest in land conserving techniques. Farmers are unwilling to invest in tree crops or tree planting, because they are not certain that they can retain rights to the crops. Under these circumstances, soil degradation and erosion become a problem as discussed below.

3.80 Soil degradation and soil erosion are the most important environmental problem in some parts of the country, again notably in Kivu and Bas-Zaïre. Slash and burn agriculture without proper fallow periods accelerates soil degradation and leaching of soil nutrients. Burning practices in savannah areas reduces sparse woodlands and accelerates soil degradation. In the highlands of Kivu, farming on steep slopes without appropriate protective techniques leads to severe soil erosion. There are no statistics on the extent of the problem in these areas, nor on the impact on labor time, food production and nutrition. It is widely acknowledged that there are pockets of malnutrition in Kivu partly because of the enormous amounts of time that women must spend in scratching a living from progressively marginal soils thereby leaving little time even to cook for the family. The problem of soil degradation and erosion tends to be ignored in Zaïre because of the vast amounts of available land and because the problem is localized. However, urgent action needs to be taken starting in Kivu to tackle this problem.
3.81. Zaire's agriculture is faced with serious problems on the supply side. These problems discourage private investments which are expected to be the main source of sectoral growth. International demand for the country's agricultural products is not a primary constraint in the near future, as Zaire's exports constitute a very small part of world exports and the incremental production expected even under favorable conditions in Zaire is too small to pose a problem. On the domestic market, there are indications of unsatisfied demand for industrial and food crops. This may be changing as high inflation erodes real incomes and leads to a decline in purchasing power. The main problems facing agriculture can be summarized in order of importance as:

(a) **Non-existent or very poor agricultural services**
   - a **severely deteriorated agricultural transport network**, exacerbated by shortage of fuel and spare parts in the interior;
   - a **weak agricultural credit system** and scarcity of short and medium term credit;
   - a **non-functioning research organization** and, therefore, deterioration of available selection material, and lack of new or improved varieties;
   - **disorganized and ineffective extension services**;
   - **weak input supply systems**;

b) **uncertain macroeconomic environment** as demonstrated by high budget deficits, high inflation, pressures on the exchange rate, and export duties that tax agriculture;

(c) **an uncertain budgetary environment** as manifested by delays in the release of investment and operating budget allocations and continuing low levels of operating budget allocations;

(d) **lack of consistency in Government's approach to agriculture**—problems of continuity in the implementation of agricultural policies, very low remuneration and hence poor motivation of agricultural field staff, and policy decisions that are detrimental to private sector investment.

(e) **overall deficiency of government and donor strategies** toward the sector, leading to support for agricultural projects that are difficult to replicate or to sustain in the long term.

Solutions to these problems will require both short- and long-term approaches. A clear understanding of Government's role in promoting agricultural growth is important. Government has defined its role in agriculture as that of creating a favorable environment for private investment which is to be the main engine of growth. This will involve appropriate macroeconomic management and, above all, the provision of essential public services necessary for agricultural production...
and marketing. To provide the services on a sustainable basis, Government will need to allocate adequate investment and operating budgets and improve substantially its cost recovery mechanisms. Of highest priority is the rehabilitation and improvement of basic infrastructure. The promotion of agricultural research, coordination of extension systems, and improvements of the framework for financial services to agriculture are also important. All this can hardly succeed without an improvement in the remuneration and incentive structure of the agricultural staff who will be charged with planning, programming and supervision. Assistance from the donor community will be essential to provide Government with the needed finances to improve and maintain agricultural services on a sustainable basis. To create the appropriate environment for agricultural growth and to promote the development of the sector, the priority actions outlined in the Executive Summary are necessary. The Bank's strategy builds on these recommendations. The strategy and its implications for potential investment activities are discussed below.

SECTION IV: BANK STRATEGY

A. Introduction

4.01. The Bank has financed twenty-two agricultural projects in Zaire (including development finance credits) for about US$297 million. Of this number, ten projects are completed and twelve are ongoing. The Bank's agricultural strategy as reflected in these projects and in sector work has supported:

a) multi-component regional development projects providing extension, roads, and social services in individual regions (North-East Rural Development in Ituri, Smallholder Maize PMKO in Kasai Oriental, the Kwango-Kwilu (CODAIK) project, and recently the South Shaba project);

b) commodity development projects based on mixed ownership companies (Kwilu-Ngongo Sugar project, Oil palm project, Cotton Rehabilitation project, Livestock Development);

c) technical assistance in planning and financial management for the Department of Agriculture;

d) agricultural credit through a Development Finance company SOFIDE, which also provides term credit to industry;

e) a National Seeds Service managed by BUNASEM which promotes seed supply to seed farms, the multiplication and distribution of seeds, and ensures seeds quality control;
4.02. The credit project with SOFIDE has worked relatively well. The National Seeds project is a good example of the development of a national agricultural service whose success appears to lie in developing a management system tailored to national capabilities, and after the demonstration phase, relying on the private sector for actual implementation. The technical assistance project has had some success in strengthening budgeting, project planning and supervision capacity in the Ministry of Agriculture. Several of the multi-component rural development projects have generated considerable benefits (North-East Rural Development and Smallholder maize PMKO). Cooperatives created in the northeast rural development project serve as a promising example of a sustainable institutional structure. Success in the PMKO project has been achieved at high cost and with major sustainability problems. The other rural development and commodity development projects have been less successful because of macroeconomic factors, management, organizational and internal design factors (para 3.10) with the result that there are questions of replicability and sustainability. In summary, Bank experience to date has been uneven. Although there are a few notable successes, Bank intervention has had less than the expected impact on the agricultural sector, an experience similar to that of other donors.

B. Broad Strategy

4.03. The strategy for future Bank assistance to the agricultural sector is two-fold. First, it will include short-term measures to aid private investment to boost agricultural production. These will focus on increasing foreign exchange availability for the purchase of inputs; easing other production and marketing constraints; and assisting Government with policy and institutional reforms aimed at improving the investment climate. Second, medium to long-term measures will center on improving key agricultural services, essentially transport, research, extension, credit and Government policy formulation, planning and programming capacity. The strategy is based on the need to stimulate increased production directly while also creating a basis for sustainable agricultural development. Longer-term measures will focus on support for institution building at the national, regional and local levels to strengthen the Government's capacity to provide essential public agricultural services. The approach rests on the principle that, to have sustainable development, the ability of Zairians to plan and manage their own services must be strengthened. The Bank's strategy is formulated within the framework of Government's liberalization policies which recognize that the Government, the private sector, NGOs and donors are critical participants and partners in the agricultural development process and can each play important roles. In this vein, and within the framework of providing needed services, the thrust of the strategy is to strengthen Government to play a policy formulation, planning, coordination and supervisory role. Government's ability to generate and manage resources needed to fund the services would also be strengthened. Actual delivery of services would be left to the private sector and NGOs wherever feasible with Government intervening to deliver services only when there is no other feasible approach and the area is deemed a priority for agricultural development.

4.04. The short-term measures would crystallize in a proposed credit to increase production of industrial and export crops. Depending on progress with macroeconomic measures under the Government's structural adjustment program, the credit could be expanded to assist more broadly with adjustment in the agricultural sector. The proposed operation in support of industrial and export crops would: (a) provide foreign exchange to ease the constraints on imports of
equipment, spare parts and inputs; (b) assist government to explore measures for increasing the flow of investment funds to agricultural enterprises. This could include strengthening of BCA, the COOPECs and other financial intermediaries in agriculture to increase the supply of funds. It could also take the form of a line of credit through these institutions to finance urgent needs of agricultural enterprises—fuel, vehicles, spare parts, storage systems; (c) promote policy reform in the area of agricultural taxes and administrative impediments to exports, and institutional reforms involving the restructuring of the coffee agency, OZACAF (Office Zairois du Café); and (d) develop subsector strategies and action plans for sugar and for food crops.

4.05. In the medium to long term, agricultural services would be developed to be sustainable. This means that, first, the capabilities of agricultural staff charged with planning for and supervising the provision of these services would be strengthened. In this regard, work will soon begin under the Bank-financed Agricultural Sector Management and Institutional Development Project to assist the agricultural Ministries. Second, services would be designed so as to be compatible with the availability of recurrent funds; and third, management systems would be tailored to in-country capabilities and would generally be kept simple. In extension, pilot projects would be used to test new management systems the scope of which would be enlarged when concrete results can be demonstrated in the field. The strategy would serve as an important tool for donor coordination. The development of separate donor extension, research, credit, and other systems has been wasteful and can be corrected by the pooling of resources behind a unified approach. The Agricultural Sector Management and Institutional Development Project, expected to get underway in 1988, is already an instrument for such donor coordination. The project will enable a clearer definition and more rational use of technical assistance resources provided by different donors for studies, planning, programming and budgeting.

4.06. The projects that would result from the Bank strategy would have a policy reform and institution building focus in addition to the normal investment activities. In this regard they would represent an important improvement over past projects. The long-term measures proposed in the above strategy cannot be implemented within a typical five-year project framework. The Bank must think of successive projects to support the development of agricultural services over a 15-20 year time frame. A larger continuous presence of Bank staff in Zaire is required, and an effort will be made to reinforce present field staff possibly with local contract staff.

4.07. Within the overall strategy, approaches have been identified for tackling the common issues confronting the agricultural sector. Specific strategies for some subsectors have also been identified and are outlined in the following paragraphs along with project proposals for their implementation. These strategies will be deepened and other subsector strategies will be developed in the context of continuing dialogue between the Bank and the Government.

The Economy and the Agriculture Sector

4.08. The structural adjustment dialogue will be one aspect of the Bank's strategy to assist the Government to tackle economy-wide and agricultural policy issues. The dialogue will help to mould the policies required to stimulate new investment and growth. Special attention will continue to be turned to the preparation and the funding of a public investment program for agriculture and for those sectors on which agricultural development depends. Attention will
also be given to the definition of a broader public expenditure program. The definition of priorities for financing under the investment and expenditure programs will lean heavily towards the agricultural services identified earlier. The dialogue on structural adjustment will also continue to identify measures aimed at the creation of a favorable environment for agricultural investment. In the adjustment dialogue, particular attention will need to be paid to the issue of improvements in civil service management and remuneration without which a strategy to strengthen agricultural services would founder. Agriculture should be used as a pilot ministry to test reforms. The Bank and other donors may want to consider financing recurrent costs on a declining basis in the initial phases of support for services. Such financing would be completely phased out after a well-determined period and become Government's full responsibility in line with the available budget. To ensure that the ministries responsible for the agricultural sector have the capacity to identify, prepare and execute the PIP over the next five to six years, another aspect of the Bank's strategy will be to continue to participate with other donor agencies in the provision of technical assistance to strengthen agricultural planning, project preparation, monitoring and evaluation services. The technical assistance will be carefully targeted at specific problem areas. It will enable the Bank to contribute to a clearer definition of the formula for ensuring the intervention of the state in an extremely liberal environment, where so much initiative is to be delegated to the private sector.

The Budget

4.09. Concerted action on increasing and subsequently maintaining the volume of funds to agriculture will be sustained in the structural adjustment dialogue with the Government and attention will also be turned to ensure that recurrent funding of agricultural programs is well-planned and sufficiently monitored. The preparation of the agricultural budget was addressed through the first agricultural technical assistance project (Cr. 1244-ZR) and some progress has been made in improving budget planning and programming. Assistance in this area will continue through the Agricultural Management and Institutional Development project. Regarding the simplification of budget release mechanisms, the first project made little progress. This was partly because a solution to the problem was also dependent on other ministries (Plan, Finance, Budget). With the recent signing of a technical assistance project to support Economic Management and Institutional Development (Cr. 1832-ZR) and the establishment of a special account for funding the investment program managed by the Ministry of Plan, efforts are being made to achieve a more normal operation of a public planning and budgeting process. Progress is, however, very slow. Many improvements have yet to be made. Both the Bank and the Government now need to turn their attention to quickening the pace of change. In its role as coordinator of external donor assistance and through its permanent representation in Kinshasa, the Bank will increase efforts to coordinate support for the PEP to generate an increasing share of the funding of this program on concessionary terms from external sources.

4.10. A start will be made on improving the regional planning and budgeting process once a pilot region has been identified and agreed upon by the Bank and Government. Regions in which the Bank has identified agricultural projects in the near future (Bandundu, Kasai Oriental, Kivu) could be candidates for pilots.
4.11. The strategy for future World Bank support for agricultural research would crystallize in the preparation of a National Research project. The project would revitalize INERA and would regroup donor efforts in the sector. In addition to covering institutional and research policy reforms the project would focus on adaptive research and varietal improvements. During strategy discussions donors expressed their willingness to participate in a restructuring of the national research system. The project, to be further defined, would in a first phase: a) support the relaunching of the national research structure, including the development and financing of research initiatives undertaken by the private sector; b) support the formulation of a Master Plan for a national research program which would include identification of priority crop and livestock research programs and their content and finance the early stages of such a plan; and c) establish a long-term training plan and finance the training of research staff in skills identified as lacking for the longer term development of agricultural research. In response to immediate needs, the project would support the immediate rehabilitation and upgrading of two research stations, to be identified, to improve perennial crops and livestock research. Support for these stations would complement ongoing donor efforts as well as efforts under the national crop programs, which support mainly food crop research.

Extension

4.12. The strategy for extension will put more emphasis on developing an effective, and replicable field-oriented extension management system with clearly defined technical messages, field job descriptions, supervision, and technical support mechanisms including strong adaptive research components. The objective is to build a management system that will systematically develop front-line extension personnel into effective providers of improved farm technology. The management system will be kept light and tailored to available budgetary resources. Where services of NGOs and private companies are contracted to undertake agricultural extension, the Government would retain a supervisory function through its regional and sub-regional agricultural inspectorates. Strengthening and development of the national service would begin with a series of pilot operations around the food deficit areas. Bandundu and Kabinda are two prime candidates. The objective would be to use these pilot operations to gain experience for a wider program covering other areas on a national scale. Means to improve extension on export and industrial crops including the development of outgrower schemes around nucleus plantation estates would be further explored. Promotion of smallholder coffee would be supported possibly through outgrower schemes, assistance to NGOs working in coffee growing areas, and in general by a rehabilitation of coffee extension using some OZACAP staff as subject matter specialists. In the cotton growing areas, extension would be carried out by rehabilitated cotton companies. The pilot extension programs will have to show that, given i) the proper extension messages and ii) the appropriate field extension management system, farm productivity can be increased on a mass scale. The extension strategy proposed would thus be distinctly field-oriented. Central services in Kinshasa would be kept to the minimum required to monitor pilot schemes, to ensure adequate central budget allocations and to promote the replication of successful schemes.
Transport

4.13. The transport problem is already being addressed through several initiatives on the part of Government, which the Bank endorses. The Bank is supporting these initiatives through several projects, the structural adjustment program and the PEP process. Further support is planned through a rural roads rehabilitation project currently being prepared through a UNDP-financed/Bank executed study on the rehabilitation of rural roads. The proposed project will provide an opportunity to match priority areas for road maintenance and rehabilitation with priority areas for agricultural development identified in the present strategies.

4.14. The next phase of support for improving agricultural transport should include increased resources for funding improvements in river and rail transport with particular attention to the river transport network. The Bank is funding a River Navigation Improvement project, which addresses some of the immediate needs for improving facilities on the major waterways. Complimentary work could be started using local entrepreneurs to improve on-loading, off-loading and fuel storage facilities on existing quays, subcontracting dredging work and encouraging medium term credit facilities for warehouse construction and the purchase of barges for strengthening private transport services. The next phase of the structural adjustment process should provide support for the definition of an institutional structure under which such a program could be launched and include resources for its launching. Given the clear cost advantage of river transport, the improvement of the river transport network deserve similar priority to rural roads improvement.

Credit

4.15. In response to the needs for agricultural credit, the Bank’s strategy would focus on the improvement of mechanisms at the central and sectoral level which would increase the availability of credit, and strengthen the mobilization of rural savings. A line of credit would be prepared for the rehabilitation of perennial tree crops, particularly coffee, cocoa, rubber, tea, and oil palm. Such a project would rely on the commercial banking system to channel funds to potential borrowers, under close monitoring and supervision. It would also use the BCA as a further channel for medium and long-term credit, as a way to help strengthen the BCA’s capacity in this type of lending.

4.16. To improve the availability of credit to small and medium-sized holdings, the Bank would continue to support the regionalization of the activities of the BCA through individual development projects (such as Shaba, with Kivu and Kasai Oriental as potential future candidates). At the same time, in the dialogue on structural adjustment attempts will be made to consolidate the initiative taken by the BCA and the COOPECs to strengthen the financial potential of the latter by developing a working relationship between the two institutions. The Bank would support the technical assistance required to make such a proposition a reality.

4.17. Devising a credit project for independent small-holder farmers is particularly complex. The costs of supervision are generally high compared with the size of individual loans, and experience has been almost universally disappointing in mounting credit schemes specifically for smallholders. Attempts will be made through existing and new production projects to start pilot credit lines to groups of farmers who are prepared to accept joint risk responsibility.
Particular attention will be turned to support efforts aimed at mobilizing rural savings and the strengthening of credit and loan cooperatives at the level of the small scale farming community.

Inputs

4.18. The strategy to promote agricultural inputs will be multi-faceted. It will consist of a) support at the macro level for the removal of constraints—foreign exchange and customs control that impede the imports of inputs. This will be initiated through the proposed operation to promote increased production of industrial and export crops; b) support for the improvement of agricultural transport to facilitate distribution; c) strengthening of extension to improve farmer practices related to input use, and research to remove technological constraints; and d) promotion of private sector distribution of inputs through a line of credit to ease the financing constraint. Support would be given to Government to establish a quality control service in those areas where it is warranted e.g., seeds through the BUNASEM project, and veterinary medicine through a proposed animal health project. The Government and donors have in some instances helped to establish channels for the supply of inputs. Such initiatives are diverse. For example, the World Bank has supported the development of a cooperative Federation in Ituri (ACOOPELI), and several non-government organizations in Shaba. To the extent that the ventures supported are viable, they can be regarded as positive contributions to a strategy for the promotion of input supplies and they will continue to receive support. However, the main thrust of the strategy will be to promote the takeover of input supply and distribution by regular commercial concerns.

Subsector Strategies

4.19. Food Crops. The problems of the food crop sector will be addressed through several strategies. In the short term, Government will receive assistance channeled through the proposed industrial and exports crops credit (IECC) to prepare a foodcrop production and food security strategy that will guide efforts in the subsector. Of vital importance will be immediate measures to improve transport and marketing of foodcrops. This could be partly achieved through the proposed line of credit in the IECC to the private sector for fuel, spare parts and vehicles. Enterprises working in the food crop sector will also be allowed to benefit from the Credit. Government will need to complement these efforts with the implementation of the emergency rural roads rehabilitation program. In the medium-term, small farmers will be assisted to increase production through the proposed pilot extension projects in Kabinda, Bandudu and other areas to be identified. Efforts to improve adaptive research to provide better planting material and other technology will also be key. An added dimension to the strategies could be the development of a line of credit for medium and large-scale enterprises for food processing facilities and improvement in storage facilities. In this regard, rice hulling, maize milling, small-scale palm oil extraction, manioc processing and preparation would receive particular attention.

4.20. Perennial Crops. The crops referred to in this section are oil palm, rubber, cocoa, tea, coffee, and cinchona. The specific problems of each of the

10/Industrial oil palm cultivation needs special attention, because the production from natural groves and other substituting vegetable oils, e.g. cotton, peanut, soya, cannot cover the national demand for vegetable oils. Commercial oil palm cannot achieve high yield levels and efficiency.
crops are detailed in the Working papers on Zaire's Agriculture Sector (available in draft). The constraints facing their development—poor transport network, lack of extension, research, credit, marketing—are however, remarkably similar and their solution merits a common approach. With the recent information on the favorable development potential for these crops (para 2.12), a strategy for their rehabilitation warrants quick action.

4.21. The proposed approach in support of perennial crops will be on two levels. First, the short-term needs of the subsector will be addressed by way of the proposed IECC, which will develop a line of credit under an Apex banking structure for urgent financing needs such as fuel, spare parts, equipment, vehicles and building rehabilitation on the perennial crops plantations. The credit could include funding for equipping and support of cooperative groups of producers restarting activities in the vicinity of larger plantations; it could also cover funding of small river transport units and repair of wharves and warehouses, to provide up-country planters with greater autonomy for extracting their produce. During the preparation of the IECC, the possibility of funding imports of agricultural inputs both for the perennial crops and for other subsectors of the agricultural economy will be pursued. The development of measures to increase the flow of private investment funds to the subsector will also be examined. Second, the longer-term credit needs for the major investments in the rehabilitation of the plantation sector will be addressed in the preparation of a Perennial Crops Rehabilitation Credit, under which on-lending terms will have to be closely tailored to the capacity of the new investments to generate revenue to service the credit. A major component for such a project will have to be the promotion of a plantation management company, which will work closely with the banks to provide sufficient technical guarantees in the implementation of the rehabilitation programs. In addition to these two projects, the problems of the perennial crops sector would be addressed through: (a) an extension program in which priority will be given to crops with the highest comparative advantage (e.g., robusta coffee and cacao); the extension service would be strengthened by subject-matter specialists in these crops; and (b) through support for research by strengthening strategic and adaptive research programs through the National Research project. Testing, multiplication and dissemination of planting material would be supported through the development of private sector services wherever the potential exists, with possible support for new seed farms. Transport and marketing constraints would be addressed through the rural roads program, the river navigation project (ongoing) and the above proposed financial support for increasing the availability of river transport units and the repair of wharves and quaysides.

4.22. Cotton. A recent (April 1988) Government-commissioned study carried out by the French company CFDT has made recommendations for improving the cotton subsector and quickly increasing production. The Bank would assist Government to implement these recommendations through a cotton subsector operation which would focus on: (a) pricing reforms in the subsector—improving the producer price by linking it to the world market price; reducing the implicit subsidy in credit terms for PL480 cotton; (b) management reforms—improving the management of the cotton companies through technical assistance and clearly defined operating procedures; clarifying the relationship between the textile and ginning companies and strengthening the financial base of the latter; (c) institutional strengthening—clearifying the role of Government, the companies and other actors in the subsector and supporting the start-up of a supervisory institution to monitor adherence to the agreed framework for operation; (d) developing a line of credit through Apex institutions to assist cotton companies with seasonal marketing credit and medium-term development credit; (e) improving
extension to small farmers through the existing cotton company extension services. Immediate impact on production could be achieved by introducing better cultural practices; (f) improving research through the proposed National Research project and (g) improving infrastructure (rural roads) in the cotton areas by including these as priorities under the emergency rural roads rehabilitation program or as part of the proposed Bank-financed Agricultural Feeder Roads project.

4.23. **Livestock.** The ultimate goal of an appropriate livestock strategy would be to transfer—to the maximum possible extent—animal health care and input supply to the private and cooperative sectors. The Government would retain only a supervisory and control function. Where markets warrant an increase in livestock production, the Government should use its rehabilitated field extension systems relying where possible on NGO initiatives and backed up with livestock subject-matter specialists, to extend better production methods to farmers. Government's initiatives in livestock would be supported through a livestock sub-sector operation which would focus on: (a) rehabilitation of veterinary services including support to private ranches, cooperative groups and others (in the form of technical assistance and credit) to take over as much of veterinary services and input supply as possible; (b) promotion of small-stock and dairy and meat development in Kivu—again through private initiatives and development around large cities; and (c) cost recovery for veterinary services still under Government control. The livestock subsector operation could also be implemented as part of a general agricultural services operation.

4.24. **Forestry.** The Bank's involvement in the forestry sector has thus far been rather limited. Steps have recently been taken to remedy this situation through the grant funding of a major study to define the criteria for decision making in the use of forest lands. Following this review, a multi-donor sector study will be mounted, for which the Canadian Government has proposed significant assistance and leadership. From this forestry sector study a forestry sub sector operation would be identified which would focus on institution building in the forestry sector, in particular, planning, budgeting, project preparation, economic analysis; training of forest engineers and technicians; and strengthening of forestry policy. In addition, the operation would include components on natural forest protection and farm and communal forestry. Funding could also be included (through a line of credit) to assist private sector activities in forestry. The private sector would also benefit from a rationalization of export taxes and administrative procedures on wood exports to be undertaken under the structural adjustment process. Some immediate assistance in planning, budgeting and project preparation is included in the proposed Agricultural Sector Management and Institutional Development Project. One of the more important bottlenecks in the development of the forestry sector is the inadequate transport network. The problem is particularly acute in the Kinshasa-Matadi corridor where it inhibits increased marketing and export of wood products. Future development of forest resources would have to be closely linked to improvements in the transportation of forest products. Some efforts can be initiated under the structural adjustment process and through the proposed Bank-financed First Transport Rehabilitation project (under preparation) to improve river and rail transport for wood products.

4.25. **Agricultural Statistics.** The Agricultural Sector Management and Institutional Development Project will provide support for the establishment of a permanent system of data collection and processing. This will complement efforts by FAO and USAID to improve the quality of agricultural statistics.
### Potential Programs and Projects

4.26. The strategies outlined above translate into a series of programs and projects which could serve as potential vehicles for Bank assistance to the sector. The projects, outlined below, combine policy reform with institution building and straightforward investment activities.

<table>
<thead>
<tr>
<th>Project</th>
<th>Project Thrust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Sector Management and Institutional Development</td>
<td>Institutional-strengthening of planning, policy formulation and budgeting capacity in Ministries that deal with agriculture</td>
</tr>
<tr>
<td>Industrial and Export Crops Credit</td>
<td>Short-term measures to ease foreign exchange, credit, transport constraints for industrial and export crops; Foodcrop enterprises can also benefit. Promotion of private investment particularly in perennial crops Institutional reforms in coffee subsector. Development of subsector strategies, e.g., for sugar.</td>
</tr>
<tr>
<td>National Agricultural Research</td>
<td>Reform research policies Restructure National Agricultural Research Institute including staff upgrading Develop better planting material and promote new technologies</td>
</tr>
<tr>
<td>Cotton Subsector operation</td>
<td>Policy (pricing) reform in Cotton subsector. Management improvement and financial assistance to cotton companies. Delivery of better extension services to farmers.</td>
</tr>
<tr>
<td>Agricultural Services Operation</td>
<td>Improve regional extension services to small farmers to increase food production beginning in selected priority regions and using NGOs, and the private sector. Establish extension management system. Substantially trim and restructure present extension service. Rehabilitation veterinary services and promote smallstock, dairy and meat development</td>
</tr>
<tr>
<td>Forestry sub-sector Operation</td>
<td>Policy reform in forestry sector (pricing forest products) Institution building in Environment Ministry, forest management action plan Natural forest protection, communal forestry</td>
</tr>
</tbody>
</table>

The Agricultural Sector Management and Institutional Development project has been negotiated (August 1988). The Industrial and Export Crops Credit and the National Research Project are in the early stages of preparation and will require resources from the Government, the Bank and other donors to successfully complete preparation. Other potential operations are in the early stages of identification. Their further development will probably require additional studies in the areas of input supply, small-stock development, agricultural processing, and land tenure. These studies may be funded under the Agricultural Sector Management and Institutional Development Project or the Industrial and Export Crops Credit.

4.27. The recommendations made in this report and the strategies outlined for their implementation can only succeed if Government makes a strong commitment to macroeconomic and agriculture sector reform. To assist Government, donors need to increase the amount of concessionary funds available to agriculture and support their use in a more rational and efficient manner. The Bank is prepared to lead this effort to improve donor coordination and support.
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_________________________ World Development Report 1987

No. 1. Agriculture and Structural Adjustment
No. 2. Budget and the Public Investment Program
No. 3. Donors and NGOs
No. 4. Research
No. 5. Extension
No. 6. Statistics
No. 7. Regional Agricultural Services
No. 8. Credit and Agriculture
No. 9. Inputs
No. 10. Rural Roads
No. 11. Land Tenure
No. 12. Sugar
No. 13. Soja
No. 14. Foodcrops
No. 15. Livestock
No. 16. Coffee
No. 17. Tea
No. 18. Cocoa
No. 19. Oil Palm
No. 20. Rubber
No. 21. Cotton
No. 22. Forestry and Environment


### Table 1

**ZAIRE: Present Land Use**

<table>
<thead>
<tr>
<th></th>
<th>Million ha.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Area 1/</strong></td>
<td>226.8</td>
<td>100</td>
</tr>
<tr>
<td>Cultivated Area</td>
<td>6.6</td>
<td>2.9</td>
</tr>
<tr>
<td>Annual Crops</td>
<td>6.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Perennial Crops</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Prairies/Permanent Pasture</td>
<td>9.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Grazed Area</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Forests and Woodlands</td>
<td>176.0</td>
<td>77.6</td>
</tr>
<tr>
<td>Other Lands 2/</td>
<td>35.0</td>
<td>15.4</td>
</tr>
</tbody>
</table>

**Land Use by the:**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Sector</td>
<td>7.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Modern Sector</td>
<td>2.3</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Source:** FAO Production Yearbook, 1986

*WB - estimate includes grazed area.

1/ The total area of Zaire's territory is 234.5 million ha, including 7.7 million ha of lakes and major rivers.

2/ Consisting of national parks, urban and industrial area roads and non usable land.
## Table 2

**ZAIRE: Per Capita Supply of Calories and Protein Per Day**

<table>
<thead>
<tr>
<th>Year</th>
<th>Calories (ZAIRE)</th>
<th>Protein</th>
<th>Calories (SUB-SAHARAN AFRICA)</th>
<th>Protein</th>
<th>Calories (LOW INCOME COUNTRIES)</th>
<th>Protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>2188</td>
<td>36</td>
<td>2094</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1973</td>
<td>2302</td>
<td>39</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1985</td>
<td>2154</td>
<td>-</td>
<td>2024</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1987</td>
<td>2151</td>
<td>33</td>
<td>-</td>
<td>-</td>
<td>2339</td>
<td>55</td>
</tr>
</tbody>
</table>

**Source:** Social Indicators of Development 1987

World Bank International Economics Dept.
### Table 3: Average Yields of Principal Industrial and Export Crops

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small Farm</td>
<td>Plantation</td>
<td>Small Farm</td>
<td>Plantation</td>
</tr>
<tr>
<td>Sugar (brown sugar)</td>
<td>n.a.</td>
<td>7,000</td>
<td>n.a.</td>
<td>6,700</td>
</tr>
<tr>
<td>Cotton (seed cotton)</td>
<td>490</td>
<td>n.a.</td>
<td>300*</td>
<td>n.a.</td>
</tr>
<tr>
<td>Tobacco (dried dark tobacco)</td>
<td>800</td>
<td>n.a.</td>
<td>1,000</td>
<td>n.a.</td>
</tr>
<tr>
<td>Coffee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arabica (dried washed beans)</td>
<td>n.a.</td>
<td>400</td>
<td>200*</td>
<td>420</td>
</tr>
<tr>
<td>Robusta (dried berries)</td>
<td>n.a.</td>
<td>500</td>
<td>300*</td>
<td>630</td>
</tr>
<tr>
<td>Tea (dried leaf)</td>
<td>n.a.</td>
<td>530</td>
<td>600</td>
<td>610</td>
</tr>
<tr>
<td>Cocoa (dried beans)</td>
<td>n.a.</td>
<td>260</td>
<td>n.a.</td>
<td>290</td>
</tr>
<tr>
<td>Rubber (sheets)</td>
<td>100-300*</td>
<td>600</td>
<td>100-450</td>
<td>500</td>
</tr>
<tr>
<td>Oilpalm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>palm oil</td>
<td>200*</td>
<td>900</td>
<td>200*</td>
<td>1,000</td>
</tr>
<tr>
<td>palm kernels</td>
<td>100</td>
<td>250</td>
<td>100*</td>
<td>260</td>
</tr>
</tbody>
</table>

**Sources:** Statistiques agricoles 1970-74; Situation Actuelle de l'Agriculture Zairoise 1987; Statistiques des plantations; Etude du secteur cotonnier au Zaïre 1988; Etudes sur les cultures pérennes au Zaïre 1987; van den Pot, les principales cultures en Afrique Centrale, 1981; data WB reports and mission findings.

**Notes:**

* Figures are mission estimates

1/ Small farm sector includes traditional farms and more developped small farms (agr. encadré). Yields are averages (one figure), or indicate a spread between the two farm types (two-figures).

2/ Yields indicate averages of the harvested areas. Yields at maturity level are indicated in the column for potential, or in the notes below.

3/ The amount sold by farmers to cane factories is negligible. Sugar yields are based on 10% sugar extraction ratio.

4/ Cotton is exclusively planted by small holders. Yields vary widely over time and location. The 1973 average yield figure was 377 kg/ha, and the 1986 yield was 240 kg/ha. Under optimal conditions small farmers can obtain yields of 1,400 kg/ha.

5/ Tobacco is exclusively planted by small holders under contract with the two tobacco companies, providing inputs and extension. Yields refer to dark tobacco under optimal conditions yields can rise to 3,000 kg/ha.
9/ Arabica coffee yields in café parche to arrive at café marchana multiply with 0.46. Robusta coffee yields in café roque; to arrive at café marchand multiply with 0.66. Final treatment for café marchand is mostly done in central plants. Small holder coffee production developed significantly after 1960. Potential yields at full maturity are 2,000 kg/ha for plantation robusta and 1,400 kg/ha for plantation arabica.

7/ The PLZ Mweso plantation obtained over the last 6 years a yield level of 2,600 kg/ha. The plantation yield average is far below this level, due to poor results on many plantation areas.

9/ Small farm participation is of a recent date. Production of new hybrids can under optimal circumstances reach 2,500 kg/ha at full maturity.

9/ Small farm production stagnated due to aging of plantings absence of maintenance and breakdown of milling/trade infrastructure. Under optimal conditions the best clones can produce 2,000-2,500 kg/ha at full maturity.

10/ The small farm sector refers to oil production from self sustaining natural palm groves (about 2 tons of bunches/ha). Yields are based on a 20% oil and 3-4% kernel extraction rate. Yields at maturity can reach 4,000 kg/ha of oil and 800 kg/ha of kernels.
Annex A

Table 4

The Agriculture Investment and Recurrent Budget \(^1\)/ as a Percentage of Total Public Expenditure

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5</td>
<td>5.6</td>
<td>2.5</td>
<td>8.7</td>
<td>4.2</td>
<td>2.8</td>
<td>3.7</td>
<td>2.7</td>
<td>1.8</td>
<td>1.2</td>
<td>6.9</td>
<td>0.9</td>
</tr>
</tbody>
</table>

\(^1\)/ Ministries of Agriculture and Rural Development only. Government funds only.

Annex A

Table 5

Execution of the Agriculture Budget (Percent)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Recurrent Budget actually released</td>
<td>105</td>
<td>104</td>
<td>N.A.</td>
<td>119</td>
<td>60</td>
<td>56</td>
<td>89</td>
</tr>
<tr>
<td>% Investment Budget actually released</td>
<td>21</td>
<td>41</td>
<td>38</td>
<td>37</td>
<td>44</td>
<td>100</td>
<td>47</td>
</tr>
</tbody>
</table>

Sources: Banque du Zaire, Ministry of Agriculture.