MEMORANDUM

Date: March 27, 1990

TO: Walter Bollinger, Acting Assistant Administrator for Africa

FROM: Dennis M. Chandler, Director, USAID/Kinshasa

SUBJECT: Zaire - FY 1990-1993 Action Plan

The enclosed Action Plan, and supporting documentation, is the culmination of intensive review and planning by USAID/Zaire over the past year. However, as the Action Plan is being submitted, there is considerable uncertainty regarding the Government of Zaire's short-term economic policies. In the past two weeks alone, we have seen IMF and World Bank Missions depart without reaching agreements with the Government of Zaire on a 1990/1991 program, and there have been one-on-one discussions between Secretary of State James Baker and President Mobuto Sese Seko. Given this fluent economic policy situation, we will provide you with a resume of recent changes in the macroeconomic policy environment in advance of the mid-June Program Week.

There are no surprises in this Action Plan. Basically, we have built upon the Preliminary CDSS approved in June 1989 and reviewed the performance and lessons learned during the FY 1987-1989 Action Plan. With that in mind and taking account of an ever evolving economic situation, we project what our assistance objectives and targets will be for next four years. The areas of emphasis remain basically the same: health and family planning, agriculture, road transport and private sector development. A target of opportunity is identified in the environmental area. We place more emphasis on the need for policy changes and performance, consistent with the new Development Fund for Africa (DFA) legislation.
We also propose to devote more attention to determining the impact of U.S. economic assistance, in line with DFA objectives. The total aid levels, which partly depend on performance, assume a straight-lining of DFA resources at $35 million. A significant increase is forecasted for PL-480, Title I, with the program growing to $40 million, assuming resource availabilities. This would result in a possible total, under optimum circumstances, of around $75 million per year.

Attachment: Action Plan and Annexes

cc:  DAA/AFR, Larry Saiers
     AFR/DP, John Westley
     AFR/CCWA, Myron Golden
USAID/ZAIRE ACTION PLAN, FY 1990 - 1993

TABLE OF CONTENTS

Table of Contents
Glossary of Terms Used

I. REVIEW OF PROGRESS IN ACHIEVING ACTION PLAN OBJECTIVES, FY 1987 - 1989

A. Country Trends

B. Assessment of Program Impact, FY 1987 - 1989

1. Economic Stabilization and Recovery
2. Small Farmer Output
3. Farm-to-Market Transportation Access
4. Health Status and Population Growth

C. Lessons Learned and Implications for the FY 1990 - 1993 Action Plan

1. Program Management
2. Economic Adjustment and Private Sector Development
3. Agriculture Sector
4. Transport Sector
5. Health and Family Planning
6. Other

II. MISSION STRATEGY, FY 1990 - 1993

A. Program Logical Framework

Strategic Objective 1: Improve Health Status, with Emphasis on Increasing the Rate of Child Survival and Reducing the Population Growth Rate.

Strategic Objective 2: Increase Agricultural Production, Productivity, and Rural Household Income, with Emphasis on the Bandundu and Shaba Regions.

Strategic Objective 3: Improve the Provision of Sustainable Transport Infrastructure Services and Maintain Road and River Infrastructure, Particularly in Bandundu and Shaba.


B. Target of Opportunity
III. MISSION MANAGEMENT ISSUES

A. Management of Mission Resources

1. Introduction
2. Program Funding
   2.a. Planned Program
   2.b. Core Program
   2.c. Alternate Uses of Counterpart Funds
3. Operating Expense/Trust Funds and Contractor Office and Housing
4. Staffing and Management
   4.a. U.S. Direct Hire and Contract
   4.b. Foreign National, Direct Hire, and Contract
5. Organization
6. Conclusion

B. Tracking and Performance Evaluation

1. Objectives
2. Current Reporting, Monitoring and Evaluation System Components
   2.a. Program Impact Reporting
   2.b. Project Implementation Reviews
   2.c. Project Evaluations
   2.d. Program Impact Evaluation
   2.e. PIE Research Management
3. Conclusion

C. Coordination with Other Donors

IV. SPECIAL CONSIDERATIONS

A. Gender Issues
B. Public Law 480
C. Environment
D. Human Resource Development
E. Private and Voluntary Organizations
F. Title XII
G. Gray Amendment
Annex A. Tabular Presentation of Goal, Strategic Objectives, and Indicators for FY 1990-93
Annex C. Health and Population
Annex D. Agricultural Sector
Annex E. Transport Sector
Annex F. Private Sector Development
Annex G. Human Resource Development
Annex H. PL-480 Food and Fiber Assessment
Annex I. Environmental Considerations
Annex J. Women in Development Action Plan
Annex K. Private and Voluntary Organizations
Annex L. Research and Evaluation

iii
**GLOSSARY OF TERMS USED**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSI-CCCD</td>
<td>African Child Survival Initiative-Combatting Childhood Communicable Diseases</td>
</tr>
<tr>
<td>AES</td>
<td>A.I.D. Evaluation Summary</td>
</tr>
<tr>
<td>AFGRAD</td>
<td>African Graduate Fellowship Project</td>
</tr>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>API</td>
<td>Assessment of Program Impact</td>
</tr>
<tr>
<td>BOZ</td>
<td>Bank of Zaire</td>
</tr>
<tr>
<td>BRH</td>
<td>Basic Rural Health Project</td>
</tr>
<tr>
<td>CCA</td>
<td>Contribution Chiffres d'Affaires, a turnover tax</td>
</tr>
<tr>
<td>CIP</td>
<td>Commodity Import Program</td>
</tr>
<tr>
<td>COOPEC</td>
<td>Cooperative d'Epargne et Credit</td>
</tr>
<tr>
<td>CPF</td>
<td>Counterpart Fund</td>
</tr>
<tr>
<td>CYP</td>
<td>Couple Years of Protection</td>
</tr>
<tr>
<td>PDO</td>
<td>Project Design and Operations</td>
</tr>
<tr>
<td>DFA</td>
<td>Development Fund for Africa</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Commission</td>
</tr>
<tr>
<td>EX-IM</td>
<td>Export Import Bank</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FSN</td>
<td>Foreign Service National</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>HBCU</td>
<td>Historically Black College and University</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HRDA</td>
<td>Human Resource Development Assistance</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>IMR</td>
<td>Infant Mortality Rate</td>
</tr>
<tr>
<td>INERA</td>
<td>Institut National pour l'Etude et la Recherche Agronomique</td>
</tr>
<tr>
<td>ISAC</td>
<td>Industrial Sector Adjustment Credit</td>
</tr>
<tr>
<td>NPA</td>
<td>Non-Project Assistance</td>
</tr>
<tr>
<td>OE</td>
<td>Operating Expense</td>
</tr>
<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>PIE</td>
<td>Program Impact Evaluation</td>
</tr>
<tr>
<td>PIP</td>
<td>Priority Investment Program</td>
</tr>
<tr>
<td>PIR</td>
<td>Project Implementation Review</td>
</tr>
<tr>
<td>PL-480</td>
<td>Public Law 480, the Agricultural Trade Development and Assistance Act of 1954, as amended</td>
</tr>
</tbody>
</table>
## Glossary of Terms Used

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>Project Paper</td>
</tr>
<tr>
<td>PROCAR</td>
<td>Projet de Developpement de la Production et Commercialisation Agricoles Regionale</td>
</tr>
<tr>
<td>PRAPAC</td>
<td>Programme Regional d'Amelioration de la Culture de la Pomme de Terre en Afrique Centrale</td>
</tr>
<tr>
<td>PSC</td>
<td>Personal Services Contractor</td>
</tr>
<tr>
<td>PSSP</td>
<td>Private Sector Support Program</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization</td>
</tr>
<tr>
<td>RAV</td>
<td>Recherche Appliquee et Vulgarisation</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
</tr>
<tr>
<td>SNRDA</td>
<td>Service National des Routes de Deserte Agricole</td>
</tr>
<tr>
<td>TRP</td>
<td>Transport Reform Program</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>USAID</td>
<td>A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USDH</td>
<td>U.S. Direct Hire</td>
</tr>
</tbody>
</table>
This Action Plan is being submitted at a time when the Government of Zaire's (GOZ) economic management is undergoing close scrutiny by the U.S. Mission, the International Monetary Fund, and the World Bank. Successful implementation of the FY 1987 - 1989 Action Plan was constrained by poor GOZ performance. In 1987 and 1988, the GOZ abandoned critical elements of its structural adjustment program. Excessive and misguided public expenditures destabilized the economy, resulting in rapid inflation, depreciation of the currency and deterioration of public infrastructure and social services. In early 1989, the GOZ renewed its commitment to the adjustment process. Government deficit spending and inflation rates declined, while positive steps were taken to promote economic growth.

USAID/Zaire's FY 1990 - 1993 Action Plan strategy is designed to support continuing structural adjustment in Zaire. By helping to improve rates of child survival, reduce fertility, increase food production, maintain transport infrastructure, and promote private enterprise, the U.S. will, over the next three years, contribute to Zaire's sustainable, broad-based, market-oriented economic growth and development. Presently, the Mission manages the largest A.I.D. program in sub-Saharan Africa. This program is a well-balanced mix of Development Fund for Africa (DFA) project and non-project assistance, as well as PL-480, Title I activities. The Mission's program exhibits a strong private sector orientation, an emphasis on both economic and environmental sustainability, and a commitment to achieving and demonstrating broad-based development impact. If, over the course of this Action Plan, GOZ commitment to economic adjustment wavers, U.S. assistance should be adjusted accordingly.

I. REVIEW OF PROGRESS IN ACHIEVING ACTION PLAN OBJECTIVES, FY 1987 - 1989

A. Country Trends

Zaire has made significant progress since 1983 in reducing the role of the state in the economy and improving the policy environment for the private sector. However, a critical constraint to Zaire's economic growth and development has been the GOZ's "on-again, off-again" adherence to its structural adjustment programs. Considerable progress has been made in liberalization of agricultural markets, tariff reform, and
increasing government revenues. Yet, public expenditures in years such as 1987 and 1988 soared out of control and the GOZ resorted to monetary financing of its deficits, fueling bursts of inflation and undermining the value of the nation's currency.

This instability retarded economic growth. Zaire's recorded gross domestic product (GDP) per capita fell at a rate of 1.1 percent per year between 1980 and 1989 to $150, making Zaire one of the four poorest countries in the world, according to the 1989 World Development Report. There is an important unrecorded sector of the economy, as well, that is at least as large as the recorded sector and has also been handicapped by the inconsistent economic management of the GOZ. The unrecorded economy involves legal small-scale, traditional production and marketing activities, as well as clandestine trade.

Zaire enjoys a strongly positive balance of trade as a result of its wide range of mineral and agricultural exports, especially copper. However, the country suffers from an enormous and growing debt, estimated at $8 billion in 1989. Zaire's ratio of debt service to export earnings climbed from 36 percent in 1983 to 58 percent in 1989 (before rescheduling). However, actual debt service paid in 1989 was 24 percent of export earnings. As a result, the balance of payments-current account deficit (excluding transfers) widened from 11 percent of recorded GDP in 1984 to 14 percent in 1988. Thus, Zaire has turned to foreign donors for support. Official development assistance averaged $600 million per year in 1987 and 1988, or 11.6 percent of GDP. Approximately one-tenth of this assistance was provided by the United States.

Little of Zaire's public spending has been for investment or social services. Out of total planned expenditures of $1 billion in 1989, only $50 million, or five percent, was allocated to public investment, while debt servicing and personnel costs received 36 percent and 19 percent, respectively. Agriculture development accounted for only one per cent of total expenditures. Similarly, transport infrastructure was allocated two percent; health, less than three percent; and education, four percent.

Declining per capita incomes, GOZ neglect of the social sectors, and the rapid three percent annual growth of the population are reflected in the poor socio-economic status of the Zairian population. In 1988, the infant mortality rate (IMR) was 110 per 1000 live births, compared to an average 71 per 1000 in all medium and low income countries. Mortality rates for children under five and maternal mortality rates in 1988 were 164 per 1000 and 6 to 8 per 1000 live births, respectively. The HIV seropositivity rate in Kinshasa is estimated at six percent of the general population, while in rural areas the rate remains...
below one percent. Primary school enrollment rates are high, 89 percent for boys and 64 percent for girls in 1986/87. However, these rates have been declining gradually and the facilities and quality of education are poor.

B. Assessment of Program Impact, FY 1987 - 1989

Against the backdrop illustrated above, U.S. economic assistance is making a very positive contribution to economic welfare and physical quality of life in Zaire. USAID's performance under its FY 1987 - 1989 Action Plan is reviewed below with respect to four objectives:

- Economic Stabilization and Recovery
- Increased Small Farmer Output
- Increased Farm-to-Market Transportation Access
- Improved Health Status and Lower Population Growth

1. Economic Stabilization and Recovery

USAID's economic stabilization and recovery objective addressed constraints to economic growth caused by: a volatile economy; poor pricing, trade, investment, and exchange rate policies; and GOZ overspending. In 1986, USAID substantially increased its involvement in economic policy analysis and dialogue with the authorization of a $15 million African Economic Policy Reform Program (AEPRP). This program linked disbursements for a private sector Commodity Import Program (CIP) to industrial and trade policy reforms. The FY 1987 - 1989 Action Plan entailed further efforts to promote economic reforms and provide balance of payments support through the Private Sector Support Program (PSSP) and PL-480, Title I programs. Counterpart funds generated by CIPs and PL-480 imports are programmed jointly by the GOZ and USAID in support of common development objectives.

Performance in meeting economic stabilization and recovery objectives was mixed. The GOZ's budget proved to be the linchpin of Zaire's structural adjustment program. The GOZ's budgetary discipline was weak through much of the Action Plan period, with the overall budget deficit rising to $571 million in 1988. However, in 1989 budgetary discipline improved, with deficit financing reduced to only $90 million. The market-based official exchange rate was restored, with the gap between official and parallel market exchange rates dropping from between 25-40
percent in late 1987 to nearly 10 percent at the end of 1989. Significant tariff and non-tariff barriers to trade and investment were eliminated.

In addition, the private sector directly benefited from U.S. assistance. Capacity utilization rates among commodity import program participants increased an average of 7.4 percent between 1985 and 1988. Moreover, PL-480 wheat and cotton imports supported over $50 million per year in value-added output and sustained approximately 42,000 jobs.

2. Small Farmer Output

USAID's increased small farmer output objective addressed agricultural policy constraints, lack of research in single input technology, and insufficient institutional development (primarily for policy planning, research and extension). The Mission supported GOZ policy reforms resulting in price liberalization, and promotion of agricultural marketing and agribusiness. USAID projects contributed to institution building to support agricultural policy planning, research, and extension work. Research and outreach activities were devoted to improving crop varieties and farming techniques. While its national research and policy activities are Zaire-wide, the Mission has continued to focus its efforts to the extent possible in an attempt to gain maximum impact (in terms of increased small farmer output) in Bandundu and Shaba regions.

USAID's policy dialogue efforts were particularly successful in the area of agricultural liberalization: small farmers increased area cultivated in basic food crops, thus raising production and income. Surveys of farmers in Bandundu and Shaba showed that over 50 percent of those interviewed increased area cultivated as a result of liberalization. Furthermore, the parastatal mining company, Gecamines, recently adopted the recommendation of a USAID-financed study to procure maize through open competition. Formerly, Gecamines, the largest buyer of maize in Shaba, fixed prices and substantially controlled the regional market. Small farmers in the region should benefit over time through market-determined maize prices.

Agricultural research generated significant results: five new varieties of maize were developed with yields 40 percent higher than those of local varieties; six new varieties of cassava with yields 25 percent higher were developed; and, improved varieties of grain legumes resulted in eleven new varieties with average yields 30 percent higher. During 1988, A.I.D.-supported development and dissemination of improved maize seed resulted in production of an additional 8,300 tons of maize.
in Shaba, equivalent to 4.2 percent of the total Shaba regional market, with a value of $830,000. A.I.D.-supported development and dissemination of improved cassava varieties resulted in production of an additional 3,000 tons of dry cassava chips with a market value of $305,000. Further results are expected in the future: farmer field trials of improved cultivation technologies using local seed and stock in Central Shaba yielded increases averaging 45 percent for maize, 78 percent for peanuts, and 81 percent for peanuts intercropped with cassava. Similar field trials in Bandundu resulted in a 48 percent increase for maize. Finally, small fish pond production of tilapia rose from 80 metric tons in 1986 to over 120 metric tons in 1988 in five regions of the country.

3. **Farm-to-Market Transportation Access**

USAID's increased farm-to-market transportation access objective was directed at the constraint of inadequate transport infrastructure. USAID addressed this problem through project activities to rehabilitate specific sections of road, improve water crossings, and facilitate the use of Zaire's rivers.

The projects sustained tactical successes over the Action Plan period:

- In central Bandundu, 190 kilometers of national road with regional links were rehabilitated and 24 water crossings installed or improved, providing improved access to goods and services for approximately 280,000 people.

- In central Shaba, 126 kilometers of link road were rehabilitated to specifications and an additional 460 kilometers of link roads were opened to traffic. Additionally, 180 kilometers of connecting feeder roads were rehabilitated to specifications and 400 kilometers were opened. When completed, this road network will connect with critical ports and railheads to provide improved access to the area's 450,000 citizens.

- In southwestern Shaba, 1158 kilometers of national road were completed to specifications, providing greatly improved access to the urban markets of southeastern Shaba for the population of 400,000 in Lualaba, a subregion which endured two military invasions in the late 1970s and an influx of refugees in the 1980s.

-5-
4. Health Status and Population Growth

During the FY 1987 - 1989 Action Plan, the Mission's objective of improving health status and lowering population growth addressed the constraint of limited health services for preventable diseases and family planning. USAID's child survival activities over the Action Plan period focused on reducing infant and child mortality and morbidity in the short term and on establishing institutions and systems that will lead to lower rates of mortality and population growth in the long term.

Decreasing the spread of HIV/AIDS is a theme that increased in importance during the Action Plan period.

Many positive impacts were achieved through USAID's wide variety of project interventions:

- In one of Bandundu's health zones, a reduction in infant mortality of 15 percent in five years, from 130 per 1000 to 110 per 1000, has been demonstrated based on the comparison of a 1989 survey of mortality and utilization of health services with 1984 survey data. It is believed that an impressive increase in vaccination coverage explains much of this improvement, suggesting that USAID's priority child survival interventions have significant impact.

- An additional 2.1 million people were provided access to full service rural health centers, bringing the total under A.I.D.-assisted zones to almost five million. Nearly 400,000 children and 350,000 women now have access to under-five and prenatal clinics, respectively, in health zones assisted by the Basic Rural Health (BRH) II project.

- Although vaccination coverage rates leveled off, with USAID support they remained over 40 percent, thereby preventing 470,000 measles cases and 23,500 measles-related deaths in 1988 alone.

- Improved water sources were provided to an estimated 1.1 million rural inhabitants, roughly five percent of the total rural population of Zaire. A study in Kivu found a 30 percent reduction in episodes of diarrhea among children living close to clean water sources.

- Family planning programs attained a total of 127,966 couple years of protection (CYPs). High increases in condom sales under the successful Contraceptive Social Marketing program accounted for 75 percent of the nearly 30,000 CYP in the last two quarters of FY 1989.
C. Lessons Learned and Implications for the FY 1990 - 1993 Action Plan

1. Program Management

A critical factor limiting the success of USAID's programs in Zaire has been the GOZ's inconsistent macroeconomic policies. Economic instability has inhibited growth in the private sector. At the same time, it has interfered with the performance of the public sector, limiting the effectiveness of USAID's public sector partners. The breakdown in the GOZ's budgetary discipline in 1987 and 1988 had severe consequences for USAID-supported activities. Excessive spending ultimately fueled inflation, yet investment and social spending priorities were frequently neglected.

In this environment, USAID made effective use of non-project assistance and PL-480, linking quick-disbursing assistance to GOZ performance in implementing sound economic policies. In FY 1989, the U.S. withheld commitments of PL-480 commodities and the obligation of the Private Sector Support Program for several months, until the GOZ renewed its commitment to its economic adjustment program. This flexibility to withhold aid disbursements permits the U.S. to support good policies on a timely basis and increases the Mission's effectiveness in policy dialogue.

DFA non-project assistance, and PL-480, Title I further contribute to Mission objectives through the generation of counterpart funds. USAID-supported activities have come to rely heavily on counterpart funds to supplement the often meager resources provided by the GOZ. However, as poor policy decisions by the GOZ have led to bursts of inflation and slower aid disbursements, USAID projects have been caught in the squeeze between low GOZ budget allocations and tight counterpart fund budgets.

USAID's experience over the past three years thus underscores the importance of improving GOZ budgeting and expenditure controls. Within the framework of the IMF programs, the World Bank is playing a leading role among donors in urging the GOZ to contain and improve the allocation of its spending. The GOZ's Priority Investment Program (PIP) has become a focal point for the establishment and monitoring of budgetary and donor-financed investment priorities. In 1989, GOZ expenditures for development projects generally conformed to the PIP. Thus, it is important during the next Action Plan that USAID better coordinate its own project budgets with the development of the PIP.
In light of the importance of the PIP and the variability of counterpart funding, USAID has established priorities for use of counterpart funds. It distinguishes between activities that it is willing to scale back in response to poor GOZ performance and reduced availability of counterpart funds, and those activities that must be assured GOZ financing or, in certain cases, priority use of counterpart funds.

2. Economic Adjustment and Private Sector Development

USAID's experience in the economic policy arena demonstrates that the Mission is influential and has a significant role to play in certain sectors. At the same time, the Mission has learned that its reach is limited both by the size of its financial assistance and by the numbers and expertise of its staff. USAID looks to the IMF and World Bank to take the lead in promoting constructive changes in the GOZ's macroeconomic policies, although the Mission has an important role in the development and implementation of financial sector reforms. As one of the principal bilateral donors, USAID is supportive of IMF and World Bank initiatives, and actively coordinates assistance with the World Bank and other donors.

USAID's presence as a full field mission and its years of experience in Zaire are responsible for its comparative advantage in influencing policies in the health, agriculture, transport, and financial sectors, as well as policies of the regional governments in Bandundu and Shaba. USAID is likely to play a less active role than in recent years in attempts to influence trade and industrial policies.

Commodity Import Programs and PL-480 assistance will continue to be important in the USAID program, supporting policy reforms and providing foreign exchange for critical food and industrial commodities. Commodity assistance provides a demonstrable stimulus to the private sector, increasing productivity and employment.

3. Agriculture Sector

Since 1983, substantial improvements in agriculture sector policies have been made at the national level with significant people-level impact. For USAID, the next step in the policy dialogue is to discourage any backsliding in national policies and, through policy research and dialogue, to support efforts of
regional and local authorities to consolidate the gains made in market liberalization.

A weak extension component of the Applied Agricultural Research and Outreach I (RAV) Project has led the Mission to place greater emphasis on outreach and farming systems research in the design of the follow-on agricultural research (RAV II) project. The major causes for the shortfall in extension and outreach activities have been weaknesses in defining approach and methods to on-farm research, lack of balance between on-station and on-farm research and, during the past two years, insufficient operating funds and rapid inflation. Eliminating these apparent project constraints as well as exploring means to improve the financial viability of the RAV programs will be the primary implementation focus on the new agricultural research project.

A significant constraint to the dissemination of improved genetic material has been the budgetary austerity of the last few years, and the concomitant cutbacks in off-station activities. The RAV project is scheduled for close-out in September 1990, with a follow-on project under active development for FY 1990 obligation. Of particular importance in the future is the consolidation of agricultural research in Zaire, both within the vertical programs of RAV and between RAV and the national perennial crop research institute, INERA, so that the two do not compete. USAID has maintained influence with INERA through establishment of Title I self-help conditionalities, primarily regarding financial and organizational management, and through funding INERA's component of the regional PRAPAC Potato Research Network Program. The Mission has also been an active participant in recent GOZ-donor meetings to resolve problems in the organization and funding of research in Zaire. In November 1989, the GOZ agreed to integration of RAV and INERA by 1993. This was a culmination of USAID and World Bank efforts and offers the possibility of a unified national research system by 1993.

4. **Transport Sector**

USAID-supported road improvement projects suffered during the Action Plan period as a result of erratic financing by the GOZ and institutional weaknesses of Office des Routes and the local interest roads authority, SNRDA. The Mission has learned that transport project activities cannot be sustained in the absence of needed policy and institutional changes. These changes should include a stable source of funding for road maintenance, improved planning for resource allocation, increased use and improved supervision of private sector contractors for manual as well as mechanical maintenance, and increased planning and management authority for regional governments. These
lessons-learned are being taken into account in the design of the Transport Reform Program. This Program is being designed in coordination with major World Bank credits in the fuel and road transport sub-sectors. It focuses on helping the GOZ to put into place needed fuel price and tax changes and on institutional strengthening. This coordination results in added leverage on key policy reforms.

USAID's experience has also demonstrated that the GOZ must place increased emphasis on maintenance and rehabilitation of priority earth roads and less emphasis on new construction projects. This is an important theme in donor coordination and in implementation of USAID road projects in Bandundu and Shaba.

5. Health and Family Planning

Health and family planning projects have been among the most successful activities in the Mission's program. However, these projects have proven to be costly and extremely management intensive. Although the GOZ increased its contributions for the social sectors in 1989, there is little hope for long-term sustainability without greater mobilization of indigenous resources. Increased funding by the GOZ for such activities is essential. USAID supports efforts of the World Bank to obtain the GOZ's commitment to finance health and family planning programs in the context of a Social Sectors Adjustment Program. The Mission is also encouraging the Japanese to provide more aid in this sector. At the same time, the progress achieved at the health zone level, financed in part by local resources, shows that a certain level of services -- although less than desirable -- can be organized and provided with minimal GOZ budget support. Thus, new and creative approaches to mobilizing financial resources need to be developed. To address the problem of management intensity, in future project design activities the Mission will shift more of the day-to-day management burden for health and family planning projects to institutional contractors, freeing Mission staff to focus on program direction and impact.

USAID's experience has demonstrated that low-cost child survival technologies can be delivered effectively despite major constraints, with impressive impact on child survival. This experience argues for a continuing emphasis on making child survival measures, particularly vaccinations, oral rehydration therapy, and malaria control, more widely available to the population.

The contraceptive prevalence levels of 15 percent and higher that have been achieved on a small scale where well-managed services have been available, as well as the success of the
Contraceptive Social Marketing Project, demonstrate that there is a latent demand for family planning and AIDS-prevention measures. The challenge is to make appropriate services more widely available.

6. Other

Training activities will continue to be an important facet of USAID's development effort; over 5,000 Zairians receive USAID-supported in-country and off-shore training each year. Experience gained over the past three years demonstrates that training activities are an important complement to Mission activities. USAID's training program is able to reach important target populations who would not otherwise be direct beneficiaries of the Mission's private sector support activities, including women and managers of micro-enterprises.

Private and voluntary organizations (PVOs) and the Peace Corps make significant contributions to the development of Zaire and the implementation of USAID projects. USAID integrates PVO and Peace Corps activities into its major projects where feasible. The Mission has found effective ways to work with these organizations to the mutual benefit of all concerned. Approximately 75 percent of the 150 Peace Corps Volunteers in Zaire work with USAID projects, providing invaluable hands-on experience. In addition, the new Small Project Support Project, which is administered by an international PVO, will provide support to PVO sub-projects which are consistent with Mission objectives.

II. MISSION STRATEGY, FY 1990 - 1993

A. Program Logical Framework

Goal Statement

The Zaire Mission's Program Goal is:

To contribute to sustainable, broad-based, market-oriented economic growth and development.

Country Trend Indicators

1. The recorded Gross Domestic Product will increase at a rate of 3.5 percent per year between 1990 and 1995.
2. Labor productivity of men and women will increase as demonstrated using national census and survey data.
3. The infant mortality rate will decline from 110 per 1000 live births in 1988 to 80 by 2000.
4. The total fertility rate will decline from 6.1 children per woman in 1987 to 5.8 in 2000.

Rationale

USAID's program goal is fully consistent with the goal and strategy of the Africa Bureau. It reaffirms the Mission's intention to promote economic growth which will improve the well-being of Zaire's poor majority by providing opportunities to increase families' productive capacity, consumption, nutrition, and access to social services.

The Mission's strategy involves a strong, private sector orientation: emphasis will be placed on improving the business climate and seeking private sector solutions to development problems. At the same time, the Mission will work with the GOZ to limit the role of the state in the economy and to improve public policy-making and management capabilities. Sustainable growth will be supported through the introduction of technologies to safeguard the natural resource base and increase agricultural output, through efforts to assure profitability for the private sector, and through adjusting the role of the public sector to fit with the levels of available revenues and the nation's development priorities.

USAID will monitor Zaire's performance with respect to the program goal on a periodic basis using country trend indicators on macroeconomic performance, labor productivity, household consumption, nutrition status and health status. All indicators will require further definition and development of monitoring procedures during this Action Plan period (see Section III.B. and Annex L).

Strategic Objective 1: Improve Health Status, with Emphasis on Increasing the Rate of Child Survival and Reducing the Population Growth Rate.

Program Performance Indicators

A. Reduce infant mortality rates from 110 per 1000 live births in 1988 to 95 in 1995.
B. Reduce mortality rates for children between one and five years of age from 54 per 1000 in 1989 to 45 per 1000 in 1995.
C. Increase contraceptive prevalence from two percent in 1988 to seven percent in 1995.
Targets and Benchmark Indicators

Target 1.1: Decreased diarrhea-related morbidity and mortality.

b. Rural population in USAID-assisted health zones provided with potable water increases from 1.3 million in 1989 to 1.6 million in 1992.
c. Deaths due to severe diarrhea reduced in sentinel areas from 404 in 1988 to 200 in 1992.

Target 1.2: Reduced vaccine-preventable morbidity and mortality.

a. Measles vaccine coverage rates among children 12 to 23 months increase from 44 percent in 1988 to 60 percent in 1992.
b. Polio vaccination (third dose) coverage rates for children 12-23 months increase from 41 percent in 1988 to 60 percent in 1992.
c. Diphtheria, pertussis, tetanus vaccine (third dose) coverage rates for children 12 to 23 months increase from 41 percent in 1988 to 60 percent in 1992.

Target 1.3: Reduced morbidity and mortality from malaria.

a. Increase percentage of public health facilities practicing presumptive treatment of fever among children less than five years old from 90 percent in 1988 to 100 percent in 1992.

Target 1.4: Increased couple years of contraceptive protection.

a. Increase sales and distribution of contraceptives in the private sector from 12,500 CYP in 1988 to 180,000 CYP in 1992.
b. Increase couple years of protection from all contraceptive methods from 30,000 CYP in 1988 to 235,000 CYP in 1992.

Target 1.5: Reduced HIV/AIDS transmission.

a. Increase condom distribution in high-risk urban areas from 800,000 units in 1988 to eight million units in 1992.

**Target 1.6: Increased access to and improved quality, efficiency, and sustainability of health services.**

c. Provide access to under-five clinics for 625,000 (52 percent) of children living within 50 BRH-II-assisted rural health zones by 1992, compared to 400,000 in 1989.
d. Provide access to prenatal clinics for 625,000 (52 percent) of women of child bearing age living within 50 BRH-II-assisted rural health zones by 1992 compared to 340,000 in 1989.
e. Conduct research and initiate pilot projects to develop new health zone level cost-recovery strategies, including health insurance and other prepayment schemes.

**Target 1.7: Improved population, health and water policies adopted by GOZ.**

a. Actual GOZ total budgetary expenditures in health and family planning increase from $0.33 per capita per year in 1986 to $1.00 per capita by 1992.
c. GOZ establishes a national plan for operation and maintenance of water systems by 1992.

**Rationale**

The health and population sector is the one in which USAID has achieved the greatest verifiable impact. Building on this success, USAID's health and family planning interventions will be oriented to both the economic growth and equity aspects of the Mission goal. Health programs are investments in human productive capital and, thus, contribute to sustainable economic growth. USAID's health and family planning activities will also contribute to increasing human productive capacity in the following ways: first, AIDS prevention activities will be directed to the individuals at greatest risk, including men and women in the most productive age and socio-economic groups; second, the time and energy saved by using convenient, safe water supplies and having well-spaced, healthier children will make women more productive; third, basic community health services will benefit working men and women directly, thereby enhancing their productive capacity and contribution to economic growth.
USAID will emphasize improved financial sustainability for health and family planning services, but not at the expense of social equity. Thus, cost-recovery measures are being designed to minimize adverse impacts on utilization, particularly by the poor.

Health and family planning programs also support agriculture and private sector development as reflected in indicators on labor productivity and household consumption.

Resources

USAID's major interventions in health and family planning are national in scope, with selected projects concentrated in those parts of Bandundu and Shaba where the Mission has other activities. The Mission will continue to implement activities in child survival, contraceptive delivery, HIV/AIDS, basic rural health, and water and sanitation. To carry this out, project amendments are required in child survival (African Child Survival Initiative-Combating Childhood Communicable Diseases, ACSI-CCCD) and family planning, to extend the projects until September 1992, the anticipated completion date for the Basic Rural Health II project. A follow-on program focusing on primary health care and child survival will be designed in 1991 to start in late 1992. It will continue high impact child survival interventions, strengthened and expanded primary health care at the health zone level, family planning, and at a level yet to be determined, improved water quality. The private sector, including PVOs, will continue to play a major role. The feasibility and management advantages of one large project with several components will be studied as an alternative to three or four smaller projects.

USAID will continue to implement its AIDS-prevention activities (including mass media information, education and communication; counseling; condom sales and distribution; rapid assay blood screening; training and research). The School of Public Health Project will continue throughout the Action Plan period, establishing a national program to train public health managers and conduct critical public health research.

Strategic Objective 2: Increase Agricultural Production, Productivity, and Rural Household Income, with Emphasis on the Bandundu and Shaba Regions.

Program Performance Indicators

A. Real returns to crop labor hours increase.
B. Crop yields per hectare increase.
C. Rural household incomes increase.
D. Food consumption increases.
E. Natural resource management improves.
Targets and Benchmark Indicators

Target 2.1: Increased sustainable crop production and productivity for domestic and export market.

a. Cassava production in Bandundu and Shaba increases by 25 percent over the 1989 to 1993 period.
b. Maize production in Bandundu and Shaba increases by 35 percent over the 1989 to 1993 period.
c. Peanut production in Bandundu and Shaba increases by 35 percent over the 1989 to 1993 period.
d. Real returns to crop labor hours increase for maize and cassava by 20 percent in Bandundu and Shaba over the 1989 to 1993 period.
e. Marketed surplus for maize and cassava in Bandundu and Shaba increases by 50 percent over the 1989 to 1993 period.
f. Marketed surplus for peanuts in Bandundu and Shaba increases by 55 percent over the 1989 to 1993 period.
g. Soil conservation and natural resources management technologies are developed and utilized by 137,000 farmers by 1993.

Target 2.2: Market-oriented policy and institutional incentives provided for rural agricultural enterprises.

a. GOZ eliminates regulations and practices restricting the inter-regional flow of agricultural commodities by 1993.
b. GOZ eliminates regulations and practices involving administrative determination of crop marketing seasons by 1993.
c. GOZ eliminates compulsory cropping regulations and practices by 1993.
d. GOZ formulates policies supporting establishment and operation of a viable food crop seed production and distribution system.
e. GOZ refines its data base to incorporate physical and economic data (area planted, yield, production, producer and consumer prices, export and import data, etc.) on major agricultural crops of Bandundu and Shaba.
f. GOZ conducts timely and sound economic analyses of investment for consideration during the Priority Investment Program and Public Expenditure Program allocation processes.
g. Percentage of national investment budget and of Priority Investment Program going to the agricultural sector increases to 20 percent over the 1989 to 1993 period.
h. GOZ undertakes appropriate measures to institute a tender and bid system for Gecamines' local purchase of maize, to promote competition in the maize market.
Rationale

The agriculture sector is a key to sustained economic growth in Zaire. Agriculture accounts for more than 30 percent of the nation's GDP, 70 percent of employment, and offers considerable growth potential. Agriculturally-based economic growth and concomitant increases in rural household incomes will depend on increasing the production and productivity of Zairian farmers and on improving agricultural marketing and the rural-urban terms of trade. This, in turn, will depend on rural and urban infrastructure improvements, on public policies which are supportive of the development of agriculture and agribusiness, and on the provision of critical inputs, notably information (extension) and credit.

USAID's emphasis on Bandundu and Shaba reflects A.I.D.'s comparative advantage in assistance for food crop production, as well as the importance of these regions to the urban centers of Kinshasa and Lubumbashi. Additionally, USAID will redouble its emphasis on outreach programs to extend improved agricultural technologies, building on the experience gained from two decades of assistance to agricultural research.

Resources

USAID will continue to support agricultural sector development through policy analysis and dialogue, research and extension, and market development activities. The Agricultural Policy and Planning Project (660-0119) is assisting the GOZ to improve its agricultural sector investment planning and policy analysis capabilities. This project provides significant opportunities for USAID to assist the GOZ in developing viable agricultural policies. This opening is reinforced by PL-480, Title I Self-Help Measures which increasingly will be linked to necessary policy reforms in the agricultural sector. A follow-on Agricultural Research and Outreach Project (RAV II, 660-0124) is scheduled for authorization in September 1990. RAV II will continue support to crop research on cassava, maize, and grain legumes, as well as technology transfer activities, while placing increased emphasis on extension.

Two projects, the Area Food and Market Development Project (PROCAR, 660-0102) and the Central Shaba Agricultural Development Project (660-0105) will continue through the life of the Action Plan. These agricultural area development projects support extension for increases in crop production and improvements in agricultural marketing in specific regions. USAID's activities in the sector rely heavily on PVOs and private enterprises for service delivery and promotion of improved technologies. The Small Project Support Project (660-0125) will help to finance Peace Corps and PVO sub-projects in the rural sector.
Rural credit constraints are being addressed through a GOZ-USAID Rural Financial Markets Study, PROCAR pilot technical assistance activities for savings and credit cooperatives in Bandundu, and the Private Sector Support Program (660-0120) which promotes financial sector reforms, finances commodity imports, and will provide local currency loans for agricultural production and marketing activities.

**Strategic Objective 3:** Improve the Provision of Sustainable Transport Infrastructure Services and Maintain Road and River Infrastructure, Particularly in Bandundu and Shaba.

**Program Performance Indicator**

Increase flow of goods and services on roads and rivers in Bandundu and Shaba, as demonstrated through comparisons with project baseline studies.

**Targets and Benchmark Indicators**

**Target 3.1:** Sustainable mechanisms for financing infrastructure established by GOZ.

- a. Fuel prices correspond to import prices, distribution costs, and reasonable profits.
- b. Office des Routes and SNRDA receive a minimum of 45 percent of fuel tax receipts or a minimum of $30 million per year in revenues from fuel surtaxes.
- c. A greater and more equitable share of financial responsibility for the cost of road use is shifted to road users.
- d. Office des Routes debts incurred prior to January 1990 are eliminated by June 1991.
- e. Office des Routes debts incurred after January 1990 are serviced regularly.

**Target 3.2:** Efficient transport infrastructure management institutions established by GOZ through policy and institutional reform.

- a. Priority annual road plans of Office des Routes and SNRDA correspond to available annual funding.
- b. Investment options for maintenance, rehabilitation, and new construction are identified in the National Road Master Plan, which will be completed by 1992.
- c. Office des Routes personnel are reduced from 7,500 to 5,000 by 1993.
Target 3.3: National and regional priority infrastructure maintained, as identified in annual and multi-annual plans.

a. Selected traffic surveys show a steady increase in the number of vehicles but no marked increase in travel times on rehabilitated roads.
b. Maize tonnage transported on central Shaba roads, as measured at railheads, increases from 50,000 tons in 1989 to 80,000 in 1992.

Target 3.4: Private sector involvement in the production of transport infrastructure services increased.

a. Manual and light mechanical maintenance of earth roads in the Office des Routes and SNRDA networks increases from 17,000 km to 34,000 km by 1993.
b. The private sector handles more of the management of equipment and laboratory functions.
c. The private sector assumes greater responsibility for the execution of construction, rehabilitation, and heavy maintenance activities currently undertaken by the Office des Routes.

Target 3.5: Responsibility of regional organizations in the management of transport infrastructure increased by the GOZ.

a. Increased delegation of authority is given to Office des Routes and SNRDA regional offices for matters pertaining to contracting, personnel issues, annual planning, and supplemental resource allocation.
b. Regional Road Commissions assume responsibility for mobilization of resources, in addition to national budgets, and for coordination of regional road maintenance programs.

Target 3.6: Bandundu and Shaba roads rehabilitated.

a. GOZ completes rehabilitation of 1500 km of roads in Bandundu and Shaba between 1989 and 1993.

Rationale

USAID's assistance to the transport sector over the FY 1990 - 1993 period will address broad constraints to the sustainability of transport infrastructure and the expansion of transport services. Because Zaire's road network carries over 50 percent of officially recorded freight tonnage and because movement of goods and passengers on roads reinforces most directly other USAID-financed activities, U.S. assistance will emphasize road transport. By contributing to the improvement and maintenance of transport infrastructure, USAID's interventions will help to increase efficiency and thereby reduce the economic...
costs of utilizing roads and rivers. This is expected to contribute to efforts to increase agricultural productivity, production, and income growth, to expand markets for agricultural and manufactured products, and to improve access to health and other social services. Moreover, assistance in the road and river subsectors is consistent with USAID's goal under the Development Fund for Africa which stresses a private sector orientation and equity considerations.

This strategy represents a shift in emphasis from rehabilitation linked strictly to agricultural development activities. The earlier, ongoing generation of rehabilitation projects was constrained by inadequate financing mechanisms and ineffective public sector management, resulting in the failure of the GOZ to maintain roads once they were improved. In close coordination with the World Bank and other donors, USAID will support GOZ efforts to create the necessary policy, institutional, and investment conditions for sustained improvement in road and river infrastructure. Although the Mission will work with public sector transport agencies, emphasis will be placed on increasing their efficiency to engender a more favorable physical and policy environment for the private transport industry. Parastatal agencies will be encouraged to contract with private enterprises for such services as road maintenance, where this is in the interest of development in the sector. During the Action Plan period, USAID will undertake research on options for assisting the expansion of the transport industry. This research may result in design of a new transport program in 1993/94.

In pursuing its transport sector strategy, USAID will continue to promote environmentally, as well as economically, sustainable approaches to infrastructure maintenance and improvement. USAID has already gained considerable experience in practices to control soil erosion associated with road and water-crossing projects.

Resources

The proposed Transport Reform Program (TRP, 660-0126), scheduled for authorization in June 1990, signals a shift in USAID's assistance strategy in the transport sector. The TRP will place greater emphasis on policy and institutional reforms using a combination of project and non-project assistance. At the same time, USAID will continue, through FY 1994, its traditional infrastructure improvement and technical assistance projects, specifically the Agricultural Marketing III Project (660-0098) in Bandundu, and the Central Shaba Agricultural Development Project (660-0105).
Other USAID programs will directly support the transport sector. It is expected that the Small Project Support Project (660-0125) will help PVOs to improve transport infrastructure. The Private Sector Support Program, which can be tapped by the private sector transport industry for commodity import or local currency financing, contributes to the alleviation of financial constraints which have resulted in low investment and shortages of equipment and spare parts. Moreover, the broad range of Mission activities in agriculture, health, and private sector development will help to create the demand for transport services required for sustainable growth and improvement of the transport sector.

**Strategic Objective 4:** Increase Production and Productivity of Private Enterprises, with Emphasis on Manufacturing, Transport, and Agribusiness.

**Program Performance Indicators**

A. Manufacturing GDP increases by four percent per year between 1990 and 1993, compared to 3.4 percent between 1985 and 1988.
B. Capacity utilization rate of medium-sized manufacturing firms increases from 50 percent in 1987 to 60 percent in 1993.

**Targets and Benchmark Indicators**

**Target 4.1:** Sustained growth in domestic credit outstanding to small and medium enterprises (SMEs) and farm firms achieved.

a. Share of total domestic credit going to the private sector increases from 26 percent in 1989 to 50 percent in 1993.
b. GOZ Rural Financial Markets Study is completed and other priority recommendations are implemented.
c. Baseline data are established for measurement of the commercial investment of COOPECs (credit and savings cooperatives) and the overall economic impact of savings and lending activities.

**Subtarget 4.1-1:** Increased domestic savings mobilization.

d. Real savings in commercial banks increases by four percent per year between 1991 and 1993.
e. Mobile savings mobilization facility is strengthened and expanded, reaching 10 new COOPECs over the 1989 to 1993 period.
f. Total COOPEC savings mobilized increases by 30 percent over the 1990 and 1993 period.

Subtarget 4.1-2: Establish and maintain market-determined interest rates and reduce costs of funds to banks and non-bank financial institutions.

g. Reserve requirements on demand deposits are reduced and a portion of these reserves are remunerated, resulting in a decrease of 20 percent in the transfer from banks to the BOZ (Bank of Zaire) as measured by the implicit cost per 1000 zaires held as demand deposits by the banks.

h. The CCA (turn-over tax) on interest payments is reduced from 18 percent in 1989 to nine percent in 1991.

Target 4.2: GOZ's macroeconomic adjustment program supported.

a. Private participants in the PSSP-CIP and PL-480 program increase capacity utilization by five percent.

b. The gap between official and parallel exchange rate remains below 20 percent.

c. Inflation rate is reduced to and remains below 40 percent per year, or at a target agreed between GOZ and IMF.


Target 4.3: Private enterprise and PVO production and delivery mechanisms developed in conjunction with USAID-supported projects.

a. Private sector increases production of oral-rehydration products from one million units in 1989 to three million units in 1991.

b. Private sector sales and distribution of condoms and spermicide tablets increase from 1.25 million units in 1988 to 18 million units in 1992.

Rationale

Zaire's private sector is the most dynamic and efficient vehicle for broad-based, sustainable economic growth. Consequently, USAID will continue to support increases in production and productivity by private enterprises and PVOs in all sectors, particularly agriculture, agribusiness, transportation, manufacturing, and banking. This assistance will result in increased utilization of existing productive capacity, thereby helping to sustain current employment and income levels. Over time, and in coordination with other donors, USAID expects its support to the private sector to contribute to growth in
investment, employment, and real incomes in both the recorded and unrecorded sectors of the economy.

**Resources**

The Private Sector Support Program (PSSP) is USAID's flagship program in the private sector. Policy dialogue and quick-disbursing assistance are directed towards securing macroeconomic and regulatory reforms to improve the climate for private investment and business activity. Working with the World Bank and International Monetary Fund, special emphasis is being placed on financial sector reforms and efforts to increase savings mobilization and domestic credit, particularly for small and medium sized enterprises and agriculture-related activities. The PSSP's Commodity Import Program (CIP), the CIP under the proposed Transport Reform Program, and PL-480 Title I provide hard-currency financing for essential manufacturing and commercial inputs: food, fiber, equipment, spare parts, and raw materials. Some of the local currency generated from these programs will be on-lent to Zairian businesses. During the Action Plan period, USAID will also identify options for assisting Zairian cooperative savings and credit associations, or credit unions, to expand their activities for mobilizing savings and providing credit to small-scale and micro-enterprises.

The PVO community is a valued segment of the private sector. The Small Project Support Project provides small grants to PVOs working in A.I.D.'s areas of interest. In addition, private sector solutions to development needs are being supported throughout the range of USAID's projects. For instance, the Family Planning Services Project contains a dynamic and highly successful social marketing program for contraceptives; the Central Shaba Agricultural Development Project is working to develop private sector seed multiplication and distribution; and private sector contractors are funded through USAID projects for road maintenance.

**B. Target of Opportunity**

In response to the Congressional Initiative on Global Climate Change, A.I.D. designated Zaire as a key action country, based on Zaire's vast tropical forests, USAID's management and analytical capacity, and the preliminary analysis contained in the 1989 report *Conservation and Management of Tropical Forests and Bio-Diversity in Zaire*. The Zaire Mission has concurred, prepared a preliminary report (Annex I), and developed the following strategy:
Target of Opportunity: Increased Protection of Zaire's Tropical Forests and Biological Diversity.

Subtargets and Benchmark Indicators

Subtarget 5.1.1: Protected area increased.

a. Incorporation into Zaire's reserves of 2.2 million hectares currently identified as requiring protection.
b. An additional six million to 10 million hectares are identified for future incorporation into Zaire's reserves.

Subtarget 5.1.2: Increased funding for Zairian Natural Resource Management.

a. A U.S. debt-for-nature swap reduces Zaire's external debt payments by up to $30 million to $60 million per year.
b. The GOZ contributes the equivalent of $10 million to $20 million per year to a PVO-administered fund for management of Zaire's protected areas.

Rationale

Zaire currently has 181,000 square kilometers of tropical forest designated as protected and an additional 2.2 million hectares identified as needing protection. President Mobutu has indicated that he would like to see 13 to 15 percent of Zaire (30 to 35 million hectares) incorporated into reserves.

Zaire has debts to the U.S. amounting to approximately $1.5 billion, of which $885 million are held by the Export-Import (EX-IM) Bank. As one of the world's poorest countries, Zaire is not in a position to effectively protect its natural resource base while servicing its debt and pursuing productive investments for economic growth.

Increasingly, debt-for-nature swaps are being used to deal with problems such as those faced by Zaire in attempting to protect its natural resource base. Because Zaire has been designated as one of the eight key countries with respect to the U.S. Global Climate Change Initiative, and has a very solid base of U.S., international, and indigenous PVOs, Zaire is a strong candidate for a major new initiative in the debt-for-nature arena.

Resources

During FY 1990, USAID will begin to examine options for a Debt for Nature Swap modeled on the existing Debt for Development mechanism. One option to be considered is a proposal for new legislation to permit the swapping of EX-IM debt for forest
reserves and funding for resource management activities, within a long-term (20-year) framework.

III. MISSION MANAGEMENT ISSUES

A. Management of Mission Resources

1. Introduction

The evolution of USAID's strategy during the FY 1987 - 1989 Action Plan involved some reorganization of staffing and reallocation of funding. Much is in place, but further shifts in resources, staff skills, and functions will be required to carry out the FY 1990 - 1993 Action Plan. This program has been carefully developed to be within the manageable interest of the Mission, assuming that Development Fund for Africa (DFA) financing is maintained at the FY 1990 level, Operating Expense (OE) resources do not significantly decrease, and that PL-480, Title I/III assistance increases slowly over the Action Plan period. Certain resource management issues need to be resolved in the near future to ensure the most effective execution of the Action Plan within anticipated resource levels.

2. Program Funding

2.a. Planned Program. During the last Action Plan period USAID authorized five new projects/non-projects for Zaire and the Congo, while simultaneously reducing its portfolio from 31 to 21 projects (including four regional buy-ins, but excluding PL-480). By FY 1994, USAID will have authorized an additional five projects/non-projects while further consolidating its portfolio to 14 active projects focused on the DFA goal and strategic objectives. USAID's obligation and design schedules are found in Tables 1 and 2.
### Table 1: USAID/Zaire Obligation Schedule FY 1990 - FY 1995

(Millions of Dollars)

<table>
<thead>
<tr>
<th>Number</th>
<th>Sector/Type/Name</th>
<th>Pipeline 12/31/89</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zaire Program Total</td>
<td></td>
<td>76.22</td>
<td>65.0</td>
</tr>
<tr>
<td>Project Assistance</td>
<td></td>
<td>24.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Non-Project Assistance</td>
<td></td>
<td>26.0</td>
<td>15.0</td>
</tr>
<tr>
<td>PL-480</td>
<td></td>
<td>24.22</td>
<td>30.0</td>
</tr>
<tr>
<td>Health and Population Total</td>
<td></td>
<td>9.17</td>
<td>6.5</td>
</tr>
<tr>
<td>Project Assistance</td>
<td></td>
<td>8.95</td>
<td>6.5</td>
</tr>
<tr>
<td>Non-Project Assistance</td>
<td></td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>PL-480 Title II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>660-0094 Family Planning Services</td>
<td></td>
<td>3.8</td>
<td>2.8</td>
</tr>
<tr>
<td>660-0101 School of Public Health</td>
<td></td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>660-0107 Basic Rural Health</td>
<td></td>
<td>4.45</td>
<td>5.3</td>
</tr>
<tr>
<td>698-0474 HIV/AIDS</td>
<td></td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>698-0421 ASCI-CCCD</td>
<td></td>
<td>2.1</td>
<td>3.6</td>
</tr>
<tr>
<td>PL-480 Title II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>660-XXXX Health/Pop. Sector Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA and Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy-based CIP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture Sector Total</td>
<td></td>
<td>30.0</td>
<td>34.3</td>
</tr>
<tr>
<td>Project Assistance</td>
<td></td>
<td>6.0</td>
<td>4.3</td>
</tr>
<tr>
<td>PL-480 Title II</td>
<td></td>
<td>24.0</td>
<td>30.0</td>
</tr>
<tr>
<td>660-0102 Area Food &amp; Mkt. Dev.</td>
<td></td>
<td>4.7</td>
<td>3.2</td>
</tr>
<tr>
<td>660-0119 Agr. Policy &amp; Planning</td>
<td></td>
<td>4.6</td>
<td>4.3</td>
</tr>
<tr>
<td>660-0124 Agr. Research</td>
<td></td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td>660-XXXX Agr. Sector Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PL-480 Title II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Sector Total</td>
<td></td>
<td>16.3</td>
<td>10.7</td>
</tr>
<tr>
<td>Project Assistance</td>
<td></td>
<td>3.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Non-Project Assistance</td>
<td></td>
<td>13.0</td>
<td>7.0</td>
</tr>
<tr>
<td>660-0098 Agr. Marketing Development</td>
<td></td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td>660-0126 Transport Reform Program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA and Training</td>
<td></td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Policy-based CIP</td>
<td></td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td>Transport Reform Program II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA and Training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy-based CIP</td>
<td></td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>Private Sector Total</td>
<td></td>
<td>14.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Project Assistance</td>
<td></td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Non-Project Assistance</td>
<td></td>
<td>13.0</td>
<td>8.0</td>
</tr>
<tr>
<td>660-0126 Agr. Marketing Development</td>
<td></td>
<td>3.0</td>
<td>1.8</td>
</tr>
<tr>
<td>660-0121 Private Sector Support I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA and Training</td>
<td></td>
<td>21.0</td>
<td>14.0</td>
</tr>
<tr>
<td>Policy-based CIP</td>
<td></td>
<td>14.0</td>
<td></td>
</tr>
<tr>
<td>Private Sector Support II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA and Training</td>
<td></td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td>Policy-based CIP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Projects</td>
<td></td>
<td>4.75</td>
<td>4.5</td>
</tr>
<tr>
<td>660-0125 Small Project Support</td>
<td></td>
<td>5.0</td>
<td>0.8</td>
</tr>
<tr>
<td>698-0455 AFGRAD</td>
<td></td>
<td>1.4</td>
<td>1.0</td>
</tr>
<tr>
<td>698-0463 HRDA</td>
<td></td>
<td>0.3</td>
<td>1.6</td>
</tr>
<tr>
<td>698-0510 PD &amp; S</td>
<td></td>
<td>0.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>

a. Three $15 million AEPRPs are anticipated: FY 1990 - Transport Reform Program (660-0126); FY 1992 - Private Sector Support Program II; and FY 1994 - Transport Reform Program II.

b. The total regular DFA request FY 1990 - FY 1995 has been straight lined at the FY 1990 level of $35 million. The $35 million includes $2 million per year in support of the Global Climate Changes Initiative.
Table 2: USAID/Zaire Design and Obligation Schedule
FY 1990 - FY 1993

<table>
<thead>
<tr>
<th>Project</th>
<th>Design Schedule</th>
<th>Initial Oblig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0094 - Family Plan. Support (PP Amend.)</td>
<td>FY 90</td>
<td>FY 90</td>
</tr>
<tr>
<td>0105 - Central Shaba (PP Amendment)</td>
<td>FY 90</td>
<td>FY 90</td>
</tr>
<tr>
<td>0125 - Small Proj. Support (PP Amend.)</td>
<td>FY 90</td>
<td>FY 90</td>
</tr>
<tr>
<td>0126 - Transport Reform Program</td>
<td>FY 89/90</td>
<td>FY 90</td>
</tr>
<tr>
<td>XXXX - Child Survival/Basic Health</td>
<td>FY 90/91</td>
<td>FY 92</td>
</tr>
<tr>
<td>XXXX - Private Sector Support II</td>
<td>FY 91/92</td>
<td>FY 92</td>
</tr>
<tr>
<td>XXXX - Ag. Sector Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XXXX - Transport Reform - II</td>
<td>FY 93/94</td>
<td>FY 94</td>
</tr>
</tbody>
</table>

2.b. Core Program. The planned program is based on the recognition that the GOZ may falter from time to time in its resolve to implement its ambitious reform program, but that periods of backsliding will not exceed one year. If lack of resolve exceeds one year, USAID will retrench to a core humanitarian assistance program directed at those who suffer most during periods of poor policy. USAID priorities in funding under the core program will be, first, child survival and basic rural health, second, non-governmental organizations (PVOs and private sector), and third, the agriculture and transport sectors.

USAID's planned program averages $75 million per year. In the event that the GOZ abandons its reform program, $23 million in projects would be cut back to $18, $33 million in PL-480 would be cut back to $17 and the $19 million in non-program assistance (NPA) and/or CIPs would be cut back to $5 million for an average core program of $40 million (a reduction of $35 million). The major impacts of the reduced program would be first noticed in the foreign exchange market, second in the local currency credit market, and third in the GOZ budget (operating expenses) associated with the U.S. development program. The reduction would have immediate impact upon those who are in the strongest position to influence government policy.

2.c. Alternate Uses of Counterpart Funds. Currently the bulk of counterpart funds (CPF) generated from PL-480 and NPA are programmed in direct support of USAID assisted projects as follows: Health and Population, approximately $5.8 million equivalent per year; Agriculture, $5.1 million per year; Transportation, $2.7 million per year; and Miscellaneous (PVO, Private Sector, training, environment, etc.), $2.0 million per
year. Additionally, the CPF provides $2.6 million per year for GOZ Budgetary Support and USAID operating (Trust Fund) expenses, for a total of roughly $18.2 million equivalent in CPF purchasing power per year.

As USAID increases its policy-based NPA and PL-480 funding, the CPF will grow from $20 million to a projected $50 million per year. However, allowing for delays in CPF payments and the effects of a continuation of inflation at a rate of 30 to 35 percent per year, actual CPF available for disbursement will not exceed $35 million per year during the Action Plan period. The increasing level of funding will alleviate the GOZ's major constraint (financing of local costs), since USAID plans to increasingly shift to budgetary support tied to its sectoral policy based programs. USAID will continue to allocate CPF to projects, but increasingly these funds will support non-governmental organizations (PVOs, private sector implementors, and investment through private sector banks).

In periods of poor policy performance, USAID will cut back drastically on GOZ budgetary support in areas other than health. If further cuts are required, GOZ health budgets, along with those of PVO and private sector implementors, would also be reduced. USAID feels that in this manner it will be able to signal U.S. Government displeasure with inappropriate policies, in a manner which will get the immediate attention of policy makers and managers.

3. **Operating Expense/Trust Funds and Contractor Office and Housing**

USAID has made an effort during the last Action Plan period to make long-term investments that will reduce future OE costs. This has resulted in many significant improvements in the management of the Mission. From 1987 to 1990, the Mission invested approximately $5.6 million in office facilities and staff housing, including the following:

- Developed project-funded field support facilities (regional offices) and associated housing for expatriate technical staff, with positive impacts on remote area project implementation.

- Purchased computers for all USAID offices which are now equipped with Wang terminals and personal computers (PCs) connected to a Wang VS-65 plus stand alone PCs (total 67 terminals).
o Increased and consolidated USAID office space; major renovations have improved space utilization and increased staff efficiency.

o Installed a new generator which insures that USAID offices function during power outages.

o Replaced vehicles and increased the size of the motor pool, with particular emphasis on improving our fleet of four-wheel drive field vehicles.

o Purchased a 12-unit apartment building and two houses, resulting in long term OE/Trust Fund savings over rentals.

o Upgraded and improved within the same overall cost, the apartments and houses rented by the Mission.

Having made these investments, much is in place now that will help the Mission to function within current operating expense and trust fund constraints. It is anticipated that USAID can continue the current level of effort (required to carry out this Action Plan) without significant increases in OE levels over the FY 1990 - FY 1992 period.

4. **Staffing and Management**

4.a. **U.S. Direct Hire and Contract.** At present, the Mission has nearly a full staff in place. Two important additions within the past year were a Direct Hire (USDH) Commodity Management Officer and a USDH Contracts Officer. These additions have enabled the Mission to put into place efficient systems for procurement of services, and project and non-project commodity imports. These new management systems were an integral part of USAID's shift to non-project assistance and policy dialogue which require effective management of the many service and commodity contracts entered into by USAID/Zaire. Also, USAID has considerably upgraded its private sector, agricultural economic, and Republic of the Congo support staff in order to carry out the required analysis, implementation, and oversight required for effective policy dialogue.

USAID's ability to maintain its current mix of staff is based on the following three assumptions: 1) OE budget levels will remain constant in real terms; 2) Trust Fund availabilities for OE will continue to be provided at the level of the two prior fiscal years (currently, approximately 50 per cent of our total OE costs); and 3) the Mission will be able to continue to finance project-related personnel from project funds -- seventy percent of the 43 U.S. Personal Services Contractors (PSCs) working in
various regions of Zaire are funded from the projects to which their activities are related. Further reductions in USDH and OE funded support staff as a result of OE funding shortages would require rethinking of staff functions.

USAID's shift from project to non-project assistance, and the present need (under the DFA) for greater and improved impact data collection and analysis, have important Mission management implications. USAID is committed to policy analysis and dialogue and the establishment of a program impact evaluation system. This entails an ambitious agenda of research for program and project design, policy implementation, and impact evaluation. USAID will continue its shift in staff mix from project managers to more research and policy analysis skills, as well as commodity management, budgeting, and accounting skills. However, Washington's commitment to improved data collection and analysis, and impact reporting to improve resource allocation decisions, requires revisions in A.I.D. policy to allow missions the flexibility to alter systems and to hire officers with greater socio-economic analytical skills, either as Direct Hire staff or under projects as Personal Services Contractors (PSCs). This is particularly critical in a large African mission like USAID/Zaire, where overall coordination of impact data collection and analysis is difficult, given the large geographic areas and wide range of activities in the portfolio. USAID/Zaire and A.I.D./W must also come to grips with the fact that impact reporting requires additional, or a change in focus of, research, design, and evaluation efforts already imposed as part of the project design, authorization, and implementation process.

4.b. Foreign National, Direct Hire, and Contract. The Mission must improve its ability to retain and recruit Zairian staff. This is particularly crucial in light of current and projected OE constraints. USAID/Zaire needs to begin a shift from U.S. PSC staff, to highly qualified and motivated Foreign Service National (FSN) staff as a long-term investment directed at cost reduction. At present, this is nearly impossible, given the poor salary scale and USAID's limited ability to fund enough training for FSNs. The real value of FSN salaries has been declining each month for the past few years. Salaries declined by 25 percent in dollar terms between May 1989 and February 1990 alone. It is therefore difficult to retain high quality personnel and even harder to try to attract new talent. For example, the Controller's Office constantly loses candidates with accounting skills to employers who can provide better compensation, and it took the Program Office three years of aggressive recruiting to hire an Economist with a Master's degree. The immediate need is for USAID to be able to offer a salary and benefit package that provides an employee's family
with a reasonable standard of living and is competitive with the market.

Training is also necessary to improve FSN staff skills to fit the evolving needs of the Mission. As OE constraints and A.I.D.'s current policy do not permit the funding of long-term FSN academic training, perhaps it is time for A.I.D. to rethink its policy and consider initiating, at least in the Africa Bureau, a program-funded project under which USAIDs could improve the quality of their FSN staff by financing long-term academic training, as well as short-term technical and management training, in required skills. Such an initiative would be long-term in that USAID/Zaire would foresee sending one FSN per year to obtain a minimum of a Bachelor's degree in critical skill areas. Returned FSNS would be required to serve a minimum of six years in the USAID structure to provide training to other qualified Zairian staff, and help develop the capacity of their Zairian co-workers.

5. Organization

Over the period of the Action Plan, the new senior management team will need to reconsider the present Mission organization, in particular the size and role of the Project Design and Operations Office (PDO). There will be a major turnover at the senior staff level in mid-1990. Replacements with the appropriate mix of skills have already been identified for most of those positions, with the important exception of the Chief of the Project Development Office. PDO is the largest office in USAID/Zaire and is responsible for project design, commodity procurement, transportation projects and private sector activities. It has a staff of four USDH, ten U.S. PSCs, and nineteen FSNS. Given the size and broad range of responsibilities of the office, a Senior Project Development Officer is required to head it up. At present no such person has been designated by A.I.D./W, and the existing Chief is departing post in August of this year. If this situation is not resolved quickly, consideration should be given to reducing or eliminating PDO by redistributing its functions.

6. Conclusion

In the short run, USAID is embarking on important design efforts in agricultural research and transport, and will soon do the same for health and population, and environmental activities. Attention will be paid to designing these activities so that they contribute to the Mission's strategic objectives and remain
within the Missions manageable interest. It is also important that USAID and A.I.D./W resist the temptation over the Action Plan period to include new activities outside of USAID's strategic objectives and manageable interest, if we are to have a chance to make this new planning-programming-implementation exercise a success.

B. Tracking and Performance Evaluation

1. Objectives

USAID/Kinshasa very much shares the Africa Bureau's commitment to demonstrating results, that is, the "people-level impact" of our assistance. This is why USAID is actively engaged in monitoring and evaluation activities that collect and analyze data in order to report on results and to inform managers on how to better use development resources to achieve maximum impact.

2. Current Reporting, Monitoring and Evaluation System Components

a. Program Impact Reporting. Over the past few years, the Project Implementation Review (PIR) Overview Statement has been the Mission's main vehicle for reporting on program impact, successes and problems. USAID will continue to improve its program reporting through the Overview Statement or the proposed Assessment of Program Impact (API). This reporting will address performance with respect to the Mission's goal, strategic objectives and targets based on the indicators presented in this Action Plan (Section II) as well as results generated from all monitoring, research and evaluation activities.

b. Project Implementation Reviews. The PIRs will continue to be a major Mission tool for reviewing implementation problems and progress, and for examining the effectiveness of project inputs and outputs in contributing to project purposes. It is, however, anticipated that project research efforts will strengthen PIRs by improving the Mission's ability to measure project impact as well as facilitating corrective actions at the project level. Moreover, PIRs will be used to document USAID management decisions and corrective actions based on project research, evaluations and technical or administrative consultancies.
c. **Project Evaluations.** Independent evaluations of special concerns and specific project or non-project assistance, including start-up, mid-term, and final evaluations, are important management tools that must be maintained. However, management's project evaluation needs will be examined in relation to the increased levels of information provided by other system components, such as PIRs, research, technical reviews and impact evaluations. A reduction in the number of major project evaluations over the Action Plan period is planned. At the same time, to facilitate the day-to-day problem-solving process, project officers will commission narrowly-defined technical or administrative reviews and minor research. These activities will be documented through the A.I.D. Evaluation Summary (AES) to ensure adequate documentation of project redesign and mid-course corrections.

d. **Program Impact Evaluation.** Program Impact Evaluation (PIE) is a new component of the Mission's research and evaluation system. PIE provides a framework for collection of data required to enhance the Mission's ability to analyze the critical linkages between project and non-project assistance vis-a-vis achievement of the Mission's goal, strategic objectives, targets and associated indicators. With PIE, USAID is improving the coordination of its research efforts and placing greater emphasis on development of data bases to support quantitative impact evaluation and semi-annual reporting. As a consequence, use of large multi-disciplinary teams will be de-emphasized in favor of evaluations building upon research results, data bases and ground-truthing to measure impact.

The PIE approach is possible because recent advances in micro-computer technology are allowing USAID to assemble and integrate data sets using existing secondary data. Three types of data bases are presently being assembled: first, location-specific data that permit analysis of project impacts using a geographic information systems approach; second, non-location-specific data bases which will facilitate the development and use of regional social accounting matrixes and economic models; and third, annotated bibliographies on research topics related to the USAID program.

Impact evaluation will focus upon the relationships between strategic objectives and four measures of "people-level impact:" labor productivity, per capita consumption of goods and services, nutritional status, and child survival. During the implementation of this Action Plan, USAID will further develop and report on program-level indicators corresponding to these four measures and how changes were influenced by project inputs.
The FY 1989 evaluation of the Structural Adjustment Support Grant (660-0120) represented the first use of the PIE approach to impact evaluation. This evaluation relied on data from previous studies of agricultural market liberalization as well as a study on changes in manufacturing productivity to assess the impact of the Grant. For the future, in order to improve non-project assistance evaluations and measure the likely impacts of economic policy reforms, key economic linkages are currently being modeled by Cornell University, with the participation of local researchers and support from the Africa Bureau and USAID. The Cornell approach is to construct a social accounting matrix of the Kinshasa-Bandundu economic region as the basis for a macroeconomic model.

e. PIE Research Management. Program impact evaluation is still in the developmental stage. It will be based upon data bases built by combining existing secondary data with information generated by USAID projects for use in internal management and measurement of benchmark indicators. PIE data base development is part of the Mission's effort to coordinate research, minimize duplication of effort, and reduce costs. Previously, project research and data base development were decentralized and inadequately documented. This inhibited rigorous analysis and impact reporting. Therefore, to facilitate development of these bases, USAID is centralizing coordination of research in its Program Office and is developing specific guidelines for future USAID financed research. These guidelines will deal with data collection, scientific sampling, data analysis, management of electronic data processing and data presentation.

USAID is developing its data bases and analysis guidelines in cooperation with Zaire's National Institute of Statistics, the School of Public Health, the "Service d'Etudes et Planification" (SEP), the "Centre de Planification de la Nutrition" (CEPLANUT), and other information units such as those contained in USAID's two area development projects. As a result, the quality of local data collection, analysis and utilization should improve. The pay offs are already apparent - the data bases assembled by USAID are in demand by other donors and the GOZ, and cooperative efforts are currently being pursued by the UNDP, World Bank, Belgian Aid and USAID within the National Institute of Statistics, the School of Public Health and the Department of Agriculture.

3. Conclusion

USAID has, within current resource constraints, laid out an evolving framework for examination of critical linkages among
project inputs, outputs, targets, strategic objectives and the program goal in support of impact reporting and the targeting of assistance. Impact analysis will focus on labor productivity, per capita consumption, nutritional status and child survival as related to the achievement of the Mission's strategic objectives. The principal foundations are data bases structured to support analysis using geographic information system and social accounting matrix methodologies. USAID's monitoring and evaluation system strengthens data base development, maintains the positive aspects of independent project evaluation, and provides Mission management with greater flexibility to deal with problems and document management solutions. Program impact evaluation will complement proven components of USAID's monitoring and evaluation system, the PIR and project evaluations, and strengthen research and reporting through the PIR Overview Statement or API.

C. Coordination with Other Donors

Zaire receives financial and technical assistance from several multilateral and nearly a dozen bilateral donors. The World Bank, the largest multilateral, provides a framework for structural adjustment and quick-disbursing assistance, with sector programs and projects in energy, transport, agriculture, education, and mining. Among the largest bilateral donors, Belgium is active primarily in agriculture and education, France provides assistance mostly in transport and communications, natural resources, and education, and Italy provides the largest part of its technical assistance in health. Japan is becoming increasingly active in development assistance to Zaire. A.I.D.'s role among the international donors is as leader in focusing on expanding economic opportunity within Zaire's largest rural-urban markets.

Prior to FY 1986, the USAID program, with the exception of the health portfolio, was focused on specific target groups and geographic locations. Although USAID was knowledgeable of other donor efforts, little coordination with other donors was required. With the design and authorization of the AEPRP-funded Structural Adjustment Support Grant in FY 1986, USAID began to actively coordinate actions directed at broad-based structural problems. The AEPRP represented parallel financing to the World Bank Industrial Sector Adjustment Credit (ISAC) and contained complementary conditionality to that of the ISAC. Moving the AEPRP forward necessitated increased donor coordination.

These efforts have since grown to include other sectors and donors. The development of the PSSP was the result of close coordination with the World Bank and the IMF with respect to
constraints to private enterprise development and financial sector reform. Not only was there a sharing of information, but USAID co-financed World Bank design of a Financial Sector Adjustment Credit which will build upon and complement the PSSP.

In the agriculture sector, an ad hoc donor committee under the auspices of the World Bank, and including major bilateral donors, was established in mid-1987 to coordinate action in support of the reorganization of the National Agricultural Research Institute (INERA), including the possible merger of INREA and RAV, and the revitalization of agricultural research. Also, the World Bank, FAO, Canada, and USAID coordinate efforts in agricultural statistics, analysis, and policy formulation. The World Bank, UNDP, and USAID are currently discussing coordination of agricultural extension efforts in Bandundu and Shaba.

In the Transport sector, at USAID's initiative, the World Bank formed a donors' working group on road transport in May 1988. Participants include the World Bank, USAID, West Germany, Belgium, Canada, France, Italy, Japan, and the EEC. This group is coordinating assistance with emphasis on the development with the GOZ of common transport policy positions. Meetings have focused on financing feeder road maintenance and a technical audit of the national Office des Routes. In May 1989, the latter was co-financed by the World Bank and USAID. Based upon this audit, USAID and the World Bank are involved in a joint design for parallel financing of transport sector adjustment programs in FY 1990 aimed at common policy reform objectives.

In health, donor coordination in carrying out basic health, child survival, HIV/AIDS, and water initiatives has been a standing pillar of the USAID program. All of the major international and bilateral donors have participated.

Donor coordination on policy reforms will be increasingly important during the upcoming Action Plan period. Despite the considerable resources which USAID will bring to bear over the Action Plan period, these resources in themselves are not adequate for USAID in isolation to leverage major reform. USAID, therefore, will increasingly improve its capacity for analysis, coordination, and dialogue to ensure that it is in a position to make a major contribution to the IMF- and World Bank-led policy dialogue and structural adjustment effort.
IV. SPECIAL CONSIDERATIONS

A. Gender Issues

The Mission's strategy for incorporating gender considerations into its program is to address the major constraints confronting women in those sectors where USAID is otherwise active. This involves: a) increasing women's access to and encouraging their participation in USAID-sponsored activities in areas beyond those traditionally reserved for women; b) improving the health status of women, especially those of child-bearing age; c) increasing women's access to improved farming technologies which have traditionally been reserved for men; d) providing opportunities for women to increase family incomes through direct participation in and as beneficiaries of project activities; and e) promoting understanding and resolving constraints to women's participation through donor coordination on gender issues, specifically, and social issues, generally. Annex J contains USAID/Kinshasa's Women in Development Action Plan.

B. Public Law 480

PL-480 Title I commodity aid is a critical element of the Mission's assistance to Zaire, accounting for approximately 40 percent of yearly obligations. The objectives of this assistance are: a) to alleviate the immediate gap in basic foods and cotton fiber; b) to maintain employment and in-country value added; and c) to provide foreign exchange support for the importation of essential commodities.

The present mix of commodities imported under PL-480, wheat, rice, and cotton, is justified by analyses of supply and utilization. The question of disincentives on local crop production has also been examined, with the Mission concluding that PL-480 wheat, rice, and cotton imports do not displace local production. However, the Mission recommends against maize, tallow, soy product, and vegetable oil food aid at this time on disincentive grounds. The Mission will continue to work with the GOZ's Department of Agriculture to further refine the data and analysis of crop production and the impacts of PL-480 aid. All PL-480 commodities are imported and distributed through the private sector, with counterpart funds being programmed and closely monitored by USAID in cooperation with the GOZ's Department of Plan (see Annex H).
C. Environment

USAID is actively involved in programs to address environmental concerns. In response to the new Congressional Mandate, the Mission is designing an amendment to its Small Project Support Project to finance PVO and Peace Corps projects which will contribute to the effort to retard Global Warming. The Mission has also identified a Target of Opportunity, to increase protection of Zaire's tropical forests and biological diversity, and is exploring the possibility of a debt-for-nature swap to protect additional tracts of tropical forest. During FY 1989, the Mission conducted a study entitled "Conservation and Management of Tropical Forests and Bio-Diversity in Zaire," which has subsequently influenced project implementation and is guiding USAID's movement into a more aggressive environmental protection program.

Several activities related to Natural Resource Management are already integrated into ongoing Mission agriculture projects. For example, the Area Food and Market Development Project (660-0102) in Bandundu is active in reforestation and soil conservation, and the Applied Agricultural Research and Outreach Project (660-0091) conducts research on improved biological technologies for pest control and on soil conservation. USAID also provides needed training in conservation and natural resource management practices (see Annex I).

D. Human Resource Development

USAID plays a highly significant role in human resource development through participant training programs and project-related training activities. These training activities are geared to support achievement of the Mission's strategic objectives while placing special emphasis on women and the private sector. Buy-ins to the Human Resources Development Assistance (HRDA) and African Graduate Fellowship (AFGRAD) Projects are responsible for the advanced training of over 100 Zairians per year. Health and agriculture projects in particular include training components, the most visible of which is the School of Public Health Project (660-0101). In-country training for operators of small businesses is funded through counterpart fund contributions to the Human Resources Development Assistance Project; special sessions are designed to attract participation by women.

In response to inquiries by A.I.D./W, the Mission has also analyzed possible assistance to the primary and secondary education sub-sectors. This has resulted in the conclusion that
USAID has neither the resources nor a comparative advantage for participation in these subsectors. Heavy specialization in other sectors, language barriers and the ongoing involvement of other donors, including the World Bank and Belgium, are among the factors supporting this conclusion (see Annex G).

E. Private and Voluntary Organizations

Private and Voluntary Organizations play a central role in USAID's program, as implementing agents for many of the Mission's project activities, and as direct beneficiaries of USAID's efforts to support growth in the private sector. More than 20 percent of USAID resources benefit PVO activities in Zaire. PVOs are valued partners in the development effort because of their strong roots in Zaire and their unique ability to work at the grass-roots level, contributing to broad-based economic growth (see Annex K).

F. Title XII

Mission consideration of Title XII collaboration has resulted in the decision to pursue design and implementation of the follow-on agricultural research project which is scheduled for authorization in late FY 1990 using the Title XII collaborative design mechanism. This project will forge valuable new links between Zaire's agricultural research institutions and a consortium of land-grant universities in the U.S.

G. Gray Amendment

Recent legislative changes require A.I.D. to ensure that at least 10 percent of all contracts or subcontracts are awarded to small and disadvantaged institutions and minority individuals (Gray Amendment entities). To meet and hopefully exceed this 10 percent requirement at the Mission level, USAID has specified two contracts for Gray Amendment entities as 8(a) set-asides: an Indefinite Quantity Contract to provide management studies in support of the Private Sector Support Program (660-0120) and a four-year technical assistance contract for the Area Food and Market Development Project (660-0102). Also, the Mission is reviewing capability statements of 8(a) qualified Gray Amendment entities to determine their possible role in providing technical assistance to the Transport Reform Program (660-0126).
Additionally, the Mission has recently concluded negotiations with a large firm to provide technical assistance to the Agricultural Marketing Development Project (660-0098). The contract requires that the firm subcontract for at least 10 percent of the contract's value with Gray Amendment entities for services and short-term consultants. Other Mission contracts with non-Gray Amendment firms will also have the stipulation that at least 10 percent of the contract value will be subcontracted to Gray Amendment entities. Finally, the Title XII agricultural research program noted above will be contracted with a consortium of universities, prominently led by an Historically Black College and University (HBCU).
ACTION PLAN

FY 1990-1993

ZAIRE

Volume 2
Annex A-B

JUNE 1990

Agency for International Development
Washington, D.C. 20523
ANNEX A

TABULAR PRESENTATION OF
GOAL, STRATEGIC OBJECTIVES AND INDICATORS
FOR FY 1990 - 1993

USAID/Zaire
### Program Logical Framework, FY 1990 – 1993

#### Goal
To Contribute to Sustainable, Broad-based, Market-oriented Economic Growth and Development

#### Country Trend Indicators
1. The recorded Gross Domestic Product will increase at a rate of 3.5 percent per year between 1990 and 1995.
2. Labor productivity of men and women will increase as demonstrated using national census and survey data.
3. The infant mortality rate will decline from 110 per 1000 live births in 1988 to 80 by 2000.
4. The total fertility rate will decline from 6.1 children per woman in 1987 to 5.8 in 2000.

#### Strategic Objective 1:
Improve Health Status, with Emphasis on Increasing the Rate of Child Survival and Reducing the Population Growth Rate

#### Program Performance Indicators
A. Reduce infant mortality rates from 110 per 1000 live births in 1988 to 95 in 1995.
B. Reduce mortality rates for children between 1 and 5 years of age from 54 per 1000 in 1989 to 45 per 1000 in 1995.
C. Increase contraceptive prevalence from 2 percent in 1988 to 7 percent in 1995.

#### Targets
1.1: Decreased Diarrhea-Related Morbidity and Mortality
1.2: Reduced Vaccine-Preventable Morbidity and Mortality
1.3: Reduced Morbidity and Mortality from Malaria

#### Benchmark Indicators
b. Rural population in USAID-assisted health zones provided with potable water increases from 1.3 million in 1989 to 1.6 million in 1992.
c. Deaths due to severe diarrhea reduced in sentinel areas from 404 in 1988 to 200 in 1992.

a. Measles vaccine coverage rates among children 12 to 23 months increase from 44 percent in 1988 to 60 percent in 1992.
b. Polio vaccination (third dose) coverage rates for children 12-23 months increase from 41 percent in 1988 to 60 percent in 1992.
c. Diptheria, pertussis, tetanus vaccine (third dose) coverage rates for children 12 to 23 months increase from 41 percent in 1988 to 60 percent in 1992.

a. Increase percentage of public health facilities practicing presumptive treatment of fever among children less than five years old from 90 percent in 1988 to 100 percent in 1992.
| 1.4: Increased Couple Years of Contraceptive Protection (CYP) | a. Increase sales and distribution of contraceptives in the private sector from 12,500 CYP in 1988 to 180,000 CYP in 1992.  
b. Increase couple years of protection from all contraceptive methods from 30,000 CYP in 1988 to 235,000 CYP in 1992. |
| --- | --- |
| t.5: Reduced HIV/AIDS Transmission | a. Increase condom distribution in high-risk urban areas from 800,000 units in 1988 to 8 million units in 1992.  
| 1.6: Increased Access to and Improved Quality, Efficiency and Sustainability of Health Services | a. Convert 720 dispensaries into full service health care centers by 1992.  
c. Provide access to under-five clinics for 625,000 (52 percent) of children living within 50 BRH-II-assisted rural health zones by 1992, compared to 400,000 in 1989.  
d. Provide access to prenatal clinics for 625,000 (52 percent) of women of child bearing age living within 50 BRH-II-assisted rural health zones by 1992 compared to 340,000 in 1989.  
e. Conduct research and initiate pilot projects to develop new health zone level cost recovery strategies, including health insurance and other prepayment schemes. |
| 1.7: Improved Population, Health and Water Policies Adopted by GOZ | a. Actual GOZ total budgetary expenditures in health and family planning increase from $0.33 per capita per year in 1986 to $1.00 per capita by 1992.  
c. GOZ establishes a national plan for operation and maintenance of water systems by 1992. |
<table>
<thead>
<tr>
<th>Strategic Objective 2:</th>
<th>Program Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Agricultural Production, Productivity and Rural Household Income, with Emphasis on the Bandundu and Shaba Regions</td>
<td>A. Real returns to crop labor hours increase.</td>
</tr>
<tr>
<td></td>
<td>B. Crop yields per hectare increase.</td>
</tr>
<tr>
<td></td>
<td>C. Rural household incomes increase.</td>
</tr>
<tr>
<td></td>
<td>D. Food consumption increases.</td>
</tr>
<tr>
<td></td>
<td>E. Natural resource management improves.</td>
</tr>
</tbody>
</table>

**Targets**

2.1: Increased Sustainable Crop Production and Productivity for Domestic and Export Market

<table>
<thead>
<tr>
<th>Benchmark Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cassava production in Bandundu and Shaba increased by 25 percent over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>b. Maize production in Bandundu and Shaba increased by 35 percent over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>c. Peanut production in Bandundu and Shaba increased by 35 percent over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>d. Real returns to crop labor hours increased for maize and cassava by 20 percent in Bandundu and Shaba over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>e. Marketed surplus for maize and cassava in Bandundu and Shaba increased by 50 percent over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>f. Marketed surplus for peanuts in Bandundu and Shaba increased by 55 percent over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>g. Soil conservation and natural resources management technologies developed and utilized by 137,000 farmers by 1993.</td>
</tr>
</tbody>
</table>

2.2: Market-oriented Policy and Institutional Incentives Provided for Rural Agricultural Enterprises

<p>| GOZ eliminates regulations and practices restricting the inter-regional flow of agricultural commodities by 1993. |
| GOZ eliminates regulations and practices involving administrative determination of crop marketing seasons by 1993. |
| GOZ eliminates compulsory cropping regulations and practices by 1993. |
| GOZ formulates policies supporting establishment and operation of a viable food crop seed production and distribution system. |
| GOZ refines its data base to incorporate physical and economic data (area planted, yield, production, producer and consumer prices, export and import data, etc.) on major agricultural crops of Bandundu and Shaba. |
| GOZ conducts timely and sound economic analyses of investment for consideration during the Priority Investment Program and Public Expenditure Program allocatin processes. |
| Percentage of national investment budget and of Priority Investment Budget going to the agricultural sector increases to 20 percent over the 1989 to 1993 period. |
| GOZ undertakes appropriate measures to institute a tender and bid system for Gecamine's local purchase of maize, to promote competition in the maize market. |</p>
<table>
<thead>
<tr>
<th>Strategic Objective 3:</th>
<th>Program Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve the Provision of Sustainable Transport Infrastructure Services and Maintain Road and River Infrastructure, Particularly in Bandundu and Shaba</td>
<td>A. Increase flow of goods and services on roads and rivers in Bandundu and Shaba, as demonstrated through comparisons with project baseline studies.</td>
</tr>
</tbody>
</table>

**Targets**

3.1: Sustainable Mechanisms for Financing Infrastructure Established by GOZ

3.2: Efficient Transport Infrastructure Management Institutions Established by GOZ through Policy and Institutional Reform

3.3: National and Regional Priority Infrastructure Maintained, as Identified in Annual and Multi-annual Plans

3.4: Private Sector Involvement in the Production of Transport Infrastructure Services Increases

3.5: Responsibility of Regional Organizations in the Management of Transport Infrastructure Increased by the GOZ

3.6: Bandundu and Shaba Roads Rehabilitated

**Benchmark Indicators**

a. Fuel prices correspond to import prices, distribution costs and reasonable profits.
b. Office des Routes and SNRDA receive a minimum of 45 percent of fuel tax receipts or a minimum of $30 million per year in revenues from fuel surtaxes.
c. A greater and more equitable share of financial responsibility for the cost of road use is shifted to road users.
d. Office des Routes debts incurred prior to January 1990 are eliminated by June 1991.
e. Office des Routes debts incurred after January 1990 are serviced regularly.

a. Priority annual road plans of Office des Routes and SNRDA correspond to available annual funding.
b. Investment options for maintenance, rehabilitation and new construction are identified in the National Road Master Plan which will be completed by 1992.
c. Office des Routes personnel are reduced from 7,500 to 5,000 by 1993.

a. Selected traffic surveys show a steady increase in the number of vehicles but no marked increase in travel times on rehabilitated roads.
b. Maize tonnage transported on central Shaba roads, as measured at railheads, increased from 50,000 tons in 1989 to 80,000 in 1992.

a. Manual and light mechanical maintenance of earth roads in the Office des Routes and SNRDA networks increases from 17,000 km to 34,000 km by 1993.
b. The private sector handles more of the management of equipment and laboratory functions.
c. The private sector assumes greater responsibility for the execution of construction, rehabilitation and heavy maintenance activities currently undertaken by the Office des Routes.

a. Increased delegation of authority is given to Office des Routes and SNRDA regional offices for matters pertaining to contracting, personnel issues, annual planning and supplemental resource allocation.
b. Regional Road Commissions assume responsibility for mobilization of resources in addition to national budgets, and for coordination of regional road maintenance programs.

c. GOZ completes rehabilitation of 1500 km of roads in Bandundu and Shaba between 1989 and 1993.
<table>
<thead>
<tr>
<th>Strategic Objective 4:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Production and Productivity of Private Enterprises, with Emphasis on Manufacturing, Transport and Agribusiness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Manufacturing GDP increases by 4 percent per year between 1990 and 1993, compared to 3.4 percent between 1985 and 1988.</td>
</tr>
<tr>
<td>B. Capacity utilization rate of medium-sized manufacturing firms increases from 50 percent in 1987 to 60 percent in 1993.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1: Sustained Growth in Domestic Credit Outstanding to Small and Medium Enterprises (SMEs) and Farm Firms Achieved</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benchmark Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Share of total domestic credit going to the private sector increases from 26 percent in 1989 to 50 percent in 1993.</td>
</tr>
<tr>
<td>b. GOZ Rural Financial Markets Study is completed and other priority recommendations are implemented.</td>
</tr>
<tr>
<td>c. Baseline data established for measurement of the commercial investment of COOPECs and the overall economic impact of savings and lending activities.</td>
</tr>
<tr>
<td>d. Real savings in commercial banks increases by 4 percent per year between 1991 and 1993.</td>
</tr>
<tr>
<td>e. Mobile savings mobilization facility is strengthened and expanded, reaching 10 new COOPECs over the 1989 to 1993 period.</td>
</tr>
<tr>
<td>f. Total COOPEC savings mobilized increased by 30 percent over the 1990 and 1993 period.</td>
</tr>
<tr>
<td>g. Reserve requirements on demand deposits are reduced and a portion of these reserves are remunerated, resulting in a decrease of 20 percent in the transfer from banks to the Bank of Zaire (BOZ) as measured by the implicit cost per 1000 zaires held as demand deposits by the banks.</td>
</tr>
<tr>
<td>h. The CCA (turn-over tax) on interest payments reduced from 18 percent in 1989 to 9 percent in 1991.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subtarget 4.1-1: Increased Domestic Savings Mobilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtarget 4.1-2: Establish and Maintain Market- determined Interest Rates and Reduce Costs of Funds to Banks and Non-bank Financial Institutions</td>
</tr>
<tr>
<td>4.2: GOZ's Macroeconomic Adjustment Program Supported</td>
</tr>
</tbody>
</table>

| Target 4.3: Private Enterprise and PVO Production and Delivery Mechanisms Developed in Conjunction with USAID-supported Projects |

<p>| a. Private participants in the PSSP-CIP and PL-480 program increase capacity utilization by 5 percent. |
| b. The gap between official and parallel exchange rates remains below 20 percent. |
| c. Inflation rate is reduced to and remains below 40 percent per year, or at a target agreed between GOZ and IMF. |
| b. Private sector sales and distribution of condoms and spermicide tablets increase from 1.25 million units in 1988 to 18 million units in 1992. |</p>
<table>
<thead>
<tr>
<th>Target of Opportunity:</th>
<th>Increase Protection of Zaire's Tropical Forests and Biological Diversity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subtargets</strong></td>
<td><strong>Benchmark Indicators</strong></td>
</tr>
</tbody>
</table>
| 5.1.1: Protected Area Increased | a. Incorporation into Zaire's reserves of 2.2 million hectares currently identified as requiring protection.  
b. An additional 6 million to 10 million hectares are identified for future incorporation into Zaire's reserves. |
| 5.1.2: Increased Funding for Zairian Natural Resource Management | a. A U.S. Debt for Nature swap reduces Zaire's external debt payments by up to $30 million to $60 million per year.  
b. The GOZ contributes the equivalent of $10 million to $20 million per year to a PVO-administered fund for management of Zaire's protected areas. |
Goal, Strategic Objectives and Target of Opportunity

To Contribute to Sustainable, Broad-based, Market-oriented Economic Growth and Development

1. Improve Health Status, with Emphasis on Increasing the Rate of Child Survival and Reducing the Population Growth Rate

2. Increase Agricultural Production, Productivity and Rural Household Income, with Emphasis on the Bandundu and Shaba Regions

3. Improve the Provision of Sustainable Transport Infrastructure Services and Maintain Road and River Infrastructure, Particularly in Bandundu and Shaba


Target of Opportunity: Increase Protection of Zaire's Tropical Forests and Biological Diversity
Strategic Objective 1 and Targets

Improve Health Status, with Emphasis on Increasing the Rate of Child Survival and Reducing the Population Growth Rate

1.1: Decreased Diarrhea-Related Morbidity and Mortality
1.2: Reduced Vaccine-Preventable Morbidity and Mortality
1.3: Reduced Morbidity and Mortality from Malaria
1.4: Increased Couple Years of Contraceptive Protection
1.5: Reduced HIV/AIDS Transmission
1.6: Increased Access to and Improved Quality, Efficiency and Sustainability of Health Services
1.7: Improved Population, Health and Water Policies Adopted by GOZ
Strategic Objective 2 and Targets

Increase Agricultural Production, Productivity and Rural Household Income, with Emphasis on the Bandundu and Shaba Regions

2.1: Increased Sustainable Crop Production and Productivity for Domestic and Export Market

2.2: Market-oriented Policy and Institutional Incentives Provided for Rural Agricultural Enterprises
Strategic Objective 3 and Targets

Improve the Provision of Transport Infrastructure Services and Maintain Road and River Infrastructure, Particularly in Bandundu and Shaba

3.1: Sustainable Mechanisms for Financing Infrastructure Established by GOZ

3.2: Efficient Transport Infrastructure Management Institutions Established by GOZ through Policy and Institutional Reform

3.3: National and Regional Priority Infrastructure Maintained, as Identified in Annual and Multi-annual Plans

3.4: Private Sector Involvement in the Production of Transport Infrastructure Services Increased

3.5: Responsibility of Regional Organizations in the Management of Transport Infrastructure Increased by the GOZ

3.6: Bandundu and Shaba Roads Rehabilitated
Strategic Objective 4 and Targets

Increase Production and Productivity of Private Enterprises, with Emphasis on Manufacturing, Transport and Agribusiness

4.1 Sustained Growth in Domestic Credit Outstanding to Small and Medium Enterprises (SMEs) and Farm Firms Achieved

Subtarget 4.1-1: Increased Domestic Savings Mobilization

Subtarget 4.1-2: Establish and Maintain Market-determined Interest Rates and reduce costs of funds to Banks and Non-bank Financial Institutions

4.2: GOZ’s Macroeconomic Adjustment Program Supported

4.3: Private Enterprise and PVC Production and Delivery Mechanisms Developed in Conjunction with USAID-supported Projects
Target of Opportunity and Subtargets

Target of Opportunity: Increased Protection of Zaire's Tropical Forests and Biological Diversity

- Protected Area Increased
- Increased Funding for Zairian Natural Resource Management
ANNEX B

USAID/ZAIRE FY 1987 - 1989

PROGRAM PERFORMANCE AND IMPACT

USAID/Zaire
USAID/ZAIRE FY 1987 - 1989
PROGRAM PERFORMANCE AND IMPACT

TABLE OF CONTENTS

Table of Contents i
Glossary of Terms Used iii

I. PROGRAM OVERVIEW AND CONTEXT 1

A. Overview 1
   1. Economic Stabilization and Recovery 1
   2. Small Farmer Output 2
   3. Farm-to-Market Transportation 2
   4. Child Survival 3

B. Program Resources 4
C. Policy Environment 6

II. PROGRAM PERFORMANCE FY 1987 - FY 1989 7

A. Economic Stabilization and Recovery 7
   1. GOZ Budgetary Discipline Resumed 8
   2. Market-Based Official Exchange Rate at Central and Commercial Banks Maintained 9
   3. Impediments to Trade and Investment Reduced 10
   4. Private Sector Production and Productivity Increased 11

B. Small Farmer Output 12
   1. Agricultural Pricing Liberalized 12
   2. Production of Maize, Cassava, and Legumes Increased 14
   3. Genetic Materials for Food Crops Improved through Concentrated Research 15
   4. Accelerated Outreach Mechanisms Developed and Transferred 17

C. Farm-to-Market Transportation 19
   1. Roads Rehabilitated in Bandundu and Shaba 19
   2. Transport Infrastructure Strengthened 21
II. D. Child Survival

1. Coverage for Vaccine-Preventable Diseases and Malaria Increased
2. Primary Health Care Services in Rural and Urban Areas Improved
3. Availability and Use of Safer Drinking Water Expanded
4. Contraceptive Couple Years of Protection (CYP) Raised
5. Protective Measures Against Transmittal of HIV/AIDS Taken
6. Public Health Personnel Trained

E. Cross-Cutting Support

III. Lessons Learned and Implications for the FY 1990 - 1993 Action Plan

A. Program Management
B. Economic Adjustment and the Private Sector
C. Agriculture
D. Transport
E. Health and Family Planning
F. Other
GLOSSARY OF TERMS USED

AFR : A.I.D.'s Bureau for Africa
A.I.D. : U.S. Agency for International Development
AIDS : Acquired Immune Deficiency Syndrome
AIDSTECH : Centrally-funded AIDS Technical Assistance Project
BRH : Basic Rural Health
BUNASEM : Bureau National des Semances
CCC : Combatting Childhood Communicable Diseases Project
CENACOF : Centre National de Coordination de la Formation
CIP : Commodity Import Program
CPF : Counterpart Funds
CSM : Contraceptive Social Marketing
CYP : Couple Years of Protection
DFA : Development Fund for Africa
FAO : United Nations Food and Agriculture Organization
GDP : Gross Domestic Product
GOZ : Government of Zaire
HIV : Human Immunodeficiency Virus
HRDA : Human Resources Development Assistance
ICRW : International Center for Research on Women
IEC : Information, Education, Communication
IMF : International Monetary Fund
IMR : Infant Mortality Rate
INERA : Institut National pour l'Etude et la Recherche Agronomique
MPH : Master of Public Health
MUHS : Child Mortality and Utilization of Health Services
MT : Metric Ton
ORT : Oral Rehydration Therapy
PCV : Peace Corps Volunteer
PHC : Primary Health Care
PIP : Priority Investment Program
PL-480 : Public Law 480, the Agricultural Trade Development and Assistance Act of 1954, as amended
PNM : National Maize Program
PNPF : National Program for Family Fish Farms
PPC/WID : A.I.D. Bureau of Program and Policy Coordination/Women in Development Office
PROCAR : Projet de Developpement de la Production et Commercialisation Agricoles Regionale
PRONAM : National Cassava Program
**GLOSSARY OF TERMS USED**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSSP</td>
<td>Private Sector Support Program</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization</td>
</tr>
<tr>
<td>RAV</td>
<td>Recherche Appliquee et Vulgarisation</td>
</tr>
<tr>
<td>SASG</td>
<td>African Economic Policy Reform Program Structural Adjustment Support Grant</td>
</tr>
<tr>
<td>SEP</td>
<td>Service d'Etudes et Planification</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
</tr>
<tr>
<td>SNRDA</td>
<td>Service National des Routes de Deserte Agricole</td>
</tr>
<tr>
<td>SNCZ</td>
<td>The National Rail Authority</td>
</tr>
<tr>
<td>SPH</td>
<td>School of Public Health</td>
</tr>
<tr>
<td>USAID</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
USAID/ZAIRE FY 1987 - 1989
PROGRAM PERFORMANCE AND IMPACT

I. PROGRAM OVERVIEW AND CONTEXT

A. Overview

The Mission's FY 1987 - 1989 Action Plan had as its stated goal "to improve the living standards of the Zairian population by supporting both rehabilitation of infrastructure and improvements in managerial and technical skills." This goal was to be accomplished through four operational objectives:

- economic stabilization and recovery;
- increased output from small farms, particularly foodcrop production that will improve income and nutrition;
- increased farm-to-market transportation access; and
- increased child survival.

Significant accomplishments have been realized:

1. Economic Stabilization and Recovery

- Government of Zaire (GOZ) budgetary discipline was resumed, with deficit financing reduced from $571 million in 1988 to only $90 million in 1989.

- With a reduction in monetary financing of government operations, inflation fell from nearly 100 percent per year in 1987 and 1988 to an annual rate of 12 percent during the last quarter of FY 1989.

- The market-based official exchange rate was restored, with the gap between official and parallel market exchange rates dropping from between 25-40 percent in late 1987 to nearly 10 percent at the end of 1989.

- Significant tariff and non-tariff barriers to trade and investment were eliminated.

- Capacity utilization among Commodity Import Program (CIP) clients increased an average of 7.4 percent between 1985 and 1988.
PL-480 wheat and cotton imports supported over $50 million per year in value-added and sustained approximately 42,000 private sector jobs.

2. Small Farmer Output

In response to successful negotiation of agricultural price liberalization by the World Bank and USAID, small farmers increased the area cultivated in basic food crops, thus increasing production and income.

A.I.D.-supported development of improved maize seed resulted in five new varieties of maize with yields 30 percent higher than those of local varieties. Although the full potential for dissemination of these varieties has not been realized, their use has already resulted in production of at least 8,300 tons of additional maize in Shaba in 1988, equivalent to 4.2 percent of the total Shaba regional market, with a value of $830,000.

A.I.D.-supported development of improved cassava varieties resulted in six new varieties with yields 25 percent higher than those of local varieties. Their use resulted in production of an additional 3,000 tons of dry cassava chips with a market value of $305,000 in 1988.

Farmer field trials of improved cultivation technologies using local seed and stock in Central Shaba yielded increases averaging 45 percent for maize, 78 percent for peanuts, and 81 percent for peanuts intercropped with cassava. Similar field trials in Bandundu resulted in a 48 percent increase for peanuts and a 200 percent increase for maize.

Small fish pond production of tilapia rose from 80 MT in 1986 to over 120 MT in 1988 in five regions of the country.

3. Farm-to-Market Transportation

In central Bandundu, 190 kilometers of national roads with some regional links were rehabilitated and 24 water crossings installed or improved, providing
improved access to goods and services for approximately 280,000 people.

- In central Shaba, 126 kilometers of link road were rehabilitated to specifications and 460 kilometers were opened to traffic. Additionally, 180 kilometers of feeder roads were rehabilitated to specifications and 400 kilometers were opened. When completed, this road network will connect critical ports and railheads to provide vastly improved access to the area's 450,000 citizens.

- In southwestern Shaba, 1158 kilometers of national road were completed to specifications, providing the war-torn population of 400,000 of Lualaba with improved transport access to the Lubumbashi market.

4. **Child Survival**

- In one of Bandundu's health zones, a reduction in infant mortality of 15 percent in 5 years, from 130 per 1000 to 110 per 1000, has been demonstrated, based on the comparison of a 1989 survey of mortality and utilization of health services with 1984 survey data. It is believed that an impressive increase in vaccination coverage explains much of this improvement, suggesting that USAID's priority child survival interventions have significant impact.

- An additional 2.1 million people were provided access to full service rural health centers, bringing the total under A.I.D.-assisted zones to almost five million. Nearly 400,000 children and 350,000 women now have access to under-five and prenatal clinics in health zones assisted by the Basic Rural Health II Project.

- Although vaccination coverage rates leveled off, with USAID support they remained over 40 percent, thereby preventing 70,000 measles cases and 23,500 measles-related deaths in 1988 alone.

- Improved water sources were provided to an estimated 1.1 million rural inhabitants, roughly five percent of the total rural population of Zaire. A study in Kivu found a 30 percent reduction in episodes of diarrhea among children living close to clean water sources.
Family planning programs attained a total of 127,996 Couple Years of Protection (CYP). High increases in condom sales under the successful Contraceptive Social Marketing program accounted for 75 percent of the increase of nearly 30,000 CYP in the last two quarters of FY 1989 alone.

B. Program Resources

The achievements highlighted above were attained through a combination of project and non-project assistance which grew significantly during the period. Table B-1 summarizes this program growth. U.S. dollar expenditures were complemented during the FY 1987 - 1989 period by approximately $91.3 million equivalent expenditures of program generated local currency as well as significant contributions by the private sector, private and voluntary organizations (PVOs), and private citizens. GOZ contributions to A.I.D. programs from its Ordinary Budget could not be tracked; contributions from the Investment Budget, however, increased significantly for critical programs during FY 1989.

Table B-2 provides a summary listing of USAID/Zaire's active assistance portfolio during the reporting period.

| Table B-1: USAID/Zaire Program Growth FY 1986 - FY 1989 (Dollars 1,000,000) |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                | FY 86 | FY 87 | FY 88 | FY 89 |
| Obligations    | 63.6  | 60.9  | 57.0  | 62.8  |
| PL-480         | 13.0  | 27.0  | 23.2  | 24.6  |
| Non-Project Assistance | 15.0 | 0.0  | 0.0   | 14.0  |
| Project Assistance     | 35.6 | 33.9 | 33.8  | 24.2  |
| Expenditures          | 61.0  | 76.7  | 86.1  | 66.5  |
| PL-480         | 13.0  | 27.0  | 23.2  | 24.0  |
| Non-Project Assistance | 5.9  | 9.7   | 10.3  | 0.1   |
| Project Assistance     | 18.0 | 19.7 | 25.3  | 19.3  |
| Counterpart Funds      | 24.1  | 20.3  | 27.3  | 23.1  |

Source: USAID/Zaire
Table B-2: Summary USAID/Zaire Active Portfolio FY 1987 - FY 1989 (U.S. Dollars 1,000)

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Name</th>
<th>Init. FY</th>
<th>PACD</th>
<th>LOP Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Stabilization &amp; Liberalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>660-0120</td>
<td>Private Sector Support (PSSF)</td>
<td>89</td>
<td>5/24/94</td>
<td>$35,000</td>
</tr>
<tr>
<td>660-0121</td>
<td>AEPRP</td>
<td>86</td>
<td>12/01/89</td>
<td>15,000</td>
</tr>
<tr>
<td>PL 480</td>
<td>Title I &amp; II (Section 206)</td>
<td>87</td>
<td>N/A</td>
<td>22,391</td>
</tr>
<tr>
<td></td>
<td>Title I</td>
<td>88</td>
<td>N/A</td>
<td>13,225</td>
</tr>
<tr>
<td></td>
<td>Title I</td>
<td>N/A</td>
<td>N/A</td>
<td>24,000</td>
</tr>
<tr>
<td>Increased Small Farm Output</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>660-0080</td>
<td>Fish Culture Expansion</td>
<td>77</td>
<td>9/15/88</td>
<td>1,650</td>
</tr>
<tr>
<td>660-0091</td>
<td>Applied Agr. Res. &amp; Outreach (RAV)</td>
<td>83</td>
<td>9/30/90</td>
<td>15,000</td>
</tr>
<tr>
<td>660-0100</td>
<td>Agr. Inputs Support I</td>
<td>84</td>
<td>12/01/89</td>
<td>10,000</td>
</tr>
<tr>
<td>660-0102</td>
<td>Area Food &amp; Market Dev. (PROCAR)</td>
<td>85</td>
<td>1/31/95</td>
<td>15,000</td>
</tr>
<tr>
<td>660-0103</td>
<td>Agr. Inputs Support II</td>
<td>84</td>
<td>2/28/90</td>
<td>10,000</td>
</tr>
<tr>
<td>660-0105</td>
<td>Central Shaba Agr. Development</td>
<td>86</td>
<td>9/30/93</td>
<td>33,907</td>
</tr>
<tr>
<td>660-0119</td>
<td>Agr. Policy &amp; Planning</td>
<td>86</td>
<td>5/31/96</td>
<td>14,500</td>
</tr>
<tr>
<td>Increased Transportation Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>660-0026</td>
<td>Agr. Marketing Dev. I (Bandundu)</td>
<td>79</td>
<td>9/13/89</td>
<td>5,000</td>
</tr>
<tr>
<td>660-0028</td>
<td>Agr. Marketing Dev. II (Bandundu)</td>
<td>81</td>
<td>12/31/88</td>
<td>4,705</td>
</tr>
<tr>
<td>660-0098</td>
<td>Agr. Marketing Dev. III (Bandundu)</td>
<td>84</td>
<td>12/31/94</td>
<td>10,000</td>
</tr>
<tr>
<td>660-0115</td>
<td>Shaba Refugee Roads Project</td>
<td>84</td>
<td>9/30/90</td>
<td>7,544</td>
</tr>
<tr>
<td>Increased Child Survival</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>660-0079</td>
<td>Area Nutrition Improvement</td>
<td>82</td>
<td>9/30/90</td>
<td>4,300</td>
</tr>
<tr>
<td></td>
<td>&quot; &quot; &quot; Title II during 87-89</td>
<td></td>
<td></td>
<td>2,746</td>
</tr>
<tr>
<td>660-0086</td>
<td>Basic Rural Health I</td>
<td>81</td>
<td>1/31/88</td>
<td>4,975</td>
</tr>
<tr>
<td>660-0094</td>
<td>Family Planning Services</td>
<td>82</td>
<td>9/30/92</td>
<td>13,800</td>
</tr>
<tr>
<td>660-0101</td>
<td>School of Public Health</td>
<td>84</td>
<td>7/30/94</td>
<td>8,915</td>
</tr>
<tr>
<td>660-0107</td>
<td>Basic Rural Health II</td>
<td>85</td>
<td>9/30/92</td>
<td>21,700</td>
</tr>
<tr>
<td>660-0114</td>
<td>Shaba Refugee Health</td>
<td>85</td>
<td>3/31/91</td>
<td>2,500</td>
</tr>
<tr>
<td>660-0116</td>
<td>Shaba Refugee Water</td>
<td>85</td>
<td>9/30/90</td>
<td>2,500</td>
</tr>
<tr>
<td>660-0122</td>
<td>Kimbanquist Hospital Ass't.</td>
<td>86</td>
<td>9/30/89</td>
<td>750</td>
</tr>
<tr>
<td>698-0421</td>
<td>Combat. Child. Commun. Disease</td>
<td>82</td>
<td>9/30/91</td>
<td>9,211</td>
</tr>
<tr>
<td>698-0474</td>
<td>AIDS Prevention &amp; Control</td>
<td>88</td>
<td>9/30/91</td>
<td>678</td>
</tr>
<tr>
<td></td>
<td>Plus numerous centrally-funded activities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cross-Cutting Support |
| 660-0068 | Dev. Manpower Training                            | 80       | 12/31/87 | 2,544       |
| 660-0097 | PVO Economic Support                              | 83       | 12/31/88 | 5,000       |
| 660-0104 | Appropriate Rural Tech. Dev.                      | 85       | 10/31/87 | 134         |
| 660-0113 | Private Management Support                        | 84       | 9/30/88  | 1,094       |
| 660-0125 | Small Project Support Project                     | 88       | 9/30/94  | 6,000       |
| 698-0433 | African Manpower Dev. Project II                  | 82       | 9/30/90  | 1,602       |
| 698-0455 | African Graduate Fellowship III                    | 85       | 9/30/94  | 1,480       |
| 698-0463 | Human Resources Development Asst.                 | 88       | 9/30/95  | 2,419       |
Notes to Table B-2

1. Agricultural Inputs Support I and II and the Central Shaba Development Project have contributed to objectives in the small farm output and transport sectors but are listed only once for clarity.

2. Regional projects; funding dates and amounts for Zaire only.

3. Project/non-project assistance closed out or phased into another project during the Action Plan period.

C. Policy Environment

The growth of the A.I.D. portfolio was undertaken during a period in which the Zairian approach to economic management was "on-again-off-again." The GOZ's structural adjustment program of 1983-1986 had contained significant reforms which boosted real GDP growth rates from 0.8 to 2.7 percent. However, the cumulative political costs of those three years of economic policy reforms grew too high and, in late 1986, Zaire deviated from the reform program as the international terms of trade turned against Zaire and net financial flows from the donor community failed to meet expectations.

In 1987 and 1988, GOZ expenditures increased at a high rate, the growing deficit was largely monetized, and inflation soared, reaching its peak annual rate of 400 percent in the first quarter of 1989. During this period, however, as part of its efforts to reestablish an IMF/World Bank-supported structural adjustment program, the GOZ again set in motion a series of economic policy reforms, most notably the restructuring of state-owned enterprises and adjustments in import tariffs, export taxes, and regulations to promote private sector investment and growth. Though elements of the structural adjustment program remained intact, the GOZ was unable, during 1987 and 1988, to reach agreement with the IMF and World Bank on a new comprehensive adjustment package, with the disastrous inflationary consequences noted above.

In November 1988, the GOZ reappointed the Prime Minister who had overseen the successful 1983-86 adjustment program. In the months that followed, the GOZ laid the groundwork for a new adjustment program by improving government fiscal and monetary policies. In the third quarter of FY 1989, the GOZ reached agreement with the IMF and World Bank on a Policy Framework Paper to guide a program of structural adjustment over the next three years. Significantly, in the same quarter, inflation dropped to only 17 percent and fell to 12 percent in the fourth quarter of FY 1989, with the annual rate for 1989 ending at about 60 percent.
The program accomplishments of the FY 1987 - 1989 Action Plan period must be considered within this rapidly shifting policy context and its effect on the national economy during the period. While the Mission has attained the majority of its stated tactical objectives, the definition and pursuit of strategic aims have at times been obfuscated by the macroeconomic environment. As reflected in the refined strategy for the FY 1990 - 1993 Action Plan period, the Mission believes future potential dynamism can be anticipated and responded to based on lessons learned.

II. PROGRAM PERFORMANCE FY 1987 - FY 1989

The Mission's Action Plan for FY 1987 - 1989 was drafted in May 1987, prior to Bureau for Africa's (AFR) new guidance on program strategy, i.e., the new Program Logical Framework. The intended accomplishments in that Action Plan were thus a combination of both tactical and strategic aims. The following discussion focuses on the accomplishments that are most significant and correspond to the more recent AFR concept of strategic program pursuits.

A. Economic Stabilization and Recovery

The Mission's support for economic stabilization and recovery was based primarily on three instruments of non-project assistance during most of the reporting period. The first, the African Economic Policy Reform Program, entitled Structural Adjustment Support Grant (SASG, 660-0121), comprised primarily a private sector CIP, with disbursements tied to industrial and trade policy conditionalities. The second, the Agricultural Inputs Support I and II Projects (660-0100 and 660-0103) were both CIPs, without conditionalities but with significant foreign exchange support for Zaire's private sector. The third, the PL-480, Title I program, provided wheat, rice, and cotton on concessional terms as balance of payments assistance, but also contained self-help measures. All three thus provided leverage for the Mission's continuing policy dialogue efforts.

The Mission initiated a new activity to support economic recovery through private sector development during the third quarter of FY 1989, after the GOZ renewed its commitment to its IMF-and World Bank-supported structural adjustment program. This $40 million Private Sector Support Program (PSSP, 660-0120), which USAID had delayed from FY 1988 because the GOZ was not in compliance with the IMF/World Bank reform program, combines a CIP and technical assistance in support of reforms in the Zairian financial sector to mobilize savings and support productive small and medium scale enterprises (SMEs). During the second and third quarters of FY
1989, the GOZ satisfied all prior actions required for authorization of the PSSP and substantially complied with all relevant program conditionalities, which encompass fiscal, monetary, commodity pricing, and trade policies. Although little impact can be attributed to the PSSP during the FY 1987 - 1989 Action Plan period, the start-up is propitious.

It must be emphasized that the IMF and World Bank have taken the lead among donors in support of structural adjustment and liberalization. While A.I.D.'s contributions are high by Africa Bureau standards, given an almost $1 billion Zairian national budget in 1989, the A.I.D. support must be taken in context. Attribution of specific A.I.D. program inputs to specific macroeconomic change is indirect and supportive of overall IMF and World Bank program objectives, except in specific cases such as CIP and PL-480 clients' production.

1. GOZ Budgetary Discipline Resumed

The GOZ's budget has proven to be the linchpin of Zaire's structural adjustment program. GOZ performance in maintaining budgetary discipline was generally poor in 1987 and 1988, with real improvements occurring in 1989. Deficit financing in 1987 was approximately $200 million; in 1988, $571 million; and in 1989 an estimated $90 million against an IMF target of $126 million for the year.

Improved budgetary performance in 1989 was not so much the result of greater discipline over expenditures, as the result of strong copper prices and improved revenue collection. In late 1988 the GOZ instituted a number of measures to increase government revenues. Those that were implemented include: a) simplifying import duties and taxes and increasing the administrative tax on imports from 3 to 5 percent; b) changing specific import duties and excise taxes to an ad valorem basis; c) introducing a special highway tax; and d) doubling of the motor vehicle stamp tax.

In 1989, a number of other measures were initiated. Significantly, the GOZ instituted new fuel pricing mechanisms to take account of changing market conditions and regional cost differences, and fuel taxes were increased and partially earmarked for road maintenance. Initial payments to the relevant roads authorities were below expectations, but reached the targeted 1989 level of $3 million per month by September 1989.

The lower budget deficit in 1989 contributed to GOZ success in meeting IMF monetary targets as well. Monetary financing of the budget was $78 million for 1989 as compared to $571 million in 1988. The money supply (M2) grew at a rate of 29.3 percent per year over
the period April through July compared to 108 percent in 1988. Rapid increases in the money supply fueled inflation rates of 100 percent in 1987 and 1988. Monetary financing of the excessive expenditures of late 1988 contributed to inflation at an annual rate of over 400 percent during the first quarter of 1989. As spending was brought under control, the annual rate of inflation fell to 17 percent during the second quarter of 1989.

Budgetary discipline has resulted, however, in a tightening of civil service employment as well as a substantial decrease in real wages of such employees. All data on formal employment in Zaire must be approached with caution, as definitions have changed over the years. However, available data indicate that whereas private employment has steadily increased since 1983 at an annual average growth rate of 8.4 percent, the civil service decreased from a high of nearly 450,000 in 1981 and 1982 to only 290,000 by 1985. Renunciation of austerity measures in late 1986 resulted in new hiring, and by the end of 1987, public employment increased by 26 percent over the 1985 level. Since then, it has gradually decreased due to attrition and the abolition of at least 8,000 fictitious positions.

The Mission has collaborated closely with the GOZ to allocate, between 1987 and 1989, over $90 million in counterpart funds (CPF) generated through its CIP and PL-480 non-project assistance mechanisms, as budget support for agreed-to programs. The Mission and the GOZ are under constant tension to balance the macroeconomic targets of budgetary discipline with the realities of undertaking major operational projects which employ literally thousands of civil servants and which rely on the CPF for salaries, salary supplements, and most recurrent cost expenses. This at times requires hard decisions, as in the termination of 240 contract employees financed through CPF under the Agriculture Research and Outreach Project (RAV, 660-0091).

In terms of the impact of budgetary austerity on the poor, real incomes in Kinshasa decreased by 25 percent in the period 1975-1986, and, given the fiscal situation of the 1987-1989 period, have declined further since then. In rural areas, given the fact that real farmgate prices remained constant and production increased, it can be inferred that the position of the small farm family relative to urban households has improved despite the overall deteriorating economic environment.

2. Market-Based Official Exchange Rate at Central and Commercial Banks Maintained

Zaire's exchange rate system is best described as a "managed float", with the Bank of Zaire setting the official buying and
selling rates. In October 1986, the gap between official and parallel market exchange rates was 20 to 25 percent. Depreciation between January and March 1987 closed the gap to 10 percent, and the official exchange rate remained near the free market rate until December 1987. After December 1987, however, the gap again widened, fluctuating between 25 to 40 percent until the first quarter of FY 1989, when it grew to nearly 50 percent. The GOZ then began a release, through the commercial banking system, of some $30 million of foreign exchange per month which again closed the gap to less than 20 percent, where it has remained. The June 1989 IMF agreement set a target of 10 percent, which, given GOZ performance in the last six months, appears possible to achieve and to maintain, particularly if the GOZ continues to provide approximately $30 million a month through the banking system.

The impact of the deteriorating exchange rates was generally negative for the general population. Planning and budgeting in local currency, be it by USAID/Zaire or a small private firm, became an ongoing and almost futile exercise as the purchasing power of the Zaire declined. Although nominal wages in the private sector increased during the reporting period, those of the public sector did not keep pace and real incomes in the overall wage employment sector generally declined. Given the June 1989 IMF agreement, the Mission is cautiously optimistic that as price and exchange rates stabilize, these tight conditions should relax in the coming Action Plan period, provided the GOZ retains its commitment and donors continue their financial support. Through the Mission's buy-in to the Cornell University study, the impact on the population of these and other structural adjustment efforts will be analyzed.

3. **Impediments to Trade and Investment Reduced**

In response to A.I.D. and other donor policy dialogue efforts during the 1987-1989 period, the GOZ undertook a number of important policy measures which reduced impediments to trade and investment. The Structural Adjustment Support Grant (SASG) which covered the reporting period included a number of conditions precedent and covenants concerning harmonizing import tariffs, prohibiting the introduction of non-tariff barriers, eliminating export taxes, and simplifying export procedures, all of which were essentially met. Significant progress was made in standardizing import tariffs, thereby reducing the wide variations in effective rates of protection which distorted trade and production incentives. As of January 1989, most import tariffs fell within the range of 15 to 50 percent.

There remain, however, 20 products, including synthetic textiles and batteries, for which reference prices are still enforced, providing protection to domestic industries equivalent to
200 percent tariffs. Petroleum products are another special case: taxes applicable upon importation including duty, excise, and a road surtax, range from 35 to 75 percent, depending on the product. And, significantly, the Investment Code still allows for numerous, often arbitrary, exceptions to the new tariff schedule.

Export procedures continue as a major problem. Although the GOZ did undertake a number of actions during the Action Plan period to simplify the process, typically it still involves up to 52 different documents requiring numerous signatures from the 15 GOZ agencies involved. The evaluation team also documented a number of disturbing impediments to investment in the banking sector, which are being addressed by the FY 1989 Private Sector Support Program and form the basis for targets in the new Action Plan.

The economic impact of the policy and procedural improvements that were undertaken have not yet been realized, very probably due to the uncertainty of other economic policies during the period and the very recent enactment of some of the measures. Discussions with representatives of 11 medium and large firms by the SASG evaluation team suggests that most investment since 1983 (the beginning of the reform period) has been by established firms in an effort to protect fixed investments, and has primarily been in Kinshasa. There has been little or no new foreign investment, and at least two large multinational concerns (General Motors and Goodyear) divested during the period.

4. Private Sector Production and Productivity Increased

CIP and PL-480 commodities contributed significantly to increases in value-added, capacity utilization, and employment in manufacturing and especially in agro-industry. Based on the findings of a July 1989 study of CIP participants in the manufacturing sector, the SASG evaluators noted that:

... [producers of] 14 of 20 products increased capacity utilization between 1985 and 1988, an average of 7.4 percent. In contrast, ... capacity utilization fell by an average of 2.3 percent for non-participants. ... CIP participants also increased their volume at a faster rate than the manufacturing sector as a whole. In 1988 their production levels were 22.4 percent higher than in 1985. At this time, the Bank of Zaire showed that total manufacturing increased by only 13 percent.

... participation in the CIP may not have led to significant increases in employment. Employment data for eight of the CIP firms indicate that their employment rose by 11 percent between 1985 and 1987, while the total
private sector employment rose by more than 20 percent. This is not surprising as a number of company representatives indicated that the main contribution of the CIP was that it saved employers from being forced to lay off workers because it provided the raw materials necessary to keep plants operating. (SASG evaluation, p. 39)

PL-480 commodity imports averaged $24 million between FY 1986 and 1989. Approximately $50.0 million of net value-added was generated each year by the $14.6 million worth of wheat and cotton imported. That is, for every $1.00 worth of PL-480 wheat and cotton imported, an average of $3.43 (U.S. $3.08 for wheat and U.S. $4.07 for cotton) of net value-added is generated. Thus, PL-480 wheat and cotton generated a net value-added equivalent to nearly 1.0 percent of Zaire's 1989 recorded GDP. The figure would be larger if the impact of the PL-480 rice imports were also analyzed.

B. Small Farmer Output

The Mission's agricultural portfolio comprises four key projects, one in Agricultural Policy and Planning (SEP, 660-0119), one in Applied Agricultural Research and Outreach (RAV, 660-0091), and two in area-specific outreach, Central Shaba Agricultural Development (660-0105) and Area Food and Market Development (PROCAR, 660-0102). To foster management efficiency, during the period the decade-old Peace Corps-A.I.D. Fish Culture Expansion Project (660-0080) was transferred to the new PVO project (660-0125), but productive activities continue. These efforts have been complemented by an active policy dialogue on agricultural market liberalization and by DFA, non-project assistance (including CIPs), PL-480 and transport infrastructure projects.

1. Agricultural Pricing Liberalized

Since 1983, the agriculture sector has benefited from price liberalization. For the most part, a liberal price regime was maintained throughout the FY 1987 - 1989 period, and as of the summer of 1989, Zaire enjoyed substantially free agricultural markets. Studies conducted by the GOZ Service d'Etudes et Planification (SEP) under the Agriculture Policy and Planning Project (660-0119) in Bandundu (December 1988) and Shaba (March 1989) demonstrate that this price liberalization was perceived by farmers as having provided substantial price incentives for the staple crops of the Shaba region (maize) and the Kinshasa-Bandundu-Bas Zaire regions (cassava). A series of studies in Bandundu in 1987/88, conducted by the Ministry of Agriculture in collaboration

B-12
with the University of Leuven in Belgium, demonstrated that although the regional government still sets minimum prices, farm households reported receiving prices at least twice as high as these minimum prices.

Although valid aggregate production data are not available, it appears that these price policies have had the impact of increasing production through providing incentives to increase area cultivated. In the SEP studies in Bandundu and Shaba, over half of the farmers interviewed reported increasing the area cultivated in maize and cassava as a result of liberalization.

The impact of price liberalization on the rural poor appears, based on limited data, to be generally positive in the short-term with potential for continuing improvements. Using data from the 1987-1988 University of Leuven's Bandundu sample, the SASG (660-0121) evaluation of September 1989 investigated the intersectoral terms of trade and concluded that inflation caused no real effects or distortions since it did not change relative prices facing farm households. The evaluation concluded that liberal pricing prevailed in the agriculture sector:

Farmers in the Bandundu region reported that in 1986/87 and 1987/88, the areas harvested of all crops grown in that region had increased from the preceding year. With favorable terms of trade this increased production led to a substantial increase in real income of farm-households. Price liberalization therefore benefited most of the region's 611,000 farm-households. Since average per capita income was $63 per year, price liberalization also satisfied the U.S. Congressional mandate [for broad-based economic growth]. (SASG evaluation, p. iv)

The impact of price liberalization on the non-farm and urban population is not well documented, although the A.I.D-Cornell University study of the impacts of structural adjustment on the poor will begin to yield gender-disaggregated data on this population later in 1990. The SASG evaluation assessed the available data for the Kinshasa metropolitan area (population estimated at 3.5 million in 1989), and arrived at a number of preliminary conclusions which are offered in the following paragraphs.

Between 1978 and 1984, the relative prices of imported cereals (rice and wheat) in Kinshasa fell rapidly but stabilized thereafter. On the other hand, for the last 27 years the relative prices of domestically produced staples (manioc, corn, bananas) have shown no discernible long-term trend even with price liberalization after 1982. Thus it is not likely that price liberalization would cause large substitution effects between domestically produced staples and imported staples. (SASG, p. 16)
Between 1975 and 1986 the real wage of industrial workers declined only 20 percent as that of public employees fell by 66 percent. Thus it is quite possible that real per capita incomes in Kinshasa may, on the average, have declined by more than 25 percent. But, as indicated earlier, the downward trend in the real wages was reversed even before price liberalization took place and has since been sustained. (SASG, p. 21)

2. Production of Maize, Cassava, and Legumes Increased

The University of Leuven surveys in Bandundu found that over half of the farmers interviewed claimed production increases in cassava, maize, groundnuts, and rice between the 1986/87 and 1987/88 seasons. For both those that claimed increases and those that claimed decreases, the area cultivated was the primary reason given for the change. The second most important reason given for increasing production was an attractive price.

In these surveys, 20 percent of the land planted to cassava in Bandundu and 52 percent in Shaba was reported to have been in production less than six years, indicating a rapid expansion of the agricultural frontier in the region in the last five years. And in the same surveys, in both Shaba and Bandundu, over 80 percent of farmers claimed to have sufficient land to further increase areas grown to food crops. Given the low population densities throughout most of rural Zaire, and the predominance of customary usufructuary tenure, land availability should not be a constraint in the medium term.

Survey responses were not sorted by gender, although this may be a key variable in access to additional land and to labor. Several recent studies suggest that labor may become more of a constraint in the near term, particularly as land is cleared. That is, most small farm households still use predominantly family labor (although use of wage labor is not uncommon in Shaba), with the general labor allocation similar to the rest of Africa: the men clear the land while the women sow, weed and harvest. Thus, while men may find extra time for one-shot clearing of additional land, it is not known how much additional time rural women have for additional work. Compulsory cropping also still exists throughout the country, with compulsory fields allocated on the basis of adult males but cultivated almost exclusively by adult females. The Mission is undertaking a pilot effort in credit for women for labor saving agricultural tools in Bandundu, and is engaged in a broader agricultural extension strategy targeted on women in Shaba, to address many of these constraints.
Time series data are not available to demonstrate the impact of increased food production on income or nutrition during the reporting period. The SASG evaluation, using the Leuven data, determined that the average annual income (cash and cash equivalent) per farm-household member in the Bandundu region was $63 for the period October 1987-September 1988. The evaluation concluded:

The policy implications of the foregoing observations are that the key to progress no longer lies in price liberalization. It is already a reality for a large majority of farm-households. The next logical step is resource accumulation, improvement of rural roads, and technological transformation. Farm-households, who on their own initiative expand the area planted at a rate of almost 1.5 percent per year and who invest more than 50 percent of their net income in human capital (education and health) are indicative of the latent productivity of Bandundu's rural households. (SASG evaluation, p. 13)

USAID/Zaire's assistance in technological transformation is discussed in the following paragraphs, and improvement of rural roads is addressed in Section II C. which follows. Potential interventions in resource accumulation, with data collected by gender, are under study in collaboration with Ohio State University and will receive increased attention in the coming Action Plan period.

3. **Genetic Materials for Food Crops Improved through Concentrated Research**

USAID-supported research has resulted in the development of five maize varieties providing yields 30 percent above those of local varieties and six cassava varieties with yields that are 25 percent higher. It has also supported development of improved varieties of grain legumes which has resulted in 11 new varieties (6 groundnut, 3 cowpea, 2 soybean) with average yields 30 percent higher than local varieties.

In the Leuven surveys, in response to the question "Do you use improved varieties?" the following percentage of farmers responded yes:
Table B-3: Percentage of Farmers Using Improved Varieties of Selected Crops (December 1988 & March 1989)

<table>
<thead>
<tr>
<th></th>
<th>Bandundu</th>
<th>Shaba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td>Cassava</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: SASG Evaluation, Table 14

The October 1989 evaluation of A.I.D.'s Applied Agricultural Research and Outreach project, or RAV (660-0091), arrived at the following conclusions regarding the impact of adoption of new materials:

Maize: Estimates of the impact on additional maize production from the improved varieties are about 8.3 kilotons of new grain, equivalent to about 4.2 percent of the total 200-kiloton Shaba regional market. At wholesale prices, this added production is valued at $830,000 or roughly four times the $200,000 local currency budget for PNM [National Maize Program] in the Shaba region. The actual amount of maize produced from improved varieties is estimated at between 30 and 36 kilotons. This production estimate only takes into account the yield differential over local varieties. It does not take into account increases in area planted as a result of the introduction of new varieties. To that extent, the estimate undervalues the production impact. (RAV evaluation, p. 2)

Cassava: The introduction of improved cassava varieties by the National Cassava Program (PRONAM) has so far had a rather small impact on the overall cassava production at the farm level. We estimate that at most 3,000 tons of additional dry cassava chips (cossettes) are produced currently as a result of the cumulative diffusion of the PRONAM varieties. If valued at $100 per ton at the farm level, this additional production was worth $305,000 (sic) in 1988. This represents only 30 percent of the current level of PRONAM expenditures of roughly $1 million per year. Paradoxically, the impact is light despite the success of PRONAM and its predecessors in developing at least one good variety -- F-100 -- that is both higher-yielding than local varieties and well adapted to local farm conditions. (RAV evaluation, p. 48)
The difference in adoption rates for maize and cassava may be attributed to reproductive characteristics of the two species. Maize seed has a low weight and volume, can be relatively easily graded and stored, and maintains a good germination rate over time; indeed, at the recommended planting rate of 25 kilograms per hectare an individual can carry enough to seed the average plot of 1.5 hectares. In comparison, cassava cuttings are bulky, more labor intensive to prepare for distribution, and more time-sensitive to replanting; large open vehicles are required to move a sufficient volume to plant even modest areas. Some potential breakthroughs for disseminating cassava involving smaller cuttings have recently been identified and will be further tested in coming years.

4. **Accelerated Outreach Mechanisms Developed and Transferred**

Outreach mechanisms supported by USAID projects focus on two primary outcomes: 1) assuring an uncontaminated, high quality, and steady supply of improved genetic materials to the farm households; and 2) providing training in improved cultivation techniques to men and women farmers. Given the paucity of rural credit mechanisms and the erratic financial environment of recent years, promotion of imported inputs such as fertilizer or pesticides is only carried out on a modest basis.

Provision of improved genetic materials has been attempted directly from station to farmer (RAV, Fish Culture), from station to project to farmer (North Shaba, Central Shaba, PROCAR-Bandundu), through a private sector seed firm (which failed in Central Shaba) and through PVOS (RAV, Central Shaba, PROCAR-Bandundu). Problems with assuring adequate quantities that meet high demand but which retain quality and affordability are unresolved. The recent creation of a national seed program (BUNASEM) supported by the World Bank and FAO has initially confused the situation but may, in the coming Action Plan period, result in at least an assured supply of commercial maize seed. USAID is using the agricultural policy project to review seed industry investments, pricing, and other policies to clarify the situation and encourage the private sector. In the interim, USAID will continue its efforts with direct production by the research stations (RAV) and its work with PVO's through the area-specific projects.

Training in improved cultivation techniques is carried out for field crops by RAV, through on-farm trials, and through the Central Shaba and PROCAR Bandundu projects, which are discussed in more detail below. On-farm training in fish culture has been primarily undertaken as outreach activities from five fingerling production centers in Bandundu, Kasai Occidental, Kasai Oriental, South Kivu and, Bas-Zaïre through a joint A.I.D.-Peace Corps-GOZ vertical project. The project, which has employed over 450 Peace Corps
Volunteers (PCVs) in the last decade, is now part of the Department of Rural Development's National Program for Family Fish Farms (PNPF), which is funded under the Mission's Small Project Support Project (660-0125), and is now extending fish pond production into Shaba. At the end of the reporting period, 64 PCVs and 21 GOZ agents were working with 600 small farmers (only 4 women own ponds, but many of the "farmers" are husband-wife teams) in developing fish ponds, with production up from 80 MT in 1986 to 121 MT in 1988. An impact evaluation planned during FY 90 by the Small Project Support Project will assess the extent to which fish are consumed by the family to meet protein needs and/or sold to produce income.

All field production projects work with both men and women farmers. In Central Shaba, 20 percent of the Zairian extension agents and 58 percent of the Peace Corps agents are women. They and their male colleagues are working in 374 villages with over 1,400 contact farmers (290, or 20 percent, women) who in turn provide training in improved technologies to more than 10,000 farmers (30 percent women). Given a population of approximately 450,000, this translates to approximately 15 percent of farm households reached in the first two years of implementation.

In Bandundu, the PROCAR project works through five PVO's which support 85 village-level extension agents (13 women) and 10 Peace Corps Volunteers (8 women) in training male and female farmers. Through a buy-in to PPC/WID's contract with the International Center for Research on Women (ICRW), one of the PROCAR-supported PVO's is undertaking a pilot credit, training, and extension effort with 120 female farmers in the project area.

The impact on yield of improved genetic materials was discussed above. Improvements in cultivation techniques have been shown to have potentially more significant results. In Central Shaba, preliminary findings from a comprehensive analysis of 433 demonstrations in farmers' fields indicate that improved cultivation practices using local seed and stock provide increases averaging 45 percent for maize, 78 percent for peanuts, and 81 percent for peanuts intercropped with cassava. In Bandundu, 124 demonstration field trials combining improved varieties with improved cultivation practices resulted in a 48 percent increase for peanuts and 200 percent increase for maize.

These results are most significant when consideration is given to the fact that as of the beginning of the Action Plan period (October, 1986) neither project had any agricultural field staff or program on site. With personnel in place, broader dissemination of these results combined with increased training will lead to widespread production and yield increases in the coming Action Plan period.
C. Farm-to-Market Transportation

The Mission's support to transport infrastructure during the period consisted of five projects, two in Shaba and three in Bandundu (ref. Table B-2), as well as non-project assistance through the CIPs for transport-related enterprises. The projects were developed during the period 1979-1984, based on the assumptions: that improved road and river infrastructure would stimulate agricultural production through increasing the access of producers to markets; and, that improved access to social services, specifically health and education, would lead to enhanced quality of life for the rural poor.

The projects sustained significant tactical successes during the reporting period. However, given the erratic performance of the GOZ in terms of public sector investment, and the short time frame of the Action Plan period for roads to be both rehabilitated and used, there is no empirical data to demonstrate that they have achieved the broader strategic objectives of increased flow of goods and services and thus increased production. Indeed, the impact of increasing fuel prices late in the reporting period may have served as a short-term disincentive to transporters until gains through improved maintenance are realized. A modest impact on the quality of life through access to health services may be inferred in select locations.

1. Roads Rehabilitated in Bandundu and Shaba

As part of its production-driven transport strategy of the eighties, the Mission has focused on: 1) rehabilitation of national roads where they constitute critical links in trade patterns; and 2) improvements in regional and local interest roads to facilitate access of the poorer populations to productive goods and services. In Bandundu, during the reporting period 190 kilometers of national road with some regional links were rehabilitated under the Agricultural Marketing Development I Project (660-0026). The project's 10-year total of 370 kilometers provides greatly improved access to the project area's population, thus improving access to goods and services within the rural areas to approximately 74,000 persons and to all of the 160,000 inhabitants of the city of Kikwit, the region's largest city and commercial center.

The complementary Agricultural Marketing Development III Project (660-0098) in Bandundu installed or improved approaches to 24 water crossings on regional and local interest roads during the Action Plan period, thus eliminating seasonal choke points and providing all-weather access to an additional approximate 50,000 persons. Agricultural Marketing Development II (660-0028) was to
improve an additional 80 kilometers of road between Kikwit and Idiofa, but this proved technically unfeasible and the effort was terminated.

Traffic counts made during a nine-month period in 1988 provided a baseline estimate of 243 trucks/week entering and leaving the area of the three projects, generally entering empty and leaving loaded with an average of 10 MT of agricultural products. This baseline estimate will be used to measure increases in traffic and tonnage during the coming Action Plan period.

The monthly traffic counts only began in February 1988 and no increase has been recorded to date. Anecdotal evidence provided by long-term residents of the area, in fact, suggests a decrease in the number of trucks servicing the area over the past decade. This decrease is in part the result of the economic instability of the period and their effect on other critical factors in the transport sector, i.e., scarcity of foreign exchange for spare parts, periodic fuel shortages, etc. Additionally, the project area in Bandundu is approximately 500 kilometers from Kinshasa, and the organization of commercial wholesale and retail trade for both agricultural commodities and manufactured goods is based almost exclusively on supply and demand from the Kinshasa market. The deterioration of the national road linking the project area to Kinshasa during the reporting period was significant, thus serving to counterbalance the positive improvements in travel time and operating costs within the project area. That road is now being repaired again.

As an example of this dynamic, based on August 1988 data, the wholesale price of a sack of cassava in Kinshasa represented four times the farmgate price. Due to the high cost of transport, however, at an average estimated cost of $2845 from farmgate to market, a trader could only make at most $155 per sack when prices were at their peak in Kinshasa. Rudimentary vehicle operating cost calculations in the same period suggest that transporters actually lost money on such trade, if real costs of depreciation and cost of capital are considered. So, although farmers appear to have benefited from price liberalization, the benefits have not accrued to traders or transporters, and assumed stimulation of the project area economy through such forward linkages have not occurred.

In Shaba, the Mission has focused on two specific areas for road improvements. In Central Shaba, work is progressing on the rehabilitation of approximately 1000 kilometers of link road to be upgraded to a standard affording 60 kilometers per hour speeds and approximately 1000 kilometers of feeder road to a standard of 40 kilometers per hour speeds. At the beginning of the Action Plan period, only 50 kilometers of link road had been completed to specifications, with no feeder road work undertaken. As of September, 1989, 460 kilometers of link road were opened to traffic and 176 kilometers rehabilitated to specifications. Additionally,
400 kilometers of feeder roads were opened to traffic and 180 kilometers rehabilitated to specifications. The eventual completion of this network of link and feeder roads will provide the richly productive subregion with improved internal access for the area's approximately 450,000 people, as well as vastly improved access via river ports and railhead to external markets to the south (Lubumbashi) and west (the Kasais). Traffic counts made for the full agricultural season in 1989 -- when enough roads were opened to have traffic to count -- combined with a commercial baseline survey conducted in 1987, will provide a basis for measuring increased traffic and availability of goods and services in the coming Action Plan period.

In the Lualaba subregion of southwestern Shaba, during the reporting period 1158 kilometers of national road were rehabilitated to specifications. When the eventual life of project target of 1266 kilometers is completed during the coming Action Plan period, the population of approximately 400,000 in Lualaba subregion will have greatly improved access to the urban center of Kolwezi and other southern Shaba markets. The Lualaba subregion is an area that had its infrastructure destroyed by war in 1977 and 1978, and is host to tens of thousands of Angolan refugees and displaced Zairians. Complementary Mission-funded projects in primary health care and rural water supply are discussed below. The combination of the three PVO-assisted refugee projects constitutes an important and ongoing "target of opportunity" that has had a significant humanitarian impact on a distressed population.

2. **Transport Infrastructure Strengthened**

Given problems encountered with road maintenance to date, the Mission has supported multi-modal transport development as well as road rehabilitation. As described above, the road rehabilitation in Central Shaba is predicated on a multi-modal transport network and is strategically planned to provide links among road, river, and rail for evacuation of agricultural produce. Baseline estimates have been developed for commercial activity and traffic in the area. Studies at critical nodes in the coming Action Plan period will provide more detailed information on the relative costs and efficiencies of each transport link. The upcoming World Bank loan which includes reform of the national rail authority (SNCZ) will strengthen the potential impact of USAID inputs.

In Bandundu, studies conducted under the Agricultural Marketing Development III Project (660-0098) demonstrate that although the bulk of agricultural production from the area is marketed via road (approximately 58 percent to Kinshasa and 3 percent to the Kasais in 1988), almost 40 percent is transported out of the area by river. Although specific comparative data is not yet available, the
proportion of goods brought into (or transiting) the area via the rivers (e.g. salt, soap, wheat flour, bottled drinks) may be at least as high.

The Agricultural Marketing Development III Project (660-0098) has thus supported geodetic and geotechnical mapping and marking of treacherous sections of the Kasai River, a major channel for marketing produce south to the Kasais and northwest to the Zaire River and Kinshasa, and has provided basic equipment and training to the GOZ's River Transport Authority. The project has additionally supported the research, design, and construction of six prototype boats, two of which have been sold to private firms and one of which is being utilized by the Area Development & Marketing Project (660-0102) for marketing trials. The relative costs and performance of these prototypes will be studied in the coming Action Plan period, with emphasis on transfer of the designs and construction to interested private sector firms.

D. Child Survival

During the FY 1987 - 1989 reporting period, a number of the Mission's longer-term Child Survival strategies have begun to demonstrate significant progress:

- Under Basic Rural Health II (BRH II, 660-0107), the baseline survey for a second study designed to measure infant and child mortality rates in five control and experimental areas was completed. Preliminary data indicate a positive correlation in four out of five zones studied between the number of years the zone has received Basic Rural Health (BRH) assistance and a reduction in infant mortality rates (IMR). The zone of Vanga in Bandundu Region has received assistance since 1982 and had, in 1989, an average IMR of 65. The zone of Kabongo, in Shaba Region, started receiving assistance in mid-1988 and recorded an average IMR of 95. The national IMR is believed to be approximately 110.

- In July-August, 1989, a Survey of Child Mortality and Utilization of Health Services (MUHS) was undertaken in Kingandu, in Bandundu region, as follow-up to baseline surveys undertaken in the same region in 1984 and 1985, under the Combatting Childhood Communicable Diseases Project (CCCD, 698-0421.60). Preliminary results indicate that the IMR fell 15 percent from 130 to 110, possibly because measles vaccine coverage increased from 20 percent to 71 percent while third dose polio coverage increased from 10 percent to 58 percent.
Under Family Planning Services (660-0094), the May 1987 Action Plan target for new acceptors was 50,000. Results as of September 30, 1989 were 57,691 new acceptors, for a total of 127,996 Couple Years of Protection (CYP). The Contraceptive Social Marketing (CSM) program has been dramatically successful. High increases in condom sales accounted for 75 percent of the nearly 30,000 Couple Years of Protection (CYP) in the last two quarters of the reporting period alone.

The Mission's health and family planning activities focus on reducing infant and child mortality and morbidity in the short-term and in establishing institutions and systems that will lead to lower rates of mortality and population growth in the long term. Decreasings the spread of HIV/AIDS is a theme that increased in importance during the reporting period. Projects in support of these objectives are listed in Table B-2 of this report. A discussion of targets achieved is found below.

1. **Coverage for Vaccine-Preventable Diseases and Malaria Increased**

The Combatting Childhood Communicable Diseases Project (CCCD, 698-0421.60) takes the lead in the Mission's efforts to increase coverage, and currently covers 206 of Zaire's 306 health zones, encompassing 71 percent of Zaire's population.

Table B-4 provides a listing of targets established in the May 1987 FY 1987 - 1989 Action Plan and what was achieved during the reporting period. The increased coverage translates into cases of the disease, and deaths attributable to the disease, prevented. In 1988, an estimated 470,000 measles cases were prevented through vaccinations, as well as approximately 23,500 deaths. Polio vaccination prevents about 450,000 polio infections annually, including an estimated 4,500 cases of paralysis.

Lack of achievement of targets is attributed primarily to the fact that the Expanded Program of Immunization received no increase in local financing during 1987 and 1988, thus limiting its planned efforts at expansion. Indeed, given the high inflation rates (ref Section I.C.) and lack of budget increases, it may be considered an achievement to have maintained coverage at constant rates. The 75 percent increase in presumptive treatment of malaria is deceptive, in that malaria-related deaths are believed to be increasing due to the expansion of the chloroquine-resistant strain.
Table B-4: Immunization Coverage Rates 1987-1989
(Percentage of at-risk population covered)

<table>
<thead>
<tr>
<th>Disease</th>
<th>1987</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achieved</td>
</tr>
<tr>
<td>Measles</td>
<td>90</td>
<td>41</td>
</tr>
<tr>
<td>BCG</td>
<td>70</td>
<td>57</td>
</tr>
<tr>
<td>DPT 3</td>
<td>57</td>
<td>36</td>
</tr>
<tr>
<td>Polio 3</td>
<td>54</td>
<td>36</td>
</tr>
<tr>
<td>Tetanus Toxoid</td>
<td>60</td>
<td>42</td>
</tr>
<tr>
<td>ORT</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>Malaria-Presumptive²</td>
<td>78</td>
<td>41</td>
</tr>
<tr>
<td>Malaria-Chemoprophylaxis³</td>
<td>28</td>
<td>39</td>
</tr>
</tbody>
</table>

Notes to Table B-4:

1. Figure represents percentage of population with access to ORT. Access defined as services available within 5 km radius from health center.
2. Percent of health centers and hospitals applying presumptive therapy for fever.
3. Percent of health centers and hospitals administering chemoprophylaxis to pregnant women.

Sources: USAID/Kinshasa and CCCD, 1989

2. Primary Health Care Services in Rural and Urban Areas Improved

The primary benchmark established in the FY 1987-1989 Action Plan for this target was that comprehensive Primary Health Care (PHC) services would be available to about four million villagers by the end of the Action Plan period. As of September 1989, data indicate that of the 90 BRH-assisted health zones, almost five million have access to full service centers, as compared to 2,800,000 reported in the last Action Plan (May 1987). A second benchmark was that 35 new health zones would become operational during the period; 40 new zones have been established. This represents an increase of over one million inhabitants with access to PHC as compared to 1985. This data includes persons in the Lualaba sub-region, where 15 new health centers were constructed under the Shaba Refugee Health Project (660-0114). Nearly 400,000
children and 350,000 women now have access to under-fives and prenatal clinics.

3. **Availability and Use of Safer Drinking Water Expanded**

Achievements cited in the FY 1987 - 1989 Action Plan (May 1987) for the previous period for the Shaba Refugee Water Project (660-0116) and the water component of BRH II (660-0107) were 150 water systems of various types providing potable water to approximately 270,000 villagers. Cumulative accomplishments as of September 1989 are as follows:

- 2688 water sources have been improved under BRH-II (health component only) serving an estimated population of 770,000;

- 1256 springs have been capped, 289 deep wells fitted with hand pumps, and 18 gravity-fed systems constructed, under BRH-II (water component), for a cumulative coverage of 400,000 persons;

- 454 springs have been capped, 163 existing wells have been rehabilitated and provided pumps, 2 piped water systems have been completed and one is partially complete under Shaba Refugee Water Project (660-0116), for a cumulative coverage of 160,000 persons.

These activities during the reporting period thus provide improved drinking water to 1,330,000 persons in rural areas; if one deducts the 270,000 claimed in the previous Action Plan period, the accomplishment for the FY 1987 - 1989 period is thus an additional 1,060,000 persons provided safer drinking water. Given a total population of 35.6 million for Zaire in 1990, of whom approximately 40 percent are considered urban, this means that an additional five percent of the total rural population of Zaire benefited from A.I.D.-financed improved water supply during the reporting period.

At the beginning of the reporting period, BRH funded a longitudinal study of 1223 children in Northern Kivu region who benefited from the installation of a BRH-financed gravity-fed system. Preliminary study results available in FY 1989 demonstrate a strong relationship between incidence of under-fives diarrhea and safe water consumption measured by quantity of provided water and by distance from the standpipe. The two areas served by water systems reported 18 percent fewer episodes of diarrhea than a control area using traditional water sources. Distance from the standpipe and incidence of diarrhea were also correlated. Families less than 10 minutes walking distance from a standpipe experienced 40 percent fewer episodes of diarrhea than those living more than 10 minutes...
away. And, significantly, reported cases of cholera in the zone decreased by 50 percent in Year 1 of the water system and an additional 52 percent in Year 2.

The study also demonstrated that knowledge of homemade oral rehydration solution (ORS) increased from 82 percent to 98 percent in water system areas, although only 36 percent could correctly prepare the formula. These results suggest that water supply projects are also reinforcing other child survival interventions such as oral rehydration therapy (ORT) for diarrhea.

4. **Contraceptive Couple Years of Protection (CYP) Raised**

As stated above, the May 1987 Action Plan target for new acceptors was 50,000, and results as of September 1989 were 57,691 new acceptors for a total of 127,996 Couple Years of Protection (CYP). The previous Action Plan period had only resulted in approximately 13,000 acceptors; the increase thus exceeds 300 percent.

The previous Action Plan also stated that the family planning program was active through 70 delivery centers in 16 cities and towns. In the intervening period, the program has expanded to work through a cumulative total of 104 family planning clinics and eight community-based distribution sites in the public sector, and the private sector Contraceptive Retail Sales works through well over 85 percent of Kinshasa's pharmacies and wholesale suppliers and 50 percent of the medical centers. Social marketing products are now available in 12 cities throughout the country. A recently initiated Sentinel Site Survey covering seven cities and 68 outlets is beginning to provide reliable data on which types of outlets provide the most effective means of achieving increases in CYP's. Clinic-based family planning services increased CYP by 15 percent during the most recent period measured (January-June 1988 compared to January-June 1989).

5. **Protective Measures Against Transmittal of HIV/AIDS Taken**

The Mission's approach to HIV/AIDS prevention is integrated throughout its portfolio and supplemented by specific assistance from a number of centrally-funded projects. All activities are coordinated with the WHO's Global Program on AIDS in collaboration with the GOZ's Central Coordination Bureau of the National AIDS Committee's Medium Term Plan. Particularly close collaboration is found between this group and the A.I.D.-financed PVO working in the social marketing of condoms and AIDS IEC (information-education-communication) activities.
A USAID-financed survey of knowledge, attitudes and practices (KAP) for AIDS in Kinshasa (February 1989) demonstrated that adult knowledge about AIDS was over 90 percent and that a great majority of Kinshasa residents know the major routes of transmission. However, many misconceptions and gaps of information remain, especially among the young. The target group during the 1989 AIDS IEC campaign was thus youths aged 15 to 19. Through a number of different venues the Mission is continuing to support targeted media campaigns, training, and studies to increase awareness and thus protective behaviors among both high risk groups and the general population in five regions of the country.

Statistics show that Zairian communities, especially Kinshasa, are responding to these campaigns. Condom sales increased from 900,000 in 1988 to well over 4,000,000 in 1989. A short, informal survey revealed that at least 70 percent of condom use was for the prevention of AIDS.

USAID/Zaire is also supporting various clinical activities with regard to screening of blood for transfusion, again through bilateral projects with centrally-funded technical assistance. Under the centrally-funded AIDSTECH project, evaluation and validation of rapid tests for the diagnosis of HIV infection in four rural (in collaboration with BRH II) and one urban hospital has been accomplished. Training in AIDS counseling is also being offered. The five hospitals have completed all activities with all tests performed and eight technicians trained. Data have been forwarded to AIDSTECH for analysis of results. Of key concern in the next Action Plan period will be an assessment of the potential for cost recovery of such tests. USAID is looking into the possibility of implementing a sustainable program to supply rapid assay tests to 30 rural hospitals to be financed through user fees.

6. **Public Health Personnel Trained**

The health and family planning portfolio supports training at all levels in numerous fields throughout the country. Several thousand person-days of in-country nonacademic training were provided to various types of health and family planning personnel during the reporting period. This ranged from village-level pump operators to traditional birth attendants to lab technicians to pregnant village women.

The Mission is also supporting the creation, in Zaire, of central Africa's first program in higher education to offer the equivalent of a Master of Public Health (MPH) degree (School of Public Health, or SPH, Project 660-0101). Participants in the SPH's one-year diploma degree program are primarily physician
administrators working in health zones, rural health facilities, and
government departments assisted by the BRH-II project. Short-term
courses and applied research under the auspices of the School are
specifically designed for other USAID projects.

At the beginning of the reporting period the SPH was just being
organized, with Action Plan targets including somewhat vague
benchmarks such as "curricula for diploma program developed" and
"students for diploma program selected." As of September 1989, 62
health professionals had completed, and an additional 25
professionals were about to begin, a one-year program equivalent to
an MPH degree offered by accredited U.S. schools. Short-term
courses on computer applications to the field of public health have
been held for 160 persons from Zaire and for visitors from ten
neighboring countries. Numerous research projects have been
completed and others are in progress. The SPH has quickly become a
center for public health dialogue in the country.

The GOZ Minister of Higher Education has agreed that the
University of Kinshasa School of Public Health will be recognized as
an independent faculty, on a par with the School of Medicine, within
the University of Kinshasa system. This is a significant
accomplishment for an American-supported effort within a heavily
Belgian-influenced educational system. The SPH has also initiated
efforts to establish a related non-profit association in Zaire and
to solicit funds from major U.S. corporations as a means of assuring
long-term financing.

E. Cross-Cutting Support

The Mission supported a number of efforts which enhance and
support efforts under several of the key objectives noted above.
Chief among these is USAID's human resource development assistance,
which provides training for nearly 5,000 Zairians each year.
Training is carried out under both projects and non-project
assistance in all sectors of activity. Additionally, through the
regional training projects (698-0433, 0455 and 0463), relatively
untied funding is provided for "targets of opportunity" in
participant training, notably in support of A.I.D.'s policy dialogue
and special interest efforts, e.g. women's and environmental issues.

The Mission also continued its more broad-based support to
Zaire's "third force" in development, its large and diverse PVO
community. During the Action Plan period, three PVO projects were
completed. Under the five year PVO Economic Support Project (660-
0097), approximately 2 million local citizens ultimately benefited
from interventions in rural infrastructure, rehabilitation of rural
health centers, and rural electrification. Under the Appropriate
Rural Technology Development Project (660-0104) and the Private
Management Support Project (660-0113), Zairian non-governmental institutions were created for which USAID/Zaire and other organizations now serve as clients. Technoserve/Zaire, created under the Private Management Support Project, is providing business and financial management training to several A.I.D. projects and local PVOs. And CENACOF, a local training institution started by USAID (660-0068), has developed significant self-financing mechanisms and continues its work.

The Mission is continuing this cross-cutting support under the new Small Project Support Project (660-0125), which began implementation at the end of the reporting period. This project, implemented by a U.S.-based PVO, provides sub-grants to Zairian-based PVO's as well as training in organizational and institutional development. Its recent support to regionally-initiated PVO coordination activities in Bandundu and Shaba provides the Mission with continuing input from an increasingly vocal and important sector in the Zairian development community.

III. Lessons Learned and Implications for the FY 1990 - 1993 Action Plan

A. Program Management

A critical factor limiting the success of USAID's programs in Zaire has been the GOZ's inconsistent macroeconomic policies. Economic instability has inhibited growth in the private sector. At the same time, it has interfered with the performance of the public sector, limiting the effectiveness of USAID's public sector partners. The breakdown in the GOZ's budgetary discipline in 1987 and 1988 had severe consequences for USAID-supported activities. Excessive spending ultimately fueled inflation, yet investment and social spending priorities were frequently neglected.

In this environment, USAID made effective use of non-project assistance, including PL-480, linking quick-disbursing assistance to GOZ performance in implementing sound economic policies. In FY 1989, USAID withheld commitments of PL-480 commodities and the obligation of the Private Sector Support Program for several months, until the GOZ renewed its commitment to its economic adjustment program. This flexibility to withhold aid disbursements permits the U.S. to support good policies on a timely basis and increases the Mission's effectiveness in policy dialogue.

DFA non-project assistance and PL-480, Title I further contribute to Mission objectives through the generation of counterpart funds. USAID-supported activities have come to rely
heavily on counterpart funds to supplement the often meager resources provided by the GOZ. However, as poor policy decisions by the GOZ have led to bursts of inflation and slower aid disbursements, USAID projects have been caught in the squeeze between low GOZ budget allocations and tight counterpart fund budgets.

USAID's experience over the past three years thus underscores the importance of improving GOZ budgeting and expenditures. Within the framework of the IMF programs, the World Bank is playing a leading role among donors in urging the GOZ to contain and improve the allocation of its spending. The GOZ's Priority Investment Program (PIP) has become a focal point for the establishment and monitoring of budgetary and donor-financed investment priorities. In 1989, GOZ expenditures for development projects generally conformed to the PIP. Thus, it is important during the next Action Plan that USAID better coordinate its own project budgets with the development of the PIP.

In light of the importance of the PIP and the variability of counterpart funding, USAID has established priorities for use of counterpart funds. It distinguishes between activities that it is willing to scale back in response to poor GOZ performance and reduced availability of counterpart funds, and those activities that must be assured GOZ financing or, in certain cases, priority use of counterpart funds.

B. Economic Adjustment and the Private Sector

USAID's experience in the economic policy arena demonstrates that the Mission is influential and has a significant role to play in certain sectors. At the same time, the Mission has learned that its reach is limited both by the size of its financial assistance and by the numbers and expertise of its staff. USAID looks to the IMF and World Bank to take the lead in promoting constructive changes in the GOZ's macroeconomic policies, although the Mission has an important role in the development and implementation of financial sector reforms. As one of the principal bilateral donors, USAID is supportive of IMF and World Bank initiatives and actively coordinates assistance with the World Bank and other donors.

USAID's presence as a full field mission and its years of experience in Zaire are responsible for its comparative advantage in influencing policies in the health, agriculture, transport, and financial sectors, as well as policies of the regional governments in Bandundu and Shaba. USAID is likely to play a less active role than in recent years in attempts to influence trade and industrial policies.
Commodity Import Programs and PL-480 assistance will continue to be important in the USAID program, supporting policy reforms and providing foreign exchange for critical food and industrial commodities. Commodity assistance provides a demonstrable stimulus to the private sector, increasing productivity and employment.

C. Agriculture

Since 1983, substantial improvements in agriculture sector policies have been made at the national level with significant people-level impact. For USAID, the next step in the policy dialogue is to discourage any backsliding in national policies and, through policy research and dialogue, to support efforts of regional and local authorities to consolidate the gains made in market liberalization.

A weak extension component of the Applied Agricultural Research and Outreach I (RAV) Project has led the Mission to place greater emphasis on extension and farming systems research in the design of the follow-on agricultural research (RAV II) project. The major causes for the shortfall in extension and outreach activities have been weaknesses in defining approach and methods to on-farm research and, during the past two years, insufficient operating funds and rapid inflation. Eliminating these apparent project constraints as well as exploring means to improve the financial viability of the RAV programs will be the primary implementation focus of the new agricultural research project.

A significant constraint to the dissemination of improved genetic material has been the budgetary austerity of the last few years and the concomitant cutbacks in RAV staff and off-station activities. The RAV project is scheduled for close-out in September 1990, with a follow-on project in agricultural extension under active development for FY 1990 obligation. Of particular importance in the future is the consolidation of agricultural research in Zaire, both within the vertical programs of RAV and between RAV and the national perennial crop research institute, INERA, so that the two do not compete. USAID has maintained influence with INERA through establishment of Title I self-help conditionalities, primarily regarding financial and organizational management, and through funding INERA's component of the regional PRAPAC Potato Research Network Program. The Mission has also been an active participant in recent GOZ-donor meetings to resolve problems in the organization and funding of research in Zaire. In November 1989, the GOZ agreed to integration of RAV and INERA by 1993. This was a culmination of USAID and World Bank efforts and offers the possibility of a unified national research system by 1993.
D. Transport

USAID-supported road improvement projects suffered during the Action Plan period as a result of erratic financing by the GOZ and institutional weaknesses of Office des Routes and the local interest roads authority, SNRDA. The Mission has learned that project activities cannot be sustained in the absence of needed policy and institutional changes. These changes should include a stable source of funding for road maintenance, improved planning for resource allocation, increased use and improved supervision of private sector contractors for manual as well as mechanical maintenance, and increased planning and management authority for regional governments. These lessons-learned are being taken into account in the design of the Transport Reform Program. This Program is being designed in coordination with major World Bank credits in the fuel and road transport sub-sectors. It focuses on helping the GOZ to put into place needed fuel price and tax changes and on institutional strengthening. This coordination results in added leverage on key policy reforms.

USAID's experience has also demonstrated that the GOZ must place increased emphasis on maintenance and rehabilitation of priority earth roads and less emphasis on new construction projects. This is an important theme in donor coordination and in implementation of USAID road projects in Bandundu and Shaba.

E. Health and Family Planning

Health and family planning projects have been among the most successful activities in the Mission's program. However, these projects have proven to be hungry for financial resources and extremely management intensive. Although the GOZ increased its contributions for the social sectors in 1989, there is little hope for long-term sustainability without greater mobilization of indigenous resources. Increased funding by the GOZ for such activities is essential. USAID supports efforts of the World Bank to obtain the GOZ's commitment to finance health and family planning programs in the context of a Social Sectors Adjustment Program. The Mission is also encouraging the Japanese to provide more aid in this sector. At the same time, the progress achieved at the health zone level, financed in part by local resources, shows that a certain level of services -- although less than desirable -- can be organized and provided with minimal GOZ budget support. Thus, new and creative approaches to mobilizing financial resources need to be developed. To address the problem of management intensity, in future project design activities the Mission will shift more of the day-to-day management burden for
health and family planning projects to institutional contractors, freeing Mission staff to focus on program direction and impact.

USAID's experience has demonstrated that low-cost child survival technologies can be delivered effectively despite major constraints, with impressive impact on child survival. This experience argues for a continuing emphasis on child survival measures, particularly vaccinations, oral rehydration therapy, and malaria control.

The contraceptive prevalence levels of 15 percent and higher that have been achieved on a small scale where well-managed services have been available, as well as the success of the Contraceptive Social Marketing Project, demonstrate that there is a latent demand for family planning and AIDS prevention measures. The challenge is to make appropriate services more widely available to the population.

F. Other

Training activities will continue to be an important facet of USAID's development effort; over 5,000 Zairians receive USAID-supported in-country and off-shore training each year. Experience gained over the past three years demonstrates that training activities are an important complement to Mission activities. USAID's training program is able to reach important target populations who would not otherwise be direct beneficiaries of the Mission's private sector support activities, including women and managers of micro-enterprises.

PVOs and the Peace Corps make significant contributions to the development of Zaire and the implementation of USAID projects. USAID integrates PVO and Peace Corps activities into its major projects where feasible. The Mission has found effective and efficient ways to work with these organizations to the mutual benefit of all concerned. Approximately 25 percent of the 150 Peace Corps Volunteers in Zaire work with USAID projects, providing invaluable hands-on experience. In addition, the new Small Project Support Project, which is administered by an international PVO, provides support to PVO sub-projects which are consistent with Mission objectives.
ACTION PLAN

FY 1990-1993

ZAIRE

Volume 3
Annex C-L

JUNE 1990

Agency for International Development
Washington, D.C. 20523
ANNEX C

HEALTH AND POPULATION BACKGROUND PAPER

USAID/Zaire
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>iii</td>
</tr>
<tr>
<td>I. SECTOR OVERVIEW</td>
<td></td>
</tr>
<tr>
<td>A. Background</td>
<td>1</td>
</tr>
<tr>
<td>B. Health Status</td>
<td></td>
</tr>
<tr>
<td>1. General Health Indicators</td>
<td>2</td>
</tr>
<tr>
<td>2. Maternal and Child Health</td>
<td>3</td>
</tr>
<tr>
<td>3. Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>4. AIDS</td>
<td>5</td>
</tr>
<tr>
<td>C. Water Supply and Sanitation</td>
<td>6</td>
</tr>
<tr>
<td>D. Population Overview</td>
<td>7</td>
</tr>
<tr>
<td>1. General Indicators</td>
<td>8</td>
</tr>
<tr>
<td>2. Population Policy and the Political Environment</td>
<td>8</td>
</tr>
<tr>
<td>3. Family Planning Activities</td>
<td>8</td>
</tr>
<tr>
<td>E. Health System Structure and Functions</td>
<td>9</td>
</tr>
<tr>
<td>1. Organizational Structure</td>
<td>9</td>
</tr>
<tr>
<td>2. Technical and Administrative Functions</td>
<td>11</td>
</tr>
<tr>
<td>F. Private Sector Participation</td>
<td>12</td>
</tr>
<tr>
<td>1. Private and Voluntary Organizations</td>
<td>12</td>
</tr>
<tr>
<td>2. The For-Profit Private Sector</td>
<td>13</td>
</tr>
<tr>
<td>3. Traditional Healers</td>
<td>13</td>
</tr>
<tr>
<td>G. Health Sector Costs and Financing</td>
<td>14</td>
</tr>
<tr>
<td>H. Human Resources</td>
<td>15</td>
</tr>
<tr>
<td>1. National Indicators</td>
<td>15</td>
</tr>
<tr>
<td>2. Physician Training</td>
<td>15</td>
</tr>
<tr>
<td>3. Nurses Training</td>
<td>16</td>
</tr>
<tr>
<td>4. In-Service Training</td>
<td>16</td>
</tr>
<tr>
<td>5. Other Training</td>
<td>17</td>
</tr>
<tr>
<td>6. School of Public Health</td>
<td>17</td>
</tr>
<tr>
<td>I. Bilateral and Multilateral Donor Activity</td>
<td>17</td>
</tr>
</tbody>
</table>
II. CONSTRAINTS ANALYSIS

A. Key Constraints to Health Expansion and Development

1. Health Policy, Planning, and Budget
2. Other External Constraints
3. Inter-Institutional Conflicts

B. Efforts to Address Constraints

III. USAID HEALTH SECTOR STRATEGY AND PORTFOLIO

A. Context

B. Health Sector Strategic Objective, Targets, and Benchmark Indicators

C. Relationship of Current Portfolio to Strategic Objective and Targets

1. Relationship of Projects to Sectoral Objective, Targets, and Benchmark Indicators
2. Cross-Sectoral Issues and Sustainability

D. Future Health and Population Portfolio

1. Continuity of Objectives
2. Project Versus Non-Project Modes of Assistance
4. Coordination with Other Donors
GLOSSARY OF TERMS USED

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSI-CCCD</td>
<td>African Child Survival Initiative-Combatting Childhood Communicable Diseases</td>
</tr>
<tr>
<td>AEPRP</td>
<td>African Economic Policy Reform Program</td>
</tr>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>BCC</td>
<td>Central Coordinating Bureau of National AIDS Committee</td>
</tr>
<tr>
<td>BCG</td>
<td>Tuberculosis vaccine</td>
</tr>
<tr>
<td>BCT</td>
<td>Tuberculosis Control Office</td>
</tr>
<tr>
<td>BNL</td>
<td>Leprosy Control Office</td>
</tr>
<tr>
<td>BNT</td>
<td>Trypanosomiasis Control Office</td>
</tr>
<tr>
<td>BOM</td>
<td>Bureau des Oeuvres Medicales Catholiques</td>
</tr>
<tr>
<td>BRH</td>
<td>Basic Rural Health Project</td>
</tr>
<tr>
<td>CBD</td>
<td>Community-Based Distribution</td>
</tr>
<tr>
<td>CDC</td>
<td>U.S. Centers for Disease Control</td>
</tr>
<tr>
<td>CECAP</td>
<td>Administrative and Coordination Office for Population in the Department of Plan</td>
</tr>
<tr>
<td>CEPLANUT</td>
<td>Centre National de Planification de Nutrition Humaine</td>
</tr>
<tr>
<td>CNND</td>
<td>Comite National des Naissances Desirables</td>
</tr>
<tr>
<td>CONAPO</td>
<td>National Population Committee</td>
</tr>
<tr>
<td>CPS</td>
<td>Contraceptive Prevalence Survey</td>
</tr>
<tr>
<td>CYP</td>
<td>Couple Years of Protection</td>
</tr>
<tr>
<td>DPH</td>
<td>Department of Public Health</td>
</tr>
<tr>
<td>DPT</td>
<td>Diphtheria, Pertussis, Tetanus vaccine</td>
</tr>
<tr>
<td>ECZ</td>
<td>Church of Christ in Zaire</td>
</tr>
<tr>
<td>FMECO</td>
<td>Medical Coordinating Fund</td>
</tr>
<tr>
<td>FONAMES</td>
<td>National Fund for Medical/Health Activities</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>HAPA</td>
<td>HIV/AIDS Prevention in Africa Project</td>
</tr>
<tr>
<td>HC</td>
<td>Health Center</td>
</tr>
<tr>
<td>HEALTHCOM</td>
<td>Health Communications Project (centrally-funded)</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HPN</td>
<td>Health, Population, Nutrition</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, Education, Communication</td>
</tr>
<tr>
<td>IMR</td>
<td>Infant Mortality Rate</td>
</tr>
<tr>
<td>ISTM</td>
<td>Institut Superior des Techniques Medicales</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>NIH</td>
<td>U.S. National Institutes of Health</td>
</tr>
<tr>
<td>NPA</td>
<td>Non-Project Assistance</td>
</tr>
<tr>
<td>OPTIONS</td>
<td>Centrally Funded Population Project</td>
</tr>
<tr>
<td>ORS</td>
<td>Oral Rehydration Salts</td>
</tr>
<tr>
<td>ORT</td>
<td>Oral Rehydration Therapy</td>
</tr>
<tr>
<td>ORT</td>
<td>Organization for Rehabilitation through Training</td>
</tr>
</tbody>
</table>

iii
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACD</td>
<td>Project Assistance Completion Date</td>
</tr>
<tr>
<td>PASS</td>
<td>Program of Adjustment in the Social Sectors</td>
</tr>
<tr>
<td>PEV, PEV-LMTE</td>
<td>Expanded Program of Immunization/CCCD</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>PL-480</td>
<td>Public Law 480, the Agricultural Trade and Development Act of 1954, as amended</td>
</tr>
<tr>
<td>PRICOR</td>
<td>Primary Health Care Operations Research Project</td>
</tr>
<tr>
<td>PSI</td>
<td>Population Services International</td>
</tr>
<tr>
<td>PSND</td>
<td>Projet des Services des Naissances Desirables, or Family Planning Services Project</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization, term used by A.I.D. for non-governmental organizations (NGOs)</td>
</tr>
<tr>
<td>REACH</td>
<td>Resources for Child Health Project</td>
</tr>
<tr>
<td>REGIDESO</td>
<td>National Urban Water Service</td>
</tr>
<tr>
<td>RHC</td>
<td>Reference Health Center</td>
</tr>
<tr>
<td>SIDA</td>
<td>French acronym for AIDS</td>
</tr>
<tr>
<td>SNHR</td>
<td>National Rural Water Service</td>
</tr>
<tr>
<td>TIPPS</td>
<td>Technical Information on Population in the Private Sector</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Fund for Population Activities</td>
</tr>
<tr>
<td>UNHCR</td>
<td>United Nations High Commission on Refugees</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
</tr>
<tr>
<td>USAID, USAID/Zaire</td>
<td>A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization of the United Nations</td>
</tr>
</tbody>
</table>
I. SECTOR OVERVIEW

A. Background

Public health services in Zaire have undergone significant changes in the past 25 years. Prior to independence, Zaire had one of the most developed colonial health care services in sub-Saharan Africa. There was an extensive rural dispensary system and an active infectious disease control program operating via mobile teams. It was, however, almost entirely dependent on Belgian personnel and administrative oversight. Thus, the upheavals of the post-independence period, when many Belgians left the country, resulted in the nearly complete cessation of the health services. The Government of Zaire (GOZ) attempted to continue the colonial system, but had neither the trained personnel nor an experienced and capable administration. By the early 1970s, the GOZ was allocating 80 percent of its entire health budget for care primarily in urban areas. No more than 15 percent of the population was reached with these limited, largely curative and palliative services.

Private and Voluntary Organizations (PVOs), particularly church groups, strived to fill the void. Despite limited financial and human resources, they were successful in establishing scattered pilot programs promoting curative, preventive, and promotive services. These PVO efforts served as models for a national proposal in 1975 to establish decentralized health zones. By the end of the 1970s the Department of Public Health (DPH) actively began to seek assistance from larger donor agencies to expand this effort.

In 1980, Zaire officially adopted the "Charter for the Development of Health Care in Africa" which has, as its base, the adoption of a national primary health care (PHC) strategy. The GOZ's first five-year National Health Plan (1982-1986) mandated the decentralization of the health care system by the creation of 306 well-defined health zones. In general, the Government hopes to make basic primary health care available to the entire population via a low-cost delivery mechanism relying upon health centers and village-level health workers.

The GOZ further developed the health zone concept in order to coordinate and standardize the administrative and technical supervision of all preventive, promotive and curative health services within a specified geographic area. Prior to the introduction of the health zones, GOZ, Catholic, Protestant, and
private dispensaries coexisted within a given geographic area, each with an independent administration, leaving a system characterized by overlapping coverage, limited coordination and few if any preventive activities.

The objective of the current National Health Plan (1986-90) is to begin 30 new health zones per year. In addition, each year each operational health zone is to transform three dispensaries into full-service primary health care centers. At this rate, an estimated 70 percent of the population should have access to PHC services by the end of 1991. As of 1989, approximately 175 zones had been established. However, PHC coverage rates per zone varied dramatically, with an estimated range of 20 to 100 percent.

A.I.D.'s support for the health sector began in the 1970s with three elements: 1) a project to develop maternal and child health (MCH) centers in Kinshasa; 2) a pilot rural health systems development project in the Equateur Region; and 3) general assistance to the GOZ's Endemic and Communicable Disease Program, which consisted of vaccination campaigns and anti-malarial activities. Today, the USAID Health, Population and Nutrition (HPN) portfolio consists of eight bilateral and twelve centrally-funded projects with a focus on child survival interventions.

B. Health Status

1. General Health Indicators

Owing to the absence of reliable national health information and vital statistics systems, the overall health status of the Zairian population cannot be accurately assessed. Morbidity and mortality rates are estimated on the basis of: 1) a limited number of area studies carried out by donor-supported projects and academic researchers; and 2) an on-going sentinel site survey system established by the national vaccination program. Although recent area health status impact studies indicate a declining trend in infant and child mortality rates, in general, the average health status of the Zairian population remains poor.

According to the World Bank's World Development Report, Zaire's crude death rate has fallen from 21 per 1000 population in 1965 to 14 in 1987. Life expectancy at birth has risen 25 percent since 1960, and is now 52 years (51 for men and 54 for women). The crude birth rate has remained constant at about 45. These figures are comparable to those of other Central African countries.
2. **Maternal and Child Health**

Estimates of the infant mortality rate (IMR) vary widely from 98 to 160 per 1000 live births. UNICEF estimates an IMR of 110 and an under-five mortality rate of 164 for 1988. This represents a decline of under-five mortality of 35 percent since 1960, when the rate was 251. Recent impact studies indicate tremendous variation between specific groups (e.g., urban versus rural), as well as among disparate regions in the country.

Although cause and effect relationships are difficult to ascertain, a USAID-supported Basic Rural Health II Project (BRH) household impact study in five rural health zones indicated a positive correlation between project assistance and a reduction in IMR. The rural zone of Vanga, in Bandundu Region, which has received USAID-supported BRH assistance since 1982 and PVO assistance for over two decades, currently has an IMR of 65. A 1989 study in rural Bandundu, compared to a 1984 study in the same zone, showed a 15 percent decline in IMR from 130 to 110. This trend is consistent with improved vaccination coverage rates in the zone and the apparent decline in measles mortality.

The major documented causes of childhood death are malaria, measles, diarrhea, pneumonia, and tetanus. It is believed, however, that up to 80 percent of infant and child mortality is due to the synergism between disease and malnutrition. Many children who survive the first year of life fall prey to malnutrition and/or infection before the age of five. For those who do survive beyond the age of five, malaria and anemia are ubiquitous problems, as are problems resulting from poor sanitation such as intestinal parasites and diarrhea. AIDS is also now emerging as a new challenge to child survival.

The maternal mortality rate is high, estimated at 6-8 per 1000 live births. The primary cause of maternal mortality is childbirth complications, which are often aggravated by endemic disease and malnutrition. These complications are the result of a number of factors, including ineffective or nonexistent prenatal care, unsanitary delivery conditions, close birth intervals, maternal age at delivery, and untrained traditional birth attendants. Illegal abortion is also a factor.

Other important determinants of maternal and child health in Zaire, as elsewhere, include nutritional status, income, family size, education, and personal and environmental hygiene.

A major focus of the national PHC strategy is the establishment of prenatal and infant/child services. Zaire's
Combatting Childhood Communicable Disease Program (CCCD), the largest and oldest in Africa, supports an expanded immunization program (Programme Elargi des Vaccinations, or PEV) aimed at reducing morbidity and mortality caused by six vaccine preventable childhood diseases. Pregnant women are also immunized to prevent neonatal tetanus. The program also promotes presumptive treatment of malaria and chemoprophylaxis in high-risk groups, and oral rehydration therapy (ORT) for the treatment of diarrhea. To date, the program has been established in 206 zones. Vaccination coverage rates for 1989 were: 1) BCG, 59 percent; 2) Measles, 44 percent; 3) DPT (third dose), 41 percent; and 4) Polio (third dose), 41 percent.

Although Zaire has made significant progress in establishing vaccination services, coverage rates have stagnated over the last few years. Expansion has been impeded by the lack of management and supervision capacity, poor transportation and communication infrastructure, inadequate financial support for personnel and supervision, lack of adequate cold-chain equipment, and insufficient planning and coordination mechanisms at the national level among contributing donor organizations and government institutions.

3. Nutrition

Protein-calorie malnutrition and anemia, both serious health problems in Zaire, are widely distributed. National rates for severe and moderate malnutrition of under-five children are estimated at 5 percent and 15 percent, respectively. Recent research shows wide variation seasonally and across areas in the country. Iodine deficiencies occur in certain areas of the country, and hazardous levels of fluoride have recently been identified in the central Kivu region. However, Vitamin A and other micronutrient deficiencies do not appear to pose major nutritional problems.

Anemia is ubiquitous, exacerbated by the high prevalence of malaria, and the low consumption of protein foods. The major determinants of malnutrition and anemia in Zaire include severe poverty, stagnant agricultural production along with rapid population growth, economic pressure to sell agricultural products for cash, premature introduction of weaning foods, low average birth intervals, inequitable distribution of protein-rich foods among family members, lack of access to information and health services, and overall poor health status.

The GOZ does not have an official nutrition policy. It does endorse the promotion of food supply and proper nutrition under the current five-year development plan, but has failed to provide
resources to implement the plan adequately. In 1978, the Centre National de Planification de Nutrition Humaine (CEPLANUT) was created with USAID support and placed under the auspices of the DPH. Although CEPLANUT was able to carry out a number of area surveys in the early 1980s, and established a surveillance system in Bandundu, its weak leadership and insufficient operating funds precluded the implementation of nutrition promotive strategies.

USAID/Zaire's current nutrition-related activities in the health sector include: 1) a PL-480, Title II food-distribution program in Kinshasa, which works through 42 health centers in the city's poorest zones and emphasizes nutrition education through local women's groups; 2) a focus at the health center level to establish growth-monitoring clinics and nutrition education in an integrated manner using weight-for-age charts as a means of surveillance; and 3) a growth-monitoring component of the A.I.D. contract with Tulane University at the Kinshasa School of Public Health where other nutrition-related research and education also take place. Commodities such as infant weighing scales, growth cards, and educational materials are provided by USAID, UNICEF, and Belgian Cooperation.

4. AIDS

The AIDS epidemic is another major public health problem for Zaire, though data demonstrating its economic and human impact are still imprecise. However, prevalence data and projections generated by the World Bank and by Projet SIDA (the French acronym for AIDS), which is funded by the U.S. Centers for Disease Control/National Institutes of Health (CDC/NIH), Belgium, and Zaire, are worrisome. The most pessimistic projections suggest that the progress in reducing infant and child mortality through application of child survival technologies may be partially or wholly cancelled by an increase in pediatric AIDS.

AIDS in Zaire is primarily a heterosexually transmitted disease, with 80 percent of AIDS transmission occurring through sexual intercourse. It is almost equally divided between men and women. Transmission through contaminated blood transfusions and skin piercing instruments is also significant, at 15 percent of cases. Perinatal transmission comprises the final 5 percent of cases. Seropositivity rates in Kinshasa are estimated at 6 percent of the general population, with group rates at 6-10 percent in pregnant women and blood donors, and about 50 percent in certain prostitute populations. The rate among Kinshasa newborns is 3 percent. Rural seroprevalence is believed to be about 1 percent.
The GOZ has made great progress in changing its attitude toward AIDS from one of denial to one of openly trying to assault the causes of the spread of the disease. Following the World Health Organization's (WHO) Global Program on AIDS guidance, the GOZ decided on a prevention strategy of educating the public about the threat of AIDS and means of preventing AIDS transmission, thus reducing HIV-associated morbidity and mortality. It established a Central Coordinating Bureau (BCC) of the National AIDS Committee to coordinate all efforts in the fight against AIDS.

USAID-financed surveys indicate that about 90 percent of the population of Kinshasa (which represents 10 percent of the population of Zaire) is aware of AIDS and how it is transmitted, although misconceptions still exist, particularly regarding prevention. The GOZ and USAID's current strategy is to use this information to target the 12-20 and 20-30 age brackets with specific prevention messages, while trying to ensure that condom demand is met. Fidelity, abstinence and compassion are also suggested as specific behavioral responses to the epidemic.

While official GOZ dialogue with donors remains very open on the subject of AIDS, the BCC remains a bureaucratic, slow-moving coordinating body with a tendency toward over-centralization. It has recently, however, established offices in all eleven regions of Zaire with a Medical Director and an Information, Education, Communication (IEC) specialist in each regional capital.

C. Water Supply and Sanitation

Almost 40 percent of the population in Zaire is considered urban, and about 50 percent of the urban population has access to potable water through private connections and standpipes. These are installed and managed by REGIDESO, a parastatal agency supervised by the Department of Public Works. The World Bank estimates that 30 percent of the urban population has access to sewage systems, 10 percent use septic tanks, and 60 percent use latrines.

In rural areas, only an estimated 10 percent of the population has access to potable water. Rural water and sanitation efforts are coordinated by the National Rural Water Service (SNHR), a parastatal agency supervised by the Department of Rural Development and the Direction of Water and Sanitation of the DPH.

Three types of systems are provided to the population in rural Zaire: 1) gravity-fed adduction systems; 2) pumps on both hand-dug and drilled wells; and 3) capped springs. Several
donors (USAID, Japan, UNICEF, and other bilateral agencies) support the program. Approximately 1.33 million people to date have benefited from currently active USAID water projects. The BRH project has also trained water and sanitation coordinators for 99 health zones to promote the concept of "clean villages", which includes construction of simple water systems and ventilated improved pit latrines.

In 1989, a USAID-financed longitudinal study of 1,223 children demonstrated a 30 percent reduction in frequency of diarrhea among those living close to water outlets of a piped adduction system built with BRH project assistance. These findings are consistent with findings reported from other studies and demonstrate the health benefits that result from the water program.

D. Population Overview

1. General Indicators

Among African nations, Zaire ranks fifth in population size, with approximately 35.6 million inhabitants in 1990. The estimated annual population growth rate is three percent. If this rate remains constant, the population will double in 23 years. About 48 percent of the population is under 15.

Population density averages 14 inhabitants per square kilometer, but is unevenly distributed across the 11 regions. Urbanization is high for a sub-saharan African nation, with almost 40 percent living in urban areas of over 5,000 inhabitants.

The total fertility rate for Zaire has remained nearly constant since 1960 at 6.1. The most important sociocultural, demographic, and policy-induced fertility determinants in Zaire are: 1) young age at first union; 2) low legal age of marriage (14 years); 3) slow decline of widespread sterility caused by disease; 4) continued high infant/child mortality rates; 5) prohibition of clinically-induced abortions; 6) early solid food supplementation disrupting fertility-controlling effects of breastfeeding; 7) low utilization of modern contraceptive methods; 8) the absence of old age security arrangements outside family; 9) high cultural value placed on having many children; and 10) the positive economic value of children in rural areas.
2. Population Policy and the Political Environment

In terms of population policy, Zaire historically assumed a pro-natalist stance, which was reinforced by colonial attitudes and the Catholic Church. In 1972, however, the GOZ officially endorsed the concept of "child spacing", and in 1973 created the Comité National des Naissances Désirables (CNND) to promote and provide family planning services. CNND helped establish a "desirable births" component in the pilot health zones of the 1970s. This has been expanded, and today such components are standard in USAID's BRH and Family Planning Services Projects.

In 1986, a National Population Committee (CONAPO) was established by presidential ordinance. CONAPO was charged with assisting the GOZ in defining a population policy consistent with Zaire's socioeconomic and cultural conditions, as well as with proposing and evaluating programs designed to advance such a policy. A 35-member interministerial and academic group drafted the National Population Policy in late 1986. The policy is a comprehensive document which sets forth strategies for implementing a population program in Zaire which better equilibrates population and economic growth.

CONAPO is supported by CECAP, which is a supporting administrative and coordinating office for population activities in the Department of Plan. During 1988-1990, USAID provided CECAP with technical assistance through a buy-in to the OPTIONS Project, and supported a series of population planning and budgeting workshops. These efforts resulted in the issuance of a national Population Policy Action Plan, which consolidates over 200 population related activities, including key PHC efforts.

Despite a concerted effort by selected GOZ officials, PVOs and donors to support and encourage the acceptance of the Population Policy, misconceptions and pro-natalist attitudes persist. Key among these is that the policy primarily promotes birth control. In fact, although "birth spacing" and "desirable births" are two components among the dozens of socioeconomic and demographic variables addressed in the policy, they are not the overriding components. Arguments based on the fact that Zaire has vast uninhabited tracts of land coupled with the overall low population density continue to fuel pro-natalist beliefs.

3. Family Planning Activities

Although family planning service delivery is still in its infancy in Zaire, an infrastructure in urban health zones has been created, and there has been promising progress in selected
areas. The 1982-84 Contraceptive Prevalence Survey (CPS) demonstrated a remarkably high level of contraceptive knowledge but very low prevalence data for Zaire as a whole (1-2 percent). Contraceptive prevalence in Kinshasa is now estimated at 6 percent of eligible couples and in Matadi has reached 23 percent. The private sector has also proven to be a viable mode of service delivery and contraceptive distribution.

The USAID-funded Family Planning Services Project (Project des Services des Naissances Desirables, or PSND) has service delivery points in 104 urban locations (17 cities) and offers a comprehensive array of contraceptive methods including voluntary surgical contraception. The BRH project promotes family planning training and integration of activities in rural health zones.

Despite PSND's success in establishing family planning units in urban centers, it is not having great success in significantly raising contraceptive prevalence nationwide. PSND's major weaknesses are twofold: 1) it has remained a vertical program with very little actual integration at the health zone level; and 2) it has been unable to effectively implement either a secure contraceptive supply line or a broad multi-media IEC program.

A number of PVOs are also involved in family planning. A church-administered project in Kananga has shown that a sustained clinic-based program, when managed well, can achieve significant gains in contraceptive prevalence.

A creative and promising component of PSND is community-based distribution (CBD), through which contraceptives, oral rehydration salts (ORS), malaria suppressants and other basic health care products are made available through small commercial vendors and/or through individuals. The successful USAID-funded Contraceptive Social Marketing Project acts as a private sector-like entity by providing condoms and vaginal foaming tablets through existing commercial distribution networks.

E. Health System Structure and Functions

1. Organizational Structure

The health sector is organizationally complex, with health services being provided by the Department of Public Health, PVOs, company medical programs, and a large variety of private providers, including traditional practitioners. At the national level, the DPH is divided into seven Directorates: 1) general services; 2) hospital administration; 3) pharmaceuticals and traditional medicine; 4) epidemiology and preventive medicine; 5)
PHC policy and health zone strategy; 6) nursing school administration and curricula development; and 7) water and sanitation. Also under DPH management, but parallel to the Directorates, are the following special programs with separate administrative and management offices: expanded program on immunizations (PEV), trypanosomiasis control (BNT), tuberculosis control (BCT), leprosy control (BNL), family planning services (PEND), onchocerciasis control, nutrition activities (CEPLANUT) and AIDS coordination (BCC). The DPH is assisted by two parastatal organizations accountable to the Minister: FOMECO, which is responsible for some clinics, and FONAMES, an organization created in the mid-1980s to coordinate PHC and health zone activities.

The Department's administration is decentralized at the regional level where there are 11 Regional Directorates headed by Regional Inspectors. The Regional Directorates were designed to correspond in structure to the seven central Directorates, but are insufficiently staffed and funded. The regions are further sub-divided into 36 sub-regions, each with a sub-regional chief physician.

The building block of the primary health care delivery system is the health zone, the system's smallest functional unit. Each health zone serves a population of between 60,000 - 150,000 people. Health zones that are organized and operational each have a central office, a general hospital, 1-3 reference health centers (RHCs), and 10-20 health centers (HCs), each with a catchment of 3,000-10,000 people.

The health zone central office team generally includes a chief medical officer, an administrator, one or more nurse supervisors, a water and sanitation coordinator, and a person responsible for coordinating drug distribution. The principle responsibilities of the team include:

-- coordination of all health-related activities within the zone;
-- training and continuing education of health personnel;
-- technical supervision of the health centers;
-- maintenance of secure supply lines;
-- financial oversight of the health centers; and
-- collecting and analyzing statistical reports from the health centers.
2. Technical and Administrative Functions

Historically, the central level of the Department of Public Health has been characterized by weak planning and implementation capabilities. Key contributing factors to this weakness are: 1) the unpredictable and extremely limited government budget allocations to health operating and investment costs; and 2) the rapid turn-over in top decision-making levels, frequently based on political or patronage recruitment and promotion rather than on performance. Consequently, actual responsibility for managing and implementing the majority of PHC services has largely fallen on the PVOs and the administrative offices of the donor-supported special projects and programs.

FONAMES, the parastatal organization originally established to coordinate PHC and zone activities, has made a laudable contribution in the area of in-service management training, but has not been fully effective. Program coordination depends on the individual initiative of service directors. In some cases ad hoc committees have successfully served to coordinate cross-cutting issues, e.g., training or AIDS activities, although they tend not to endure. Hence, the central level is characterized by fractionated forces with a proclivity toward competing agendas.

The concept of decentralization, within the context of the national health strategy, is most evident at the health zone level. A zonal administrative council serves as the administrative board. It is composed of the sub-regional medical chief, the zonal chief medical officer, the medical director of the hospital, and representatives of all public and private organizations present in the zone involved in health activities. Programs formulated by the council are executed with the assistance of a management committee composed of the health zone's central office team and nurses from selected health centers. Although this management system, mandated with the creation of the health zone concept, was slow to evolve, many established zones now have operational councils and management committees which meet regularly.

The health center (HC) is the key link in the health zone structure. Health centers are generally staffed by one nurse (A2-level) and several aides who are responsible for providing PHC services, including curative care, prenatal and preschool clinics, vaccinations, growth monitoring and counseling, family planning services, and basic laboratory testing. HC staff also supervise community-based activities, e.g., water and sanitation campaigns, and teach village members basic hygiene and promotive health concepts. Approximately 90 percent of health problems can
be treated at the HC; the remaining 10 percent are referred to a reference health center or to the general hospital.

Reference health centers (RHCs) are established as intermediate structures in areas of health zones that are relatively far from the hospital. An RHC is staffed and equipped to treat all but the most serious referred cases and may have a 10-50 bed capacity. The RHC also serves as a supply depot for vaccines and medications that are required by surrounding health centers.

To ensure community involvement in the management of services, the health zone administrative design includes an HC committee comprising the HC staff and elected members of the surrounding communities. The object of the committee is to integrate the community into HC management decisions thus increasing the accountability of HC staff. However, owing to the lack of budgeting and management skills among community members, this mechanism has principally served to create a permanent dialogue whereby villagers can air grievances and participate in the general planning of health services.

F. Private Sector Participation

1. Private and Voluntary Organizations

A large percentage of primary health care, particularly in the rural areas, is provided by an extensive network of PVOs, many of which are religious missions. The major groups involved in PHC are the Church of Christ in Zaire (Eglise du Christ au Zaire, or ECZ), an indigenous umbrella PVO for all Protestant groups; the Catholic Medical Projects Office (Bureau des Oeuvres Medicales Catholiques, or BOM); and the Kimbanguist Church, an indigenous Christian sect. PVOs such as the Red Cross and Rotary Clubs International are also involved in the health sector.

USAID actively collaborates with PVOs in the health sector. ECZ is a primary implementing agency under the BRH project, and over 40 of its affiliates receive BRH assistance for health zones and/or HCs which they administer. The United Methodist Church is the key implementing agency for the Shaba Refugee Health Project. Acting through the U.S. chapter of the international PVO, Hadassah, USAID has also provided the Kimbanguists with assistance for hospital rehabilitation and urban outreach activities in a very poor section of Kinshasa.
2. The For-Profit Private Sector

Public and private enterprises are required by law to provide medical services to their employees and dependents. Employees of such firms make up about 17.5 percent of Zaire's population. Large enterprises, such as Gecamines, the parastatal copper conglomerate, have in-house medical services. Smaller businesses contract with outside private or public facilities.

There is an extensive proliferation of private pharmacies in Zaire. Urban centers are crowded with pharmacies, which serve as distribution centers for pharmaceuticals and other health care products. It is common practice for a physician to direct his or her patient to bring drugs and supplies from the local pharmacy for a specific procedure. State control of pharmaceuticals remains loose and the centralized depot system proposed by the government is not working efficiently, thus allowing these private pharmacies to proliferate.

Private practice, not legally sanctioned in Zaire, is nevertheless widespread. Services vary from sophisticated clinics in Kinshasa to small dispensaries and health posts in the rural areas operated by independent physicians and nurses. The type of care provided is essentially curative on a walk-in basis.

3. Traditional Healers

Traditional healers, particularly in the rural areas, still play a major role in the health care system. Indigenous practitioners throughout Zaire have developed coherent and inclusive systems of diagnosis and treatment for all known diseases using a variety of local herbs and medicinal plants. The introduction of European allopathic medical treatments did not supersede the indigenous system, but became an enrichment and alternative to existing practices. In recent years, the DPH has acknowledged the role of traditional medicine, and has invited members of the National Association of Traditional Healers to participate in various public health functions. However, with the exception of traditional birth attendants, there has been no official effort to incorporate the traditional sector into the public health system.
G. Health Sector Costs and Financing

As in most social services in Zaire, public expenditures in health have remained low and fluctuating. The World Bank estimates that total recurrent health care expenditures (public and private) are about $6 per capita (comparable to other sub-Saharan countries). If the cost of transportation and loss of income from seeking care is added, estimated at one-half of the above amount, health care consumes $9 or roughly 6 percent of the average 1989 per capita GDP of $150. However, in 1986 the public share was estimated to be only $0.33 per capita. Thus the largest share of health care costs is provided by private enterprises, donors, PVOs, and the health care consumers.

Recent evidence suggests that per capita expenditures on health care by consumers may be even higher than the World Bank estimate of $6.00. A 1988 USAID-funded REACH survey of 1100 rural households found that, of the average reported annual per capita household expenditure of $79, one-half or more of families spent at least 10 percent of income on health care.

An important characteristic of Zaire's health economy is its twenty year history of providing health care primarily through a fee-for-service approach. With the establishment of the decentralized health zone system in the 1980s, zones were permitted to develop cost-recovery schemes to fit local conditions. Most zones thus developed cost-sharing strategies which depend to a large extent on the continued support of PVOs and donors.

Assistance for investment costs has been arranged primarily through external donors and the extensive system of church-related PVOs. The GOZ pays base salaries for some zone, sub-regional, and regional personnel, and provides limited supervision and rehabilitation subsidies. The zones themselves are responsible for paying operating and maintenance costs. This often includes paying substantial salary supplements to personnel paid by the GOZ.

In 1986, USAID, in collaboration with the centrally-funded REACH Project, found that in seven of the more progressive zones an average of 79 percent of non-capital recurrent expenditures were financed by patient fees. Similar experiences have occurred with selected potable water activities. These results indicate that some health zones may eventually become self-sufficient in terms of operating costs.

Despite this favorable situation for self-financing operating costs, i.e., decentralized financial operations in which the revenues remain at the zone level, etc., there are a
number of significant constraints. As the economy declines, the ability of the poorest beneficiaries to pay for services decreases. Rapid inflation, including increases in medicine and fuel prices, is placing an additional burden on the zones' self-financing capacity. GOZ provision of central and recurrent cost subsidies is inadequate. Competitive providers, who operate outside of the official system, are believed to account for large shares of ambulatory service utilization in the rural areas. Critical deficiencies remain in planning and financial management from the national to the zone levels.

The GOZ hopes to increase its budgetary allocation to health from funds coming from the World Bank loan for the Program of Adjustment in the Social Sectors (PASS). Indeed, an increase of GOZ budget to health is a condition of that proposed loan.

H. Human Resources

1. National Indicators

There are approximately 2,000 medical doctors in Zaire, resulting in a physician/population ratio of 1/17,500. This ratio is significantly higher than in many African nations. Nurses (all categories) number about 18,000, with a ratio of one nurse per 1,940, again high by African standards. However, these relatively high ratios are not indicative of overall coverage rates. Sixty percent of physicians and 18 percent of all categories of nurses are believed to live in Kinshasa, which comprises only 10 percent of the population.

2. Physician Training

There are currently three faculties of medicine in Zaire, located in Kinshasa, Lubumbashi and Kisangani. In Kinshasa, the annual number of applicants is around 2,000, with about 500 accepted based on unclear criteria. Approximately 80 percent of the students are male. Only about 25 percent of a given class graduates each year.

All observers agree that the quality of medical education in Zaire has significantly deteriorated over the last decade. Current medical curricula, steeped in the colonial-inspired, curative-based services, are out of step with national PHC priorities. Physicians do not receive internships in rural areas and are frequently ill-prepared to cope with medical emergencies, particularly concerning maternal and child health. They also
have difficulties keeping up with the demands of developing and expanding PHC services (i.e., vaccination programs, oral rehydration therapy, etc.) in health centers.

3. **Nurses Training**

Nurses are trained at three levels: A1 (graduate) requiring five years, A2 (certified) requiring four, and two year A3 level or auxiliary nurses. Graduate A1 nurses receive training at one of several Superior Nursing Schools (Institute Superior des Techniques Medicales, or ISTM). As is the case with medical schools, ISTM curricula are oriented towards curative health, with specialties in anesthesia, obstetrics, radiology, physical therapy, nutrition, and administration. ISTM suffers from the same problems as the medical faculties, with poor facilities and few educational materials. The student attrition rates are high, at 75 to 80 percent.

Certified A2 and auxiliary A3 level nurses are trained at one of approximately 180 Institutes de Techniques Medicales (ITMs) or Instituts d'Enseignement Medicales (IEMs), located throughout Zaire. Only slightly more than one-half of these programs have been licensed by the GOZ. About one-third are operated by the GOZ, one-third by PVOs, and one-third by private owners. Although there is a great range in the quality of training, many schools teach PHC concepts and require health center internships. However, management, supervisory and evaluation skills are weak, and the system lacks a nationally standardized PHC training manual.

4. **In-Service Training**

In the last decade, progress has been made in institutionalizing physician and nurse in-service training at the national level. FONAMES, with the assistance of donors, is conducting annual regional management and supervisory training seminars. USAID has been particularly active in this area through the BRH Project, which supports regional training-of-trainers for nurses, rural water coordinators, and traditional birth attendants. BRH also provides subsidies for zone-level training of health center nurses and village health workers. To date, over 4,500 medical workers and community members have received in-service training with BRH support. However, continuity of these and other training programs depends heavily on donor assistance.
5. **Other Training**

There are two schools in Zaire to train assistant pharmacists. One is located in Kinshasa and the other in Haut Zaire, the latter supported by a U.S. missionary organization. Graduates of this school, in particular, work in the health zones, thereby supporting PHC programs.

6. **School of Public Health**

Under a USAID grant, Tulane University has helped set up a Masters Of Public Health (MPH) program at the University of Kinshasa, the first of its kind in Central Africa. About 20 MPH students graduate each year and return to work in rural areas. Short-term technical training and research in public health areas are also conducted. The school is functioning well, in contrast to the rest of the University, and efforts are now underway to assure its sustainability.

I. **Bilateral and Multilateral Donor Activity**

In 1988, external donor assistance for the health sector was approximately $44 million, with an estimated 67 percent devoted to the delivery of primary health care services. The four largest contributors ranked in the following manner: 1) Belgium, 31 percent; 2) USAID, 21 percent; 3) UNICEF, 14 percent; and 4) Italy, 14 percent. The African Development Bank, Canada, the European Economic Community, China, France, Great Britain, World Bank, UNFPA, UNHCR, UNDP, and the Federal Republic of Germany each contributed less than four percent.

Belgian Cooperation supports more than 60 health zones located in urban areas. The Belgian-supported project Health For All (Sante Pour Tous) in Kinshasa is the only major PHC initiative serving urban populations. It currently operates in 12 Kinshasa zones, and includes assistance to several infectious disease programs and to development of in-country drug production.

UNICEF assists 150 health zones and has focused on the development of rural water systems, vaccination, growth monitoring, nutrition services, and the pharmaceutical supply system. Italian Cooperation supports three relatively large, isolated health zones, and has recently rehabilitated and provided technical assistance to the urban general hospital in Goma, Kivu.
II. CONSTRAINTS ANALYSIS

A. Key Constraints to Health Expansion and Development

1. Health Policy, Planning, and Budget

Zaire's current national health policy, which aims to provide universal access to PHC services through an extensive network of decentralized low-cost delivery systems, is considered sound. An advantage of this "bottom-up" approach to development is that it places both responsibility for services and authority for financing those services at the most appropriate levels, which engenders strong "ownership" in the system by the many practitioners. Nevertheless, further progress is jeopardized by: 1) weak GOZ and parastatal implementing institutions; 2) the lack of a standardized health and management information system; 3) the absence of a functional communication system; 4) the absence of regulation mechanisms insuring an equitable distribution of medical supplies, commodities, and subsidies; 5) limited financial resources; and 6) deteriorated transportation networks.

The DPH lacks skilled administrators trained in health planning, management by objectives, and basic financial management concepts. Extremely low operating budgets, coupled with the uncertain timing of annual budget allocations, seriously impede planning and implementing processes. The lack of operating funds and low wages creates a demoralizing environment from which qualified and motivated personnel move to the private sector. The absence of a clear delineation of respective roles among government institutions, most notably between FONAMES' divisions and several DPH Directorates, contributes to the perpetuation of a conflict-ridden system.

Institutional development in Zaire has not yet evolved to the point where adequate political and administrative checks and balances are in place to minimize problems and assure most efficient use of resources. These constraints have an impact on the appointment and promotion of personnel, basic medical education, and deployment of financial and physical resources allocated to the health sector.

Health and management data from the country's 306 health zones are virtually non-existent. Selected donor and USAID-funded projects, such as BRH, PSND, and PEV, which require annual reports have established sentinel survey sites to register morbidity and mortality data. There is no functioning national
health and management information system to track the health status and cost data critical to the formulation of effective policy and planning and efficient management of resources.

Government resources allocated toward achievement of national health objectives have been minimal. Since 1985, GOZ allocations to the health sector have averaged less than two percent of public expenditures -- or about $0.33 per capita. Minimal GOZ investment in the health sector, the low and unsuitable salaries of government personnel, and the necessity to make ends meet have thus produced a system with a high dependence on fee collections borne by patients, and near total dependence on donors for investment costs.

The uneven distribution of supplies and uneven development of zones are both a function of differing zones' capacities to manage activities, as well as of a non-standardized assistance package among donors. The absence of formal coordinating mechanisms between donors and national programs has exacerbated the problems. Owing to project-specific objectives, and in order to minimize security risks, central programs tend to distribute materials directly to the zones, bypassing regional bureaus.

Inadequate supplies of essential drugs constitute a major constraint to ensuring equitable health care delivery. Annual drug consumption per capita is about US $1.00, one of the lowest figures in Africa. Key impediments to increasing the drug supply are the lack of adequate regional management structure, lack of timely foreign exchange availability for private importers (including PVOs), the absence of a national drug policy which clearly delineates the role of the public sector, and policies which penalize local production and repackaging.

2. Other External Constraints

Real per capita incomes have been declining, making pharmaceutical and medical supplies more unaffordable in a health care system largely financed by patient fees. This has deleterious consequences for nutritional status, as well as for disposable incomes. Expenditures on health care must increasingly compete with necessities such as food, water, and shelter.

The lack of telephone and postal services in many secondary cities and all rural areas makes communication and coordination extremely difficult. The continued deterioration of the transportation infrastructure means that delivery of vitally needed vaccines and medical supplies, supervisory visits by health officials, as well as patient transport to seek health care, are more costly.
The low level of education and literacy, particularly among women, are a significant constraint to improving health status. Furthermore, in rural areas women are the primary drawers and porters of water, as well as the principal caretakers of the family. Women are also expected to raise the food crops. Added to these many duties are the women's role as primary seekers of health care for their children. Women's lives are hard, overburdened by work and familial responsibilities. Their legal rights in marriage and ownership of property are minimal. Since mothers usually oversee their children's education and health, their available time and caloric intake are highly important in care seeking behavior. Conditions holding in Zaire today are clearly inimical to women's, as well as children's, health.

3. Inter-Institutional Conflicts

Although the GOZ endorsed the creation of the 306 health zones in 1981, it has not yet vested the zones with full legal status. As unofficial entities, zonal administrators are unable to open bank accounts on behalf of the zone's central office. Unofficial (parallel) providers within a zone are reluctant to collaborate and to provide requested health statistics. Confusion regarding who has legal authority to manage zones which have historically been administered by PVOs, but which now have GOZ chief medical officers, is creating serious problems. Recent experience indicates that the latter problem is escalating.

B. Efforts to Address Constraints

The transformation of a splintered PHC system, comprising numerous legitimate interest groups, into a smoothly functioning public and private collaborative effort will not be simple. Efforts to enhance GOZ capacity will continue to collide with the interests of established private groups as the terms of authority and responsibility are altered. The strategy of health zones is based on particular attributes of Zaire's political, socioeconomic, and physical environment, however, and USAID/Zaire finds it appropriate. The Mission thus plans to continue its support to actions aimed at legalizing the status of health zones. It will also continue to sponsor periodic national conferences which provide a forum for public, private, and church representatives to collaborate on policies.

Given the macroeconomic situation, it is likely that financial constraints on health sector programs will persist. The DPH will require a sustained commitment from donors aimed at
developing an institutionalized planning and financial management capacity at all levels. Additional efforts should focus on enhancing manpower competence in PHC skills, supporting community participation (especially with regard to cost recovery mechanisms), involving the private sector in all areas of health service delivery, and improving coordination among public, private and donor institutions.

III. USAID HEALTH SECTOR STRATEGY AND PORTFOLIO

A. Context

USAID/Zaire's HPN portfolio is not expected to change substantially during the FY 90-93 period. The Project Assistance Completion Date (PACD) for BRH II is September 30, 1992. The PACD for both the bilateral Family Planning Services Project and the regional/bilateral ACSI-CCCD project is September, 1991; however, the Mission will extend them by one additional year. Most of the Benchmark Indicators below, therefore, apply to the remaining life of the existing projects.

Current plans call for a major new HPN initiative to begin in 1992, with the concept paper developed in 1990 and the detailed design in 1991. Since the Strategic Objectives and Targets related to the new initiative will probably be similar to those of the current portfolio, they should be understood in a long-term perspective.

B. Health Sector Strategic Objective, Targets, and Benchmark Indicators

USAID/Zaire's Strategic Objective in the health and population sector is to: improve health status, with emphasis on increasing the rate of child survival and reducing the population growth rate.

Progress towards achievement of the Strategic Objective will be measured by the following targets and indicators.

Program Performance Indicators

A. Reduce infant mortality rates from 110 per 1000 live births in 1988 to 95 in 1995.
B. Reduce mortality rates for children between 1 and 5 years of age from 54 per 1000 live births in 1988 to 45 per 1000 in 1995.
C. Increase contraceptive prevalence from 2 percent in 1988 to 7 percent in 1995.

Targets and Benchmark Indicators

Target 1: Decreased Diarrhea-Related Morbidity and Mortality.


b. Increase rural population in USAID-assisted health zones provided with potable water from 1.33 million in 1989 to 1.6 million in 1992.

c. Reduce deaths due to severe diarrhea in sentinel areas from 404 in 1988 to 200 in 1992.

Target 2: Reduced Vaccine-Preventable Morbidity and Mortality.

a. Increase measles vaccine coverage rates among children 12 to 23 months from 44 percent in 1988 to 60 percent in 1992.

b. Increase polio vaccination (third dose) coverage rates for children 12-23 months from 41 percent in 1988 to 60 percent in 1992.

c. Increase diphtheria, pertussis, tetanus vaccine (third dose) coverage rates for children 12 to 23 months from 41 percent in 1988 to 60 percent in 1992.

Target 3: Reduced Mortality from Malaria.

a. Increase percentage of public health facilities practicing presumptive treatment of fever among children less than five years old from 90 percent in 1988 to 100 percent in 1992.


Target 4: Increased Couple Years of Contraceptive Protection (CYP).

a. Increase sales and distribution of contraceptives in the private sector from 12,500 CYP in 1988 to 180,000 CYP in 1992.

b. Increase couple years of protection from all contraceptive methods from 30,000 CYP in 1988 to 235,000 CYP in 1992.
Target 5: Reduced HIV/AIDS Transmission.

a. Increase condom distribution in high-risk urban areas from 800,000 units in 1988 to 8 million units in 1992.

Target 6: Increased Access to and Improved Quality, Efficiency, and Sustainability of Health Services.

c. Provide access to under-five clinics for 625,000 (52 percent) of children living within 50 BRH II-assisted rural health zones by 1992, compared to 400,000 in 1989.
d. Provide access to prenatal clinics for 625,000 (52 percent) of women of child bearing age living within 50 BRH II-assisted rural health zones by 1992 compared to 340,000 in 1989.
e. Conduct research and initiate pilot projects as appropriate to develop new zone-level cost recovery strategies, including health insurance and other prepayment schemes.

Target 7: Improved Population, Health and Water Policies Adopted by GOZ.

a. Increase actual GOZ investments in health and family planning from $0.33 per capita per year in 1986 to $1.00 per capita by 1992.
b. GOZ approves a national population policy by 1991.
c. GOZ establishes a national plan for operation and maintenance of water systems by 1992.

C. Relationship of Current Portfolio to Strategic Objective and Targets

USAID/Zaire's Strategic Objective and Targets for the HPN sector, as well as the major thrusts of the project portfolio, are clearly consistent with Africa Bureau and Agency-wide priorities and strategies. The smaller HPN projects, i.e., the Kimbanguist Hospital, Shaba Refugee Health and Water, and the Title II Feeding Program were Targets of Opportunity serving special, one-time purposes and will be phased out on schedule.
Improved health and progress toward reducing the population growth rate are critical to the Mission's overall Goal of sustainable, broad-based economic growth and development, as well as to other Strategic Objectives. A healthy, well-nourished population is a more productive one. Achieving satisfactory improvements in overall economic performance as well as in household incomes will be more difficult if the population continues to double every 23 years, requiring diversion of resources from productive investment to meeting social needs.

The life-of-project funding of currently active HPN bilateral projects is about $115 million, consisting of $71 million of dollar funding and about $44 million of local currency counterpart funds. Central and regional funding, e.g., the CCCD project, has averaged $3 million annually over the last six years.

1. **Relationship of Projects to Sectoral Objective, Targets, and Benchmark Indicators**

A brief description of each project and its relation to the HPN Strategic Objective, Targets and Benchmark Indicators follows.

1.a. **Basic Rural Health II** (BRH, 660-0107, FY 85-92). The BRH II Project, implemented by the Church of Christ in Zaire (ECZ), forms the core of USAID's health program. It is designed to establish a system of sustainable community-supported primary health care services in 100 of Zaire's 306 zones. Emphasizing preventive health care, the project is currently working to strengthen the health infrastructure and to institutionalize the delivery of primary health care and child survival services in 90 rural zones.

BRH relates to Targets 1, 2 and 3 through its support of immunizations, ORT, growth monitoring, nutrition education, child spacing, improved water and sanitation, and malaria treatment and prophylaxis. Project assistance is provided in the form of basic equipment and medicines needed to transform 750 dispensaries into full-service centers, with solar-powered refrigerators, technical assistance, educational materials, training for health personnel, office equipment and vehicles to establish supervisory capacity. In addition, contraceptives are channeled through project networks to promote family planning services in rural zones (Target 4).

BRH is completing a study to introduce a combination of rapid assay screening/confirmatory tests for the HIV antibody in
four rural health zones. AIDS counseling guidelines and training modules have been developed. The project plans to extend HIV rapid-testing capacity into 30 rural zones (Target 5).

To increase access to and improve the quality, efficiency and sustainability of health services (Target 6), the project has trained over 4,500 medical workers and community members in basic management and supervisory concepts and promotive health interventions. In collaboration with a local accounting firm and seven Peace Corps Volunteers with administrative backgrounds, the project is working to improve the financial management of health facilities and to help keep costs affordable to the general population. Provision of growth monitoring cards, baby weighing scales, and initial stocks of medicines, is helping to extend access to prenatal and preschool services to over 1.2 million women and children.

Provision of potable water through both BRH and the National Rural Water Service (SNHR) supports Targets 1 and 7. The project funds capping springs, hand-dug and deep bore wells fitted with hand pumps and construction of piped gravity-fed systems. Water systems are developed in collaboration with UNICEF, Peace Corps, local PVOs, and community groups.

Lastly, BRH officials are at the forefront of dialogue with GOZ representatives regarding the decentralization of services and the clarification of roles between the public and private sectors in the provision of services at the zone-level.

1.b. African Child Survival Initiative - Combatting Childhood Communicable Diseases (ACSI-CCCD, 698-0421, FY 82-91). The ACSI-CCCD project supports the national expanded program of immunizations (PEV), control of diarrheal diseases and control of malaria. USAID assistance includes technical assistance from the Centers for Disease Control as well as buy-ins to centrally-funded projects (HEALTHCOM, PRICOR). The project, in close collaboration with other donors -- notably UNICEF and Belgian Cooperation -- provides cold-chain equipment to the health zones, training of health personnel in technical areas related to the child survival priority interventions, vehicles for logistics, vaccines, outreach, and supervision (Target 2).

The national office executing the PEV project is distributing ORS packets and promoting their sale to health facilities and pharmacies (Target 1). Chloroquine is distributed for malaria treatment and prophylaxis for pregnant women (Target 3).

National vaccination rates have stagnated over the last three years at approximately 41 percent (polio, DPT-third dose)
and 44 percent (measles). An urban acceleration program is now underway and a rural acceleration planned. Experimentation with Edmunson-Zagreb measles vaccinations at four and one-half or six months may, if successful, lead to better coverage, and a significant further reduction in measles morbidity and mortality. A collaborative planning exercise among PEV and the donors is now underway to develop a strategy and action plan to increase vaccination coverage.

1.c. **School of Public Health** (SPH, 660-0101, FY 84-94). Through a contract with Tulane University's School of Public Health, this project is creating a functioning and accredited School of Public Health in the University of Kinshasa system. The project provides a modern, fully-equipped training and research facility for both long and short-term training. One-hundred-twenty physician-administrators are being trained to manage the health care system. Graduates receive a diploma recognized as the equivalent of a U.S. Master in Public Health degree. Candidates are chosen from field staff and are frequently involved with one or more of USAID projects, e.g., BRH, PEV.

The School of Public Health is an essential component of the Mission's strategy by providing the qualified personnel at the middle and upper levels of the system (Target 6). The curriculum maximizes the participant's ability to work in the Zairian context, and provides a national forum for research and agenda-setting on health problems. To date, the School has conducted important research on the sociocultural aspects of AIDS, on environmental health problems, nutrition and growth monitoring, and it has been the host agency for over 50 operational research studies on child survival activities.

1.d. **Family Planning Services** (PSND, 660-0094, FY 82-91). The project purpose is to increase contraceptive use in urban areas by strengthening and expanding family planning in private and public facilities, thus supporting achievement of Target 4. In addition to provision of contraceptives, the project directs technical assistance and training to health personnel in order to increase access to and quality of reproductive health and contraception. After several years of limited success in the public sector component, a strong social marketing effort conducted by PSI (Population Services International) has resulted in dramatic increases in sales of condoms and vaginal foaming tablets.

In conjunction with some six centrally-funded population projects, the Family Planning Services Project is central to achieving the long-term objective of reducing fertility and the
population growth rate, as well as to promoting child survival. It is complemented by the Technical Information on Population in the Private Sector (TIPPS) Project, which is introducing the concept of providing family planning services in the private sector by providing evidence to these firms that it is in their financial interest to provide these services as a health benefit to their employees.

1.0. HIV/AIDS Prevention in Africa (HAPA, 698-0474.60) and Related HIV/AIDS Prevention Efforts. The HAPA project is the cornerstone of a growing proportion of USAID efforts in AIDS prevention activities, and supports Target 5. Through an operational program grant with Population Services International (PSI), the Central Bureau of Coordination of the National AIDS Committee is promoting AIDS awareness and prevention messages via the mass media. A series of television and radio spots have been developed in five languages which supplement televised dramas, print materials, student notebooks containing AIDS prevention messages, lyrics and music produced by local musicians, a music video, and a national logo and jingle. In addition, this project sponsors social and behavioral research on AIDS, some of which is conducted by the School of Public Health staff, which not only measures impact through changes in behavior, but also provides vital information on gaps in knowledge and areas in which to direct new effort.

A direct beneficiary of this particular activity is the social marketing component of the Family Planning Services Project, which supports Target 4. The social marketing component has had great success in marketing condoms for anti-AIDS and family planning efforts. Sales of condoms in this autonomous, private-sector-like entity increased from about 900,000 in 1988 to over 4.2 million in 1989 with projections of about 9 million in 1990.

Other AIDS activities include a centrally-funded expansion of social marketing to high risk groups in urban hotels and bars, and a study to test HIV rapid diagnostic efficacy in rural hospitals. The latter study was designed as a research activity for gaining broader clinical knowledge as to which rapid diagnostic tests serve best in a rural African environment. It became, however, a pilot for a planned expansion of rapid testing into 30 rural hospitals to test the sustainability of providing these tests on a user fee basis to hospital clients (Target 5).

1.f. Kimbanquist Hospital Assistance (660-0122, FY 86-90). A grant to the U.S.-based PVO, Hadassah, funded the reconstruction and equipping of a 180-bed hospital operated by the Kimbanguist Church, an important Protestant sect. The
hospital provides secondary and primary care, including child survival interventions and HIV blood screening, to residents of disadvantaged zones of Kinshasa (Targets 1 and 6).

1.g. **Area Nutrition Improvement** (660-0079, FY 82-90). The PL-480 component of this project is a pilot activity to demonstrate a targeted, development-oriented use of Title II commodities. Under a Cooperative Agreement with the American ORT Federation, a U.S. PVO, 50 Kinshasa health centers are assisted through: a) provision of nutritious food for repackaging and sales to support center activities, b) promotion of commercial production of a nutritious maize-based weaning food and c) training of mothers to be volunteer health agents in their communities. The volunteers are now helping to recruit other mothers with malnourished or sick children and recruit them into the program (Target 6).

1.h. **Shaba Refugee Health** (660-0114, FY 85-91). Conceived as a response to the devastation of the Shaba Wars of the mid- and late-1970s, the two Shaba Refugee Projects have helped to recreate the infrastructure lost in the conflict. They should be understood primarily as a one-time response to a compelling need. Under the health project, the United Methodist Church of Shaba, a local PVO, is rehabilitating about 30 health facilities (Target 6).

1.i. **Shaba Refugee Water** (660-0116, FY 85-90). This PVO project finances community-based water systems for an eventual 180,000 people in the Lualaba sub-region and has been instrumental in pioneering community participation and planning for community maintenance of the water systems (Target 3).

1.j. **Other Mission Projects.** The Mission's agricultural and transport portfolios have important implications for nutrition. Raising food crop production is a requirement for reducing malnutrition. Improved transport, if it results in lower food prices for urban consumers, would have a positive impact. Better roads will also facilitate the delivery of child survival interventions and other health services. Some of the resources from the Small Project Support Project (660-0125) will also go to the health sector in Bandundu and Shaba. For example, the development of a locally-sponsored health center under the auspices of an experienced U.S. PVO has already been approved. Social marketing of contraceptives and ORS and efforts to encourage local manufacture of ORS may benefit from the Mission's private sector thrusts.
2. Cross-Sectoral Issues and Sustainability

In addition to the above project-by-project examination of the relationship between the portfolio to the strategic objective and targets, an analysis of some of the portfolio's cross-cutting issues and activities follows.

2.a. Nutrition. Malnutrition is an important underlying cause of much of Zaire's morbidity and mortality. The Mission's strategy emphasizes the following interventions which have an indirect impact on nutrition:

-- reducing infectious diseases that interfere with food absorption and cause diarrhea (ACSI-CCCD, BRH, water);

-- encouraging birth spacing to ensure prolonged breastfeeding (Family Planning Services, Social Marketing);

-- increasing food crop production and farmer incomes (Agriculture portfolio);

-- increasing food availability through PL-480 Title I sales;

-- enhancing movement of food from producer to consumer and lowering costs (Transport portfolio);

-- training health personnel and community members in nutrition (BRH, School of Public Health, ACSI-CCCD, HealthCom); and

-- growth monitoring (BRH, School of Public Health);

Direct feeding programs, such as the Title II program administered by ORT in Kinshasa, or nutrition projects per se will not receive priority in the nutrition strategy.

2.b. Information, Education, Communication (IEC). Since empowering communities, families, and individuals to protect their own health is so critical to the achievement of the Strategic Objective and targets, IEC is an important component of most HPN bilateral and centrally-funded projects. The GOZ and PVOs give priority to IEC and are relatively advanced in their appreciation of modern approaches to both mass media and interpersonal communication. Developing local IEC capacity and programs, including an effort to facilitate coordination and an appropriate level of integration among the various IEC units, will receive increasing emphasis in USAID's HPN portfolio.

C-29
2.c. Economic Factors: Effective Demand. Foremost in any consideration of the sustainability of health services in Zaire is the disposable income available to the population, since operating costs for health services in Zaire are predominantly financed from fee-for-service revenues. Since only 20 percent of the population is employed in the formal sector, health care expenditures are largely made from cash on hand. A secondary consideration is the government's ability to assume donor contributions over some reasonable long-term perspective (e.g., ten years). Based on both of these considerations, the sustainability of health services in Zaire is cause for concern.

Given the constraints on government expenditures, the weak revenue base of the government, and the low priority given to health, increases in GOZ spending for the health sector sufficient to "close the gap" and make health care affordable for the majority of the population are not assured. USAID's strategy has been to contribute toward investments in plant and equipment and in human capital to extend essential services of acceptable quality to the majority of the population. Development assistance allocated to the sector is also leveraged through support of PVOs, with substantial commitment of their own resources. Technical assistance and training, close collaboration on planning, and organizing health and family planning services contribute to increased efficiency of the providers. To a large extent, USAID's health strategy has kept health providers from dependence upon USAID funds for their operation although a significant share of the investment costs comes from USAID and other donors.

2.d. Health Care Financing. USAID will continue to pursue its dialogue with the GOZ and the PVO community on the need to maximize but not exploit user fee contributions to health care and to determine to what degree health zones will require financial support from the GOZ or PVOs to maintain an acceptable quality of PHC services.

Additional priorities include promoting improved planning and resource coordination at the national level, pilot testing prepayment schemes in selected zones, improving accounting and financial management information systems throughout BRH's 90 rural zones, and establishing a sustained capacity for water systems operations and maintenance through community financing mechanisms.

2.e. Private Sector Development. Seventy-five percent of USAID's investments in child survival go to or through the
private sector, including PVOs. Based on this success, USAID/Zaire plans continued assistance to the BRH Project, continued work with local and expatriate PVOs and expanded work in social marketing (AIDS and ORS).

Under the water component of BRH II, USAID plans to complement the assistance provided to the national rural water service (SNHR) with an agreement to fund more PVO involvement. The BRH water component, implemented by SNHR, will procure pump parts locally for the 800 Mark II hand pumps (to be manufactured in Zaire) to insure a supply of parts and to promote Zairian industry.

Social marketing of contraceptives, and, eventually, of ORS and possibly other health products is central to USAID's child survival strategy. Under the PL-480 Title II grant to ORT, a commercial weaning food was successfully produced and marketed. Local private sector manufacturing of ORS is also being explored.

2.f. Training. Nearly every child survival activity includes a significant effort in training. Since Zaire already has substantial staffing in the health sector, many of USAID's efforts focus on increasing the productivity, efficiency and effectiveness of existing human resources. Training of health personnel for provision of better services will remain a key activity. The Mission will continue to seek opportunities to reform the basic, largely curative oriented education of doctors and nurses to bring it in line with the country's primary health care policy.

2.g. Research. In a setting of extreme poverty, economic decline, management inefficiencies, and transportation and communication obstacles, increasing the population's access to child survival information and technologies is a formidable challenge. The GOZ, PVOs and other private sector organizations and donors have collaborated in experimentation and research, especially operations research, to develop ingenious approaches to overcoming these obstacles and have made surprising progress. USAID will continue to support operations research in health and family planning. Future research will focus on developing effective strategies and delivery systems as well as establishing a local capacity to identify and resolve problems in program implementation.
D. Future Health and Population Portfolio

1. Continuity of Objectives

USAID/Zaire's involvement in establishing and strengthening the physical and human resource infrastructure for the delivery of health services, especially to women and children in the rural areas, goes back at least to the early 1970's. Similarly, a concern about rapid population growth and the promotion of family planning for demographic and health reasons go back to at least the mid-1970s. These themes remain at the heart of the current HPN portfolio, and the Mission believes that they should remain the chief preoccupations of USAID assistance in the 1990s.

The terminology has changed somewhat but the overall themes, although sharpened, have remained fairly constant. Strengthening health delivery systems evolved to providing basic health services. Now the GOZ approved health strategy is called primary health care, or PHC. UNICEF and USAID have popularized a focused PHC component under the name of child survival. Most of USAID's current health assistance portfolio is justified in the name of child survival. It is thus appropriate that the new portfolio beginning in 1992 continue this focus on PHC and child survival.

The creative concept of relatively autonomous health zones, developed in the 1970s, seems to suit Zaire's circumstances, but only about 175 out of 306 delineated zones are functioning according to established criteria. Establishing and strengthening this infrastructure must remain a central task of maximizing progress toward the GOZ objective of health for all by the year 2000.

A sharp focus on child survival continues to be appropriate in Zaire. Infant and child mortality remain unnecessarily high. The relatively simple and inexpensive knowledge and technologies that can avert one-half the deaths now occurring in under-fives are reaching perhaps one-third to one-half the population. This progress has reduced infant and child mortality by perhaps as much as 15 percent in the last decade. With greater political will and social mobilization, more efficient management of resources, an improvement in per capita food crop production, and an expanding commitment of resources by both Zaire and donors (all admittedly major assumptions), it should be feasible to reduce under-five mortality by a further one-fourth by the end of the decade. If the worst case scenarios of AIDS impact on child mortality turn out to be accurate, however, these gains could be wiped out. A 25 percent reduction in under-five mortality would mean that 70,000 deaths that would occur at today's mortality rate would be avoided each year by the start of the next century.
An impressive reduction in morbidity and disablement would also result.

Such progress, although not bringing immediate relief to population growth pressures, would create socioeconomic conditions conducive to a decline in fertility -- perhaps by the year 2000 -- and a decrease in the population growth rate soon after the turn of the century. Experience in other countries has demonstrated that as parents gain confidence in their ability to ensure the survival of their first children, their desire for additional children tends to decrease.

2. Project Versus Non-Project Modes of Assistance

The current HPN portfolio is structured in a project mode. Since project-type assistance in the health sector is working fairly effectively, despite inadequate commitment by the GOZ, it is likely that the portfolio after 1992 will continue in this format. The Mission will, nevertheless, study the feasibility of switching partially or wholly to policy-oriented non-project assistance (NPA) tied to a major commitment on the part of the GOZ to address adequately the health care needs of the Zairian people. This will involve dialogue with appropriate levels in the Departments of Health and Plan, as well as perhaps at the highest political levels of Government, to ascertain whether significant and meaningful policy reforms and resource commitments might be fostered by a large non-project assistance grant. Discussions with other donors will also be required, particularly with UNICEF and with the World Bank in the context of the Program of Adjustment in the Social Sectors (PASS). Depending on the outcome of these explorations, a grant styled on the Africa Economic Policy Reform Program (AEPRP) may also be proposed.

Some, if not all, of the future health and population portfolio will almost certainly be project assistance. Technical assistance, training, and management improvements will be as crucial to continued progress as policy reform, if not more so. Assuring the continuation and perhaps expansion of health assistance through PVOs and the private sector is important, considering management constraints of the GOZ and the low priority accorded to health by the government. This orientation may be difficult under an NPA portfolio. In addition, the decision-making on matters crucial to health development is so dispersed that it remains to be determined how NPA could be used effectively to affect change on all the needed fronts. Whether project or non-project or a combination of the two, it is definitely the Mission's intention to seek opportunities to
influence policies in the design and negotiation of its post-1992 assistance.

3. **Major Interventions Anticipated in Post-1992 Portfolio**

A major consideration in designing the next generation of HPN activities will be simplification of management. The current portfolio of eight bilateral projects and an additional twelve or so centrally-funded activities creates an extremely heavy management burden on the Mission. It requires a staff for office-based project monitoring, documentation and coordination that could be used more effectively for sector analyses, policy dialogue, field-level project monitoring, and searching for innovative ways to meet Strategic Objectives and Targets.

Concentration and consolidation will be important themes in the follow-on to the current portfolio. A non-project or AEPRP grant, if feasible, would be a step in this direction. Project assistance will select PHC and child survival interventions and modalities so as to minimize the number of units of management.

The project elements of the future portfolio will likely include the following: 1) continued assistance through the Church of Christ in Zaire (ECZ, through BRH) for strengthening the rural health zones; 2) assistance to high priority child survival interventions, including vaccinations, malaria, and diarrhea control and ORT through the GOZ expanded program of immunization (PEV); and 3) family planning through the GOZ, PVOs, and the private sector.

Provision of potable water will continue to be an intervention, but will probably be conditional on a higher level of commitment of resources by the GOZ and local communities. Continuation of technically complex, expensive water projects such as well drilling will be contingent upon cost considerations and the technical and management capacity to mount and sustain such efforts. Continued attention to population dynamics and policy is anticipated. Reducing the transmission of AIDS will remain a significant element of the future HPN portfolio with important child survival implications. Efforts to develop the School of Public Health toward sustainability will continue as programmed through at least 1994 and indirectly, if not directly, thereafter.

To simplify management and enhance integration and coordination, serious consideration will be given to consolidating into one PHC/child survival project the current assistance under BRH, PEV and PSND. It would also be easier to shift funds from one activity to another according to need and
opportunity. The major technical assistance funding would be channeled to one or two large institutional contractor or consortium of contractors. This would make it easier for technical advisors to provide expert support to several different activities at the same time.

For this consolidation to achieve the desired effects, it would be essential that USAID, through the contractor, work independently with the various GOZ and private sector implementing organizations. No one GOZ institution could provide the breadth and flexibility required. There would still need to be separate budgets and accounting for each major activity. A.I.D./W and other Mission experience with large omnibus projects with multiple purposes and tasks would be assessed before choosing this option. Even with this approach, some funding and flexibility for direct Mission procurement of assistance through Personal Service Contractors and buy-ins to centrally- and regionally-funded projects would be retained.

Although AIDS is relevant to child survival, it is likely that it will remain somewhat separately managed, though integrated into health and family planning activities. The current combination of central and regional funding plus a transfer of bilateral funding is working satisfactorily. The Mission will discuss with A.I.D./W the pros and cons of continuing the present arrangements as compared to establishing a discrete bilateral project and be guided accordingly.

Assuming that USAID/Zaire's Operating Year Budget remains constant, the Mission anticipates that project funding for HPN would continue a level of $7 million per year, plus non-project assistance of $5 million per year tied to health policy improvements. An additional $6 million equivalent or more in counterpart funds would also be allocated.

4. Coordination with Other Donors

The design process for the future HPN portfolio will require a considerable effort at coordination with other donors. USAID's presence alone is not large enough to fund and manage the range of health assistance needed. Although there seems to be a local perception that USAID is a giant on the donor scene, U.S. assistance in the health sector in 1988 was $9 million, only 20 percent of total health aid. In addition, the total against which these figures are measured do not include important (and largely unknown) contributions by local and international PVOs in investments and support for health care work in Zaire. Given the uncertainty of the future level of GOZ support to sustain health zones, USAID should encourage studies to evaluate the potential
and willingness of PVOs to contribute to the functioning costs of health zones.

USAID's resources can be leveraged for greater impact with appropriate coordination with other donors. UNICEF is a very important donor, for example, in the vaccination and water programs, and can be a partner in policy dialogue to seek greater GOZ commitment and resources allocated to PEV and SNHR. The World Bank, under the Program of Adjustment in the Social Sectors (PASS), is setting as a condition for the credit the approval of a population policy. USAID's dialogue on population policy and its efforts through the OPTIONS project to help the Department of Plan develop a sound population policy should be enhanced by the World Bank's attention to population policy issues. Because the absorptive capacity of some programs is greater than available GOZ and donor resources, an attempt is being made to interest new donors, such as the Japanese, in the health sector. This effort will continue during the Action Plan period.
# Agricultural Sector Background Paper

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>iii</td>
</tr>
<tr>
<td>I. Overview of the Agricultural Sector</td>
<td>1</td>
</tr>
<tr>
<td>A. Agricultural Production Factors</td>
<td>1</td>
</tr>
<tr>
<td>1. Agricultural Production</td>
<td>1</td>
</tr>
<tr>
<td>1.a. Crop Production, Livestock, and Forestry</td>
<td>1</td>
</tr>
<tr>
<td>1.b. Production Technologies</td>
<td>4</td>
</tr>
<tr>
<td>2. Factors of Production</td>
<td>4</td>
</tr>
<tr>
<td>2.a. Natural Resource Base</td>
<td>4</td>
</tr>
<tr>
<td>2.b. Human Resources</td>
<td>6</td>
</tr>
<tr>
<td>2.c. Other Agricultural Inputs</td>
<td>7</td>
</tr>
<tr>
<td>B. Economic Factors</td>
<td>8</td>
</tr>
<tr>
<td>1. Agriculture in the Economy</td>
<td>8</td>
</tr>
<tr>
<td>2. Macroeconomic Policies</td>
<td>9</td>
</tr>
<tr>
<td>3. Agricultural Marketing and Market Infrastructure</td>
<td>11</td>
</tr>
<tr>
<td>C. Institutional Factors</td>
<td>12</td>
</tr>
<tr>
<td>1. Public Institutions</td>
<td>12</td>
</tr>
<tr>
<td>2. Private Organizations</td>
<td>13</td>
</tr>
<tr>
<td>3. Donor Organizations</td>
<td>14</td>
</tr>
<tr>
<td>II. Constraints Analysis</td>
<td>17</td>
</tr>
<tr>
<td>A. Key Constraints to Agricultural Growth and Development</td>
<td>17</td>
</tr>
<tr>
<td>1. Government Policy and Planning</td>
<td>17</td>
</tr>
<tr>
<td>2. Private Sector Marketing</td>
<td>18</td>
</tr>
<tr>
<td>3. Commodity Exportation</td>
<td>18</td>
</tr>
<tr>
<td>4. Credit Availability</td>
<td>19</td>
</tr>
<tr>
<td>5. Farmer Productivity and Access to Inputs</td>
<td>20</td>
</tr>
<tr>
<td>6. Natural Resource Base Management</td>
<td>21</td>
</tr>
<tr>
<td>7. Technology Development and Dissemination</td>
<td>22</td>
</tr>
</tbody>
</table>
II. B. Efforts to Address the Constraints

1. Government Policy and Planning
2. Private Sector Marketing
3. Commodity Exportation
4. Credit Availability
5. Farmer Productivity and Access to Inputs
6. Natural Resource Base Management
7. Technology Development and Dissemination

III. USAID AGRICULTURAL SECTOR STRATEGY

A. Current Program

1. Strategic Objective, Targets, Indicators and Discussion
2. Resources
   2.a. Applied Agricultural Research and Outreach
   2.b. Area Food And Market Development
   2.c. Central Shaba Agricultural Development
   2.d. Agricultural Policy and Planning
3. Tracking Sector Program Performance
   3.a. Program Performance Indicators
   3.b. Data Requirements

B. Implications For Future Program Action

1. Assistance and Funding Mechanisms
2. Areas of Opportunity for Future Program Action
   2.a. Supporting Policy Reforms
   2.b. Developing the Institutional Base
   2.c. Other Measures to Improve Household Income

List of Tables

D-1: Production of Major Food Crops in Zaire, 1979-1988
D-2: Production of Industrial and Export Crops in Zaire, 1979-1988
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>BCA</td>
<td>Banque de Credit Agricole</td>
</tr>
<tr>
<td>BUNASEM</td>
<td>Bureau National des Semances</td>
</tr>
<tr>
<td>COOPEC</td>
<td>Cooperative d’Epargne et Credit</td>
</tr>
<tr>
<td>CPF</td>
<td>Counterpart Funds</td>
</tr>
<tr>
<td>DAFECN</td>
<td>Department des Affaires Foncieres, de l'Environnement et de la Conservation de la Nature</td>
</tr>
<tr>
<td>DOA</td>
<td>Department of Agriculture</td>
</tr>
<tr>
<td>DMPCC</td>
<td>Direction des Marches, Prix et Credits de Campagne</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>FAO</td>
<td>United Nations Food and Agriculture Organization</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>ha</td>
<td>Hectare</td>
</tr>
<tr>
<td>IECC</td>
<td>Industrial and Export Crops Credit</td>
</tr>
<tr>
<td>INERA</td>
<td>Institut National pour l'Etude et la Recherche Agronomique</td>
</tr>
<tr>
<td>ISNAR</td>
<td>International Service for National Agricultural Research</td>
</tr>
<tr>
<td>MT</td>
<td>Metric Ton</td>
</tr>
<tr>
<td>km</td>
<td>Kilometer</td>
</tr>
<tr>
<td>PAT2</td>
<td>World Bank technical assistance project</td>
</tr>
<tr>
<td>PIP</td>
<td>Priority Investment Program</td>
</tr>
<tr>
<td>PL-480</td>
<td>Public Law 480</td>
</tr>
<tr>
<td>PNE</td>
<td>Programme National Engrais</td>
</tr>
<tr>
<td>PROCAR</td>
<td>Projet de Developpement de la Production et Commercialisation Agricoles Regionale</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization</td>
</tr>
<tr>
<td>RAV</td>
<td>Recherche Applique et Vulgarisation</td>
</tr>
<tr>
<td>SEP</td>
<td>Service d'Etudes et Planification</td>
</tr>
<tr>
<td>SOFIDE</td>
<td>Societe Financiere de Developpement</td>
</tr>
<tr>
<td>TA</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>USAID</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USDA</td>
<td>U.S. Department of Agriculture</td>
</tr>
</tbody>
</table>
AGRICULTURAL SECTOR BACKGROUND PAPER

I. OVERVIEW OF THE AGRICULTURAL SECTOR

A. Agricultural Production Factors

1. Agricultural Production

1.a. Crop Production, Livestock, and Forestry. Agricultural production in Zaire has typically been carried out by two very distinct sectors: the traditional sector, consisting of three to four million small family farms, practicing slash-and-burn agriculture with minimal inputs on cultivated areas averaging 1.5 hectares (ha) or less; and the modern sector, which includes perhaps nine hundred larger plantations (averaging 300 ha in size) and other agribusiness enterprises using modern production techniques. The traditional sector is predominantly oriented toward production of food crops, while the modern sector is oriented to production of industrial and export crops. Over the past decade there has been increasing involvement of smallholders in production of industrial and export crops. In addition, there is a small but growing class of commercially-oriented farmers who are technically more advanced than those in the traditional sector. This group produces significant amounts of coffee and cotton, and also produces food crops such as maize, legumes, and in some cases, cassava.

Cassava is the staple of the diet in most of Zaire, and appears to be almost universally cultivated. Maize is also widely produced, and is, in fact, the staple of the diet within much of the two Kasais and Shaba region. In addition, bananas and rice, which are cultivated extensively in the northern and eastern parts of the country, and groundnuts are also important crops.

Table D-1 provides estimates of food crop production over the past decade. The importance of cassava in the diet of most Zairians is evident from the dominance of the crop with respect to the total volume of food crop production. Cassava is not only the principal source of calorie consumption, but is also increasingly important as a cash crop and hence as a source of income. This is especially true in the country's southern band, where much of the cassava as well as much of the maize that is grown is marketed in the major urban centers (Kinshasa, Lubumbashi, Kikwit, Kananga, Mbuji-Mayi).
A wide variety of minor crops is produced in addition to the major food crops. These include other tubers besides cassava (e.g., sweet potatoes and yams), as well as legumes and fruits. As is the case elsewhere in Africa, there is substantial variation in the specific minor crops that are grown in particular local areas.

### Table D-1: Production of Major Food Crops In Zaire, 1979-1988 (1,000 MT)

<table>
<thead>
<tr>
<th>Year</th>
<th>Maize</th>
<th>Paddy</th>
<th>Cassava</th>
<th>Sweet Potato</th>
<th>Beans</th>
<th>Peanuts</th>
<th>Plantain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>536</td>
<td>223</td>
<td>12,566</td>
<td>324</td>
<td>160</td>
<td>334</td>
<td>1,373</td>
</tr>
<tr>
<td>1980</td>
<td>562</td>
<td>234</td>
<td>12,800</td>
<td>333</td>
<td>162</td>
<td>339</td>
<td>1,408</td>
</tr>
<tr>
<td>1981</td>
<td>639</td>
<td>245</td>
<td>13,170</td>
<td>343</td>
<td>104</td>
<td>347</td>
<td>1,438</td>
</tr>
<tr>
<td>1982</td>
<td>666</td>
<td>251</td>
<td>14,184</td>
<td>353</td>
<td>111</td>
<td>349</td>
<td>1,467</td>
</tr>
<tr>
<td>1983</td>
<td>673</td>
<td>271</td>
<td>14,601</td>
<td>363</td>
<td>156</td>
<td>366</td>
<td>1,496</td>
</tr>
<tr>
<td>1984</td>
<td>704</td>
<td>286</td>
<td>15,037</td>
<td>373</td>
<td>164</td>
<td>375</td>
<td>1526</td>
</tr>
<tr>
<td>1985</td>
<td>721</td>
<td>297</td>
<td>16,286</td>
<td>382</td>
<td>166</td>
<td>424</td>
<td>1,795</td>
</tr>
<tr>
<td>1986</td>
<td>729</td>
<td>274</td>
<td>16,892</td>
<td>375</td>
<td>---</td>
<td>443</td>
<td>1,834</td>
</tr>
<tr>
<td>1987</td>
<td>780</td>
<td>300</td>
<td>16,400</td>
<td>372</td>
<td>---</td>
<td>420</td>
<td>---</td>
</tr>
<tr>
<td>1988</td>
<td>800</td>
<td>350</td>
<td>17,000</td>
<td>368</td>
<td>---</td>
<td>425</td>
<td>---</td>
</tr>
</tbody>
</table>

**Notes:**
1. The conversion rate from paddy to rice is approximately 60 %.
2. Unshelled.

**Sources:** Service d'Etudes et Planification Situation Actuelle de l'Agriculture Zairoise January 1987.
Service d'Etudes et Planification, unpublished data.

Table D-2 provides data on production of export and industrial crops. In contrast to food crops, where production estimates indicate modest growth in output over time for virtually all crops, there is a much more mixed record for export and industrial crops. Overall, there has been a clear decline in the modern sector over the past 10 years.
Table D-2: Production of Industrial and Export Crops in Zaire
1979-1988 (1,000 MT)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sugar</th>
<th>Coffee</th>
<th>Cocoa</th>
<th>Tea</th>
<th>Tobacco</th>
<th>Seed</th>
<th>Cotton</th>
<th>Rubber</th>
<th>Oil Quinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>48</td>
<td>87</td>
<td>3.5</td>
<td>4.8</td>
<td>1.6</td>
<td>19</td>
<td>22</td>
<td>98</td>
<td>6.0</td>
</tr>
<tr>
<td>1980</td>
<td>48</td>
<td>89</td>
<td>4.2</td>
<td>4.4</td>
<td>1.9</td>
<td>29</td>
<td>21</td>
<td>93</td>
<td>5.9</td>
</tr>
<tr>
<td>1981</td>
<td>47</td>
<td>93</td>
<td>4.6</td>
<td>4.8</td>
<td>2.9</td>
<td>21</td>
<td>18</td>
<td>106</td>
<td>6.0</td>
</tr>
<tr>
<td>1982</td>
<td>52</td>
<td>93</td>
<td>4.5</td>
<td>4.5</td>
<td>2.8</td>
<td>24</td>
<td>17</td>
<td>94</td>
<td>5.9</td>
</tr>
<tr>
<td>1983</td>
<td>52</td>
<td>84</td>
<td>4.2</td>
<td>4.7</td>
<td>1.5</td>
<td>27</td>
<td>16</td>
<td>85</td>
<td>5.2</td>
</tr>
<tr>
<td>1984</td>
<td>61</td>
<td>89</td>
<td>4.4</td>
<td>5.0</td>
<td>1.9</td>
<td>21</td>
<td>14</td>
<td>93</td>
<td>4.7</td>
</tr>
<tr>
<td>1985</td>
<td>56</td>
<td>90</td>
<td>4.5</td>
<td>4.8</td>
<td>2.4</td>
<td>22</td>
<td>13</td>
<td>89</td>
<td>4.8</td>
</tr>
<tr>
<td>1986</td>
<td>61</td>
<td>95</td>
<td>6.3</td>
<td>4.7</td>
<td>3.2</td>
<td>19</td>
<td>13</td>
<td>86</td>
<td>7.0</td>
</tr>
<tr>
<td>1987</td>
<td>68</td>
<td>97</td>
<td>5.4</td>
<td>3.4</td>
<td>2.7</td>
<td>17</td>
<td>12</td>
<td>--</td>
<td>7.0</td>
</tr>
<tr>
<td>1988</td>
<td>70</td>
<td>99</td>
<td>6.2</td>
<td>3.1</td>
<td>2.8</td>
<td>16</td>
<td>12</td>
<td>--</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Notes:
1. Excluding village production.
2. Tons of bark.

Service d'Etudes et Planification, unpublished data.

Livestock (excluding poultry) are possessed by a minority of smallholders. Most common are goats (estimated, in 1988, to number in excess of 3.3 million), followed by cattle (1.6 million, two-thirds of which are in the traditional sector), sheep and pigs (900,000 each). The stock of poultry has been estimated at over 22 million. A third of the cattle production, as well as some pig and poultry production in the areas surrounding Kinshasa and Lubumbashi, is done on a commercial basis. Overall, annual domestic production of livestock products is estimated to be in excess of 80,000 tons. Just over a third of this total is beef production, while pork accounts for over a quarter of the total and poultry represents a fifth.

Wood production from Zaire's massive forest reserves presently amounts to approximately half a million cubic meters (a tiny fraction of potential wood production). Most of the wood produced is consumed domestically, while 30 to 40 percent of production is exported. The forests also serve as a source of firewood and charcoal, and it is estimated that 25 to 30 million cubic meters of wood are harvested annually to meet domestic energy requirements.
1.b. **Production Technologies.** Food production in the traditional sector is carried out using very simple technology. Land is cleared using the slash-and-burn method, followed by hand plowing. Capital inputs typically consist of a small number of rudimentary tools (e.g., hoe, machete, axe). Use of fertilizers is extremely limited, and ordinarily takes place only in areas served by agricultural development projects. With the exception of cassava, which is grown and harvested on a continuous basis, crops are most commonly grown during two distinct seasons. The timing of these seasons depends on location (i.e., on the timing of rainfall). Multicropping is the rule, and monocropping the exception, with cassava-based or maize-and-cassava-based multicropping being most prevalent. Long fallow periods were traditionally used as a means of allowing restoration of soil fertility, although in more densely populated areas of the country (Bas-Zaire, parts of Bandundu and Kivu) there is some indication that fallow periods have been shortened with consequent adverse effects on yields.

Production in the modern sector often takes on a very different character: not only is the size of agricultural production units quite different from the traditional sector, but in many cases so also is the technology used. Thus, for example, there is plantation production of export and industrial crops that takes place using fertilizers, improved seeds, pesticides, power equipment, and modern cultural methods. Under these conditions, yields obtained are usually substantially higher than those obtained in smallholder production. Similarly, there is also modern-sector livestock production in which animals are provided with animal feed and veterinary care.

The modern technology of production just described does not, however, accurately reflect the entire modern sector. In many cases, shortages of foreign exchange and limited access to financing investments in rehabilitation of older plantations, coupled with difficulties and unreliability in obtaining inputs, result in modern sector production that more closely resembles the technologies found in the traditional sector. There is much greater variability in production technologies within the modern sector than there is within the traditional sector.

2. **Factors of Production**

2.a. **Natural Resource Base.** Zaire is a land abundant country of approximately 2.3 million square kilometers. It is estimated that only about 3 percent of the total land area is presently under cultivation, with another 2 percent or less in grazing. More than three quarters of the country's area is
covered by forests and woodlands. Zaire can be divided into four major biogeographical regions: 1) the central basin of the Zaire River; 2) the transitional woodlands to the north and south of the central basin; 3) the tropical humid montane area of eastern Zaire; and 4) the gallery forested savanna region along the southern border with Angola and Zambia.

The central basin, which consists of the closed canopy rain forest of the Zaire River basin, is sparsely populated and supports a very limited commercial timber industry. The forest receives 2000-3000 mm of rain per year, and is supported by soils generally classified as Oxisols (USDA Soil Taxonomy system). Much of the forest area is suitable for perennial tree crop production, and many palm oil, coffee, and cocoa plantations are located in this zone. Annual food crop production is unsuited to the region, due to loss of mineral nutrients upon forest clearing resulting in a loss of organic matter and nutrient leaching.

North and south of the rain forest are transitional woodland forests characterized by an open canopy covering at least 40 percent of the land surface. These areas have less rainfall (1200-2000 mm) than the central basin, although the bimodal distribution of rainfall permits two planting seasons per year. These transitional woodlands support a large proportion of the country's population owing to the availability of forested, relatively fertile soils for cropping. In areas of high population density, cropping and wood harvesting pressures have caused considerable loss of original forest. These pressures have also resulted in reduced fallow periods, leading ultimately to declining yields and raising questions of sustainability of existing agricultural practices.

The tropical montane region lies east of the central rain forest along the eastern border adjacent to Kivu. This high altitude region supports a dense humid upland forest and is the most densely populated rural area of Zaire, on the country's most fertile soils (volcanic origin). Rainfall is plentiful (2000 mm) and allows two growing seasons. A wide variety of crops is cultivated in the area. Production of arabica coffee and quinine is centered here, as is bean and potato production. The high human population densities have put pressure on the land resources for both agricultural crops and fuelwood. Overcutting of the forest, short fallows, and steep hillside farming have caused degradation of both soil and forest resources.

The gallery forested savanna region south of the forested transition zone receives 800-1500 mm of rain per year in a unimodal pattern that permits only a single growing season. Soils are poor, being acid and sandy. The region consists of open woodlands of drought-tolerant trees that can withstand the four to seven month dry seasons. The higher plateaus have
isolated gallery forests dispersed throughout a grassy savanna. This area is sparsely populated except around the urban centers which support mining activities. It is a net importer of food from the transition forest to the north and from Zambia to the south.

2.b. Human Resources. Zaire's population, estimated to be 35.6 million in 1990, is growing at an annual rate of approximately 3 percent. The areas of greatest population density are those most capable of supporting agricultural production activities, i.e., the transitional zones north and south of the central basin, and the montane forested region of eastern Zaire. The southern band of Zaire, running from Bas-Zaïre through Bandundu, the two Kasais, and into Shaba, includes approximately 40 percent of the country's population and most major urban centers. Since 1970, urban population growth has been very rapid (seven-to-ten percent per year) while rural population growth has been quite modest (one percent per year). This reflects continued rural migration to urban areas.

Nearly all rural households are involved in agriculture, and participation by adults in agricultural activities is virtually universal among women and nearly so for men. In the aggregate, it is estimated that agriculture provides employment for about 70 percent of the labor force. The ease of access to land results in the absence of unemployment within the agriculture sector. However, seasonal underemployment is present.

Within the traditional sector, farms average 1.5 ha or less in size. The single most important determinant of farm size is the pool of household labor resources (adults) available for agricultural work. Farm families average between six and seven members, approximately evenly divided (on average) between adults (those aged 15 and over) and children. Household labor is by far the principal labor input to production, although a number of farmers also use other workers in their farming activities (via trading of labor with extended-family members and/or with other villagers, and -- to a lesser degree -- use of salaried labor). Studies suggest that given the technology presently being utilized, labor is the principal constraint to increased agricultural production.

There is a distinct gender differentiation in agricultural work. Men tend to be most actively involved in clearing land for food crops and in commercial crops. Women predominate in most of the activities related to food-crop production: preparing land, planting, weeding, and harvesting. Overall, there is considerable evidence suggesting that women's inputs into agricultural production (especially food-crop production) substantially exceed those of men.
Farmer education levels are generally quite low, with high proportions of both men and women farmers never having attended school and very low proportions having reached secondary school. This situation will likely change in the future, since school enrollment rates have increased substantially over the past twenty years or so. One area of concern regarding human resources in Zairian agriculture relates to rural outmigration, particularly by males. This outmigration is often tied to receipt of schooling and efforts to secure employment in urban areas that is more remunerative than work in agriculture.

Although the agricultural sector provides employment for more than two thirds of the work force, it is low-income work: the World Bank estimates rural per capita income (as of 1985) to be only about $80, and this figure represents approximately half of the national average. Thus, rural per capita income is not only substantially lower than incomes in the small modern urban sector of employment, but it is also less than incomes of many urban informal-sector workers. Hence, incentives are present for continued rural-urban migration, despite the fact that urban employment rates are much lower than rural rates.

Estimates of nutritional status in Zaire indicate that overall calories consumed per capita per day are comparable to or slightly higher than elsewhere in sub-Saharan Africa, and slightly lower than in low-income countries generally. Malnutrition is widespread, with an estimated 40 percent of children under 5 being severely malnourished while 15 percent are moderately malnourished.

2.c. Other Agricultural Inputs. Inputs to agricultural production other than natural and human resources are extremely limited in the traditional sector. As noted earlier, such inputs are primarily limited to simple tools. A national seed office, BUNASEM, was initiated in the early 1980s with support from the FAO and the World Bank. Its objectives are to control seed quality, coordinate seed production and distribution, facilitate access of farmers to improved seeds, and supply foundation seed to seed farms. With seed farms now in every region, Bureau National des Semences (BUNASEM), is making progress in distributing improved seeds to smallholders. However, coverage is still relatively limited. Chemical fertilizers are promoted by the FAO-supported national fertilizer program (Programme National Engrais, or PNE) and at times are used in specific area development projects, but fertilizer use is extremely limited and occurs only when the fertilizers are subsidized.

Within the modern sector, there is somewhat greater resort to other production inputs. Most of the modest amount of
fertilizer imported each year goes to the larger enterprises in the plantation sector. Pesticides are used in plantation agriculture, on coffee and cotton. Veterinary products and other livestock inputs are often used in commercial livestock production.

B. Economic Factors

1. Agriculture in the Economy

In recent years, the agricultural sector has been the principal contributor to Zaire’s economy, accounting for approximately 30 percent of Zaire’s GDP. Zairian agriculture includes both a commercial component and a noncommercial (subsistence) component. Subsistence agriculture accounts for roughly 60 percent of agriculture’s contribution to GDP compared to about 40 percent for commercial agriculture. In the last few years commercial agriculture has been growing in importance. Overall (i.e., including subsistence agriculture), production of food crops represents the lion’s share of agriculture’s contribution to GDP.

Focusing specifically on commercial agriculture, one finds that the bulk of value added in commercial agriculture (typically 60 to 70 percent) is attributed to marketed food production, 70 percent of which is food crops (the remainder of marketed food production is evenly divided between livestock and fish). Agriculture for export ordinarily accounts for 25 to 30 percent of total value added in commercial agriculture, while roughly 10 to 15 percent of this total value added is attributable to agro-industrial production for domestic consumption.

Agricultural exports show considerable volatility from year to year. The share of agricultural exports in total exports has been in the neighborhood of 10 to 14 percent throughout most of the 1980s. Like many other developing countries in the 1980s, Zaire has experienced overall declines in the prices of its principal agricultural exports and hence a decrease in foreign exchange earnings from agriculture. Examination of export receipts from agricultural products by commodity documents coffee’s predominance among agricultural commodities as a source of foreign exchange.

Food imports have been fairly stable during the 1980s as a share of total imports, at around 20 percent. Since total imports have been increasing in value, this means that the value of food imports has also been increasing. During this decade
there has been a substantial decline in imports of maize and sharp increases in imports of rice, wheat, sugar, meat, and fish.

2. **Macroeconomic Policies**

From independence until the early 1980s, Zaire (like many other African countries) pursued a set of macroeconomic policies that on balance had adverse effects on the agriculture sector. These policies included, among others, maintenance of an overvalued exchange rate, low official producer prices for food crops, high export duties and cumbersome bureaucratic procedures for agricultural commodities, numerous internal local taxes on production and marketing of agricultural goods, and substantial public borrowing leading to a very heavy debt service burden which in turn severely limited the availability of foreign exchange. In addition, there were periodic sharp shifts in policies (e.g., Zairianization in 1973) that reflected substantial volatility in the policy environment.

Ideally, macroeconomic policy should seek to create conditions favorable to investments and to growth of the agricultural sector. These conditions include control of inflation, availability of foreign exchange, fiscal policy that provides investment incentives, tariff policies and procedures that encourage exports and the development of local enterprises, an efficient public administration, and a stable policy environment. By the early 1980s, it was evident that the set of macroeconomic policies in place was hindering, not facilitating, growth and development in the Zairian economy.

Beginning in the early 1980s, Zaire implemented a number of macroeconomic policies that have had important effects on the agriculture sector. In May of 1982, a policy of price liberalization was adopted, under which price and marketing controls were eliminated. In September 1983 there was a substantial devaluation of the zaire (which went from an official exchange rate of 5.9 zaires to the dollar to a rate of 30 zaires to the dollar), and movement to a flexible exchange rate regime. These policies were implemented by the GOZ with assistance from the IMF. In addition, the World Bank is also working with the GOZ, under a structural adjustment program begun in 1986, to assist in the implementation of further macroeconomic reforms.

Among other objectives, price liberalization was designed to encourage competition among traders and abandonment of the frequent practice of treating official government prices for agricultural products (which were supposed to be price floors) as price ceilings. Thus, higher farmgate prices and ultimately
increased production may be seen as principal objectives of the price liberalization measures.

A number of studies have been carried out in an effort to ascertain the effects of price liberalization. The coverage of these studies is only partial, and the absence of good production data makes the task of assessing the effects more difficult. However, there is evidence of increased real producer prices for food crops and increased production, and the tentative conclusion that emerges from these studies is that the reforms have had a positive impact on the economy in general and on the agricultural sector in particular. At the same time, the agricultural sector's response in terms of increased production has been weaker than anticipated. This mixed result is due in large part to the existence of a number of other constraints on the agricultural sector.

In theory, the devaluation of the zaire that took place in 1983 and subsequent floating of the currency, in conjunction with price liberalization, should have served to increase the real prices received by producers of export and industrial crops. This realignment of exchange rates thus may also be viewed as seeking to stimulate increased production of export crops. The positive effect on producer prices for various export and industrial crops is evident from price data. However, in contrast to the situation for food crops, there is little evidence to indicate that the changes in macroeconomic policy have contributed to increased production of export crops. Despite the increases in real producer prices, production data for most crops show output stagnating or else continuing its downward trend. In brief, the constraints on increasing production of export crops are so numerous and pervasive that alleviation of the disincentives to production due to a severely overvalued exchange rate was simply not sufficient to have any notable impact on production and on exports. These constraints will be discussed further below.

In addition to price liberalization and devaluation measures, the GOZ is presently pursuing a structural adjustment program that seeks to address remaining constraints at the macroeconomic level. The program, which was initially approved in 1987, is being carried out in collaboration with the World Bank. A number of measures expected to improve the policy environment for the agriculture sector have been adopted or are currently being pursued.

At this stage, it is still too early to determine whether the activities being pursued under the structural adjustment program will indeed have a notable impact on agricultural production. However, it is clear that the 1980s have witnessed a very sharp turnaround in Zaire's macroeconomic policy
environment, and the policies that have been implemented and that are currently being implemented should ultimately have distinctly beneficial effects on the agricultural sector.

These policies have had distributional (equity) implications within the Zairian economy. As indicated by the increases in real producer prices noted above, the reforms adopted during the 1980s appear to have had modest beneficial effects on the rural population as a whole. However, these effects are not evenly distributed throughout the rural population; rather, they will be most evident in those areas where smallholders have relatively good access to urban markets (e.g., in many parts of the southern band) and hence are most likely to benefit from competition among traders encouraged by the price liberalization measures. Planned improvements in the transportation infrastructure (including rural feeder roads) should serve to widen the benefits of these macroeconomic policies to a greater proportion of the total rural population.

During the 1980s urban real per capita incomes have continued a decline that began during the 1970s. Real food prices at the retail level have increased since the early 1980s. This is due to the removal of price controls coupled with growth in urban food demand that exceeded the growth in supply (production plus imports). Overall, then, it appears that the macroeconomic policies of the 1980s have succeeded in reversing the urban bias that characterized the policy package that had been in place previously.

3. Agricultural Marketing and Market Infrastructure

Because of the elimination of agricultural parastatal organizations in the late 1970s, the marketing of food crops and export crops is now left almost entirely to the private sector. Studies suggest that apart from some cases of localized monopsony or oligopsony, markets are fairly competitive. Typically, marketing costs are very high because of high collection costs as a result of low population densities, transport over long distances, poor state of feeder roads and river transport, shortage of and high cost of marketing credit, long delays between first purchase and final sale of the product, and in the case of export crops, very cumbersome administrative procedures.

The efficiency of food crop marketing is hampered by an almost total lack of marketing infrastructure at the collection centers and at the semi-wholesale and retail levels in urban centers. Zaire does not have organized wholesale markets for food products. All this contributes to long delays in loading and unloading, congestion, stoppage of market operations during
the rains, high product losses and deterioration of product quality, lack of transparency in the marketing process, and lack of public marketing information.

The efficiency of export crop marketing is hindered not only by the constraints already cited, but also by a lack of stability in the rules and regulations governing export operations and the repatriation of foreign exchange. This results in a lack of confidence and a poor climate for investment.

Evidence on marketing margins is quite limited, but indicates that producer prices for cassava from Bandundu amount to only about 25 percent of the Kinshasa retail market price. The distribution margin in Kinshasa (i.e., the price spread between unloading of cassava cossettes in semi-wholesale markets and retail markets) exceeds 30 percent of the retail price. The situation is somewhat better with regard to maize and groundnuts. The inefficiency of cassava distribution appears to reflect the large number of small-scale intermediaries and losses resulting from inadequate drying at the producer level.

Zaire's transportation infrastructure is a particularly severe constraint on agricultural marketing activities. The transport facilities consist of a series of regional road networks connected by a combination of navigable rivers and railways that form the country's major transport arteries. Road, river, and rail sub-sectors all suffer from a number of problems that slow marketing activities substantially and result in high effective costs of transporting agricultural products to urban consumption centers or for export.

C. Institutional Factors

1. Public Institutions

Despite repeated proclamations of the importance of Zaire's agricultural sector, the Department of Agriculture's (DOA) share of the national budget is typically less than two percent. This figure understates governmental support to agriculture, since there are a number of other public institutions that make expenditures pertinent to the agricultural sector (e.g., in the areas of transportation, agricultural research, and agricultural finance). Overall, however, budget allocations to agriculture fail to come anywhere near reflecting the sector's importance to Zaire's economy.

Within the DOA, the Service d'Etudes et Planification (SEP) is principally concerned with agricultural planning, policy
analysis, and statistics. SEP has been supported for the past 15 years by a series of USAID projects aimed at enhancing GOZ capacity for planning and policy analysis in agriculture. SEP has made considerable strides, and it is a key directorate in the DOA, being regularly consulted on policy questions not only by DOA officials but also by the Department of Plan, the Office of the Prime Minister, and the Office of the President. At the same time, there is still considerable scope for improvement, particularly in moving beyond the descriptive studies SEP has completed to carry out more analytical studies. Agricultural statistics is also an area where much remains to be done.

Agricultural research in the public sector is principally the responsibility of the Institut National pour l'Etude et la Recherche Agronomique (INERA). INERA has not functioned very effectively for quite some time, as a result of inadequate financing, run-down infrastructure and equipment, isolated research stations, and poorly managed programs. With assistance initially from the International Service for National Agricultural Research (ISNAR), funded by USAID/Zaire, and more recently assistance from the World Bank, the GOZ has been slowly moving toward reform of INERA. In the meantime, USAID has financed agricultural research under Recherche Appliquee et Vulgarisation (RAV), which has regrouped national commodity programs for cassava, maize, and legumes. In the long term, unification of RAV and INERA is anticipated; but a necessary condition for this is that first INERA itself must be profoundly reformed.

Agricultural extension in Zaire suffers from many of the same problems which are common elsewhere in Africa. These problems include low pay, lack of motivation, low status of the extension service, distrust from farmers, multiple tasks (extension, tax collection, crop imposition, agricultural statistics), lack of logistical support, ineffective coordination and organization, and lack of a backlog of farmer proven, tested varieties and recommended cultural practices. These constraints are extremely formidable and cannot be overcome easily. Effective extension services have not been forthcoming from the DOA; rather, the efforts of note in this area have been largely restricted to upgrading of the existing extension service by donors in the areas served by area development projects, or extension work carried out by Private and Voluntary Organizations (PVOS).

2. Private Organizations

Agro-industries are prominent in Zaire's industrial structure, ranking in importance just behind the extractive
industries and parastatal public utilities. Of the 50 largest industrial companies in 1987, including parastatal organizations in mining, transportation, petroleum, and public utilities, 18 were agro-industrial enterprises. These included breweries and soft-drink companies, tobacco companies, flour mills and bakeries, diversified food and soap manufacturers related to palm-oil production, sugar companies, forestry companies, and plantation-ranching companies. There are also two agro-industrial parastatal organizations, and half a dozen other major firms that use agricultural raw materials (textile firms and a tire manufacturer). Hence, more than half of the 50 largest industrial companies in Zaire are directly or indirectly related to agriculture.

Most agro-industries in Zaire are to some extent vertically integrated and diversified. Often they date back to colonial times, and in many cases they have considerable real estate holdings in the interior and in major cities. Income from urban real estate helps carry them through periods of low profitability. Most of these enterprises have at least one exportable commodity which assures them a minimum of foreign exchange. Because of the uncertain investment climate going back to the Zairianization measures of 1973/74, very little new investments have been made and most plants and equipment are quite old.

Small farm tools are produced by two manufacturers in Kinshasa. Their output is supplemented by small tools produced by village blacksmiths from scrap metal. Apart from locally produced seeds and small farm tools, most agricultural inputs (e.g., fertilizers, pesticides) are imported. Some research related to perennial crops is carried out by the private sector. Extension by private businesses to smallholders is limited to tobacco and cotton, but extension is a major activity of PVOs along with distribution of seeds and planting materials. The PVOs, most of which are religiously oriented, have filled the void left by the lack of governmental involvement in the provision of public services. However, their coverage is dispersed and thus limited.

3. **Donor Organisations**

Apart from the U.S., there are a number of other donors who are active in Zaire's agricultural sector. Most prominent among them are the World Bank, FAO, Belgium, Canada, and the European Economic Community (EEC). This section will focus on the activities of the other major donors. Activities of USAID are described in Section III.A.
The World Bank lending effort in Zaire is very much sector-based, and it combines policy reform with institution building and investment projects. From 1980 through 1985, the Bank initiated approximately one project per year in Zaire, at an average expenditure per project of roughly $13 million. These projects were for maize, sugar, cotton, and seed production, as well as area development projects. The Bank currently provides technical assistance to the DOA aimed at institutional development and improved management of the agricultural sector. Based on a sector review done in 1988, the Bank also has five major projects in the pipeline (most from $20-40 million), indicative of increased Bank involvement with Zairian agriculture. These projects deal with agricultural research, agricultural services (extension and input services), industrial and export crops, forestry, and the cotton sub-sector.

The strategy for future Bank assistance to the agricultural sector is two-fold. It will include short-term measures to aid private investment to boost agricultural production, including foreign exchange support, easing other production and marketing constraints, and assisting the GOZ with policy and institutional reforms aimed at improving the investment climate. In addition, medium- to long-term measures will center on improving key agricultural services, including transport, research, extension, credit, and GOZ policy formulation, planning, and programming capacity. The Bank intends to bring about badly needed improvements in donor coordination in the agricultural sector, and it is prepared to assume a leadership role in this regard.

The FAO has been active in Zaire for quite some time. Technical assistance (TA) has been provided to the Statistics Division of the DOA for almost 20 years, and more recently TA has also been provided to the Direction des Marches, Prix et Credits de Campagne (DMPCC). Since the early 1970s, the FAO has supported FNE with Belgian financing, and it is also working with the World Bank in support of BUNASEM. Joint projects with the World Bank on agricultural research and on extension are in the planning stage. Budget cuts in Rome have circumscribed the scope of FAO's activities in Zaire, and increasingly these activities are being planned and carried out in conjunction with other donors, such as the World Bank. Overall, FAO's role in TA for agriculture and in strengthening of the public administration for agriculture is gradually being reduced.

Belgium's aid program in agriculture is dominated by technical assistance and is characterized by great fragmentation. There are over 50 projects in the agricultural sector, which makes management and coordination of this effort extremely difficult.
The Belgian government has indicated its desire to see 20 percent of its aid budget to Zaire (about $20 million per year) go to support agriculture and rural development. Present spending is less than one third of this amount. Increasingly, Belgium has hooked up with the World Bank to provide co-financing for Bank-initiated activities. This provides a ready mechanism for increasing expenditures, and Belgian co-financing is anticipated for the Bank's agricultural research project and TA to the DOA, among others. It is likely that Belgium's role in agricultural investment in Zaire will increase sharply, but more and more this will take the form of co-financing agreements with the World Bank.

Canadian assistance to the GOZ in agriculture has taken several forms. The Canadians have been and continue to be active in the Kivu region, with particular emphasis on livestock production, animal health, and cooperatives. They are also very active in the forestry sub-sector, principally through the Department des Affaires Foncieres, de l'Environnement et de la Conservation de la Nature (DAFECN). Within the DOA, TA is provided to the Secretary-General's Office, aimed at the DOA Directors and the Secretary General, and seeking to bring about improved management. The Canadian aid mission in Kinshasa recognizes the need for donor coordination for development of an effective public administration for agriculture. The Canadians are looking to the World Bank for leadership in this regard, and they are quite prepared to coordinate their actions with those planned by the Bank. They are also very open to other donor initiatives and proposals, and appear to have a long-term commitment to working in Zaire.

The EEC concentrates its aid efforts in two parts of Zaire: Bas-Zaire and western Bandundu (i.e., the area surrounding Kinshasa), and Kivu. Programs in each of these areas amount to more than $40 million, and are oriented to broad rural development in Kivu and reforestation of the Bateke Plateau and other activities outside Kinshasa. There is also a program budgeted in excess of $20 million for rehabilitation of the Matadi-Kinshasa road. The EEC has steered away from a sector approach and does not involve itself with policy matters in agriculture.
II. CONSTRAINTS ANALYSIS

A. Key Constraints to Agricultural Growth and Development

1. Government Policy and Planning

The macroeconomic policies adopted in the early 1980s have eliminated or reduced a number of important constraints to agricultural growth and development that stemmed from the inappropriate set of policies previously in place. There remain, however, some impediments to full liberalization (e.g., imposed crops, fixing of the timing of marketing campaigns by regional governors) which continue to hinder agricultural development. More fundamentally, the policy volatility that characterized Zaire until fairly recently, and concerns about possible changes in macroeconomic policies, serve to inhibit confidence of potential investors and thereby constrain development of the agricultural sector.

From a more direct, institutional perspective, lack of adequate skilled and experienced human resources has been a constraint on the ability of the GOZ to carry out planning and policy activities. This reflects both weaknesses in the domestic educational system and weaknesses in public sector pay policy. The Zairian educational system tends to produce graduates who have been exposed to a broad range of theoretical concepts, but whose practical and applied skills are often weak. In addition, management training per se does not exist in Zaire's universities. Public sector pay levels are exceedingly low, and this pay policy has greatly exacerbated the GOZ's difficulties in building and maintaining a group of skilled and experienced policy analysts and planners.

Data that provides an adequate overview of performance of the agricultural sector is needed to carry out effective policy analysis and planning. Unfortunately, such data has not been available. The Agricultural Statistics Division of DOA, which is part of SEP, has been particularly weak over the years. This weakness stems from a variety of factors: lack of priorities and poor management; inadequately trained and generally ineffective human resources; overly ambitious efforts at agricultural data collection, with insufficient attention paid to methodological issues, to the exceedingly difficult logistical problems posed by agricultural survey work in Zaire, to the need for supervision in the field, and to requirements for data processing; and inadequate and often delayed financing of agricultural data collection activities.
Two other elements that constrain the GOZ in policy analysis and planning are the woeful underfunding of operating expenses for the DOA and Zaire's political system itself. In recent years the DOA has had inadequate governmental resources to effectively carry out planning and policy-related activities. Small and often long-delayed budget allocations limit the scope of activities that can be undertaken. Zaire's revolving-door political system also constrains government planning and policy activities. The frequent shuffling and reshuffling of personnel at the highest echelons of the DOA discourages serious efforts at long-term planning, and creates a bias away from continuity and toward instability, as each new administration attempts to put its own mark on agricultural policy and planning.

2. Private Sector Marketing

The transportation network is a major constraint on private sector traders. Road, rail, and river transport infrastructure all deteriorated considerably following independence, and this has resulted in a situation where transportation is highly unreliable and farm-to-market transportation costs are extremely high. These high costs of transportation deter entry into commerce, and this in turn helps keep farmgate demand (and ultimately, prices) down.

Traders' access to fuel and spare parts is often limited, particularly as one gets farther away from major urban centers. When fuel is available in the interior of the country, it is often extremely expensive. These elements contribute further to high transportation costs, and, as above, reduce the effective demand for agricultural products at the farmgate. An additional element adding to the cost of marketing agricultural outputs is the lack of marketing infrastructure at collection centers and at the semi-wholesale and retail levels in urban centers.

Another important constraint to marketing is limited access to credit. Much of the credit that goes to the agricultural sector in fact goes for marketing activities, but the bulk of this credit goes to the coffee sub-sector. Overall, crop marketing credit is inadequate, and delays in allocation of credit further serve to constrain crop marketing.

3. Commodity Exportation

In assessing the constraints to exportation of agricultural products, it is useful to distinguish between constraints that impinge on the production of export crops and constraints on the
marketing of these crops. Production constraints consist of economic, structural, and policy factors. The declines in prices of agricultural exports that Zaire and other developing nations have experienced during most of the 1980s constitute a direct economic disincentive to production for export.

The policy environment that prevailed until the early 1980s also resulted in deterioration of productive capacity in the export sub-sector. Zairianization was largely responsible for the shrinkage of the modern sector that has occurred over the past 15 years or so. In addition, shortages of foreign exchange and of fuel contributed to the structural deterioration of modern sector plantations. While there has been considerable improvement in macroeconomic policy since the early 1980s, it should be noted that the efficiency of export crop marketing is also hampered by lack of stability in the rules and regulations governing export operations and the repatriation of foreign exchange. This stop-and-go regulatory environment results in a lack of confidence and a poor climate for investment. The overall economic environment has not been conducive to long-term investments in the modern sector.

The poor state of the transportation network, and particularly the river network so important for many of Zaire's export crops grown in the Central Basin, results in a very high effective cost of evacuating export crop output from the interior of the country. Inadequate credit for marketing of agricultural commodities also constrains exports.

Government regulations, in the form of required paperwork and taxes, are especially burdensome for exports. Exports of agricultural commodities may require up to 52 different documents and procedures, and dealing with as many as fifteen different government agencies (some of which duplicate one another's actions). In addition, there are several different export taxes on agricultural commodities, as well as separate export charges and levies, that could amount to up to 20 percent of the export value of some commodities.

4. **Credit Availability**

Credit for the agricultural sector comes principally from Zaire's commercial banks and also from two development banks, SOFIDE and the BCA. Forty percent of the total lending of these banks between 1982 and 1986 went to the agricultural sector. However, the formal banking sector provided credit to only two main groups of agricultural borrowers: agro-industrial enterprises that could put up collateral such as real estate, and
companies and individuals involved in the purchase of coffee, food crops, and cotton, and in the production of sugar cane.

There has been a sharp increase in credit to the agricultural sector over the past five years, representing a doubling of credit in real terms. Much of the increase has gone to seasonal crop marketing, which is the principal type of credit extended by the commercial banks to the agricultural sector. Despite this increase crop marketing credit is still inadequate and credit for production is in very short supply. In Zaire's inflationary environment, credit tends to be directed toward trade financing where turnover is fast and profit margins relatively high. Hence, credit for productive activities is increasingly crowded.

Overall, credit in agriculture has essentially served urban-based traders involved in crop marketing and some of the larger agro-industrial companies. Smallholders and the growing numbers of commercially-oriented farmers have little access to the formal credit network. The extent to which these producers are served by informal financial intermediaries (self-help groups, moneylenders, traders) is not known at present. The agricultural sector could support increased access to marketing credit. Access to credit is a distinct constraint on the modern sector. In particular, credit for both short-term investments (in equipment and spare parts, vehicles, fuel, and building rehabilitation) and for major long-term investments in rehabilitation of the plantation sector is extremely scarce. Alleviation of these credit constraints on the modern sector, in conjunction with other complementary policies such as improvement in the transportation infrastructure, offers considerable potential for increased production by the modern sector.

5. **Farmer Productivity and Access to Inputs**

At present, fertilizer, credit, and information (extension) are inputs that are simply not available to most smallholders. The lack of these inputs sharply constrains farmer productivity. Household labor is the principal source of labor inputs to agricultural production, and augmented labor productivity is necessary for increased smallholder production. Improved seeds and varieties (through BUNASEM, various commodity research programs, and area development projects) are available to significant numbers of smallholders, but the limited coverage and the present governmental dominance of the supply of these critical inputs constitute a further constraint to productivity of traditional farmers.
Access to improved inputs is a much more proximate constraint to modern-sector production than it is to smallholder production. For certain crops, lack of research and hence improved varieties constrains output. Difficulties in obtaining foreign exchange and weaknesses in the transportation system hinder acquisition of fertilizer and of modern equipment and spare parts for that equipment, and this further limits productive capacity in the modern sector. In addition, labor is often a constraint, in that wages and social services offered by plantations frequently are insufficient to attract the desired labor.

6. Natural Resource Base Management

There are natural resource constraints that impinge on the development of forestry and crop production. Constraints to development and management of the rain forest are both natural and political. The forest is, to a large degree, inaccessible to exploitation, and total extracted tonnage from logging activities is well below estimates of sustainable levels. Inventories of the natural flora and fauna are incomplete, and protection of the forest from illegal use (unlicensed hunting and logging) is constrained by an understaffed civil forest service and apparent political favoritism.

Fuelwood and agricultural production activities presently pose the greatest constraint to natural resource management. Deforestation to support these activities is occurring in the transitional forests stretching from Kinshasa to Kivu and from Kivu south into the gallery forested savanna to Lubumbashi. Continued population pressures in these regions in conjunction with high rural-urban migration have resulted in ever-increasing demand for fuelwood. Deforested halos of 50 to 150 km surround major metropolitan areas, and forest resources are being increasingly exploited to supply growing energy demands.

Market-driven agricultural production activities in the gallery and transitional forest have caused degradation of the natural resource base. Traditionally sustainable shifting cultivation practices have given way to shorter fallows that are not sustainable in the long term. Shorter fallows result in increased mining (removal without replenishment) of soil nutrients. The consequent decrease in soil fertility has fueled demand for more fertile forest land and is increasing deforestation. Rapidly growing demand for agricultural production from urban areas accelerates both deforestation and extensification through cultivation of more marginal land. This abuse of the natural resource base, if continued, will eventually constrain total production as forest reserves are depleted and

D-21
production is limited to severely degraded land. In addition, the spiraling degradation process will progress much more rapidly as farmers move from the more fertile transitional forest into the much less agriculturally suited rain forest and savannah. This, at present, is very much a long-term problem as the current rate of deforestation is much less than one percent per annum.

7. Technology Development and Dissemination

Weaknesses in the agricultural research system and in the agricultural extension system in Zaire constitute, respectively, the principal constraints to development of new or improved production technologies or cropping systems, and to adoption of these developments by farmers. The principal GOZ agricultural research organization, INERA, has been underfunded, overextended, and ineffective in making a contribution to agricultural research in Zaire. A GOZ study group, with support from ISNAR, recommended in 1985 that INERA be restructured and streamlined, with a reduction in the number of research stations from 20 to nine, transfer of INERA's headquarters from Yangambi to Kinshasa, and efforts at improved management and coordination with other departments involved in agricultural research.

To offset the lack of agricultural research in Zaire, USAID has funded RAV, which in the past several years has regrouped existing commodity programs for cassava, maize, and legumes and begun to carry out a serious program of agricultural research. RAV is limited, however, in the scope of its activities (e.g., it is not involved in rice research, nor in research on export and industrial crops). Hence, the weaknesses of INERA effectively constrain development of new production technologies and cropping systems.

Even in the presence of a functioning agricultural research system, an effective extension system is required for farmers to adopt newly-developed production technologies or cropping systems. Such a system does not exist in Zaire, where agricultural extension suffers from many of the same problems that hinder other African nations. The regional agricultural administration has staff at the local level who in principle are responsible for agricultural extension. However, as noted earlier, these individuals are hampered by a multitude of constraints: low pay, lack of motivation, low status of the extension service, distrust from farmers; severe lack of logistical support, especially vis-a-vis transportation, but also with respect to office supplies and extension materials; multiple attributions, including tax collection, crop imposition, and generating agricultural statistics; lack of overall coordination and organization, duplication of effort; and absence of a backlog.
of farmer-proven, tested varieties and cultural practices resulting in a lack of clear themes and messages for extension. Clearly, the absence of an adequate extension system is a major constraint to adoption by farmers of new or improved production technologies or cropping systems.

B. Efforts to Address the Constraints

1. Government Policy and Planning

Constraints on government planning and policy development capabilities have been and continue to be particular concerns of both the U.S. and the World Bank. These two donors have sought, through policy dialogue and the ongoing structural adjustment program, to reinforce and strengthen Zaire's economic liberalization policies, and to encourage maintenance of stability in the policy environment aimed at contributing to a healthier climate for investment. With respect to the direct, institutional constraints identified earlier, the GOZ and donors have been attempting to alleviate inadequate training, poor public sector pay, poor agricultural statistics, and inadequate GOZ resources.

USAID has been prominent in the area of training, engaging in a long-term institution-building effort at SEP that has provided stateside training for approximately 70 Zairians to date, mostly at the Master's level in Agricultural Economics. This effort goes back roughly 15 years, and technical assistance has been used to provide on-the-job training to complement academic training. The current Agricultural Policy and Planning Project (Project 663-0119), the third major USAID project to support SEP, is providing technical assistance and additional long-term academic training to continue the upgrading of GOZ capacities for planning, policy analysis, and development. Additional academic training is needed to make up for attrition of trained personnel -- some of whom move on to other jobs within the DOA or elsewhere in the GOZ, while others leave for the private agricultural sector. There has been virtually no problem with trainees not returning to Zaire or departing for other countries after meeting their return obligation. As a result, the trained personnel remain in Zaire and are a positive force for development in both the public and private sectors.

USAID's support has enabled SEP to play a key role in policy formulation within the DOA/GOZ. SEP is now carrying out agricultural policy and project-related studies formerly done by consultants. Its staff expertise is widely recognized within the GOZ. While the series of USAID projects has had a dramatic
effect on SEP's ability to carry out policy analysis and planning activities, there is still considerable room for improvement. SEP's outputs have frequently been principally descriptive, whereas improved planning and policy making require more analytical studies; the current project is beginning to produce these more analytical outputs.

An important constraint on planning and policy development capabilities within the GOZ is the absence of reliable data on the agricultural sector. USAID and the FAO have both provided support to SEP's Agricultural Statistics Division, but there are still problems. Until fairly recently, USAID's support for the Statistics Division had been concentrated on the data processing office (Bureau Informatique). The FAO, by contrast, has been seeking to establish a national system for agricultural data collection. In the latest of a series of projects providing technical assistance and material support to the Statistics Division, the FAO is attempting to establish a permanent system of agricultural data collection.

The World Bank seeks to provide support for agricultural statistics through its umbrella technical assistance (PAT2) project. This support will entail working in collaboration with FAO. However, unless the Statistics Division can significantly upgrade the qualifications of its personnel (who have not benefited from USAID-financed training to the same degree as their counterparts in SEP) and focus on some clear and feasible goals, it seems unlikely that FAO and World Bank efforts to improve agricultural statistics will bear much fruit.

Poor public sector pay is a further constraint on government planning and policy capabilities. The World Bank, under its PAT2 project, will seek to provide support for improved personnel management and salary policy formulation within the DOA. However, the limited resources of the GOZ make it impossible to raise public sector salaries significantly without simultaneously reducing the size of public sector payrolls.

A fourth constraint to improved government planning and policy development is the overall resource constraint -- i.e., GOZ resources available for operating budgets are inadequate. Debt forgiveness, which has been carried out by the U.S., Canada, Belgium, and France, is one mechanism for alleviating this constraint, as is direct donor funding of specific activities. The World Bank is seeking to address this constraint via promotion of the Priority Investment Program (PIP). In addition, under its PAT2 project the Bank intends to provide support for improved programming and execution of public expenditures. These efforts should serve to enhance somewhat the resources the GOZ can bring to bear in addressing policy and planning issues.
2. Private Sector Marketing

The state of Zaire's transportation infrastructure was identified earlier as a major constraint to private sector marketing. USAID and the World Bank are actively involved in efforts to restructure the transportation sector. The Bank has proposed a river navigation improvement project, and, in collaboration with USAID, it is also pursuing a rural roads rehabilitation project. In addition, other donors periodically get involved in efforts at improving transport infrastructure (e.g., EEC funding for rehabilitation of the Kinshasa-Matadi road). In principle, these activities should reduce effective transportation costs and thereby increase farmgate demand for agricultural products. Zaire's size and generally low population density are constraints on how effective any given resource inputs into transportation rehabilitation will be, but focus on river transport to facilitate evacuation of production from the Central Basin and on rural feeder roads in areas of relatively high population density appears to offer the best prospects for improvement.

An additional constraint on marketing consists of the numerous taxes that are often imposed on traders by local authorities. Ongoing policy dialogue with the GOZ by USAID and the World Bank, in the context of the Structural Adjustment Program and decentralization, is seeking to rationalize the tax system.

Finally, limited access to credit was identified earlier as a constraint on traders. Policy changes during the past two years, including both a reduction in the degree of Bank of Zaire intervention in credit allocation and elimination of the preferential interest rate for agricultural credit, represent improvements. As noted earlier, however, there is still a shortage of credit and there is considerable unmet demand for marketing credit. While the World Bank is seeking to augment credit to the modern sector for production activities, it would appear that there are opportunities for increasing credit availability for marketing as well. USAID's Private Sector Support Program is available for this purpose.

3. Commodity Exportation

The major constraints to exports identified earlier include declining real producer prices, a poor economic environment, poor river transport, inadequate marketing credit, and excessive paperwork and taxes required for exports. GOZ and donor efforts
have been and are being made in an attempt to alleviate most of these constraints. The World Bank is seeking to generate continued improvements in macroeconomic policy and to create a favorable environment for investment. In addition, the Bank has successfully pushed for suppression of a portion of the taxes on exports, and it is seeking to assist the GOZ in policy reform aimed at reducing the volume of required paperwork, thereby streamlining the export process. Proposed improvements to the river transportation system (discussed above) are designed in large part to facilitate agricultural exports.

4. **Credit Availability**

USAID is presently funding an extensive study of rural financial intermediation that focuses on developing a clear understanding of rural financial markets in Zaire. The study seeks in particular to explore possibilities of rural savings mobilization through savings and credit cooperatives, e.g., Cooperative d'Epargne et Credit (COOPEC), which could potentially serve as direct suppliers of financial services to rural enterprises and households. Development of specific strategies and plans for significantly expanding rural financial intermediation, and hence alleviating liquidity constraints in the agricultural sector, will be based on the study findings.

The World Bank has proposed establishment of an Industrial and Export Crops Credit (IECC) and of a Perennial Crops Rehabilitation Credit. The IECC is meant to facilitate access to foreign exchange and credit to enable modern sector enterprises to satisfy short-term needs for inputs such as equipment, spare parts, and fertilizer. The Perennial Crops Rehabilitation Credit will seek to facilitate longer-term investments in rehabilitation of the plantation sector.

While there is potential for these credit programs to have a significant impact on the plantation sector, it must be emphasized that chronic problems with inflation as well as the instability of economic policy in Zaire are important constraints on long-term investment in the plantation sector. Long-term investments need a reasonably stable economic environment with relatively modest inflation, and without fear that the rules of the game might change from one day to the next. It will take some time before such an environment can be established in Zaire.
5. **Farmer Productivity and Access to Inputs**

Earlier it was argued that access to improved seeds and varieties constituted an important constraint on smallholder productivity. BUNASEM represents the GOZ's main effort, with support from FAO and the World Bank, at engaging in improved seed production and distribution at the national level. BUNASEM has an important role to play in GOZ strategy to increase agricultural production, but considerable funds from donors and the GOZ will be required to maintain it. BUNASEM also faces substantial difficulties related to transportation, organization, and lack of qualified seed production and certification staff.

Access to inputs is in many ways much more of a constraint on the modern sector than on the traditional sector. The absence of ongoing adaptive research is an important constraint on improved seeds and varieties. The World Bank is planning a major National Agricultural Research project to support INERA, and part of the focus of this project will be on the export and industrial crops produced by the modern sector.

Additional constraints on the modern sector are caused by the poor transportation infrastructure (especially with respect to river transport), difficulties in obtaining foreign exchange, and lack of credit for both short-term inputs and longer-term rehabilitation investments. The World Bank has proposed various measures seeking to alleviate these constraints. A river navigation improvement project will seek to improve water transportation and thereby facilitate both evacuation of outputs as well as provision of inputs. The Bank's proposed Industrial and Export Crops Credit and Perennial Crops Rehabilitation Credit (discussed above) seek to alleviate foreign exchange and credit constraints.

6. **Natural Resource Base Management**

The GOZ has established an inter-departmental council, under the auspices of the Department des Affaires Foncières, Environnement et Conservation de la Nature (DAFECN), to play an advisory role in development issues having an impact on forest resources. DAFECN, with assistance from the International Institute for the Environment and Development, has produced a major study on the forestry sub-sector, and the World Bank and USAID have also carried out studies of the natural resource base. There is a developing recognition of the importance of the natural resource base and its consideration in development policy.
The major constraint to development of Zaire's forestry sector is the weak transportation system. Successful efforts at improving the transportation system will likely increase the degree of exploitation of Zaire's forest resources, and therefore will require development of forest management and protection policies. The Canadians are assisting the GOZ in establishing a permanent forestry inventory system and in developing a capacity for forestry management. In addition, the EEC and Belgium are involved in reforestation efforts on the Bateke Plateau outside Kinshasa.

7. Technology Development and Dissemination

Rehabilitation of both the national agricultural research system and the national extension system are required to alleviate constraints to development and to facilitate the adoption of new production methods. In recent years USAID has played a major role in funding agricultural research in Zaire via the RAV project, which has regrouped and revitalized national commodity research programs for cassava, maize, and legumes. RAV is presently the principal organization in Zaire carrying out agricultural research, and continued USAID funding for agricultural research is essential in the short term.

In addition to USAID's efforts with RAV, rehabilitation of INERA is also needed. The GOZ/ISNAR study group proposed that there be an integration of the national commodity research programs with INERA, after INERA itself has been profoundly reformed. The recommendations of the group provided a blueprint for restructuring INERA and transforming it into a productive research organization. However, progress toward implementing these recommendations has been exceedingly slow.

The World Bank is now taking an active role in coordinating donor support for INERA's restructuring and in drawing up a long-term master plan for agricultural research with phased implementation. The shift of INERA's headquarters from Yangambi to Kinshasa and development of an action plan to restructure agricultural research were conditions of the Structural Adjustment Credit negotiated with the Bank in 1987. The Bank has also proposed a National Agricultural Research project to continue and assist in the process of rehabilitating INERA. The project will focus initially on establishing a research and institutional framework, management support, priority activities, staff training, and minimal investment needs for research facilities. In addition to these organizational and administrative aspects, it is essential that INERA develop a realistic and manageable set of substantive research priorities.
The World Bank is also seeking to revitalize the extension system, through its proposed Agricultural Services project, which includes the following elements: improving regional extension services to small farmers to increase food production, beginning in selected priority regions and relying heavily on PVOs and the private sector; establishing an extension management system; substantially trimming and restructuring the present extension service; and rehabilitating veterinary services to promote smallstock, dairy, and meat development.

It is not readily apparent that the training and visit method of extension the Bank is promoting will work effectively in Zaire. Resolving a number of the specific constraints to extension discussed earlier will prove to be both very costly and extremely difficult to implement. On balance, the prospects for rehabilitation of the extension system do not appear to be as promising as the prospects for rehabilitation of the research system.

USAID has chosen to deal with the issues of technology dissemination on a more selective basis. Outreach activities are emphasized in USAID's two major area development projects in Bandundu and Shaba. These projects seek to assist local PVOs in delivering effective agricultural services. In addition, the RAV project (particularly the second phase beginning later this year) aims to enhance the GOZ's ability to transfer sustainable agricultural technologies to small farmers. Other USAID activities (e.g., the Small Project Support Project) also provide means of supporting PVOs in agricultural extension activities.
III. USAID AGRICULTURAL SECTOR STRATEGY

A. Current Program

1. Strategic Objective, Targets, Indicators and Discussion

USAID's Strategic Objective in the agriculture sector is to increase agricultural production, productivity and rural household income, with emphasis on the Bandundu and Shaba regions. The Mission seeks increases in rural household income through both farming and non-farming activities.

Achievement of the Strategic Objective will be measured by the following Program Performance Indicators:

A. Real returns to crop labor hours increase.
B. Crop yields per hectare increase.
C. Rural household incomes increase.
D. Food consumption increases.
E. Natural resource management improves.

USAID's emphasis on increased agricultural production and productivity is based on the premise that the agricultural sector and market-oriented policies are the keys to sustained economic growth in Zaire. This growth is expected to result in expanded employment (particularly in rural areas), reduced rural-urban migration, improved nutrition, and rising living standards throughout the population.

USAID's geographic focus is on the Shaba and Bandundu regions. This is because USAID's comparative advantage is in support to food crop production, and priorities in food crop production are in the southern band in Zaire, following high population densities in these areas and near the major industrial activities in the country. It is in this belt that many of the country's major cities are located (Kinshasa, Kikwit, Kananga, Mbuji-Mayi) as well as the southern mining towns (Kolwezi, Likasi and Lubumbashi). In the southern band's savanna or derived savanna areas the potential for food production is high and there is a major demand for commercial food production for growing urban centers and mining areas. Since such food production comes from labor-intensive smallholder cropping systems, sufficient labor must be present.

Agriculturally-based economic growth will depend on increasing both the production and productivity of Zaire's farmers and on improving agricultural marketing. This in turn will depend on infrastructure improvements in rural and urban
areas, on public policies which are supportive of agricultural development and on the provision of critical inputs, notably information (extension) and credit.

Progress with respect to the Strategic Objective is to be achieved through activities and interventions to increase crop production and productivity, provide policy and institution incentives, improve rural market infrastructure and increase domestic credit by improving financial services.

Agricultural sector Targets and Benchmark Indicators are as follows:

**Target 1: Increased sustainable crop production and productivity for domestic and export market.**

a. Cassava production in Bandundu and Shaba increases by 25 percent over the 1989 to 1993 period.
b. Maize production in Bandundu and Shaba increases by 35 percent over the 1989 to 1993 period.
c. Peanut production in Bandundu and Shaba increases by 35 percent over the 1989 to 1993 period.
d. Real returns to crop labor hours increases for corn and cassava by 20 percent in Bandundu and Shaba over the 1989 to 1993 period.
e. Marketed surplus for maize and cassava in Bandundu and Shaba increases by 50 percent over the 1989 to 1993 period.
f. Marketed surplus for peanuts in Bandundu and Shaba increases by 55 percent over the 1989 to 1993 period.
g. Soil conservation and natural resources management technologies are developed and utilized by 137,000 farmers by 1993.

**Target 2: Market-oriented policy and institutional incentives provided for rural agricultural enterprises.**

a. GOZ eliminates regulations and practices restricting the inter-regional flow of agricultural commodities by 1993.
b. GOZ eliminates regulations and practices involving administrative determination of crop marketing seasons by 1993.
c. GOZ eliminates compulsory cropping regulations and practices by 1993.
d. GOZ formulates policies supporting establishment and operation of a viable food crop seed production and distribution system.
e. GOZ refines its database to incorporate reliable physical and economic data (area planted, yield, production, producer and consumer prices, export and import data, etc.).
f. GOZ conducts timely and sound economic analyses of investment projects for consideration during Priority Investment Program and Public Expenditure Program allocation processes.

g. Percentage of national investment budget and of Priority Investment Program budget going to the agricultural sector increases to 20 percent over the 1989 to 1993 period.

h. GOZ undertakes appropriate measures to institute a tender and bid system for Gecamines local purchases of maize, to promote competition in the maize market.

A financial services target is part of the sectoral strategies for both agriculture and private sector development because of the complementary project and non-project interventions. Both sectors are focusing resources on improving mobilization of savings and domestic credit. The supporting agricultural sector interest is to improve rural financial services for production, storage, processing and marketing activities by small and medium-sized farm firms and entrepreneurs. USAID's Strategic Objective for the private sector includes the following Target 4.1: "Sustained growth in domestic credit outstanding to small and medium enterprises and farm firms achieved" (See Annex F). Four of this target's benchmark indicators measure the contribution of the agriculture portfolio to the achievement of this common target:

b. GOZ Rural Financial Markets Study is completed and other priority recommendations are implemented.

c. Baseline data are established for measurement of the commercial investment of COOPECs and the overall economic impact of savings and lending activities.

e. Mobile savings mobilization facility is strengthened and expanded, reaching 10 new COOPECs over the 1989 to 1993 period.

f. Total COOPEC savings mobilized increases by 30 percent over the 1989 to 1993 period.

Agricultural sector targets are further supported by programs and projects in the transport and private sectors as well as those in the agriculture sector.

2. Resources

At present, the USAID agricultural sector portfolio consists of the following four projects: (1) Applied Agricultural Research and Outreach (RAV); (2) Area Food and Marketing Development (PROCAR); (3) Central Shaba Agricultural Development; and (4) Agricultural Policy and Planning. The
annual dollar obligation under these and follow-on projects amounts to $7-8 million, and there is another $6-8 million dollars spent annually in local currency.

2.a. **Applied Agricultural Research and Outreach.** The Applied Agricultural Research and Outreach Project (Recherche Appliquee et Vulgarisation, RAV, 660-0091) was initiated in 1983. The purpose of the project is to improve and expand the ability of the Department of Agriculture to undertake applied agricultural research activities, and to transfer agricultural technology needed to increase village cultivators' production of food crops. A key element in the USAID strategy has been crop technology development by three national commodity programs: maize, cassava, and grain legumes.

Project implementation reports have documented the project's achievements to date and outstanding issues and problems. According to a 1988 interim evaluation of the RAV experience, a solid foundation has been laid for on-station commodity research. Outreach links to the extension agencies remain weak in all programs, however. The current research thrust of the RAV project is to institute improved crop cultural practices using the farming systems approach.

When the RAV I project ends in September 1990, it will be replaced by a follow-on, RAV II project, utilizing a Title XII mechanism. The purpose of the project is to strengthen and improve the capacity of the GOZ to develop and transfer agricultural technologies, on a sustainable basis, to small farmers for increased production and income. The project will also consolidate the building of capacity in applied food crop research and outreach in maize, cassava, and grain legumes, a process begun by USAID in the early 1970s. In this sense, the project is highly consistent with the Africa Bureau's plan for supporting agricultural research in Africa (a plan under which Zaire is targeted as one of eight technology-generating countries selected for long-term investment by A.I.D.).

2.b. **Area Food And Market Development.** The Area Food and Market Development Project (Projet de Developpement de la Production et Commercialisation Agricoles Regionale, PROCAR, 660-0102) was initiated in 1984. Its purpose is to increase agricultural production, marketing and processing in Central Bandundu. The project is focused on assisting local PVOs so that they can deliver effective services to small farmers. The main food crops are cassava, maize, peanuts, and rice. Other crops grown in the area include coffee, fibers, rubber, and vegetable crops.
PROCAR trains extension personnel to increase the diffusion rate of improved varieties. The project is also taking a leading role in improving the efficiency of crop marketing in the project area. Promotion of improved processing techniques, a pilot river marketing trial, and testing of crop storage improvements are among ongoing project activities. Technical assistance is provided to savings and credit cooperatives (COOPECs). The project also addresses environmental issues by promoting tree planting for soil enrichment, as well as by advising farmers to lengthen fallow periods to improve soil fertility.

2.c. Central Shaba Agricultural Development. The Central Shaba Agricultural Project (660-0105) focuses on five new areas identified in the Shaba regional development plan and confirmed by design research to be critical to agricultural development: (a) establish a private sector seed enterprise; (b) develop farmer-based extension services; (c) construct storage facilities; (d) improve transport; and (e) improve support centers. The ultimate goal is to move the region towards food self-reliance by increasing the production, processing, and marketing of basic food crops. USAID's support for agricultural development in Central Shaba was initiated in 1986. It is envisioned as a fifteen-year effort with major financial expenditures occurring in the initial years. The project also continues supporting agricultural activities in the zones formerly covered by the North Shaba Rural Development Project.

The extension component of the project continues to make significant progress. Eight covered loading docks are to be constructed with capacity to protect 16,000 tons of crops from rain and other elements and reduce post-harvest losses. The Shaba region is a vital link in the food supply chain of the economically important southern band region of Zaire.

2.d. Agricultural Policy and Planning. The Agricultural Policy and Planning Project (660-0119) is USAID's fourth activity to support the development of the Service d'Etudes et Planification (SEP) in the Department of Agriculture. The overall purpose of the current project is to increase the institutional capacity of the Government of Zaire to develop and implement coordinated agricultural policies and investment plans.

According to a recent evaluation, the Agricultural Policy and Planning Project provides a significant opportunity for USAID to assist the GOZ in developing viable agricultural policies. The evaluation team also underscored that the initial step for realization of this opportunity entails a thorough review of the original project design to ensure that the project responds to current GOZ priorities. Currently, the GOZ, the technical
assistance team, and USAID are working in collaboration to more clearly focus project activity in three areas: agricultural policy, agricultural statistics and investment planning.

On the policy side, for example, the technical assistance team is now addressing six key priority policy issues considered to be critical constraints to growth in agricultural production, productivity and rural income in Zaire. The topics under analysis are: (a) food security; (b) price liberalization; (c) marketing costs; (d) trade and commercial policy; (e) agricultural credit and savings mobilization; and (f) seed policy. As these priority issues are analyzed and empirical data is brought to the attention of policy makers, a sector approach funding mechanism (discussed in detail below in section III.B.) provides USAID with opportunities for encouraging implementation of desirable policy reforms.

3. **Tracking Sector Program Performance**

3.a. **Program Performance Indicators.** The long and medium term contributions of the agricultural sector programs and interventions towards the Strategic Objective will be evaluated in the areas of changes in: (a) crop yields (per unit of land and labor); b) household income (direct income, expenditure and assets); (c) food consumption (food availability, and anthropometric measures); (d) the environment (actual versus potential yield, and actual land use versus soil suitability); and (e) rural commercial activity (market information, marketing costs, transport infrastructure). Essential components of each of these measurement areas will be further refined and documented within the framework of the information units created under each of the field projects, including the agricultural policy and planning project. USAID provides guidance for gathering relevant secondary as well as primary data for tracking sector program performance within the bounds of a longer time frame. In the short run, however, the viability of the sector program will be measured by assessing movement of some selected socioeconomic Program Performance and Benchmark Indicators identified under the Targets presented above.

3.b. **Data Requirements.** The Benchmark Indicators under Target 1 are presented precisely. Achievements are expected to result following farmer adoption of improved technologies emanating from the projects described above. The Benchmark Indicators outlined under Target 2 and the rural finance Target will be tightened further following completion of the policy studies (constraints analysis) already commissioned to develop appropriate recommendations for future action. Among others, the
studies commissioned to identify key constraints on market liberalization and agricultural credit and savings mobilization are close to termination. The Benchmark Indicators for these two key policy reform areas will be tightly reformulated as soon as the recommendations are accepted by the GOZ and USAID for implementation. Remaining policy related Benchmark Indicators will be strengthened as soon as agreed-upon reform recommendations become available.

Another significant point to note in terms of these Benchmark Indicators is the weakness in Zaire's socioeconomic data base. Much of the data on yields, production, income, prices, etc., consists solely of estimates and in most cases there are fairly wide margins of error. Due to this shortcoming, the Mission is developing information units within projects to accumulate relevant and reliable data for measuring project progress and tracking sector program performance. An attempt also is being made to collaborate with other donors such as the World Bank and FAO to seek ways of improving Zaire's agricultural statistics base.

B. Implications For Future Program Action

1. Assistance and Funding Mechanisms

USAID will explore the opportunity for development of a sector-based approach to assistance in agriculture for potential adoption as current projects are completed, beginning in late 1993. In a sector-based approach, focus would be on the agricultural sector instead of individual, piecemeal projects. A sector approach provides a unifying framework for project activities and emphasizes that projects can only succeed if the economic policy environment is favorable.

The agricultural sector in Zaire has been neglected for so long that there is now a strong willingness among GOZ officials to make whatever changes seem appropriate to regenerate economic growth from the sector. In addition, the major policy thrust of the GOZ, to support private sector development in agriculture, which coincides with USAID's general orientation. The challenge for USAID is now to develop a strategy which focuses on the basic developmental issues which affect Zairian society on the whole. Sectoral grants can be a major instrument in such a strategy.

A sectoral grant is a particular mode of assistance which offers many advantages, particularly in combination with large CIPs or PL-480 Title I/III programs which generate counterpart
funds. Its operation and expected advantages would be as follows:

-- TA and participant training would be provided under the sectoral grant;

-- Goods and services would be procured locally through the CPF, thus shortening delivery times and administration and stimulating the local economy;

-- Private sector importers would be able to acquire the foreign exchange needed to import the goods and services via the CIPs, thus strengthening their operations and building local capacity;

-- Public finance of the GOZ would benefit from this assistance mode through the various taxes and duties levied on local purchases;

-- Administration at USAID/Kinshasa would be reduced by shifting many functions to the private sector and counterpart organizations;

-- The rate of implementation and disbursement within the overall program would be sped up;

-- Policy dialogue with the GOZ and donor coordination and cooperation would be facilitated through quick disbursing support (in foreign exchange and in local currency) of the agreed policies and actions; and

-- Leverage on the GOZ would be exercised through the modulation of the rate of disbursement as a function of the rate of implementation of desired policy changes and performance and benchmark indicators, as would be mutually agreed on in a memorandum of understanding.

In a sector approach and in light of the poor record of the GOZ in releasing domestic funds for projects or policies to which it is committed, the tactic of matching funds could be useful. If agreement is reached between USAID and the GOZ on policy reforms and related programs and projects, implementation could be phased such as to induce a clear commitment by the GOZ to provide its own budgetary contribution. As far as is known, there is no experience of this type in Zaire with matching funds, but the idea seems novel and worth trying. If successful, this could be the start of a genuine partnership and increased GOZ commitment to agriculture. There is, however, a danger that the GOZ would see this as infringing on its sovereignty; this could be cleared through the on-going agricultural sector policy dialogue. As the release of funds (e.g. balance of payments support) could be tied
to certain policy reforms, the matching of funds could be part of the budgetary process and could be implemented after annual or semi-annual policy review sessions.

Debt-for-nature swaps are an attractive means of securing increased GOZ commitment to preserving the rain forest specifically (for example, by expanding land area in national parks and by prohibiting logging and other forest development activities in certain areas), and for supporting efforts at improved natural resource base management generally. A Debt-for-Development Program seeking to provide support to PVOs for general extension activities would appear to be a priority area where such an assistance mode could be effective. As part of USAID's ongoing policy dialogue with the GOZ, consideration will be given to the desirability and feasibility of arranging a debt-for-nature swap or a Debt-for-Development Program.

2. Areas of Opportunity for Future Program Action

2.a. Supporting Policy Reforms. Although there have been substantial and very positive changes in Zaire's policy environment during the 1980s, there remains substantial scope for further improvements in the policy area that seek to enhance agricultural development and economic growth in the 1990s. Adopting a sector approach as a funding mechanism provides USAID with opportunities for encouraging implementation of desirable policy reforms.

In general, policy reforms should be designed to create and foster a more stable environment conducive to and supportive of increased agricultural production and more efficient and expanded agricultural marketing. This should be realized through increased private sector involvement. In particular, the thrust of USAID's economic policy reform efforts should be directed to assisting the GOZ in:

-- Tidying up of all legislation to bring it in line with the principles and spirit of economic liberalization;

-- Articulating a food security strategy in lieu of the present food self-sufficiency strategy as well as improving household food security primarily through the creation of income-earning opportunities for households in the lower income groups;

-- Promoting savings mobilization and improving access of rural households to agricultural credit;
-- Simplifying the procedures for export of agricultural products and reducing/abolishing remaining marketing taxes and export taxes;

-- Reducing marketing costs; and

-- Insuring timely delivery of quality seeds to farmers.

2.b. Developing the Institutional Base. The nature and capacity of institutions which serve the rural community also determine the character of rural productivity. An agriculture-led strategy of growth requires effective management, decentralized economic and political processes and increased governmental policy analysis capacity. Long term sustainability of rural production and income growth will ultimately depend on the vigor and flexibility of the institutional base.

In the field of agriculture, the U.S. land grant college system, which USAID will be using in research, is unique in the world and can provide high quality training over a wide range of subjects for participants. This is a unique asset of USAID vis-a-vis other donors and is all the more important in light of the weaknesses of Zairian higher education and the overriding need to build local capacity.

The demand for U.S. trained agriculturalists and economists is very high in Zaire. In contrast to some other African francophone countries, U.S. degrees are readily accepted. Enhanced problem solving skills make these returned participants very attractive to both the private and public sector for management and decision making positions.

2.c. Other Measures to Improve Household Income. Aside from improving food crop production and productivity, household incomes can be enhanced through creation of income earning opportunities. First of all, this entails determining income generating strategies of households, particularly in Bandundu and Shaba regions. Presently, the following areas are recommended for consideration as targets for future investigation:

-- Support to the agricultural export (e.g. coffee) sub-sector: Approximately 60 percent of area cultivated and 40 percent of coffee production is presently coming from smallholders. Despite a total lack of coffee extension services, coffee is the only cash and export crop which has been growing steadily since independence. Presently quality is low, particularly because of dry processing, and high marketing costs. One focus of future analysis is to determine the most appropriate form of assistance;
-- Support to the forestry sub-sector: USAID could provide incentives to U.S.-based forest industries to encourage private investment in the forestry sector in Zaire coupled with reforestation and conservation management;

-- Support to small scale viable agro-enterprise activities, particularly, in Bandundu and Shaba regions: Off-farm and small-scale activities play an important role for many households in helping to increase household purchasing power. Food processing (particularly processing of cassava) is also a significant activity in generating revenue.
ANNEX E

TRANSPORT SECTOR BACKGROUND PAPER

USAID/Zaire
TRANSPORT SECTOR BACKGROUND PAPER

TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>iii</td>
</tr>
<tr>
<td>I. THE TRANSPORT SECTOR IN ZAIRE</td>
<td>1</td>
</tr>
<tr>
<td>A. Historical Overview of Transport</td>
<td>1</td>
</tr>
<tr>
<td>B. Roads, Rivers and Distribution</td>
<td>1</td>
</tr>
<tr>
<td>1. The Road Subsector</td>
<td>1</td>
</tr>
<tr>
<td>1.a. Roads</td>
<td>1</td>
</tr>
<tr>
<td>1.b. GOZ Management of the Sector</td>
<td>4</td>
</tr>
<tr>
<td>1.c. Office des Routes</td>
<td>5</td>
</tr>
<tr>
<td>1.d. Service National des Routes de Deserte Agricole</td>
<td>7</td>
</tr>
<tr>
<td>1.e. Regional Road Commissions</td>
<td>8</td>
</tr>
<tr>
<td>1.f. Road Use</td>
<td>9</td>
</tr>
<tr>
<td>2. Waterways, Navigation and Boats</td>
<td>9</td>
</tr>
<tr>
<td>2.a. Rivers</td>
<td>9</td>
</tr>
<tr>
<td>2.b. The Department of Transport and Communications</td>
<td>10</td>
</tr>
<tr>
<td>2.c. ONATRA and RVF</td>
<td>11</td>
</tr>
<tr>
<td>2.d. Private and Informal Sectors on the Water</td>
<td>11</td>
</tr>
<tr>
<td>3. Private Surface Transport Industry</td>
<td>12</td>
</tr>
<tr>
<td>II. CONSTRAINTS TO TRANSPORT SECTOR GROWTH</td>
<td>14</td>
</tr>
<tr>
<td>A. Geographical and Historical Context</td>
<td>14</td>
</tr>
<tr>
<td>B. Ineffective Infrastructure Management</td>
<td>15</td>
</tr>
<tr>
<td>C. Transport Industry Constraints</td>
<td>17</td>
</tr>
<tr>
<td>D. Gaps in Donor Coordination</td>
<td>18</td>
</tr>
<tr>
<td>III. USAID TRANSPORT SECTOR ASSISTANCE STRATEGY</td>
<td>19</td>
</tr>
<tr>
<td>A. USAID Involvement in the Sector 1972 - 1990</td>
<td>19</td>
</tr>
</tbody>
</table>
III. B. Rationale for USAID Transport Sector Assistance

1. Principal Elements of USAID Transport Strategy
   1.a. Reliable Transport Financing Mechanisms
   1.b. GOZ Selection of Priority Road Networks and Sound Investments
   1.c. Reform and Strengthening of ODR and SNRDA
   1.d. Increased Private Sector Involvement
   1.e. Increased Responsibility for Regional Institutions
   1.f. Completion of Existing Programs

2. Donor Coordination
3. Future Focus on Expansion of Transport Services

C. Strategic Objective, Targets and Benchmark Indicators, FY 1990 - 1993
D. USAID Programs in the Transport Sector, FY 1990 - 1993
E. Risks Involved in the New Transport Strategy

IV. ANALYSIS AND RESEARCH REQUIRED FOR TRANSPORT STRATEGY IMPLEMENTATION AND REFINEMENT

A. Improved Infrastructure Financing Mechanisms
B. Transport Institutional Reform
C. Operations Research for Regional Road Maintenance Programs
D. Impact Analysis
E. Transport Industry and Services
F. Transport Needs of Lower Income Groups

List of Tables

E-1: The Road Network of Zaire
E-3: FY 1990 - 1993 Action Plan Transport Funding
GLOSSARY OF TERMS USED

AFDB: African Development Bank
A.I.D.: U.S. Agency for International Development
ANEZA: Chamber of Commerce
baleiniere: traditional wooden boat
BCEOM: Bureau d'Etude Central Outre-Mer
CFMK: Matadi-Kinshasa Railway
CIP: Commodity Import Program
DPW: Department of Public Works
EEC: European Economic Commission
FRG: Federal Republic of Germany
FY: Fiscal Year
GET: Transport Analysis Group of Department of Transport and Communications
GOZ: Government of Zaire
IBRD: International Bank for Reconstruction and Development, or the World Bank
IMF: International Monetary Fund
km: Kilometer
LIR: Local Interest Road
MAS: Messagerie Automobile du Sankuru
MT: Metric Ton
ODR: Office des Routes
OFIDA: Office des Douanes et Assises
ONATRA: National Office of Transport
PDG: President Delegue General (General Manager)
pirogue: small dugout canoe
RN: National Highways
RR: Regional Road
RRC: Regional Road Commission
RVF: Regie des Voies Fluviales
RVM: Regie des Voies Maritimes
SNCZ: National Railway
SNEL: National Electric Utility
SNRDA: Service National des Routes de Deserte Agricole
SOFIDE: Societe Financiere de Developpement
TMK: Transport Routiere du Kivu
TRANSMAC: Transport et Manutention en Afrique Centrale
TRP: Transport Reform Program
UNDP: United Nations Development Program
USAID, USAID/Zaire: A.I.D. Mission in Zaire
VN: Voie National
VPM: Vice Prime Minister
I. THE TRANSPORT SECTOR IN ZAIRE

A. Historical Overview of Transport

Zaire's principal transportation corridors have traditionally been waterways. The Zaire and Kasai Rivers, the country's largest, as well as hundreds of tributaries and lakes feeding into these rivers, constitute a network of 15,000 km which was fully navigable by the end of the colonial period. Pre-independence Congo developed a multi-modal transportation system built around abundant rivers, an additional 5,000 km of railroads and a regionally-based system of 145,000 km of earth roads.

The river and rail corridors are linked with a limited number of kilometers of road to provide the chief inter-regional transportation system, the Voie Nationale (VN). The past two decades have witnessed rapid development of aviation transport of both cargo and passengers, and the gradual collapse of the river, rail, and road transport modes. The devolution of the surface transport system has involved the loss of much of the infrastructure and the general dysfunction of the institutions charged with managing the investment.

B. Roads, Rivers and Distribution

1. The Road Subsector

1.a. Roads. The road system developed during the colonial epoch was in one of Sub-Saharan Africa's densest networks. The primary purpose of these roads was to penetrate the interior of the country, thus providing access to mineral and agricultural potential, and linking colonial exploitation and administration to the key rivers and railheads for trade and communication with Europe. Local chiefs were paid or penalized according to the quality of the road maintenance they produced using local manual laborers. In fact, this "Cantonnier" method of labor-intensive road maintenance still exists in Zaire.

Table E-1 provides basic information on the road network of Zaire.
Table E-1: The Road Network of Zaïre

A. Kilometers of Inventoried Roads

<table>
<thead>
<tr>
<th>Type of ODR Road</th>
<th>Km</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Highways Paved (RN)</td>
<td>2,801</td>
</tr>
<tr>
<td>National Highways Earth (RN)</td>
<td>18,218</td>
</tr>
<tr>
<td>Regional Priority Earth (RR1)</td>
<td>20,121</td>
</tr>
<tr>
<td>Regional Secondary Earth (RR2)</td>
<td>17,245</td>
</tr>
<tr>
<td>ODR Total</td>
<td>58,385</td>
</tr>
<tr>
<td>SNRDA Local Interest Roads (LIR)</td>
<td>87,000</td>
</tr>
</tbody>
</table>

Combined National Total 145,000

B. Distribution of ODR Roads by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>RN</th>
<th>RR1</th>
<th>RR2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bas Zaire</td>
<td>1,380</td>
<td>891</td>
<td>3,692</td>
<td>10,964</td>
</tr>
<tr>
<td>Bandundu</td>
<td>2,673</td>
<td>5,663</td>
<td>1,608</td>
<td>9,943</td>
</tr>
<tr>
<td>Equateur</td>
<td>9,702</td>
<td>7,813</td>
<td>1,588</td>
<td>19,103</td>
</tr>
<tr>
<td>Haut Zaire</td>
<td>3,706</td>
<td>3,484</td>
<td>3,075</td>
<td>10,265</td>
</tr>
<tr>
<td>Kivu</td>
<td>2,905</td>
<td>2,607</td>
<td>1,932</td>
<td>7,444</td>
</tr>
<tr>
<td>Shaba</td>
<td>4,064</td>
<td>4,024</td>
<td>2,958</td>
<td>11,046</td>
</tr>
<tr>
<td>Kasai Occ.</td>
<td>1,998</td>
<td>1,141</td>
<td>859</td>
<td>3,998</td>
</tr>
<tr>
<td>Kasai Ori.</td>
<td>1,457</td>
<td>1,627</td>
<td>1,234</td>
<td>4,318</td>
</tr>
<tr>
<td>Kinshasa</td>
<td>272</td>
<td>-</td>
<td>-</td>
<td>272</td>
</tr>
<tr>
<td>Total</td>
<td>21,019</td>
<td>20,121</td>
<td>17,245</td>
<td>58,385</td>
</tr>
</tbody>
</table>

C. Traffic on the ODR Road Network

<table>
<thead>
<tr>
<th>Vehicles/Day</th>
<th>Length in Km</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>46,628</td>
<td>79.8</td>
</tr>
<tr>
<td>21-50</td>
<td>5,699</td>
<td>9.7</td>
</tr>
<tr>
<td>51-150</td>
<td>3,514</td>
<td>6.0</td>
</tr>
<tr>
<td>&gt;150</td>
<td>2,544</td>
<td>4.5</td>
</tr>
</tbody>
</table>

D. Size - Cost - Traffic Comparison

<table>
<thead>
<tr>
<th>Type</th>
<th>Kilometers (% of total)</th>
<th>Cost (% of total)</th>
<th>Traffic (% of total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN Paved</td>
<td>2</td>
<td>4</td>
<td>70</td>
</tr>
<tr>
<td>RN Earth</td>
<td>12</td>
<td>60</td>
<td>16</td>
</tr>
<tr>
<td>RR1</td>
<td>14</td>
<td>26</td>
<td>11</td>
</tr>
<tr>
<td>RR2</td>
<td>12</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>LIR</td>
<td>60</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: BCEOM February 1990
National Highways (RN) represent by far the smallest percentage of the total network, only 12 percent, but they carry the highest volume of daily traffic (86 percent). The RNs receive, on the average, 65-70 percent of the available funding annually. Roads classified as local interest roads (LIR), or agricultural feeder roads, carry less than 1 percent of the country's traffic, and constitute well over half of the nation's total inventoried road network (60 percent). The LIRs receive relatively little funding (6 percent).

Many donors contributed to the transport sector immediately following independence. The UNDP, World Bank, and the U.S. contributed significantly to the road subsector during that period. As a result of the civil upheavals, central planning and local implementation authority were splintered. Available heavy equipment and transportation vehicles were conscripted into military service. The Belgian Road Use Code was abandoned and, for the first time, heavy trucks were imported into Zaire.

During the period 1960-1965, the road network declined with the general economy. The system improved somewhat between 1966 and 1970, but never recovered to pre-independence standards. In 1971, donor assistance, particularly from the World Bank, resulted in the creation of Office des Routes (ODR), charged with the management of 58,385 km of national and regional roads. ODR functioned as a reasonably effective rehabilitation and maintenance organization until the financial crisis, which began in 1987 and continued through most of 1989. Inadequate financing led to the severe degradation of the existing road network. Also in 1987, the Service National des Routes de Deserte Agricole (SNRDA) was created within the Department of Rural Development to take over responsibility for management of the 87,000 km of local interest roads.

In January 1990, the ODR network was estimated to be in relatively poor condition: over 55 percent of the roads were in "bad" condition (significant degradation according to common engineering standards); 23 percent of the roads were in "fair" condition; and the remaining 22 percent of the nation's principal highways were considered to be in "good" shape. The SNRDA network will likely require rehabilitation before regular maintenance is going to be effective.

The implications of the deteriorated state of the roads, estimated to be over 50 percent "good" as recently as 1986, have led to an intensive reevaluation of strategy by both the GOZ and the donors during the past year. The chief objective now is to identify, and to begin to solve, the many problems related to the enormity of the underdeveloped network, the chronic absence of regular levels of minimum financing, and the general mismanagement of the institutions responsible for roads.

E-3
As a part of this process, the March 1989 Technical Audit of Office des Routes, financed by the World Bank, USAID and France, strongly recommended that the GOZ improve its sector planning through the development of a National Road Master Plan. Recent reforms within ODR and major steps taken to coordinate budgets and programs with SNRDA have resulted in significant, positive developments in the recovery and improvement of road network funding and management in Zaire. GOZ experts place short-, medium-, and long-term planning at the top of the list of priorities aimed at sectorial reform.

ODR and SNRDA funding, although still considered to be insufficient, has been regular since September 1989. However, Zaire continues to face great macroeconomic difficulties, and adherence to World Bank structural adjustment prescriptions to reduce public expenditures will limit the resources available for capital improvement and maintenance.

1.b. **GOZ Management of the Sector.** Management responsibility for the national and regional road network falls to three separate government entities, each of which plays a distinct role in the roads subsector. The first is the Department of Public Works (DPW), which is the technical and organizational trustee of ODR. The second is the Superior Council of Portfolio, which acts as a general coordinator for parastatal agencies. Public Works and Portfolio sit on the Administrative Council of ODR, which is a steering, decision-making body put between the roads bureau and the Cabinet. The third is the Department Rural Development, responsible for rehabilitation and maintenance of the country’s vast local interest road network through its maintenance contracting service, SNRDA. There are, however, other executive offices and important ministries affecting the policies and programs of the DPW and ODR and SNRDA. A limited list of these departments follows:

--- **Office of the Presidency:** This politically powerful group has a generally well-trained, well-placed staff who can rearrange road bureau priorities and reallocate road bureau financing.

--- **Office of the Prime Minister and the Vice Prime Minister:** Macroeconomic policy is a primary responsibility of the Prime Minister. He is supported by the Vice Prime Minister (VPM) in charge of economic affairs. This VPM is also the Minister of Rural Development, and thus plays a major role in the operation of SNRDA and the maintenance of local interest roads.
-- Department of Plan: Within Plan, there are several divisions which may influence transport sector decisions. They are: the Division of Infrastructure and its Transport Office; the Division of the Productive Sector, which is associated with macroeconomic policy as well as rural development; the Division of Regional Planning, whose agents hold a seat on the Regional Road Commissions (RRCs); and the Secretariat of Counterpart Funds. Another key player is the Secretary of State for Plan, who is currently leading the GOZ team negotiating the World Bank Energy Sector Credit, which includes conditionalities affecting the funding of road and river transport.

-- Department of Transport and Communications: The research and planning division of Transport (GET) is involved in long-term transport planning. GET will have to cooperate with the Division of Infrastructure of Plan in order to produce a multi-modal national transport plan, and the National Road Master Plan.

-- Department of Finance: Finance is a key player in generating the fuel tax and other budget resources used to finance transport infrastructure. The customs agency, the Office des Douanes et Assises (OFIDA), handles import duties, including the fuel tax.

The road subsector suffers from fragmented management and planning and internal GOZ communication and approval problems. The World Bank has begun efforts to strengthen the role of the Department of Plan, Division of Infrastructure as the principal coordinating office for all transport activities, but these are progressing slowly.

1.c. Office des Routes. Before 1971, the management of Zaire's roads was the responsibility of the Bureau of Roads and Bridges within the Ministry of Public Works. The Office des Routes (ODR) was created by a national ordinance on March 26, 1971. ODR's mandate included responsibility for roughly 69,000 km of general interest rural roads and highways, as well as all urban streets. Early in 1972, under the Second Highway Credit, the GOZ signed a contract with an international consortium -- comprising U.S., French, and Belgian firms -- to provide technical assistance to Office des Routes. Reorganization of ODR occurred two years later, following the efforts of 47 expatriate advisors. The resultant basic departmental structure of ODR has existed until the present.

In 1975, a dynamic expatriate assumed the position of General Manager (PDG) of Office des Routes and contributed to the rapid development of the institution. The growth of the
organization over the next decade resulted in increases in budget requirements and allocations, staffing, administrative and logistic infrastructure, heavy equipment, and general output both in terms of quantity and quality.

By 1986, ODR maintained a network of paved and earth roads equaling 57,000 km. Donors and the GOZ generally agree that ODR was a reasonably dependable, efficient road construction and maintenance organization. ODR was responsible for an enormous road network, 16,000 employees and approximately $150 million worth of heavy equipment, vehicles, and ferries. The World Bank estimated that $50 million annually in local financing were necessary to support operations.

However, early in 1987, the performance of ODR began to deteriorate as a result of the financial crisis that continued until late 1989. This crisis was caused by the sharp decline in revenues going to ODR. ODR operations, then as now, were financed by a surtax on petroleum sales. In 1987, the surtax was levied at a fixed rate per liter. As a result of a breakdown in economic discipline, however, related to the GOZ rupture with the IMF and the World Bank, the rate of inflation both in 1987 and 1988 exceeded 100 percent per annum. Consequently, the real value of ODR revenues declined precipitously. In 1989, the GOZ changed to an ad valorem fuel tax and put in place a fuel pricing system that provides for periodic adjustments in relation to economic conditions.

The long-standing expatriate PDG was replaced in 1987 by a Zairian, who struggled with ODR's problems for less than a year before being replaced by another Zairian, who had little success in solving the organization's financial and management problems. He was replaced after one year.

In late August 1989, the GOZ appointed a new PDG, a manager with previous experience as PDG of SNEL, the electric power company, and SNCZ, the railway. Under his administration, and as a result of the revised fuel pricing and taxation system, ODR succeeded in receiving 11 billion zaires ($27.5 million) for 1989, most of it during the last calendar quarter. He responded quickly to GOZ and donor concerns about the roads bureau. A major study of options for reorientation and streamlining of ODR was conducted from November 1989 through January 1990. Presently, the World Bank is conducting a complementary study to the 1988 USAID study on the potential for greater involvement of the private sector in road maintenance (due to be completed in June 1990).

ODR had been operating at a level of almost complete bankruptcy for nearly three years. Unable to meet even minimal fixed costs, it was forced to eliminate medical and social
benefits for employees, and to default on construction, procurement, and maintenance contracts. The interest and inflationary cost of its debt to the private sector was spiraling at the same time. This bleak situation can be attributed primarily to the absence of guaranteed, regular financial backing by the GOZ, and secondarily to the overgrown, obsolete, disfunctioning institution itself. Recent movement within the subsector has provoked a spirit of change which will continue to unfold during the months to come. The primary emphases for reform, however, have been defined. These are:

-- Planning and budgeting for ODR and SNRDA must be coordinated so that the maximum number of priority and secondary roads can be maintained during a given year, corresponding to available local and external financing;

-- Institutional reforms within ODR have been proposed which will reduce operational costs, personnel, and consumption of fuel as well as streamline the management of equipment;

-- Greater responsibility for financing and management will be undertaken by regional institutions;

-- To the extent possible, execution of physical operations related to the management of the road network will be shifted to the private sector;

-- ODR and SNRDA will coordinate planning and budgeting in order to provide complementary services nationally and regionally. They will clearly identify the role and range of non-governmentally managed activities. ODR activities in the immediate future will be limited to major interventions on a reduced network of approximately 19,000 km, and minimum treatment of its remaining 41,000 km. SNRDA funding will provide limited, complementary funding for the next level of priority roads.

1.d. Service National des Routes de Deserte Agricole. SNRDA has been a part of the Zairian road maintenance picture since 1986. By 1980, ODR was approaching the threshold of its growth, efficiency, and productivity. It was clear that ODR would not be able to shoulder the responsibility of agricultural roads. Maintenance of these tracks was officially "retroceded" to the local administrative unit, the Collectivite. From 1981 to 1983, rehabilitation and maintenance of these admittedly important, but relatively untraveled, roads fell under the Department of Agriculture. In 1986, SNRDA was created as a service under the Department of Agriculture, then the Department of Rural Development, which was broken out of Agriculture in 1988.
The purpose of the organization was and still is to act as a GOZ contracting agency: a go-between for the GOZ and the private sector to manage the rehabilitation and maintenance of local interest roads in rural areas. As a result, SNRDA has almost no technical capability, no machinery, and limited administrative infrastructure. In principle, and on paper, ODR provides all technical services for SNRDA, including developing and approving plans and specifications, as well as on-site field inspection of work performed and approval of contractor payments.

SNRDA launched its first road maintenance contracting effort in August of 1988. Two-hundred-fifty contracts were awarded by October, and close to one million dollars was distributed in the form of advance payments (40 percent to get started), and subsequent quarterly payments. By March 1989, the regions, the donors, and the central authorities could see that very little work was actually performed. This Programme d'Urgence failed badly and SNRDA took most of the brunt of the severe criticism leveled at the program in the national press.

The positive side of the experience was that the GOZ Cabinet, Department of Rural Development, and SNRDA recognized immediately that the first weakness in the failed program was due to the absence of SNRDA's strong technical and supervisory arm, Office des Routes. In particular, the program lacked effective supervision by the ODR zone engineers, who were assigned to inspect the work of SNRDA contractors, but who lacked vehicles and fuel to supervise contractors. The central offices of both ODR and SNRDA contain the main organizational cells of the roads bureaus. But it is at the regional level where poor organization, bad management, ineffective planning, and inadequate financing has the most adverse effect. Ironically, it is in the regions that, when ODR and SNRDA have necessary resources, they can be very effective.

1.e. Regional Road Commissions. The Governor's office, ODR, SNRDA, Public Works, Plan, Transport, National Economy, Territorial Administration, and the Chamber of Commerce (ANEZA) are all officially represented on the chief road maintenance steering committee in each region, the Regional Road Commission (RRC). The RRCs meet regularly, but primarily on an ad hoc basis, and are responsible for making decisions in selection of priority roads, road programs, and local private contractors. The RRCs suffer from a lack of qualified staff, as might be expected in the remote areas of Zaire. They have been overlooked to a large extent as operational maintenance management bodies. With both the GOZ and the donor community emphasizing increased regional responsibility for roads, strengthening RRC capabilities will be necessary.
Since June 1989, the RRCs, acting in the name of the Governors, have assumed responsibility for approval of maintenance contract payments made through SNRDA. During June and July of 1989, the Prime Minister traveled throughout the country, bringing up the subject of roads and stressing the point that the central treasury is only able to take care of a limited number of kilometers of roads, these being primarily National and Regional Priority highways. The remainder of the roads, he informed the regions, are the responsibility of the regions. As recently as February 1990, the President of the Republic pointed to greater decentralization as an essential element of national economic reform. This theme was reiterated by the Minister of Public Works recently, reminding both the GOZ public servants and the donors that decentralization was going to figure heavily into future road maintenance funding and planning.

1.f. Road Use. Less than 2 percent of Zaire's roads can be said to be fully engineered and designed to withstand water and axle-load damage, a road's natural enemies. The roads are used above all to move goods and people. Exports and imports crucial to development flow through the road corridors. Growing urban centers like Kinshasa, Kananga and Lubumbashi depend on the rural farmer for food carried along these corridors.

Fuel imports from the West, by way of the port of Matadi and both the pipeline and the highway connecting Matadi with Kinshasa, accounted for forty times more user payment for roads than imports from the rest of the country. Road user taxes derived from Southern and Eastern imports, combined with licensing and registration fees, amount to 4.5 percent of the payment made by users of fuel imports from the West.

Fuel consumption by urban cars and trucks is paying for roads. Kinshasa, with its nearly 4 million inhabitants, is the main contributor to the budget for Zaire's roads. Interestingly, the financial contribution to road maintenance made by trucks is low compared to that made by cars, in spite of the radical increase in damage inflicted to a road as the axle load of the vehicle increases.

2. Waterways, Navigation and Boats

2.a. Rivers. The Zaire River and its tributaries represent a natural transportation network comprising an estimated 15,000 km of navigable waterways. Three major inland ports, located at Matadi, Kinshasa and Ilebo, act as transhipment points in the primary national transportation chain known as the Voie Nationale.
However, river transport, like transport in general, (with the exception of aviation), has declined in recent years. Even essential mineral exports suffer from transport bottlenecks, breakdowns, and delays. During the past two decades, the behavior of the transport sector has mirrored economic trends. Traffic volume rose in the late 1960 and early 1970s, only to fall sharply in mid-1970 and again in the early 1980s. Since then, infrastructure improvement and traffic have stagnated.

The Zaire River, eighth longest in the world and the second largest in terms of discharge, is fed by many tributaries, including the Kasai River running through the region of Bandundu. These rivers played a decisive role in the exploitation, distribution, and movement of goods during the colonial epoch. Regional and national officials alike express interest in restoring the waterways, the ports, and river traffic to the level of past economic importance. But, as in the case of roads, investment in and maintenance and management of basic river infrastructure depends on the revenues provided by the chronically undependable transport surtax on fuel.

The rivers, which were once used as principal transportation corridors, are under-utilized today. In some cases, they are not used at all. Although navigable rivers comprise nearly 10 percent of the total combined surface transport network of roads, rails and rivers, they were used to transport less than 3 percent of the freight in 1986, compared to 83 percent transported by road and 14 percent by rail. ONATRA is expecting 35 new barges with a 600 ton carrying capacity in 1990-91 to augment its fleet of 150 barges ranging from 150-300 tons.

Roads and rails both have higher utilization ratios, comparing freight tonnage hauled to the size of the available network, as well as the capacity and size of the transport fleet. Movement of cargo by rails represents 7,000 times the length of the total network. But because of the many reasons for under-utilization, river transport, according to the recorded cargo, only represents 139 times the length of the network.

2.b. **The Department of Transport and Communications.** River navigation, transport, ports, and linkages with rails and roads come under the authority of the Department of Transportation and Communications. Among its parastatal offices are ONATRA, the Office of Transportation; Regie des Voies Fluviales (RVF), the inland waterways authority; and Regie des Voies Maritimes (RVM), the maritime authority. The research and planning division of Transport (GET) is involved in sector planning.
2.c. ONATRA and RVF.

ONATRA: The National Office of Transport provides transportation services for much of the VN. Rail and river transport activities are coordinated from four internal ONATRA services: ports, railroad, river transport (barges, tugs and pushers), and boat yards. The organization has suffered from over-staffing and poor management during the past decade, which is reflected in the poorly functioning 2,655 km VN. ONATRA, which was established in 1971, has reduced its staff from 26,000 employees 15 years ago, to just over 18,000 today. Future donor assistance is aimed at increasing revenue generating activities, reducing subsidies, privatizing non-transport activities, and maintaining existing infrastructure.

RVF: Regie des Voies Fluviales is charged with maintaining the navigability of Zaire's rivers as well as certain areas on Lake Tanganyika to the east. When Office des Routes and SNRDA face shortages of available fuel tax revenues, so does RVF. It receives a mere fraction of the ODR share for roads (ODR receives 43 percent of the tax; RVF, 2 percent; and SNRDA, 4 percent). But because of the importance of river traffic to upper Zaire by way of Mbandaka and Kisangani, as well as to the agricultural centers of Bandundu, charted rivers, marked and dredged channels, and improved waterways continue to rank high on the list of RVF priorities.

2.d. Private and Informal Sectors on the Water. Dependable estimates of small barge and pirogue (small dugout canoes) traffic do not exist. Empirical evidence, however, points to a great deal of unrecorded economic activity linked to agriculture, feeding the large urban centers, and distribution of manufactured goods to remote rural areas. Rough estimates indicate that 650 wooden boats in the 10-30 ton class operate on Zaire's waterways. These are normally traders as opposed to transporters. But, the number of dugouts and small boats of less than 10 ton capacity is difficult to pin down.

Approximately 30 modern private companies compete with ONATRA for river barge traffic. The freight they transport amounts to a small percentage of ONATRA's business, but of that, only 10-20 percent is actually transported for other commercial entities. Private barge transport has developed around agro-industrial investments in transport in order to circumvent ONATRA and the inherent losses and delays associated with going the parastatal route. This is, in fact, quite similar to development of the trucking industry in rural areas by merchants who essentially only haul their own goods, but no one else's. Overall activity of private entrepreneurs on the rivers is
estimated to be on the order of 35 percent of all floating cargo and passengers. It is assumed that this share, in a business dominated by parastatals, is due to the poor quality and the dependability of the private sector services.

3. **Private Surface Transport Industry**

Surface transportation modes in Zaire comprise a mixture of modern and traditional distribution systems. Relatively advanced technologies are used to provide for railways, highways, heavy river traffic and pipelines. Simple technologies have been adapted primarily to the roads and rivers, as well as along corridors inaccessible to large scale traffic, such as footpaths and narrow tributaries.

There were an estimated 110,000 cars and trucks in Zaire in 1986. Of those, 17,000 were estimated to be heavy transport vehicles. Motorized vehicles are the predominant form of traffic on roads, but the volume is low. Zaire is not known for traditional use of animal traction. Bicycles and motorcycles are often used for short distance travel. The common alternative to motorized traffic is pedestrian traffic, head-loading anything that the neck, back, and legs will bear.

The utilization of the various transport modes, according to recorded traffic (tons-kilometer) and tonnage transported, puts roads at the top of the list, accounting for half of the recorded traffic (Ton-Km) and 83 percent of the actual tons transported. Rails are second, providing 33 percent of the traffic and only 14 percent of the tonnage. Rivers rank third, in front of air transport, with 14 percent of the recorded traffic and 3 percent of the tonnage. Roads represent by far the largest transport network in terms of sheer capacity; this suggests that roads are also the user's preference.

Utilization, particularly the informal utilization of transport modes, is as broad as the variety of corridors and motive devices. The use of trucks, barges, wagons, boats, and cars is normally maximized well beyond the capacity of the means when the opportunity exists. As witnessed across Zaire, trucks are overloaded with agricultural goods, and then additionally overloaded with passengers and other cargoes. The same holds true for river vessels and rolling stock on the rails. However, inefficiency and under-utilization of the available fleet are most likely due to the practice of official one-way hauling.

Only a relatively small percentage of distribution activity is managed through the private sector. Public entities like ONATRA, SNCZ and CFMK (national railways) dominate heavy-capacity
transport traffic (rolling stock and barges exceeding 100 ton capacity). Overall traffic levels today have fallen below the post-independence highs of the 1970s, to about what they were at independence, that is, far below the peak levels reached in the 1950s. Trucking, medium-capacity traffic, particularly between Matadi and Kinshasa, has grown substantially, increasing its share of import traffic from 15 percent in 1975 to 53 percent in 1986. The remaining key axes are import-export highways and rails linking Zaïre to Uganda, Kenya, and Tanzania by way of Goma and Bukavu, and Zambia, through Lubumbashi.

Comparison of the trade in export-import tonnage is difficult to find. Taking the Matadi-Kinshasa highway and the CFMK (Matadi-Kinshasa Railway) as examples, trucking is a predominately one-way industry, moving imports from Matadi to Kinshasa. The distribution of goods by road in the other direction is essentially limited to coffee, logs, and domestically manufactured goods. The railway, on the other hand, although locked into a period of decline in efficiency for the last decade, maintains two-way distribution, feeding Matadi with export minerals and returning to Kinshasa with import goods.

Distribution between Kinshasa and the important Bandundu commercial center of Kikwit is accomplished mainly through road transport. River traffic from Bandundu, which has gradually declined since independence, dropped off sharply in the last decade. This has been attributed to the completion of the paved highway RN1 (Kinshasa-Kenge 1975; Kenge-Kikwit 1977). Inter-modal statistics clearly demonstrate the under-utilization of Zaïre's abundant, neglected waterways. The Kinshasa-Bandundu circuit fits the model of one-way movement of goods, supplying the urban population of 3.5 million inhabitants much of Kinshasa's demand for agricultural goods. Movement in the other direction is limited to, among other things, wheat, beer, tobacco, textiles, petroleum, and construction materials.

Lubumbashi traffic patterns indicate that it is not so handicapped by one-way distribution. The Lubumbashi-Kolwezi and Lubumbashi-Zambia routes are utilized for movement of agricultural and manufactured goods feeding the mining industry and exporting Shaba minerals.

The road transport industry is dominated by the private sector and is generally considered to be competitive, with numerous operators and little systematic regulation by the GOZ. The industry is mainly composed of small traders and truckers who have very little equipment and operate mostly in the informal sector. Typically the vehicles are old and of small to medium size (5 to 10 tons). In 1986, the World Bank estimated that the industry employed 27,000 people, and that there were 2,500 small transporters with one or two vehicles and perhaps 700 firms with
10 or more trucks. Many of these firms are vertically integrated, providing transportation for their own agro-industrial or commercial activities.

Only three large trucking companies, firms with more than 60 trucks and over 500 employees, stand out. TRANSMAC (transport et Manutention en Afrique Centrale) operates primarily in Bas Zaire, Kinshasa and Bandundu, and accounts for approximately 50 percent of the Matadi-Kinshasa road traffic. TRANSMAC's long-distance tonnage, primarily coffee and logs, nearly doubled between 1984 and 1987, to 236,000 MT. TMK (Transport Routier du Kivu) serves Kisangani, Kivu and trade with East Africa. In 1987, TMK transported 36,000 MT of freight. MAS (Messagerie Automobile du Sankuru) is the third largest commercial trucker and serves primarily mining and agricultural trade in Kasai Occidental and Kasai Oriental.

II. CONSTRAINTS TO TRANSPORT SECTOR GROWTH

The factors inhibiting broad-based growth and development in the transport sector in Zaire include the following:

-- Zaire's geographical and historical context;
-- Ineffective infrastructure management;
-- Constraints to the expansion of transport services; and
-- Gaps in donor coordination.

A. Geographical and Historical Context

Zaire's wide variety of topography, soil conditions, and ethnic groups, its great expanse, and abundant rainfall combine to create a challenging context for improving the transport of people, goods, and services. Zaire is the eleventh largest country in the world with a total land area of 2.3 million square kilometers. Its 30 kilometers of Atlantic Ocean coastline lie far from its rich mining deposits and productive forest and agricultural areas. Vast savannahs, dense forests and eastern highlands cover almost half of its total area. Its 200-plus ethnic groups total an estimated 36.5 million people with an average population density of only 14 persons per square kilometer.

At the time of independence, imports, exports, and domestic goods and passengers flowed over a multi-modal transport network
comprising 145,000 kilometers of roads, 15,000 kilometers of navigable waterways, and 5,000 kilometers of railways. Following the civil strife of the 1960s, the Shaba incursions of the 1970s, and the Angolan civil war from 1975 to the present, the colonial infrastructure deteriorated badly, constraining the movements of goods and services throughout the country as well as mineral exports via the Benguela railway corridor through Angola.

B. Ineffective Infrastructure Management

A January 1990 review of the condition of the 55,000 kilometer ODR road network concluded that over 55 percent of these roads were in poor condition. This represents a substantial decline from 1986. Navigation aids, port installations on rivers, and railway infrastructure have suffered similar deterioration. The basic reasons for road, river, and rail infrastructure decline relate to overall infrastructure management: poor policies and planning, inadequate financing, and ineffective institutions.

As discussed in Section I, transportation policy and planning for separate modes of transport is fragmented among several different ministries with no clear coordinating authority. In the road subsector, official ODR and SNRDA networks far exceed resources available to manage them. A comprehensive planning exercise to determine national priority road networks that correspond to available external and local resources is only now beginning.

Financing for all transport needs has been erratic. Road transport financing has been in crisis since early 1987 because of a failure of the fuel pricing and tax system, which is the principal source of road network funding. From 1987 to mid-1989, fuel companies refused to make tax payments for road maintenance and rehabilitation because fuel prices were not allowed to adjust to cover their costs, and because GOZ ministries and parastatals were not paying their fuel bills on time. As for river and rail services, ONATRA and SNCZ rely heavily on transport tariffs to fund operations and maintenance costs, but adjustments in these tariffs have typically lagged behind increases in costs.

Since mid-1989, a revised fuel pricing and fuel tax collection system has begun to provide minimum funding for road maintenance. However, for any appreciable part of the combined national, regional, and local road network to be rehabilitated and maintained in acceptable condition, additional sources of financing through user fees or national and regional budget allocations will have to be found. One of the major questions is how to shift more of the cost of road repair and maintenance to
road users, such as trucking companies, whose heavy trucks cause a much greater proportion of road damage than lighter vehicles, especially in wet road conditions.

In general, road, river, and rail parastatals have suffered from high fixed costs and bloated staffing, excessive centralization, and ineffective management systems for planning, budgeting, financial controls, and contracting. The 1989 Technical Audit of ODR, co-financed by USAID and the World Bank, and a similar study of SNRDA, recommended a range of reforms in ODR's and SNRDA's operations and management systems. The resulting shift in direction by ODR will result in increased involvement of private contractors in road rehabilitation, maintenance, and equipment management. However, both ODR and SNRDA have inadequate procedures and systems for selecting and supervising private construction contractors.

ONATRA and SNCZ continue to experience shortages in rail wagons, delays in turn-around time, inefficient handling of containers at Matadi, and excessive delays in river transport. These problems arise from the lack of clarity in ONATRA's roles and relationships with the GOZ and the need for internal reorganization, reduction of staff, decentralization, and privatization of some functions.

The quality of human resources in transport institutions is mixed. Many highly-trained engineers and other technicians exist at national headquarters and even at regional levels. However, there are insufficient numbers of qualified planners and systems analysts to develop realistic program budgets based on program objectives, to expand private contracting and supervision, and to manage logistically complex equipment maintenance, spare parts, and inventory systems. Planners and organizational systems experts are scarce at national levels and practically non-existent at regional offices of ODR and SNRDA, where technical and managerial staff capacity is quite shallow.

Under the planned institutional reorientation in the road subsector, the private construction industry will be expected to take on progressively more responsibility for infrastructure management under contract. However, both ODR and SNRDA have been unreliable in paying smaller contractors involved in manual maintenance and larger firms in major rehabilitation. Further, both organizations have large debts to suppliers which they are only beginning to repay. Because of this history, private contractors will likely wait and see over several construction seasons before they are willing to take risks and invest in increased equipment inventories that will enable them to expand their road contracting operations.
C. Transport Industry Constraints

Constraints to the expansion of the transport industry include poor infrastructure conditions, an overall macroeconomic climate which inhibits entrepreneurs' willingness to invest, and repressive industry policies and regulations. An obvious inhibition to increased road transport services is the poor condition of roads which increases vehicle operating costs, travel time, and losses of perishable agricultural commodities. Public rail, river, and port services also experience serious delays resulting from old and poorly maintained equipment, difficult river navigation conditions, poor management practices, and low labor productivity.

The historically poor macroeconomic investment climate is as important as poor road conditions in blocking the expansion of transport services. High inflation and interest rates, scarcity of foreign exchange, and reluctance of banks to offer term credit for new equipment and spare parts have, over the past several years, reinforced the negative outlook of private traders and transporters toward expansion. The credit that the GOZ development bank SOFIDE once provided to large companies for new equipment investment is no longer available. Reversing their expectations and encouraging new capital investment will take both time and a consistent investment climate.

Urban and rural demand for transport has also suffered from slow or negative growth in rural production and manufacturing. This translates into lower purchasing power, reduced demand for manufactured and basic consumer goods, agricultural products, and, therefore, less demand for transport services. Further, low population density combined with low productivity of rural producers means that traders must travel relatively long distances to buy and sell relatively small volumes of goods. This raises traders' per unit costs and inhibits rural-urban trade.

State-sponsored parastatal domination and over-regulation of both public and private transport is an additional disincentive for more fluid movement of goods and passengers. Losses and delays by ONATRA and SNCZ are massive. Private transporters complain that the multiplicity of regulators, procedures, fees for licensing and handling, and unofficial charges by GOZ officials and police drive up transport prices and squeeze profits. Similarly, agricultural marketing restrictions and licenses inhibit rural trading. The need for increased regional financing for road maintenance and repair of truck damage to wet roads may raise transport costs further.
D. Gaps in Donor Coordination

The positive effects of donor assistance to Zaire are clear: establishment of a structural adjustment program for macro-economic stabilization and recovery and specific investments in a number of sectors, including transport. However, there are a number of ways in which the involvement of multiple aid donors in transport, and particularly road transport, complicate the sector's development.

At a general level, each donor active in transport in Zaire operates with a variety of viewpoints, including political, developmental, basic human needs, and commercial self-interest objectives. In the aggregate, the variety of donor objectives, numerous donor missions, and the demand for GOZ decisions on transport projects and policy reforms place a substantial burden on the limited number of GOZ decision-makers and analysts. This contributes to an already fragmented transport planning process. Donors also generally have a relatively short attention span. Reorientation and rehabilitation of the transport sector is a 20-30 year effort, but individual donors tend to change policy directions every 5-10 years. Overall funding levels may change more quickly. As a result, GOZ decision-makers are always aiming at a moving target in responding to individual donor proposals and requirements. Their own consistency in transport planning suffers.

Specifically, the World Bank, USAID, and other donors in the past encouraged the creation and financed the expansion of the very transport parastatals that they now decry as major constraints to transport sector development. Today, however, particularly now that economic conditions have changed, donors are aiding in the process of reducing parastatal domination of the sector and in transferring some sector operations to the private sector.

Finally, individual donor transport projects, particularly in road construction, are often associated with commercial self-interest in selling heavy equipment or in obtaining construction contracts for national firms. Even though particular donor proposals may not be consistent with the GOZ's priority investment program, GOZ officials may agree to expensive proposals to increase donor contributions to their ministries. Such projects then divert to distant corners of Zaire scarce local financial resources required to meet the GOZ contribution, as well as scarce high-level technical personnel required as Zairian counterparts.

The fact that donors can contribute to the constraints in developing the transport sector reinforces the need for improved
coordination efforts by the World Bank, USAID, and other active transport sector contributors. This point is discussed in the following section on the USAID transport sector strategy.

III. USAID TRANSPORT SECTOR ASSISTANCE STRATEGY

A. USAID Involvement in the Sector 1972 - 1990

USAID experience in the road transport sector spans two decades. USAID was influential in establishing the original post-independence roads bureau, and has continued to be influential in the development and directions taken by the present-day Office des Routes.

In more recent times, USAID road projects have been closely linked to agricultural development and marketing projects in Bandundu and Shaba. Seven projects will have resulted in the systematic rehabilitation of nearly 5,500 km between 1980 and 1994. Besides the physical roads, USAID has contributed heavy equipment and vehicles, base camps, and logistical centers, training facilities, in-country and off-shore training, technical assistance, and counterpart funded budgetary support.

USAID has been relatively active in the river transport subsector for many years as well. USAID has worked with ONATRA, the cargo movement parastatal, and Regies des Voies Fluviales and Maritimes (RVF and RVM), the much smaller inland and maritime waterways authorities. USAID contributed significant equipment to RVF and RVM in the 1970s. During the 1980s, USAID assistance further modernized the Kinshasa boat yard and provided echo sounding and digital hydrographic instruments. Technical assistance has been provided to supervise hydrographic surveys and channel marking exercises on the heavily traveled Kasai River, which is a key link in the VN.

In addition, the ongoing Agricultural Marketing Development III Project (660-0098) has introduced a greatly improved class of wooden boats to Zaire. These traditional boats, called baleinières, range in size from five to 25 meters and in capacity from two to over 50 tons.

The long standing relationship between USAID and the Department of Public Works, the Department of Plan, and parastatals like ODR and SNRDA has resulted in shared development objectives anchored in the belief that sustainable maintenance systems provide the footing for future development. USAID's dialogue with the transport donors and the GOZ has already resulted in the initiation of fundamental reforms in the sector.
These preliminary steps, policy, planning and funding measures, will determine where Zaire's transport network is headed between now and the year 2000, and will help estimate the amount of local and external financing required to take it there.

B. Rationale for USAID Transport Sector Assistance

Over the FY 1990 -1993 Action Plan period, USAID assistance in the transport sector will shift in emphasis from focusing on rehabilitation of specific road segments to addressing broader constraints to the sustainability of transport infrastructure and the expansion of transport services. USAID assistance will focus on broader sectoral problems because the earlier generation of rehabilitation activities linked to agricultural development activities have not achieved expected maintenance of the road links rehabilitated. The main reasons for this failure have been the absence of (1) adequate financing mechanisms, and (2) effective infrastructure management institutions. In close coordination with the World Bank and other major donors, USAID will target its assistance on creating the necessary policy, institutional, and investment conditions for sustained improvement in road and river infrastructure.

Because Zaire's road network carries over 50 percent of officially recorded freight tonnage, and because movement of people, goods, and services on roads reinforces most directly other USAID-financed activities, USAID assistance will emphasize road transport. Reducing the operating costs of utilizing both roads and rivers through improved management will enhance efforts to increase agricultural productivity, production, and income growth; expand markets for agricultural and manufactured products; and improve access to health and other social services.

1. Principal Elements of USAID Transport Strategy

Quick-disbursing assistance, technical assistance, training, and local currency activities are proposed to help the GOZ satisfy the necessary conditions for sustained improvements in the quality of transport infrastructure. These conditions include: (1) adequate financing for maintenance and investment; (2) sound GOZ investment decisions; (3) continued development of effective transport institutions; (4) increased involvement of the private sector; and (5) greater responsibility of regional institutions for local road maintenance and rehabilitation. Section III. C. lays out the specific targets and indicators of success for the strategy.
1.a. Reliable Transport Financing Mechanisms. USAID and World Bank conditionality will require adequate levels of fuel tax and other revenues for transport infrastructure. Since July 1989, regular fuel price adjustments and direct tax payments to ODR, SNRDA, and RVF have provided an adequate level of resources for basic programs of rehabilitation and maintenance. GOZ compliance with conditions on fuel pricing, fuel consumption payments, and fuel tax payments to transport institutions will be monitored and will determine releases of quick-disbursing dollar assistance under the proposed Transport Reform Program (TRP, 660-0126), and for continuation of World Bank road transport financing.

1.b. GOZ Selection of Priority Road Networks and Sound Investments. Annual levels of national and donor financing must correspond to road rehabilitation and maintenance requirements. Therefore, the GOZ will be expected to identify priority road networks whose repair and maintenance requirements do not exceed available resources. This will require difficult choices between new construction, restoration, and maintenance. Program budgets for ODR and SNRDA will clearly earmark adequate funds for maintenance of existing road links before new construction is undertaken. Finally, ODR and SNRDA priority road networks and programs must be coordinated so that movements of goods and services support greater rural development. ODR's proposed 1990 - 1992 program has identified a 20,000 km priority national road network. Roads were chosen based on their importance for inter-regional movement of goods and passengers, and for linking centers of production to centers of consumption.

1.c. Reform and Strengthening of ODR and SNRDA. ODR and SNRDA institutional reforms supported by USAID project and non-project assistance will lead to leaner and more effective infrastructure management institutions. As discussed in the earlier constraints section, recent diagnostic studies of both ODR and SNRDA have shown that high fixed costs, excessive centralization, and ineffective management systems have severely damaged their effectiveness. These studies have proposed restructuring and privatization of various functions of these institutions. USAID financing will assist and accelerate a major ODR reorientation program aimed at reducing ODR force account operations and other costly parastatal functions, cutting fixed costs, and improving planning, budgeting, contracting, and supervision systems.

USAID assistance will support complementary reforms in SNRDA. A significant part of USAID assistance to both institutions will involve a variety of in-country, short-term,
and long-term training efforts for ODR and SNRDA staff in coordination with other donors.

1.d. Increased Private Sector Involvement. USAID assistance will accelerate the involvement of the private construction industry in rehabilitation and maintenance activities. Financial, as well as technical, assistance and training are needed to fund contracts. More importantly, however, the assistance is needed to help establish effective contracting and supervision systems to ensure that the quality and quantity of work performed corresponds to contracts and that contractors are promptly paid. USAID assistance will also facilitate the sub-contracting of major ODR functions, which the new reform-minded PDG of ODR has already proposed, such as heavy equipment maintenance, spare parts management, and construction-related laboratory testing.

USAID assistance will be important in re-establishing a favorable climate for the construction industry. Encouraging the hundreds of entrepreneurs, agro-industries, and local religious and secular PVOs with past experience in manual maintenance work to accept new contracts with ODR and SNRDA will progress more quickly than convincing major construction firms to increase their heavy equipment inventories to handle larger rehabilitation and mechanical maintenance contracts. USAID-financed private contracts for bridge construction, road rehabilitation, and maintenance have already begun and will increase in number.

1.e. Increased Responsibility for Regional Institutions. Section I discussed the excessive centralization of both ODR and SNRDA. This has resulted in low productivity, wasted resources, and low employee morale. USAID assistance will encourage significantly increased delegations of authority to regional offices of both ODR and SNRDA so that they can set priorities for their work within general guidelines, develop annual coordinated programs, select competent contractors and penalize incompetent ones, and purchase basic materials and spares for their local operations.

At top political levels, the GOZ has renewed calls for increased decentralization of authority to regional and local levels for development activities. USAID programs will encourage this deconcentration of authority and will help identify new mechanisms for mobilizing local resources for regional road maintenance.

USAID will also assist regional institutions to take on more responsibility for programming, establishing priorities, and monitoring infrastructure repair, improvements, and maintenance.
Only with increased regional and local efforts will appreciable portions of the national, regional, and local road networks be maintained.

1.f. Completion of Existing Programs. In the Bandundu and Shaba regions, USAID will continue to assist ODR to rehabilitate over 2,500 kilometers of national, regional, and local roads during the Action Plan period. These roads are important for agricultural production and marketing, private sector development, and improved access to potable water and health services. Assistance to RVF and river navigation improvements in Bandundu will also continue. The new USAID emphasis on sustainable infrastructure management will increase the likelihood that these infrastructure improvements will benefit from continuing maintenance after the specific A.I.D.-financed projects end.

2. Donor Coordination

For USAID to achieve its objectives in the transport sector, coordination with other donors, especially the World Bank, is essential. Since USAID and the World Bank are designing their two major road transport programs in concert, agreement on road subsector aims is generally assured. The result of this collaborative design effort will include a clear definition of USAID and World Bank roles. A key issue that needs to be coordinated with other donors is investment financing of new paved road construction, which often diverts large amounts of local resources away from maintenance of existing roads. The Donor Working Group on Road Transport, initiated by the World Bank and USAID, will continue to provide a forum for resolution of this and other issues.

The Japanese government has cooperated with USAID in the past in co-financing equipment costs for road rehabilitation in central Shaba. Current and future discussions will explore Japanese co-financing to support the recent move toward greater policy and institutional reform. USAID staff and technical advisers will also remain in collaboration with World Bank and other donor assistance programs for river, rail and air transport and its implications for USAID programs. Table E-2 summarizes project assistance from donors during the 1989 -1991 period, approximately $150 million per year. This level of assistance is expected to continue for the rest of the Action Plan period.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Donor</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Pavement Rehabilitation</td>
<td>EEC</td>
<td>46,000</td>
</tr>
<tr>
<td></td>
<td>AFDB</td>
<td>35,000</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>World Bank</td>
<td>20,000</td>
</tr>
<tr>
<td>2) Earth Road Rehabilitation</td>
<td>World Bank</td>
<td>35,000</td>
</tr>
<tr>
<td></td>
<td>USAID¹</td>
<td>7,000</td>
</tr>
<tr>
<td></td>
<td>USAID²</td>
<td>13,000</td>
</tr>
<tr>
<td></td>
<td>USAID³</td>
<td>35,000</td>
</tr>
<tr>
<td>3) New Construction</td>
<td>FRG⁴</td>
<td>90,000</td>
</tr>
<tr>
<td></td>
<td>AFDB</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
<td>40,000</td>
</tr>
<tr>
<td></td>
<td>Japan⁵</td>
<td>30,000</td>
</tr>
<tr>
<td>4) Major Bridges</td>
<td>AFDB</td>
<td>10,000</td>
</tr>
<tr>
<td>5) Ferries</td>
<td>FRG</td>
<td>6,000</td>
</tr>
<tr>
<td>6) Routine Maintenance</td>
<td>World Bank</td>
<td>100,000</td>
</tr>
</tbody>
</table>

**TOTAL**                   |             | 486,000|

* Fifteen separate projects

**Notes:**

1. Estimate for USAID Project 660-0105 Section III contract including $1 million in local currency.
2. Projects 660-0105 and 660-0098.
4. For the Oso Osakari road, 60 km estimated at $1.5 million per km.
5. Pavement of Matadi-Boma road.

**Source:** ODR and USAID/Zaire, 1990.
3. **Future Focus on Expansion of Transport Services**

Improved road conditions and other infrastructure improvements will reduce travel time and vehicle operating costs and improve the climate for expansion of private transport services. During the 1990 - 1993 period, USAID will analyze further policy, regulatory, financial, or other constraints hindering the expansion of transport services. For improved infrastructure to fully support agricultural and private sector growth, as well as expand access to health services, greater competition is necessary to move goods and passengers at lower prices. Given a continuing stable macroeconomic climate, USAID will consider options for future programs aimed at accelerating transport industry expansion. This could include design of a transport industry assistance program toward the end of the Action Plan period. Transport industry growth will also provide opportunities for alternative levying of taxes and fees based on levels of road damage inflicted by the user.

**C. Strategic Objective, Targets and Benchmark Indicators, FY 1990 - 1993**

The Strategic Objective for the Transport Sector is to improve the provision of sustainable transport infrastructure services and maintain road and river infrastructure, particularly in Bandundu and Shaba.

Performance towards achieving the objective will be measured by a *Program Performance Indicator*, which is: increased flow of goods and services on roads and rivers in Bandundu and Shaba as demonstrated through comparisons with project baseline studies.

**Targets and Benchmark Indicators** are as follows:

**Target 3.1: Sustainable mechanisms for financing infrastructure established by GOZ.**

a. Fuel prices correspond to import prices, distribution costs and reasonable profits.
b. Office des Routes and SNRDA receive a minimum of 45 percent of fuel tax receipts or a minimum of $30 million per year in revenues from fuel surtaxes.
c. A greater and more equitable share of financial responsibility for the cost of road use is shifted to road users.
d. Office des Routes debts incurred prior to January 1990 are eliminated by June 1991.
e. Office des Routes debts incurred after January 1990 are serviced regularly.

**Target 3.2: Efficient transport infrastructure management institutions established by GOZ through policy and institutional reform.**

a. Priority annual road plans of Office des Routes and SNRDA correspond to available annual funding.
b. Investment options for maintenance, rehabilitation and new construction are identified in the National Road Master Plan which will be completed by 1992.
c. Office des Routes personnel are reduced from 7,500 to 5,000 by 1993.

**Target 3.3: National and regional priority infrastructure maintained, as identified in annual and multi-annual plans.**

a. Selected traffic surveys show a steady increase in the number of vehicles but no marked increase in travel times on rehabilitated roads.
b. Maize tonnage transported on central Shaba roads, as measured at railheads, increased from 50,000 tons in 1989 to 80,000 in 1992.

**Target 3.4: Private sector involvement in the production of transport infrastructure services increases.**

a. Manual and light mechanical maintenance of earth roads in the Office des Routes and SNRDA networks increases from 17,000 km to 34,000 km by 1993.
b. The private sector handles more of the management of equipment and laboratory functions.
c. The private sector assumes greater responsibility for the execution of construction, rehabilitation and heavy maintenance activities currently undertaken by the Office des Routes.

**Target 3.5: Responsibility of regional organizations in the management of transport infrastructure increased by the GOZ.**

a. Increased delegation of authority is given to Office des Routes and SNRDA regional offices for matters pertaining to contracting, personnel issues, annual planning and supplemental resource allocation.
b. Regional Road Commissions assume responsibility for mobilization of resources in addition to national budgets, and for coordination of regional road maintenance programs.
Target 3.6: Bandundu and Shaba roads rehabilitated.

a. GOZ completes rehabilitation of 1500 km of roads in Bandundu and Shaba between 1989 and 1993.

D. USAID Programs in the Transport Sector, FY 1990 - 1993

The proposed $35 million Transport Reform Program (TRP, 660-0126), scheduled for authorization as part of an AEPRP in June 1990, signals a shift in USAID's assistance strategy in the transport sector. The new strategy moves away from production-based projects which associated construction of roads and bridges with improved quality of life. Instead, it will focus on policy and institutional changes that will insure sustainability and progressive improvement of rural infrastructure.

Closely coordinated with World Bank and other donor programs in transport, the TRP will apply quick-disbursing resources under a CIP to facilitate major policy and institutional reforms. These policy reforms will secure adequate levels of transport financing, develop more effective transport institutions at national and regional levels, and encourage the growth of the private construction industry.

Significant training and team-building efforts combined with technical assistance financed under the TRP's project component will accelerate the pace of these reforms. Finally, local currency generated by the CIP will supplement dollar resources and will support local costs of the institutional reforms, particularly decentralized contracting and supervision systems for rural road rehabilitation and maintenance.

The TRP will improve the sector policy and institutional climate for transport sector growth. Existing transport projects in Bandundu and Shaba will continue through 1993 to finance road rehabilitation, river navigation improvements, development of improved wooden boats, and river crossing repairs. Table E-3 displays the range of USAID resources under the TRP and continuing projects that will be applied to transport activities during the Action Plan period. The Agricultural Marketing Assistance III Project (660-0098) in Bandundu and the Central Shaba Area Development Project (660-0105) have been amended to refocus (in the case of Bandundu) and to add (in the case of Shaba) emphasis on improving maintenance systems and working with regional institutions to increase their involvement in rural infrastructure management.
Table E-3: FY 1990 - 1993 Action Plan
Transport Funding (U.S. $ 1,000)

<table>
<thead>
<tr>
<th>Project/NPA</th>
<th>LOP Funding</th>
<th>AP Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>660-0098</td>
<td>13,000</td>
<td>7,000</td>
</tr>
<tr>
<td>660-0105</td>
<td>34,000¹</td>
<td>14,000</td>
</tr>
<tr>
<td>660-0126²</td>
<td>35,000</td>
<td>35,000</td>
</tr>
<tr>
<td>660-0000³</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>82,000</strong></td>
<td><strong>56,000</strong></td>
</tr>
</tbody>
</table>

Notes:

1. 660-0105 is being amended to add $3-5 million which will bring total LOP funding to $37-39 million.

2. Transport Reform Program (TRP), approved in preliminary form for $15 million, will be expanded in scope to provide from $25-30 million in fuel exports (CIP) and from $5-10 million in technical assistance and training.

3. Undefined transport sector program to expand transportation services may be designed during 1992-1993 and obligated in FY 1994 will round out the USAID transport portfolio through the mid-1990s.

Other USAID projects and non-project assistance will directly support the transport sector. It is expected that the Small Project Support Project (660-0125) will help PVOs improve transport infrastructure. The Private Sector Support Program (660-0120) could be tapped by private transporters and the construction industry for financing of materials, equipment and spare parts. Mission activities in agriculture, health, and private sector development will help to increase demand for transport services required for sustainable growth and improvement of the transport sector.
During the Action Plan period, USAID resources of at least $55 million and substantial sums of local currencies will be combined with projected other donor contributions of over $450 million and GOZ fuel tax revenues of $120 million to effect substantial improvements in transport policies, institutions, and infrastructure. Given a continuing stable macroeconomic environment, USAID resources and leadership, in partnership with the World Bank, can make substantial contributions to transport development. Improvements in transport will reinforce USAID-financed activities in agriculture, health, and private sector development.

E. Risks Involved in the New Transport Strategy

There are three principal risks associated with the new transport strategy:

-- For a variety of reasons, the GOZ may be unable or unwilling to follow through on the fuel sector reforms necessary for adequate transport financing;

-- Carrying out the range of necessary reforms in ODR and SNRDA may demand too much of these organizations and/or USAID; and

-- For their own interests, other donors may propose investments which conflict with this strategy.

With regard to the first risk, if the GOZ fails to adequately fund transport needs as required by the TRP and World Bank Energy Sector Credit conditions, Zaire will lose over $100 million in petroleum financing or the portion of that financing still remaining. USAID transport staff and technical advisers working on the broad policy dialogue process will make clear to appropriate GOZ officials that the benefits of staying the course on fuel pricing/tax reforms outweigh the costs. Getting this message through may require some hard-hitting policy analysis on the economic benefits of sustaining a road rehabilitation and maintenance program and making rational reforms in the petroleum sector.

On the second risk, ODR and SNRDA leadership will be supported in their reform process by technical advisers and a broad array of focused training activities financed by both the World Bank and USAID. This assistance will help ODR and SNRDA staff develop workable plans: (1) for implementing the new planning, budgeting, and contracting systems required; and (2) for delegating increased authorities to regional levels. USAID
will also make available local currency financing to help fund costs of transition and initial costs of installing the new systems.

On the third risk of other donors, because of different interests, acting at cross-purposes to this strategy, it is clear that the World Bank and USAID, the two lead donors in road transport, agree on major objectives. The two-year old Roads Donor Working Group will continue as a forum for accentuating agreements and discouraging disagreements among the donors. When completed in 1992, the Road Master Plan will identify a national priority road network. That priority network will prove to be a valuable tool to enable USAID and World Bank staff to convince GOZ policy makers that uncritical acceptance of donor financing for non-priority projects reduces their ability to manage and improve their overall network. Identification of the national priority network will also enable more effective donor coordination, resulting in a shift of other donor focus to national and regional priority roads.

IV. ANALYSIS AND RESEARCH REQUIRED FOR TRANSPORT STRATEGY IMPLEMENTATION AND REFINEMENT

USAID will carry out significant research and analysis activities in the transport sector during the Action Plan period in order to accomplish the following:

-- Identify continuing policy and institutional changes needed for sustainable infrastructure;

-- Measure the economic and social impacts of transport programs and determine ways of increasing positive and minimizing negative impacts;

-- Develop options for expanding formal and informal transport services; and

-- Determine the transport needs for lower income groups and feasible options for meeting these needs.

A. Improved Infrastructure Financing Mechanisms

In addition to monitoring the effectiveness of the fuel tax mechanism for funding ODR, SNRDA, and RVF needs, USAID will support analyses of alternatives for additional transport taxes, user fees, and other revenue sources at the national and regional levels, with the objective of a more equitable sharing of the
costs of road use especially by truckers. Specific research activities may measure road damage and increased vehicle operating costs associated with overweight trucks and other vehicles in different seasons compared to the benefits of increased agricultural marketing and commercial activity. Studies may also examine the ability of regional and local institutions to mobilize revenues for local road maintenance and the effect of increased taxes and user payments on agricultural and private sector activities.

B. Transport Institutional Reform

The TRP will fund institutional analyses of further reforms needed in ODR and SNRDA at both national and regional levels to insure choices of wise investment priorities for maintenance, rehabilitation, and new construction. These analyses will help refine the conditionality for later tranches of the TRP's quick-disbursing CIP component, as well as keep USAID in the forefront of the transport policy dialogue. Analytical work will also provide recommendations for additional privatization of ODR and SNRDA activities.

C. Operations Research for Regional Road Maintenance Programs

Given the wide variety of physical, demographic, institutional, and economic conditions in Bandundu and Shaba, where USAID-financed transport activities will focus, operations research activities will be necessary to determine and refine models for regional road maintenance programs. These studies should design pilot systems with organizational, supervisory, and financial control systems tailored to the capacities of regional authorities and potential private contractors. These studies should help formulate model regional maintenance programs that can work under Zairian conditions.

D. Impact Analysis

All USAID-financed transport activities extending beyond FY 1990 will include baseline and follow-up surveys to determine the range of positive and negative impacts on direct and indirect beneficiaries. Research will be necessary early on in the Action Plan period to refine choices of the best economic and social impact indicators for transport activities and to determine how to measure changes most cost-effectively. Impact studies will
also seek to determine which transport interventions have the most positive impact on lower income, small-scale producers, with emphasis on women.

E. Transport Industry and Services

As discussed in the previous section, USAID will apply significant resources under the TRP to determine the major constraints hindering the expansion and greater efficiency of transport services, especially trucking and river transport. Provision of adequate, reliable transport services at reasonable prices is essential to all economic activity and represents the broader rationale for USAID-financed transport activities. Analysis on the transport industry will seek to determine options for future USAID assistance to accelerate the growth and broaden the coverage of transport services.

F. Transport Needs of Lower Income Groups

A final area of research to be undertaken during the Action Plan period is the transport needs of lower income groups, including small-scale urban and rural producers and entrepreneurs, with special emphasis on women. Transport needs of these groups are often not met by formal sector motorized transport services nor are many members of this target group served by all-weather roads. Research studies will examine their range of transport needs and seek to identify alternative, lower cost technologies for meeting the basic transport needs of these beneficiary groups.
ANNEX F

PRIVATE SECTOR DEVELOPMENT BACKGROUND PAPER

USAID/Zaire
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>ii</td>
</tr>
<tr>
<td><strong>I. PROFILE OF THE PRIVATE SECTOR IN ZAIRE</strong></td>
<td>1</td>
</tr>
<tr>
<td>A. Characteristics of the USAID Sample</td>
<td>2</td>
</tr>
<tr>
<td>B. Conclusions from the USAID Surveys</td>
<td>4</td>
</tr>
<tr>
<td><strong>II. THE ENVIRONMENT FOR PRIVATE SECTOR DEVELOPMENT IN ZAIRE</strong></td>
<td>6</td>
</tr>
<tr>
<td>A. Constraints to Private Sector Development</td>
<td>6</td>
</tr>
<tr>
<td>B. Prospects for the Future</td>
<td>7</td>
</tr>
<tr>
<td><strong>III. OVERVIEW OF GOVERNMENT, DONOR, AND LENDER EFFORTS TO STIMULATE PRIVATE SECTOR DEVELOPMENT</strong></td>
<td>9</td>
</tr>
<tr>
<td>A. Levels and Sectors of Donor Assistance</td>
<td>9</td>
</tr>
<tr>
<td>B. Primary Channels of Donor Assistance</td>
<td>11</td>
</tr>
<tr>
<td><strong>IV. OVERVIEW OF USAID'S OBJECTIVES AND INITIATIVES IN PRIVATE SECTOR DEVELOPMENT</strong></td>
<td>12</td>
</tr>
<tr>
<td>A. Relationship of Private Sector to Other Strategic Objectives</td>
<td>12</td>
</tr>
<tr>
<td>B. Relationship of Private Sector to Cross-Cutting Assistance Mechanisms</td>
<td>14</td>
</tr>
<tr>
<td><strong>V. PRIVATE SECTOR STRATEGY FOR THE ACTION PLAN PERIOD</strong></td>
<td>16</td>
</tr>
<tr>
<td>A. Strategic Objective, Targets, and Indicators</td>
<td>16</td>
</tr>
<tr>
<td>B. People-Level Impact</td>
<td>18</td>
</tr>
<tr>
<td>C. The Long-Term Perspective</td>
<td>19</td>
</tr>
<tr>
<td>1. Non-Project Assistance</td>
<td>19</td>
</tr>
<tr>
<td>2. The Informal Sector</td>
<td>21</td>
</tr>
<tr>
<td>3. Cooperatives and Credit Associations</td>
<td>21</td>
</tr>
<tr>
<td>4. Conclusion</td>
<td>21</td>
</tr>
<tr>
<td><strong>VI. FURTHER ANALYSIS AND RESEARCH</strong></td>
<td>22</td>
</tr>
<tr>
<td>A. Research under PSSP</td>
<td>22</td>
</tr>
<tr>
<td>B. Other Mission Research</td>
<td>23</td>
</tr>
</tbody>
</table>

**Figures**
- F-1: Banque de Credit Agricole Fact Sheet
- F-2: Relationship of Private Sector to Mission Portfolio
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.I.D.</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>ANEZA</td>
<td>Association Nationale des Entreprises du Zaire</td>
</tr>
<tr>
<td>BCA</td>
<td>Banque de Credit Agricole</td>
</tr>
<tr>
<td>BCZ</td>
<td>Banque Commerciale Zairoise</td>
</tr>
<tr>
<td>BEDEPE</td>
<td>Bureau d'Encouragement au Developpement des Petites Entreprises</td>
</tr>
<tr>
<td>CCA</td>
<td>Contribution Chiffres d'Affaires, a turnover tax</td>
</tr>
<tr>
<td>CEPETEDE</td>
<td>Centre de Perfectionnement aux Techniques de Developpement</td>
</tr>
<tr>
<td>CIP</td>
<td>Commodity Import Program</td>
</tr>
<tr>
<td>COOPEC</td>
<td>Cooperative d'Epargne et Credit</td>
</tr>
<tr>
<td>CPF</td>
<td>Counterpart Funds</td>
</tr>
<tr>
<td>DFA</td>
<td>Development Fund for Africa</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>FDC</td>
<td>Fonds des Conventions</td>
</tr>
<tr>
<td>FX</td>
<td>Foreign Exchange</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GNP</td>
<td>Gross National Product</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>OPEZ</td>
<td>Office de Promotion des Petites et Moyennes Entreprenes Zairoises</td>
</tr>
<tr>
<td>PL-480</td>
<td>Public Law 480, the Agricultural Trade and Development Act of 1954, as amended</td>
</tr>
<tr>
<td>PSSP</td>
<td>Private Sector Support Program</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization</td>
</tr>
<tr>
<td>SASG</td>
<td>Structural Adjustment Support Grant</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium Enterprise</td>
</tr>
<tr>
<td>SOFIDE</td>
<td>Societe Financiere de Developpement</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>USAID, USAID/Zaire</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>UZB</td>
<td>Union Zairoise Banquaire</td>
</tr>
</tbody>
</table>
PRIVATE SECTOR DEVELOPMENT BACKGROUND PAPER

I. PROFILE OF THE PRIVATE SECTOR IN ZAIRE

During 1987 and 1988, USAID/Zaire commissioned the international financial consulting firm of Coopers & Lybrand to undertake three interrelated surveys and analyses to enable USAID to better understand the Zairian private sector. The consultants reviewed previous private sector research of A.I.D, the World Bank and other donors, and undertook an interview and questionnaire survey of 250 small and medium sized private sector business enterprises. The reports are on file at USAID/Zaire and in A.I.D./Washington.

The three Coopers & Lybrand field surveys covered 130 small private manufacturing companies, 80 trading enterprises in three regions, and 38 medium-sized manufacturing and commercial companies in the Kinshasa area. The analyses reviewed linkages between these target companies and the structured and informal financial sectors. The consultants undertook independent interviews with representatives of the Central Bank, all commercial and development banks, savings and loan cooperatives, credit unions, and private money lenders.

The analyses concluded that all indicators showed a decline in Zaire's private sector since 1970.

-- Excluding mining, metallurgy, and infrastructure, industries which are primarily in the public sector, the industrial sectors of manufacturing and construction show the largest decrease in output in both relative and absolute terms: manufacturing down 19 percent and construction down 24 percent over the 14 year period.

-- Manufacturing which represented 8 percent of recorded GDP in 1970 had slipped to 6 percent by 1984.

-- The only economic sectors experiencing positive growth in absolute terms were those in which the international donors and lenders were most active: agriculture, infrastructure and mining.

Table F-1 summarizes the types and distribution of manufacturing activities in 1984.
Table F-1: Types and Distribution of Manufacturing Activities in Zaire, 1984

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverages</td>
<td>26</td>
</tr>
<tr>
<td>Textiles/Clothing</td>
<td>15</td>
</tr>
<tr>
<td>Chemicals</td>
<td>13</td>
</tr>
<tr>
<td>Metal Products</td>
<td>12</td>
</tr>
<tr>
<td>Food Products</td>
<td>11</td>
</tr>
<tr>
<td>Tobacco</td>
<td>5</td>
</tr>
<tr>
<td>Wood Products</td>
<td>3</td>
</tr>
<tr>
<td>Shoes</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>12</td>
</tr>
<tr>
<td>All Types</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Coopers & Lybrand, 1987

A. Characteristics of the USAID Sample

The types and distribution of firms in the USAID-financed Coopers & Lybrand private sector sample are shown in Table F-2. Note that beverage and tobacco manufacturers were excluded from the sample.

Table F-2: Types and Distribution of USAID-Financed Private Sector Sample, 1987

<table>
<thead>
<tr>
<th>Types</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Products</td>
<td>16</td>
</tr>
<tr>
<td>Building Materials</td>
<td>13</td>
</tr>
<tr>
<td>Wood Products</td>
<td>11</td>
</tr>
<tr>
<td>Textiles</td>
<td>8</td>
</tr>
<tr>
<td>Plastics</td>
<td>8</td>
</tr>
<tr>
<td>Paint, Chemicals and Soap</td>
<td>8</td>
</tr>
<tr>
<td>Trading</td>
<td>8</td>
</tr>
<tr>
<td>Food Products</td>
<td>5</td>
</tr>
<tr>
<td>Electrical Products</td>
<td>5</td>
</tr>
<tr>
<td>Paper and Cardboard</td>
<td>5</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>13</td>
</tr>
<tr>
<td>Total Sample</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Coopers & Lybrand, 1987
The sample, broken down by product, comprises 54 percent consumer goods producers, 26 percent industrial products, and 20 percent a mixture of consumer goods and industrial products.

Table F-3 summarizes the characteristics of the companies in the sample.

| Table F-3: Characteristics of Companies in USAID-Financed Private Sector Sample, 1987 |
|---------------------------------|-----------------|-----------------|-----------------|
|                                | 1987 Sample Gross Sales ($1,000) | Total Permanent Employees | Capacity Utilization (Percent) |
| Max. of range                  | 8,878            | 598             | 80              |
| Min. of range                  | 164              | 104             | 10              |
| Average of sample              | 2,760            | 258             | 49              |

Source: Coopers & Lybrand, 1987

Most private sector manufacturing companies surveyed by USAID relied heavily on imported raw materials and spare parts, had low capacity utilization rates, and expressed difficulties in accessing credit for imports of essential inputs.

-- Most companies in the sample relied heavily on imported raw materials and spare parts. Although they experienced great difficulties in opening letters of credit, in 1987 imported raw materials represented, in value, 65 percent of all raw materials purchased and used in production, or approximately $35.4 million. Imported spare parts represented 56 percent of total spare parts purchased.

-- Capacity utilization rates of the companies surveyed -- defined as the ratio between current levels of production and potential installed capacity -- averaged 49 percent. Lack of foreign exchange (52 percent) and age of machinery (13 percent) were cited by 65 percent of the respondents as important reasons for under-utilization of installed production facilities.

-- While all companies in the USAID sample have had or have relationships with the commercial banking system, shortage of financing and bank lending policies geared towards large companies were cited as the major reasons for lack of credit
for financing imports, rather than "bankability" of the project or the borrower.

Coopers & Lybrand estimated that low capacity utilization rates and high fixed costs were squeezing profit margins, with many companies operating at or below breakeven.

-- Unit costs were rising.

-- Few opportunities were available for further reductions in fixed costs.

-- Internally-generated investment funds were not available.

-- Reductions in quality and repackaging in small quantity-low cost retail units were common practices.

B. Conclusions from the USAID Surveys

Research-based conclusions relating to the evident stagnation and decline of the formal private sector heavily influenced the design of USAID's new Private Sector Support Program (PSSP, 660-0120), which will:

-- Provide private commercial banks with a source of foreign exchange for essential private sector imports.

-- Assist the large number of existing small and medium scale enterprises (SME) with heavy "sunk" investments to obtain access to imported raw materials, equipment and spare parts in order to increase productivity and capacity, and to yield cash flows sufficient to finance new investments.

-- Target fundamental reforms in the finance and banking sectors to reduce cost of funds to banks, reduce interest rates to SME borrowers, and promote access of SMEs to term credit.

-- Utilize the Mission's existing and effective Commodity Import Program (CIP) capabilities in managing the process.

USAID/Zaire has additionally concluded that medium term private sector growth is likely to come from the informal sector. Evidence is accumulating to support the view that the size and importance of Zaire's informal private sector in development has been either ignored or grossly underestimated. Difficult to measure -- probably unmeasurable -- informal sector activities are emerging as veritable powerhouses of grass roots rural and
urban economic development, and, as stated by the World Bank, "... by far the largest source of new employment."

-- Failure to take the informal sector into account may be producing statistical economic aggregates which are off from reality by several hundred percent. The World Bank states that "Zaire's value added in the manufacturing sector is estimated to be possibly twenty-five times the official figure." (World Bank, Sub-Saharan Africa: From Crisis to Sustainable Growth, 1989)

-- A growing body of micro-level studies in rural areas demonstrates the scope, depth, and dynamism of the informal economy of agricultural producers, farmer-traders, traders, money lenders, market women, small retailers and tradesmen, and voluntary associations.

-- Traders or farmer-traders operate as effective market-sensitive producers, buyers and commodity assemblers; agricultural input suppliers; credit sources; consumer product salesmen; and transporters even in the most remote and inaccessible areas.

-- Informal sector businesses will continue to be financed almost entirely from personal savings and loans from family or friends. Access to formal credit by these informal micro/small businessmen is not a realistic medium term possibility.

-- Donor efforts to reach the informal private sector have generally not been effective nor sustainable.

-- Unlicensed -- or illegal -- informal trade by women heads of households is often crucial in supporting essential family needs.

-- Profits from the underground economy are used to finance public services such as health care, schools, and road maintenance.

The implications of the importance of the underground economy on the Mission's private sector strategy are not now clear. Research is just beginning to deal with this issue. Efforts will continue over the Action Plan period to understand more clearly the informal underground sector and assess possible strategy and action options.
II. THE ENVIRONMENT FOR PRIVATE SECTOR DEVELOPMENT IN ZAIRE

This section assesses the regulatory and economic environment as it influences private sector development in Zaire. Conclusions are based on responses to the USAID-financed survey of Zairian private sector companies discussed in Section I; the Government of Zaire's (GOZ) recent performance in implementing regulatory and market liberalization measures; and a brief review of availability of essential indigenous infrastructure, raw materials, human resources, and services supporting private sector business development.

A. Constraints to Private Sector Development

Local and foreign business representatives express serious doubts about any medium-term recovery in the economy. Structured interviews with managers of some 250 small and medium sized businesses plus more recent informal interviews and plant visits show little new investment, low levels of plant utilization, and growing concerns about apparent declines in consumer disposable incomes. Private sector perceptions of the business environment follow below.

-- Lack of confidence by investors, banks, and businessmen in the political and economic outlook.

-- Widespread feelings of fiscal and administrative harassment, and little trust in the civil service.

-- Rapid depreciation in the local currency, making cost and selling price calculations difficult.

-- Direct and indirect taxation which is heavy-handed and ill-suited to the inflationary environment thus discouraging investment and increased production.

-- Negative impact of illegal imports on local producers.

-- Chronic shortages of foreign exchange, although there has been an easing during 1989-90 due to major foreign aid disbursements; a tight local currency market; limited access to credit by small and medium sized businesses; and an almost total lack of investment funds.

Structural adjustment policy and regulatory reforms enacted by the GOZ have been in conformity with World Bank, IMF and USAID conditionalities, although the GOZ's implementation of these reforms has been "stop and go", reducing their effectiveness. In
1989, the GOZ acted to increase budgetary resources, limit expenditures, and reduce budget deficits, although serious problems remain. These and other important reform measures are beginning to produce tangible results:

-- The official exchange rate has been permitted to respond to the market through a "managed float," with government support of the exchange rate via sales of foreign currency to the private sector.

-- Inflation rates have declined substantially, and interest rates to borrowers have been positive in real terms. IMF money supply targets are being observed.

-- Tax and customs collections have improved, and government deficits are being held in line with stabilization program targets. There is, however, growing concern about the GOZ's ability to hold the line.

There remain, however, two disquieting factors:

-- Domestic savings, as measured by private sector deposits in commercial banks, contracted by 13 percent in real terms during the first seven months of 1989.

-- Credit to the private sector has remained essentially stagnant in real terms during the same period, although the share of private sector credit to total net domestic credit increased from 26 percent to 41 percent.

B. Prospects for the Future

Zaire will continue to present major obstacles to rapid and large scale expansion of the private sector.

Zaire's national assets are well known: a country of continental size with enormous forest, agricultural and mineral resources, and an unparalleled river system with major water, hydroelectric power, and transport potential. The climate places few burdens on the population and, with normal rainfall, provides a year-round growing season. There are, notwithstanding, major constraints to large scale private sector development.

-- The large size of the country presents major problems of private sector access to both producers and consumers as cost-effective investment in road infrastructure is difficult.
-- Major and continuing decreases in consumer purchasing power are resulting in stagnant demand and low profit margins for local producers. While there may be some slow growth in aggregate demand, this growth has not been adequate to stimulate production.

-- Marked and continuing deterioration in road and river transportation systems present formidable operating obstacles and high distribution costs.

-- Totally inadequate telecommunication and mail services hamper essential business communications.

-- There is limited availability of qualified and experienced technical and management personnel.

Thus, the climate for modern sector private enterprise investment remains poor in spite of significant government efforts to liberalize the economy. Foreign and local business people and bankers agree that reforms in the areas of exchange rate liberalization, foreign exchange availability, repatriation of earnings and investments, elimination of price controls, greater control of public sector expenditures, and moderation of inflationary pressures are appropriate and substantial. Their major concern, however, relates to the GOZ's ability and dedication to "stay the course," and actually achieve reform objectives.

Zaire is likely to face a long period of major economic readjustment and low growth in both internal and export markets.

-- Foreign debt burden overhangs will remain large and place major repayment burdens on a weak economy.

-- "Net disinvestment" continues in both essential infrastructure and private sector productive capacity.

-- Capital flight continues to be a major problem.

-- Export earnings are at the mercy of generally soft world commodity prices. Zaire's major copper exports are currently running at a seventeen month low after peaking in late 1989.

-- The contribution of manufacturing to GNP is low and falling, while utilization of installed capacity is low.

-- Urban consumer purchasing power continues to decline. Consumer demand over the short to medium term is not expected to improve.
Medium term credit and investment capital for small and medium sized businesses via commercial and investment bank intermediaries will be essentially unavailable.

III. OVERVIEW OF GOVERNMENT, DONOR, AND LENDER EFFORTS TO STIMULATE PRIVATE SECTOR DEVELOPMENT

Policy statements, long-range plans, and actions of the GOZ confirm the critical importance of private sector development in the attainment of self-sustaining economic growth. The donor community has responded by making available grant and loan funds to support a number of initiatives of direct and indirect aid to the private sector. Section A below addresses non-USAID assistance to the private sector; Section B which follows describes specific USAID private sector interventions.

A. Levels and Sectors of Donor Assistance

Total donor assistance has increased in dollar terms each year since 1984. Total bilateral and multilateral aid increased 112 percent from 1983 to 1988, reaching $704 million. As reflected in Table F-4, between 1983 and 1988, the loan portion of this aid increased 243 percent, to $518 million, or 73.6 percent of total aid in 1988. A total of 589 separate donor projects were identified as operational in 1988. Belgium and the United States were the two most important bilateral donors in 1988. Belgium (38 percent) and the U.S. (22 percent), were followed by Italy (14 percent), Canada (10 percent), West Germany (8 percent), and France (4 percent).

Table F-4: External Aid to Zaire 1983-1988
(1983 = 100)

<table>
<thead>
<tr>
<th></th>
<th>Index</th>
<th>Million Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td>Bilateral and Multi-</td>
<td>100</td>
<td>93</td>
</tr>
<tr>
<td>Lateral Aid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans Sub-Total of</td>
<td>100</td>
<td>87</td>
</tr>
<tr>
<td>Bilateral and Multi-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral Aid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of Projects</td>
<td>-</td>
<td>559</td>
</tr>
</tbody>
</table>

The major sectoral targets for both bilateral and multilateral loan assistance were natural resources and transport and communications. Mining, energy, and water investments predominated (42 percent), followed by transport and communications (32 percent), and agriculture, forestry, and fisheries (11 percent). The bulk of this loan assistance was for government managed projects and institutions. Specific private sector assistance represented a very small percentage of these loans (Tables F-5 and F-6).

Table F-5: Sector and Type of Assistance to Zaire 1988
(Expressed as Percent of Total)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Technical Assistance</th>
<th>Financial Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resources</td>
<td>-</td>
<td>42</td>
</tr>
<tr>
<td>Agriculture</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Education</td>
<td>18</td>
<td>-</td>
</tr>
<tr>
<td>Health</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>General Economic Development</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Transport &amp; Communications</td>
<td>14</td>
<td>31</td>
</tr>
</tbody>
</table>

Source: USAID/Zaire, March 1990

Table F-6: Capital Investments Supplied by External Sources, 1988

<table>
<thead>
<tr>
<th>Sector</th>
<th>Million Dollars</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Economic Development</td>
<td>52.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>217.5</td>
<td>42.0</td>
</tr>
<tr>
<td>Agriculture, Forestry &amp; Fisheries</td>
<td>57.8</td>
<td>11.0</td>
</tr>
<tr>
<td>Industry &amp; Tourism</td>
<td>18.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Transportation &amp; Communication</td>
<td>162.8</td>
<td>31.4</td>
</tr>
<tr>
<td>Health</td>
<td>.3</td>
<td>.06</td>
</tr>
<tr>
<td>Education</td>
<td>4.2</td>
<td>.8</td>
</tr>
<tr>
<td>Other</td>
<td>5.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Totals</td>
<td>518.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: 1. Includes Mining, Energy and Water

Source: USAID/Zaire, March 1990
B. Primary Channels of Donor Assistance

The major donors and lenders channeled their assistance to the private sector through the GOZ development bank, Société Financière de Développement (SOFIDE). The World Bank, the African Development Bank, the European Economic Community (EEC), FAO, and West Germany provided soft loans to SOFIDE for on-lending to private sector borrowers. SOFIDE has experienced increasing financial difficulties, due primarily to a 1980 decision to transfer exchange rate risk to the borrower. In spite of the GOZ's stated intent to cover this risk, no action has been taken. SOFIDE is reported to have stopped extending new loans in 1989. USAID has chosen not to utilize SOFIDE as a participating bank in its CIP program due to continuing management and financial problems experienced by this GOZ development institution.

The Banque de Credit Agricole (BCA) is the GOZ's financial entity established to make loans to private sector farmers and small businesses. The World Bank, the African Development Bank, Belgian Cooperation, USAID, and West Germany provided soft loans to the BCA, a GOZ agricultural development bank, for on-lending to farmers and small businesses. Although the BCA does not have the network capabilities required to service small farmers, approximately seventy percent of its loans goes to the interior of the country. The bank lost money in 1987 and is currently experiencing serious financial difficulties. (Figure F-1)

The World Bank Small Enterprise Development Project has provided $25 million for on-lending to small private sector companies. This private sector lending program is handled by public and private sector participating banks and is managed by the Bureau d'Encouragement Au Développement Des Petites Entreprises (BEDEPE) which operates under Bank of Zaire supervision. A recent EEC credit of roughly $3.5 million was added in 1989. Supporting training and technical assistance are provided by existing public and private institutions such as the Centre de Perfectionnement aux Techniques de Développement (CEPETEDE). Private sector companies are eligible for loans of two to ten year terms. As of September 30, 1989, 72 projects submitted by participating banks had been approved. Eighty-six percent of the proposals originated from the Banque Commerciale Zairoise (BCZ) and SOFIDE, and 10 percent from the Union Zairoise Banquaire (UZB), for a total of $11,812,000 in loans. Thirty percent of the proposals were for new start-ups.

The Office De Promotion Des Petites Et Moyennes Entreprises Zairoises (OPEZ) is the GOZ's major institution for development of small private sector businesses. OPEZ has a broad mandate for assisting private sector entrepreneurs to conduct feasibility
studies and obtain financing. It also has an active national seminar program, and manages a small business loan guarantee fund. USAID, along with the World Bank and French and Belgian Cooperation, has provided assistance in 1989 and 1990 in the financing of the OPEZ small business seminar program. OPEZ had not been considered effective in past years, suffering from lack of funds and poor leadership. It has recently been reorganized and restaffed with qualified professionals, a number of whom are former USAID participants.

Apart from assistance to SOFIDE, there appear to be relatively few donor or lender projects directed at private sector development.

-- United Nations Development Program (UNDP): Assistance to the private sector Association Nationale des Entreprises du Zaire (ANEZA); industrial promotion master plan; and formulation of national employment policy.

-- Canada: Assistance to a national SME development program.

-- France: Assistance to the Centre de Perfectionnement aux Techniques du Développement (CEPETEDE), to Lake Mobutu fishing operations, and ANEZA.

Any number of bilateral donors have, of course, projects working in direct support of private sector farmers.

IV. OVERVIEW OF USAID'S OBJECTIVES AND INITIATIVES IN PRIVATE SECTOR DEVELOPMENT

A private sector orientation is pervasive in USAID's Zaire project and program portfolio. Figure F-2 summarizes the private sector objectives and initiatives of current project and non-project assistance. The following section provides conclusions regarding the relationship of the private sector to achievement of USAID's Strategic Objectives, and to strengthening cross-cutting USAID assistance efforts.

A. Relationship of Private Sector to Other Strategic Objectives

The Mission's three other Strategic Objectives are: to improve health status; increase agricultural production, productivity and rural income; and improve transport
infrastructure. They all emphasize private sector objectives and delivery mechanisms.

Under **improve health status:**

-- Many projects use Private and Voluntary Organization (PVO) as implementing agencies and intermediaries.

-- Contraceptive social marketing projects use private sector distribution and sales points.

-- Health and water projects have primary objectives of creating sustainable, market-driven systems of community-supported, preventive, promotive, and curative primary health care and water services in rural health zones.

-- Health and water projects have installed user-fees to promote sustainability.

-- One water project has taken the lead in promoting the development of a private sector joint venture between a U.S. and Zairian firm in water pump procurement and maintenance.

-- Private sector production of weaning foods has been developed, and studies are underway to develop local production and distribution of oral rehydration treatment products.

-- Major efforts are being made to establish financial and management sustainability for the School of Public Health at the University of Kinshasa.

Under **increase agricultural production, productivity and rural income:**

-- Many projects involve PVOs as both implementing agencies and as recipients of assistance.

-- The Central Shaba Agricultural Development Project is promoting private sector seed production and distribution.

-- Pilot studies on how to assist private savings and credit cooperatives are underway to improve assistance for agricultural production and marketing.

-- Policy reform studies and dialogue are underway to liberalize agricultural prices, marketing, credit and exports.
Under **improve transport infrastructure:**

-- PVOs and other private sector actors are active in bridge and road building and maintenance.

-- Pilot tests aim to encourage private sector boat building and operation to support river transport of agricultural commodities.

-- A major new initiative earmarks petroleum taxes and local currency generations to finance road maintenance by private sector contractors.

-- The Central Shaba Agricultural Development Project is financing private sector rehabilitation of 150 kilometers of link road, so as to compare private sector with force account road construction cost and performance.

-- The new Transport Reform Program will use technical assistance and local currency resources to promote privatization of Office des Routes-financed road rehabilitation and maintenance.

B. **Relationship of Private Sector to Cross-Cutting Assistance Mechanisms**

The Mission's strategic areas of emphasis described above receive support from private sector, human resources development, and PVO support activities. These activities are primarily oriented to assisting and deepening private sector delivery mechanisms, credit and training while at the same time providing levels of local currency counterpart funds for financing project activities in health, agriculture and transport.

-- Commodity imports—both CIP and PL-480—utilize private sector importers and distributors and operate through private commercial banks. PL-480 commodities have directly supported private sector millers, bakers and textile companies.

-- The commodity import component of the Private Sector Support Project provides foreign exchange and local currency term credit to private sector SME businesses operating predominantly in agriculture and industrial activities. Private sector transport, road maintenance and health product firms are also eligible to participate in the program. Delivery mechanisms are solely private sector commercial banks.
-- PVO mechanisms are the primary focus for small project support initiatives, heavily weighted towards agriculture, fisheries, rural infrastructure, and natural resource management.

-- Banking system reforms have the primary purpose of reducing loan interest rates and increasing access of SME borrowers to term credit through the private banking system.

-- Human resources development programs have supported agencies in conducting 15 training seminars in 1989 for small and medium sized private sector entrepreneurs with specific focus on women entrepreneurs.

-- Graduate training and short term training programs finance training for the private sector and for public sector officials able to influence market-oriented reforms.

In summary, it is clear that the Mission's portfolio reflects a fundamental private sector orientation.

The Private Sector Support Program (PSSP), while forming the centerpiece of the Mission's private sector initiatives, represent only one facet of USAID's efforts to assist private sector development. The Mission's portfolio almost across the board contains a number of important elements driving private sector development.

-- Initiatives targeting lower income population groups utilizing private sector and PVO delivery agencies.

-- Policy dialogue leading to selected reforms of the financial and banking, energy, agriculture and transport sectors supporting greater private sector participation and equity in national development planning.

-- Access to foreign exchange and local currency resources via private sector financial intermediaries for essential private sector imports by existing SMEs.

-- Promotion of PVOs for mobilization of savings in rural and urban areas, and the provision by these institutions of credit to micro and small private sector entrepreneurs.

-- Coordinated programs of business orientation, education, training and seminar activities for leaders in both public sector policy making and private enterprise sector business development in order to stimulate continuing, realistic and fruitful GOZ/private sector dialogue and investment climate reform.
A continuing program of action-oriented research to guide USAID/GOZ private sector reform dialogue, and to influence GOZ policy, plans and programs in achieving positive changes in the investment climate.

Close, continuing and organized coordination with the World Bank/IMF and key donors to achieve coordinated efforts and maximum impact on private sector investment climate reforms.

V. PRIVATE SECTOR STRATEGY FOR THE ACTION PLAN PERIOD

A. Strategic Objective, Targets, and Indicators

The Strategic Objective for private sector activities over the Action Plan period is: increase production and productivity of private enterprises, with an emphasis on manufacturing, transport, and agribusiness.

The private sector strategy relates directly to the DFA goal of sustainable, broad-based, market oriented growth. The strategy will also contribute to more than one of the DFA's long range strategic objectives, of which the following is key: strengthen competitive markets to permit private sector led economic growth.

The Mission's Strategic Objective encompasses the strong private sector theme running throughout the Mission's portfolio. However, detailed discussions of private sector initiatives in other Mission projects and programs will be left for the appropriate annexes.

Progress towards achievement of the Strategic Objective will be assessed through measurement of the following.

Program Performance Indicators

A. Manufacturing GDP increases by 4 percent per year between 1990 and 1993, compared to 3.4 percent between 1985 and 1988.
B. Capacity utilization rate of medium-sized manufacturing firms increases from 50 percent in 1987 to 60 percent in 1993.
Targets and Benchmark Indicators

Target 1: Sustained growth in domestic credit outstanding to small and medium enterprises (SMEs) and farm firms achieved.

a. Share of total domestic credit going to the private sector increases from 26 percent in 1989 to 50 percent in 1993.
b. GOZ Rural Financial Markets Study completed and other priority recommendations implemented.
c. Baseline data established for measurement of the commercial investment of COOPECs (credit and savings cooperatives) and the overall economic impact of savings and lending activities.

Subtarget 1.1: Increased domestic savings mobilization.

d. Real savings in commercial banks increases by 4 percent per year between 1991 and 1993.
e. Mobile savings mobilization facility strengthened and expanded, reaching 10 new COOPECs over the 1989 to 1993 period.
e. Total COOPEC savings mobilized increases by 30 percent over the 1990 and 1993 period.

Subtarget 1.2: Establish and maintain market-determined interest rates and reduce costs of funds to banks and non-bank financial institutions.

g. Reserve requirements on demand deposits are reduced and a portion of these reserves are remunerated, resulting in a decrease of 20 percent in the transfer from banks to the BOZ (Bank of Zaire) as measured by the implicit cost per 1000 zaires held as demand deposits by the banks.
h. The CCA (turn-over tax) on interest payments is reduced from 18 percent in 1989 to 9 percent in 1991.

Target 2: GOZ's macroeconomic adjustment program supported.

a. Private participants in the PSSP-CIP and PL-480 program increase capacity utilization by 5 percent.
b. The gap between official and parallel exchange rate remains below 20 percent.
c. Inflation rate is reduced to and remains below 40 percent per year, or at a target agreed between GOZ and IMF.
Target 3: Private enterprise and PVO production and delivery mechanisms developed in conjunction with USAID-supported projects.

a. Private sector increases production of oral rehydration products from 1 million units in 1989 to 3 million units in 1991.
b. Private sector sales and distribution of condoms and spermicide tablets increase from 1.25 million units in 1988 to 18 million units in 1992.

B. People-Level Impact

Zaire's private sector is the most dynamic and efficient vehicle for broad-based, sustainable economic growth. Consequently, USAID will continue to support increases in production in all sectors, particularly agriculture, agribusiness, transportation, manufacturing and banking.

Policy dialogue and quick-disbursing assistance will be directed toward securing macroeconomic and regulatory reforms to improve the climate for private investment and business activities. Special emphasis is being placed on financial sector reforms and efforts to increase domestic credit, particularly for small and medium sized enterprises. This assistance will result in increased utilization of existing productive capacity, thereby helping to sustain current employment and income levels.

Employment generation is likely to be minimal over the Action Plan period. Coopers & Lybrand investigations indicated that companies interviewed are deliberately overstaffed since managers tend to hold on to experienced workers in expectation of better times. Follow-up studies of PSSP participants, however, will measure employment generation impact. Over time, USAID expects its support to the private sector to contribute to growth in investment, employment, and real incomes.

Longer term impacts on Zairian consumers may be lower real prices due to higher productivity of new and renovated manufacturing equipment. Unit costs may be lower as greater availability of imported raw materials leads to higher capacity utilization. Efforts will be made to measure these changes in studies of participants in the PSSP in 1991-92.

Increased production can be expected to increase demand for locally produced products; for example, local jute for fiber sacks, quarry products for brick making, maize for weaning and other food products, local wood for furniture, matches, and other
wood-based products. Efforts will be made to measure these links to agriculture and rural areas.

C. The Long-Term Perspective

This section attempts to draw conclusions on the Mission's long term private sector strategy development viewed from a total Mission portfolio point of view.

Mission projects and programs are in harmony with DFA goals, strategic objectives and A.I.D.'s management guidelines which stress private sector-led growth.

-- Most projects emphasize market-oriented growth and sustainability.

-- Serious efforts are underway to reduce public sector roles, seek decentralization and increase public sector efficiency.

-- Several initiatives are underway to strengthen competitive private sector led economic growth and competition.

-- Proven project approaches such as private sector import and distribution of food aid, private sector CIPs, work with and through PVOs, and encouragement of private sector delivery mechanisms are receiving a major share of long term funding.

-- Cooperation with the donor community and in particular the World Bank has been close and continuing. Conditionalities and program and project objectives on such current major programs as the PSSP and the proposed Transport Reform Program have been carefully planned and coordinated with parallel World Bank initiatives.

1. Non-Project Assistance

In the medium term, the Mission will seek to strengthen and deepen private sector-oriented initiatives currently found in almost all Mission projects and non-project assistance. Meeting short and medium term objectives of the DFA relative to private sector and free market economic growth and development can be most easily attained by doing "more, better and faster" through the private sector initiatives already underway in the Mission's existing portfolio.
Private sector imports of essential food and industrial commodities and the accompanying impact on increased local production and plant utilization can best be served by continuance on a long term basis of the PL-480 and CIP non-project assistance modes. Both of these mechanisms are well-honed and proven approaches to assisting private sector import of essential commodities. They also provide important financial support for essential GOZ structural adjustment and reform efforts—including encouragement of essential banking and financial sector reforms—and in generating a major source of local currency for support of priority projects.

Previous CIPs, with their quick and effective disbursement mechanisms, have financed nearly $20 million of essential commodity imports for thirty private sector companies, of which 50 percent were small and medium size enterprises. CIP and PL-480 counterpart fund generations were nearly $35 million equivalent in zaires in the last three years.

In addition to the direct benefits to private sector companies in agriculture, agro-industry and transport, non-project assistance provides important financial and technical assistance to the GOZ in effecting essential economic policy reform. The current PSSP seeks major reform impacts in the lowering of interest rates to SME borrowers, and encouraging bank credit to these companies. Previous non-project assistance has provided an effective policy dialogue and reform mechanism—closely coordinated with similar efforts of the World Bank—to secure reforms in revenue and expense control, revised import tariffs, elimination of export taxes, and simplification of export procedures. General covenants have required maintenance of free floating exchange rates and agreements not to establish or reestablish import license and price controls.

The Structural Adjustment Support Grant (SASG, 660-0121) evaluation team (July 1989) found that the Mission’s CIP programs had a positive impact on participating firms.

-- Fourteen of 20 participating private sector companies increased plant utilization an average of 7.4 percent over the 1985-88 period as compared to a 2-3 percent decline in nonparticipating companies.

-- Participants' production levels were 22.4 percent higher over the 1985-88 period, while the manufacturing sector as a whole only increased 13 percent.
2. The Informal Sector

The growing recognition of the importance of the informal sector in Zaire as a major driving force in development requires further study and possible pilot efforts. The up-to-now unrecognized and powerful impact of the unmeasured informal sector, which may have resulted in gross underestimation of GDP and per capita incomes, must be reassessed on the basis of current and planned research surveys. Conclusions, recommendations and action options for support of the informal sector should emerge during the planning period.

3. Cooperatives and Credit Associations

Cooperative savings and credit associations represent an important intermediary mechanism for mobilizing savings and providing credit to micro and small business entrepreneurs.

A.I.D. assistance to credit unions in countries such as Cameroon and Togo have been highly successful. While limited assistance has been given to a small sample of such cooperatives in Zaire, and current USAID-sponsored research in this field continues, a serious and long term approach to development of credit cooperatives will be considered. A successful project could result in helping existing "home grown" credit associations provide highly important secure savings repositories, assist in mobilizing savings for investment, and serve as possibly the only short-to-medium source of credit to micro and small business operators who have no likelihood of access to formal banking system credit. Such a strategy would of necessity cut across both sectoral and project/non-project lines and involve several of the Mission's organizational units in conception and project development. Formulation of strategy will be deferred until the conclusion of ongoing rural financial intermediation studies.

4. Conclusion

In the interim, efforts will continue and be expanded to assist both public, private and PVO organizations dedicated to assisting private sector SMEs. USAID will make no efforts to "create" new structures to assist SMEs. Several private and public organizations which can guarantee continuity--and with which A.I.D. has already had contacts--should be supported on a long term basis. Consideration should be given to support which would include current training and graduate education assistance and new mechanisms for technical and commodity assistance.
VI. FURTHER ANALYSIS AND RESEARCH

This section summarizes on-going and proposed research required for providing a factual basis for measuring performance of USAID's private sector portfolio and for further development of Mission private sector interventions.

A. Research under PSSP

The PSSP provides for a continuing series of surveys and research activities designed to assess achievement of program targets and benchmark indicators.

-- Impact surveys of private sector participants in both the foreign exchange and local currency lending programs will be conducted to assess the level of new investments, increases in productivity, cost reduction, capacity utilization, profitability, market expansion, and employment generation.

-- The original survey of 250 private sector participants in the original Coopers & Lybrand survey conducted in 1987 will be repeated in 1991 to determine changes in perceptions, attitudes, business performance, and outlook for future investment and profitability of the baseline companies included in the original survey in order to update the private sector investment climate assessment and reassess development needs of SMEs.

-- The financial and banking sectors will be monitored to determine trends in such variables as exchange rates; reserve requirements; private sources of bank funds and bank capitalization; cost of funds; deposit growth; public and private sector credit shares and total credit outstanding; bank portfolios of term loans to SME borrowers; commercial bank obligations to the central bank; reserve requirements and credit ceilings; commercial bank interest rates and margins; secondary financial markets; and central bank financial instruments.

These survey and research activities will be closely coordinated between and in some cases cooperatively produced by USAID and the World Bank/IMF.
B. Other Mission Research

Results of on-going research and newly commissioned surveys will be utilized in a continuing planning process for development of new private sector initiatives.

-- A Cornell University modelling effort and development of a Social Accounting Matrix will be used to obtain a more informed view of the macroeconomy, and family and micro sector incomes and expenditures; savings; credit needs; participation in cooperative production, credit and savings groups; and other related issues.

-- Results of on-going project work, recent studies, and diagnostic surveys of formal and informal credit unions, savings institutions and similar cooperative undertakings will be reviewed to determine practical options for USAID assistance to these important savings mobilization and micro sector small credit organizations.

-- A survey of major public and private sector suppliers of management, financial, consulting, technical assistance, and training services to private sector SMEs will be undertaken with a view to further support and improved coordination of efforts to assist such organizations, a number of which operate with minimal resources and receive no assistance from the donor community.

-- A survey of international competitive advantage in exports with a view to possible formulation of a Mission export-oriented initiative will be undertaken.
**Figure F-1: Banque de Credit Agricole Fact Sheet**

<table>
<thead>
<tr>
<th>Basic Objective:</th>
<th>A deposit-taking government-owned institution lending exclusively to the private sector.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Funds:</td>
<td>GOZ initial capital funding supplemented by receipts from the Fonds des Conventions (FCD) and loan interest income. The FCD tax is levied on sales of locally produced goods and on specific import items. In 1987 the BCA lost its major tax revenue sources as part of World Bank structural adjustment actions. The BCA is currently seeking direct financing from donors and lenders. Deposit accounts totaled Z 432 million at the end of 1987.</td>
</tr>
<tr>
<td>Use of Funds:</td>
<td>Lending operations started in 1983. By 1987 there were 102 loans totaling Z 348 million, with average loan size of Z 3.4 million. Ninety-three percent of loans were for short term commercial and commodity buying transactions. The bank has serious financial difficulties and lost money in 1987.</td>
</tr>
<tr>
<td>Loan Selection &amp; Monitoring:</td>
<td>Clients must maintain an account for six months during which a credit approval is conducted. Projects must address agricultural, livestock, and fisheries production. Borrowers must put up 40 percent of cost of new projects and 20 percent for existing projects. Evidence must be demonstrated of good management practices, profitability, collateral and high economic returns. The BCA was established to serve individual farmers, but SME are major borrowers, due primarily to lack of a branch network.</td>
</tr>
</tbody>
</table>
Strategic Objective One: Improve health status, with emphasis on increasing the rate of child survival and reducing the population growth rate.

**Family Planning Services**
- Social marketing involving private sector distribution and sales;
- Major use of PVO project managers and intermediaries;
- Support to private sector company development of internal family planning services;

**Rural Health Services**
- Primary objective of attaining sustainable market-driven system of community-supported preventive, promotive and curative primary health care and water services in 100 rural health zones.
- Major PVO project management.
- User Fees forecast to cover 80% of costs of medical services.
- Private sector joint venture to provide procurement/manufacture and maintenance of water pumps.

**Refugee Health Program**
- Major PVO project management for both projects.
- For-Fee water services and community-cooperative ownership.

**Child Survival and Nutrition**
- PVOs used as major contractor and manager.
- Private sector development of weaning foods.
- For-Fee services for health centers.
- Planning local private sector production of ORS.

**HIV-AIDS Prevention & Control**
- Social Marketing to high risk groups; use of private sector distributors and sales points.

**Professional Education in Public Health**
- Tulane University leadership at SPH.
- Major efforts to establish facility as self-supporting institution.
Figure F-2 (Continued)

Strategic Objective Two: Increase agricultural production, productivity and rural household income, with emphasis on the Bandundu and Shaba regions.

Agricultural Research
- Heavy PVO involvement.
- Private sector seed production and distribution review.

Agricultural Development
- Pilot test and trial for private sector boat building and ownership for agricultural transport and distribution.
- PVO bridge and road building maintenance.
- Decentralization involving PVO, community groups and cooperatives.
- Private sector seed development and distribution.
- Private sector delivery of road rehabilitation services.
- PVO institution building.
- Assistance to credit and savings cooperatives.

Agricultural Policy & Planning
- Policy reform studies to reform and liberalize markets: removal of export barriers, rural credit, tariff reforms, agricultural statistics, pricing policies.
Strategic Objective Three: Improve the provision of sustainable transport infrastructure services and maintain road and river infrastructure, particularly in Bandundu and Shaba.

Area Development
- PVO/Private sector bridge and road building and rehabilitation.
- Prototype boat building to encourage private sector river transport of agricultural commodities.
- River navigation aids.

Road Agencies Planning & Management Support
- Grant funds petroleum CIP with taxes and CPF earmarked for road maintenance utilizing private sector/PVO maintenance.

Strategic Objective Four: Increase production and productivity of private enterprises, with emphasis on manufacturing, transport, and agribusiness.

Private Sector Credit
- Credit available only to private sector SME importers and borrowers (PSSP).

Banking System Reform
- Private commercial bank intermediaries (PSSP).
- Term credit features for access to FX and local currency (PSSP).
- Banking system reform conditionalities have major objectives of reducing borrowing costs and opening credit channels for SMEs.

Project Support
- PVO delivery mechanisms for originating small project proposals.
- Private sector micro/small business beneficiaries.
- Expansion or continuation add-ons possible within existing CIP and Small Project Support programs.

PL-480
- Wheat and cotton imports supplying lending private sector million, baking and textile industries (PL-480).
- Private sector importers and distributors utilized (PL-480).
- Self-help measures.
Human Resources Development

- Graduate training programs for private sector and for public sector officials who can influence market-oriented mechanisms.
- Private sector in-country seminars in business and management.
- Support in development of capabilities of Office de Promotion des Petites et Moyennes Entreprises Zairoises (OPEZ).
- Support to other Mission projects in science, technology and management with heavy emphasis on private sector and women in development.
- Lending to women-owned micro-enterprises through OPEZ training programs.
ANNEX G

HUMAN RESOURCE DEVELOPMENT

USAID/Zaire
# Table of Contents

Table of Contents .......................... i  
Glossary of Terms Used .................... iii  

I. OVERVIEW ................................ 1  

II. BASIC EDUCATION ......................... 2  
   A. Institutional Foundation and Structure 2  
      1. An Historical Perspective 2  
      2. The Present 2  
   B. Primary and Secondary Enrollment 3  
      1. Gender Differences 4  
      2. Drop-Out Rates 4  
   C. Quality of Education .................... 5  
   D. Financing ................................ 6  
      1. GOZ Expenditures 6  
      2. Parental Contributions 7  
      3. Donor Assistance ....................... 8  

III. CONSTRAINTS ANALYSIS .................. 10  
   A. Key Constraints to Improved Education 10  
      1. Economic 11  
      2. Demographic 11  
      3. Facilities 11  
      4. GOZ Policy and Planning 12  
   B. Efforts to Address the Constraints 12  
      1. GOZ Reforms 12  
      2. Foreign Donors 12
IV. USAID's Human Resource Development Program

A. Background

1. Studies and Project Evaluations
2. Revised Mission Training Program

13

B. In-Country Training

1. Health
2. Agriculture
3. Local Management Training Institutions
4. English Language Instruction

15

C. Participant Training

1. Health
2. Agriculture
3. Regional Projects

19

D. Target Groups

1. Public Sector
2. Private Sector
3. Private and Voluntary Organizations
4. Women
5. Returned Participants

22

V. FUTURE HUMAN RESOURCE DEVELOPMENT ACTIVITIES

A. Continuing Program

1. Health
2. Agriculture
3. Transport
4. PVOs and Private Sector
5. Management Training
6. Long-Term Participant Training

24

B. Future Funding Commitments

27

Bibliography
GLOSSARY OF TERMS USED

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>ADF</td>
<td>African Development Fund of the African Development Bank</td>
</tr>
<tr>
<td>APGRAD</td>
<td>African Graduate Fellowship Program</td>
</tr>
<tr>
<td>AMDP</td>
<td>African Manpower Development Program</td>
</tr>
<tr>
<td>CADICEC</td>
<td>Centre Chretien d'Action pour Dirigeants et Cadres d'Entreprises au Zaire</td>
</tr>
<tr>
<td>CENACOF</td>
<td>Centre National de Coordination de la Formation</td>
</tr>
<tr>
<td>CEPETEDE</td>
<td>Centre de Perfectionnement aux Techniques de Developpement</td>
</tr>
<tr>
<td>CPA</td>
<td>Centre de Perfectionnement en Administration</td>
</tr>
<tr>
<td>CPCZ</td>
<td>Conseil Permanent de la Comptabilite au Zaire</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>HRDA</td>
<td>Human Resources Development Assistance</td>
</tr>
<tr>
<td>ISC</td>
<td>Institut Superior de Commerce</td>
</tr>
<tr>
<td>MPH</td>
<td>Master of Public Health</td>
</tr>
<tr>
<td>OPEZ</td>
<td>Office des Petites et Moyennes Entreprises du Zaire</td>
</tr>
<tr>
<td>PIP</td>
<td>Priority Investment Program</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization</td>
</tr>
<tr>
<td>SEP</td>
<td>Service d'Etudes et Planification</td>
</tr>
<tr>
<td>SEVOZA</td>
<td>Studio Ecole de la Voix du Zaire</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
</tr>
<tr>
<td>SPH</td>
<td>School of Public Health</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Childrens Fund</td>
</tr>
<tr>
<td>UNTZA</td>
<td>Union Nationale des Travailleurs du Zaire</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USG</td>
<td>United States Government</td>
</tr>
<tr>
<td>USIS</td>
<td>United States Information Service</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>ZALI</td>
<td>Zaire American Language Institute</td>
</tr>
</tbody>
</table>
I. OVERVIEW

Nearly 5,000 Zairians receive training each year through USAID-assisted programs. USAID's training programs cut across economic, social, and educational levels, from poor urban women trained in nutritional surveillance to government policy-makers trained in econometrics. Human resource development thus represents a major investment in money, personnel, and time, which the Mission will continue during the Action Plan period.

The Mission has carefully reviewed the status, constraints, and other donor support to basic education, which are summarized in Sections II and III. USAID/Zaire supports these initiatives and the emphasis being placed on basic education. The Mission's own portfolio, however, will continue to focus on training programs that advance USAID's four strategic objectives. USAID/Zaire has neither the massive financial resources nor the appropriate human resources needed to become a key actor in revitalization of primary and secondary education. A major investment in time would be required just to research a sector in which the Mission has never been involved. Donors with a history of involvement in basic education in Zaire, namely Belgium, private and voluntary organizations (PVOs), and the World Bank, are in a better position to invest in this long-term commitment to educational reform. Moreover, given the differences in the Belgian and American educational systems, the GOZ is more likely to turn to Belgium or to France for technical assistance in curriculum and textbook development.

USAID/Zaire is making a significant contribution to the education sector by: (1) awarding scholarships for overseas study in fields for which in-country training is either unavailable or inadequate, (2) providing short and long-term training opportunities for university faculty, (3) offering on-the-job skill training, (4) strengthening in-country training institutions, and (5) conducting collaborative research studies with universities. These activities are discussed in Sections IV and V.
II. BASIC EDUCATION

A. Institutional Foundation and Structure

1. An Historical Perspective

At independence in 1960, few Zairians had been trained to assume leadership roles. While over one and a half million Zairian children (an estimated 70 percent of the school-age population) were enrolled in primary schools, only 23,000 were studying in post-primary schools. Fewer than 1,000 secondary school students were girls (Hull, 1979). Zaire entered independence with a cadre of trained priests, a couple hundred secondary school graduates, several hundred technical specialists in agriculture and medicine, and only twelve university graduates, out of a population at that time of 14 million.

A large network of primary schools, a modest number of secondary schools, a Catholic university (Kinshasa), a state university (Kisangani), and three professional and technical schools provided the foundation for the new nation's educational system. A third university, established by the Protestants, opened three years after independence (Lubumbashi).

Until the 1970s, most schools were operated by religious private and voluntary organizations (PVOs). In 1971, the government nationalized the three universities and twenty-one technical and teacher-training institutes. Three years later primary and secondary education were brought under state control. Government control of basic education was short-lived; primary and secondary schools that were nationalized were returned to the PVOs in 1976.

2. The Present

Today about 80 percent of primary schools and 66 percent of secondary schools are directly administered by religious organizations (Catholic, Protestant, Kimbanguist, and Islamic). Corporation schools and private schools account for only three percent of the nation's primary and secondary schools. Most of the country's private schools are located in the capital. Twenty-eight percent of the primary schools and 23 percent of the secondary schools in Kinshasa are operated by corporations or private enterprises. Although not sanctioned by any legal convention, more than 135 private institutions of post-secondary education operate in the country (La Semaine, Dec. 1989).
The government, through the Department of Primary and Secondary Education, establishes educational policy and standards, collects statistics, inspects schools, and pays the salaries of school administrators, teachers, and support staff in both public and church schools. The religious bodies appoint their own administrators and teachers and send out their own inspectors.

The Universities of Kinshasa, Lubumbashi, and Kisangani, 14 pedagogical institutes, and 20 technical institutes provide post-secondary education. Authority rests with the Department of Higher and University Education and the Executive Boards of the universities and the pedagogical and technical institutes.

B. Primary and Secondary Enrollment

When measured in sheer numbers, Zaire's educational achievements since independence are impressive. In 18 years, the number of Zairian university graduates grew from 12 to 12,000. During the same period, the number of teachers increased from 37,000 to 230,000.

Today over five million Zairians attend school. Eighty percent of school attenders are enrolled in primary schools, 19 percent in secondary schools, and one percent in universities or institutes of higher education.

In 1986, the number of students in higher education totalled 41,000, with 39 percent enrolled in universities, 27 percent in pedagogical institutes, and 34 percent in technical institutes.

During the 1986-87 school year, 77 percent of primary school-age children and 22 percent of secondary school-age children were enrolled in school. Due to population increases and stagnating enrollments, the percentage of the population in school is falling. A comparison of 1986-87 enrollment figures with those for 1978-79 indicates that there has been an annual growth rate of only 0.6 percent in the number of children enrolled in primary school. During this same period there has been a three percent annual growth rate in the population of primary and secondary school-age children.

While the regions of Kinshasa and Kivu recorded over a 3.5 percent annual enrollment growth rate, Kasai Oriental, Kasai Occidental, and Bandundu witnessed an average annual rate of decline of 1.9, 2.5, and 3.9 percent respectively. The most significant annual enrollment growth rate (13 percent) occurred in secondary schools that offered technical and vocational
education. In the general academic and teacher training programs in which three-quarters of secondary students were enrolled, there was a slight decline in enrollment.

1. **Gender Differences**

Although the annual enrollment growth rate is higher for girls than for boys, particularly at the secondary level, there remains a sizable gap in gender enrollment figures.

-- Around 89 percent of boys attend primary school compared to 64 percent of girls, a difference of 25 percent.

-- At the secondary level, 30 percent of boys enroll in school compared to 13 percent of girls.

Percentage differences in male/female enrollment are especially striking in regional statistics. At the primary level, the difference in male/female enrollment ranges from nine percent in Kinshasa to 40 percent in Equateur, the northwest region.

Women continue to represent a small percentage of the tertiary level student population. Around 13 percent of the students enrolled in universities and institutes of higher education are women.

Although women play an important role in agriculture, they represent only three percent of the students at the Higher Institute of Agronomic Studies and seven percent at the Higher Institute of Rural Development.

2. **Drop-Out Rates**

Compounding the problem of stagnating enrollments is the high attrition rate. For every 1000 children entering school, only six qualify for higher education and fewer are able to enter university or advanced institutes.

-- The highest drop-out rate (18 percent) occurs in the first year of school.

-- Only 45 percent of children entering school complete their primary education.
Seventy-five percent of primary school graduates enroll in secondary school, but half of them are eliminated before the third year.

Of the secondary school students who took the state exam in 1985, 46 percent passed. Among those who passed, only seven percent received a score high enough to be eligible for higher education.

C. Quality of Education

According to the World Bank Policy Study on Education in Sub-Saharan Africa, "The main educational issues in Africa today are the stagnation of enrollments and the erosion of quality." Zairian parents, teachers, and students all speak of the decline in quality. In the absence of cognitive test scores, however, it is difficult to quantify this decline. The deteriorating state of education can be attributed to under-financing, the virtual absence of textbooks and teaching materials, and a crisis in the teaching profession. Many teachers are poorly equipped, both in terms of instructional materials and academic training. Lessons are written on chalkboards and then copied by students into their notebooks. Some problems contributing to the inadequacy of the system are:

-- Teacher Qualification: Many primary school teachers have only a primary school education and no pedagogical training.

-- Failure Rates: In recent years only one-fifth of the students in vocational and technical institutes passed their final examinations.

-- Repeater Rates: In 1978-79, the repeater rate in secondary schools was nine percent; by 1986-87, it had climbed to 18 percent.

-- Regional Disparities: Sixty-one percent of secondary school students in the region of Haut Zaire passed the state exam in 1985; only 33 percent passed in Bandundu.

-- Salaries: On a scale of 100 in 1975, the value of a teacher's salary has fallen to 14. In 1990, a secondary teacher with a bachelor's degree and four children starts out at a salary of about 13,000 zaires ($28) per month. Due to meager salaries, beleaguered teachers are supplementing their income by tutoring, holding "special sessions" for their students, or engaging in other activities such as petty commerce. Although denounced by the authorities and
parents' associations, many teachers collect "contributions" from students in order to augment their salary.

-- Classroom Size: In 1986-87, the national teacher/student ratio was 1:35 at the primary level and 1:28 at the secondary level. These figures mask regional variations. In Kinshasa the ratio at the primary level was 1:56.

-- Relevance: Criticism is made that the educational system inadequately prepares Zairians to contribute to the modern productive sector. The World Bank education mission made the following observation:

The demand from the modern sector, the aspirations of the majority of the students enrolled in the school system, and the attitudes of the system's managers do not appear to coincide. Students aspire to the highest levels of schooling, and consequently favor the theoretical disciplines, which are the most likely to ensure their admission to university. Those responsible for drafting education policy do not know what curriculum to suggest as a grounding for a career in business or industry, and formal education has never really broken away from its initial vocation of providing the government with mid-level employees, despite the excessive number of civil servants (World Bank, 1989, p. iii).

D. Financing

1. GOZ Expenditures

Financing of the education sector has declined dramatically in recent years due, in part, to the need to service the foreign debt and implement budgetary austerity and restructuring policies. As reflected in Table G-1, expenditures in the education sector dropped from 24 percent of the GOZ's total expenditures (recurrent and investment) in 1980 to seven percent in 1986. Nearly all Government of Zaire (GOZ) expenditures for education are recurrent expenses. In 1986, the investment budget represented only one percent of the entire education budget. Over 90 percent of the recurrent expenses of the Department of Primary and Secondary Education are absorbed by salaries. The 150,000 primary and secondary school teachers make up one-third of the entire civil service.
Table G-1: Education as Percentage of Total GOZ Budget, 1980-86 (Recurrent and Investment expenditures)

<table>
<thead>
<tr>
<th>Year</th>
<th>Primary &amp; Secondary</th>
<th>Higher Education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>16.8</td>
<td>7.4</td>
<td>24.2</td>
</tr>
<tr>
<td>1981</td>
<td>17.7</td>
<td>6.1</td>
<td>23.8</td>
</tr>
<tr>
<td>1982</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1983</td>
<td>11.2</td>
<td>5.6</td>
<td>16.8</td>
</tr>
<tr>
<td>1984</td>
<td>6.9</td>
<td>2.4</td>
<td>9.3</td>
</tr>
<tr>
<td>1985</td>
<td>5.2</td>
<td>2.1</td>
<td>7.3</td>
</tr>
<tr>
<td>1986</td>
<td>5.1</td>
<td>2.1</td>
<td>7.2</td>
</tr>
</tbody>
</table>


The GOZ education budget favors post-primary education. Annual government expenditures per student are around $8 at the primary level, $15 at the secondary level, and $268 at the tertiary level. In 1987, one-half of the education budget was earmarked for primary education, one-quarter for secondary education, and one-quarter for higher education. Some years the amount going to tertiary education has been as high as 35 percent.

In the GOZ's Priority Investment Program (PIP) for 1989-1992, 3.2 percent of the investment funds ($93.5 million) are allocated to the education sector. Out of nine sectors, only the urban sector is funded at a lower level. If the PIP is executed as it now stands, investment funds for education will be almost equally divided between the Department of Primary and Secondary Education and the Department of Higher Education. Half of the funds are expected to come from foreign donors and creditors although most of the funds have not yet been committed.

2. Parental Contributions

GOZ expenditures cover less than half the costs of primary and secondary education, according to 1989 World Bank estimates. The educational system is highly dependent on parental
contributions, which include obligatory financial contributions, optional financial contributions, and gifts in kind. A recent survey undertaken by the University of Leuven in Bandundu region found that educational expenses were considered the highest annual expense of rural households, with 34 percent of responding households ranking it first.

Obligatory financial contributions are estimated to constitute 14 percent of total parental payments for primary and secondary education. The remaining parental expenditures are distributed as follows: uniforms, 37 percent; school supplies, 26 percent; gratuities to teachers, 14 percent; transport, 8 percent; and boarding school expenses, one percent.

Table G-2 demonstrates that parental contributions --mandatory and optional--are the chief source of funds for primary and secondary education.

<table>
<thead>
<tr>
<th></th>
<th>Primary</th>
<th>Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>40.7</td>
<td>36.4</td>
<td>39.0</td>
</tr>
<tr>
<td>Family</td>
<td>59.2</td>
<td>38.9</td>
<td>51.3</td>
</tr>
<tr>
<td>Foreign aid</td>
<td>.1</td>
<td>24.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>


3. **Donor Assistance**

Foreign governmental aid has played a minuscule role in primary education in Zaire, and has recently declined. According to statistics collected by the UNDP, the percentage of foreign aid for the education sector fell from 38 percent in 1980 to 18 percent in 1988. One deterrent to higher levels of foreign aid has been the lack of counterpart funds. The GOZ has used investment funds to pay current expenses. In recent years, between one-fourth and one-third of planned projects have been executed. Consequently, projects have experienced excessive delays, incompletion, or cancellation.

G-8
In 1988, twelve donors contributed over $42.5 million to the education sector. Due to lack of uniformity in the way donors classify their assistance, this figure should be used only as an indicator of the level of assistance. Table G-3 ranks donors according to their level of assistance to the education sector. (The United States does not appear on the donor list because all USAID's human resource development activities were classified as "general economic development" rather than as assistance to the education sector.)

### Table G-3: Levels of Donor Assistance to the Education Sector, 1988 (Excludes USG and PVO)

<table>
<thead>
<tr>
<th></th>
<th>U.S. Dollars</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>28,053,020</td>
<td>65.9</td>
</tr>
<tr>
<td>World Bank</td>
<td>3,110,000</td>
<td>7.3</td>
</tr>
<tr>
<td>European</td>
<td>3,004,560</td>
<td>7.1</td>
</tr>
<tr>
<td>Italy</td>
<td>1,637,000</td>
<td>3.8</td>
</tr>
<tr>
<td>UN organizations</td>
<td>1,215,000</td>
<td>2.9</td>
</tr>
<tr>
<td>Great Britain</td>
<td>1,171,800</td>
<td>2.7</td>
</tr>
<tr>
<td>France</td>
<td>1,053,333</td>
<td>2.5</td>
</tr>
<tr>
<td>Japan</td>
<td>917,000</td>
<td>2.1</td>
</tr>
<tr>
<td>African</td>
<td>887,000</td>
<td>2.1</td>
</tr>
<tr>
<td>Development</td>
<td>695,200</td>
<td>1.6</td>
</tr>
<tr>
<td>Bank/ADF</td>
<td>534,660</td>
<td>1.3</td>
</tr>
<tr>
<td>Sweden</td>
<td>217,461</td>
<td>0.5</td>
</tr>
<tr>
<td>West Germany</td>
<td>85,200</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>42,581,234</td>
<td>100.0</td>
</tr>
</tbody>
</table>


3.a. **Belgium.** Belgium far outdistances other donors in its level of education assistance. In 1984, the education sector received 58 percent of Belgium's aid to Zaire. Although the education sector will continue to receive more Belgian assistance than any other sector, future levels are not expected to exceed 28 percent of Belgian aid.

Belgium's aid is mainly in the form of technical assistance. Belgian instructors teach in vocational and technical institutes, universities, teacher training colleges, and secondary schools. The number of teachers dropped from 368 in 1986 to 220 in 1989.
Belgium also provides technical advisors, scholarships, equipment, and school supplies.

3.b. **World Bank.** The second major source of external financing for education is the World Bank. Two projects financed by the GOZ and the World Bank are the Education Technical Assistance and Training Project and the Higher Education Rationalization Project. Under the former, assistance has been provided to improve the planning, management, and administrative capacity of the Department of Primary and Secondary Education. The latter aims to build up a statistical base, train teachers in certain disciplines, develop research capacity in higher education, and provide library and scientific teaching materials.

The World Bank is currently involved in negotiating a credit of about $47 million for the proposed Rehabilitation of the Education Sector Project (Project IV). One component of the project will enable the Department of Primary and Secondary Education to supply basic teaching materials and textbooks for primary and secondary schools.

3.c. **Other Donors and Private and Voluntary Organizations (PVOs).** The European Economic Community (EEC) is the second largest multilateral contributor to Zaire's education sector. Assistance has been almost totally in the form of scholarships for overseas studies. Between 1972-83 around 900 Zairians studied abroad under EEC scholarships.

Other donors provide technical assistance and support activities such as technical education, research studies, and scholarship programs.

As noted in Section II.A., PVOs have played a vital role in the development of the education sector. Until the mid-1950s, there were virtually no state-run schools; now PVOs share the administration and costs with the GOZ. Many PVOs receive funding from bilateral and multilateral donors; in 1988, for example, Belgian PVOs received over $1.3 million from the Belgian government for educational activities in Zaire.

**III. CONSTRAINTS ANALYSIS**

**A. Key Constraints to Improved Education**

The impact of education on agricultural productivity, food security, child survival, health, fertility, and population
growth is well documented. Education promotes equity by increasing social and economic opportunities and empowering the individual.

The status of disadvantaged groups -- girls, rural children, and the poor -- is unlikely to improve if enrollments stagnate or deteriorate. Moreover, Zairian goals of self-reliance will be more difficult to achieve if the scientific and technological gap widens.

A Kinshasa newspaper article (La Semaine, Dec. 28, 1989) lists the following constraints to development of the education sector: continuous deterioration of buildings, school desks, instructional materials; population growth; absence of an education policy; failure to implement approved education projects; insufficient financing; unprofessional behavior of teachers and students; and decline in the status of the teaching profession with "professor" becoming synonymous with "pauper."

1. **Economic**

Section II discussed the dramatic drop in GOZ expenditures for education. At a time of falling family incomes and declining educational quality, some parents have decided that the opportunity costs related to education are too great. Children are kept out of school so that they can contribute to the family's income.

2. **Demographic**

Economic constraints to development of the education sector are exacerbated by demographic pressures. Universal education of primary school-age children by the year 2000 would require the creation of over three million places. To meet this demand, the GOZ's budget for primary education would have to double. Simply maintaining the present enrollment rate without allowing any room for qualitative improvement would require a real increase in the primary education budget of nearly four percent a year. Based on these cost simulations, the World Bank education mission concluded that GOZ expenditures for primary education should first be invested in improvements rather than expansion.

3. **Facilities**

In its policy study on education in sub-Saharan Africa, the World Bank concluded that "The scarcity of learning materials in
the classroom is the most serious impediment to educational effectiveness in Africa."

School children lack not only textbooks but a bench on which to sit. In the city of Kinshasa alone, it is estimated that there is a shortage of 300,000 school benches (Elima, Dec. 28, 1989). It is standard practice to have two shifts of students each day because of limited facilities.

In addition to the provision of textbooks, instructional manuals, desks, and school supplies, other measures recommended for safeguarding education include maintenance and repair of schools and improvements in teachers' training, supervision, working conditions, and salary.

4. GOZ Policy and Planning

Few would dispute the benefits of education or the need to improve quality and increase access. Yet donors are unlikely to substantially increase their assistance for education in Zaire without a comprehensive sector development plan, heightened commitment by the GOZ to education, and administrative and operational changes in the departments of education. Evidence of this commitment would include increased expenditures for education, better utilization of resources, and reform measures.

B. Efforts to Address the Constraints

1. GOZ Reforms

Some reforms have been made in recent years. For example, in 1984 the state relaxed restrictions on non-public primary and secondary schools. There is now further discussion of privatizing government schools. Private schools are one way of increasing access to education and reducing the government's financial burden. To lower unit costs, the GOZ reduced subsidies to university students and eliminated around 40,000 staff positions in the education system that were judged to be fictitious or superfluous.

2. Foreign Donors

Belgium, the World Bank, and the UNDP are working with the education departments to develop their institutional capacities.
The Bank has offered to help prepare an education sector strategy and participate in financing its implementation. Among donors, the World Bank is taking the initiative in promoting primary and secondary education.

IV. USAID's Human Resource Development Program

A. Background

The Zairian educational system often does not offer the expertise and resources needed to prepare individuals for their profession. Students frequently complete their studies with a limited understanding of the subject matter and its application. Consequently, they are ill-equipped to contribute to the country's economic growth. Faced with a scarcity of appropriately trained Zairians who can formulate policies, plan programs, collect and analyze data, and implement development projects, USAID has given high priority to human resource development.

The overall human resource development objective of USAID is to strengthen key Zairian institutions, thereby ensuring the sustainability of development activities and policy reform. To achieve this objective, the Mission is providing academic, technical, and management training to policy-makers and the staff of USAID-assisted projects. USAID is also supporting human resource development in the private sector. Training programs are selected on the basis of whether they support the Mission's Strategic Objectives to: improve health status; increase agricultural production, productivity and rural income; improve transport infrastructure; and increase production and productivity of the private sector.

1. Studies and Project Evaluations

In recent years several studies have helped the Mission sharpen its training objectives. A few of the salient points are summarized below.

1.a. Public Administration. Only 16 percent of the top managers in public administration are university graduates. Personnel working in economic services have long been under-represented, comprising 10 percent of public administration employees. In the "Human Resources Development Strategy and

1.b. **Private Sector.** A "Private Sector Training Needs Assessment" was conducted in 1988 as part of the Human Resource Development Assistance (HRDA) Country Training Plan. Orsini and Harmon noted that "While there certainly is entrepreneurial spirit among the Zairians, there is a lack of experienced, financially sound Zairian businessmen. Entrepreneurial ability ... must be developed." The team concurred with an earlier assessment by Coopers and Lybrand (1987) that USAID should support technical and management training for entrepreneurs of small and medium scale enterprises. Coopers and Lybrand identified the need for training in basic accounting methods, cost control, evaluation of small investment projects, and relations with commercial banks.

1.c. **Industrial and Agricultural Sectors.** Employers interviewed as part of a UNDP-funded study on "Development of Human Resources in the Industrial and Agricultural Sectors" reported that university graduates lacked technical as well as organizational, planning, and management skills. The study forecasts shortages and surpluses in various occupations at certain skill levels.

1.d. **Women.** A 1989 World Bank study of "Women in Development in Zaire" identified the following constraints to women's productivity and opportunities: (1) discriminatory legal status, (2) lack of access to financial intermediation, (3) low health status, and (4) low educational level. In addition to these constraints, rural women lack free time, control over income, and access to land title, inputs, and extension advice.

In 1988, a team of eight evaluated USAID/Zaire's Women in Development strategy. The team found that USAID could do much more to enlarge the pool of qualified women candidates for decision-making positions in government, private enterprises, and USAID projects. The team concluded that "In order for women to fully participate in the development process and to share in its benefits equally with men, USAID/Zaire should become more assertive and determined in its efforts to train more Zairian women. ... More systematic approaches must be devised to improve USAID's identification and selection processes in order to increase the number of women trained."
2. Revised Mission Training Program

These studies, along with project evaluations, have prompted the Mission to focus more sharply its training program. Specifically, the Mission is placing greater emphasis on economic training for public administrators, technical and management training for mid-level workers, and increased training opportunities for women and the private sector. Taking advantage of the U.S. education system's comparative strengths, the majority of the Mission's participants attend either M.S. or Ph.D. programs at U.S. universities, or intensive short-term, francophone management seminars. For in-country training, we are concentrating on short-term management and technical courses, many of whose instructors have attended training-of-trainers courses in the U.S., which enable the Mission to reach a wide range of small-scale entrepreneurs and GOZ cadre.

The remainder of the section describes how training activities are central to the achievement of Mission objectives.

B. In-Country Training

1. Health

USAID health projects support in-country skill training for thousands of lower and mid-level health care providers, including traditional birth attendants, village health and sanitation workers, nurses, and family planning service providers. Training covers such topics as prenatal care, nutrition counseling, and health communication techniques. Staff training focuses on computer, supervisory, and management skills. Training is an important component of the Basic Rural Health Project II (660-0107), representing 20 percent of the budget. Under the project, around 8,000 nurse supervisors, water and sanitation coordinators, village health workers, nurses, and traditional birth attendants will be trained. To date, 58 percent of the training activities have been completed. Training is also incorporated in family planning, nutrition, and health education projects.

1.a. School of Public Health (SPH, 660-0101). The establishment and development of a School of Public Health (SPH) is a major endeavor by the Mission to develop human resources for the promotion of public health in Zaire. Public health issues too often receive superficial attention in the formal training of physicians. In order to effectively institutionalize primary health care, health professionals require additional training.
Since 1985, USAID has sent more than 30 Zairians to the United States for Master of Public Health (MPH) degrees. With the establishment of the University of Kinshasa's School of Public Health, the number of Zairians with MPH degrees is increasing dramatically by about twenty graduates per year.

Under a contract with Tulane University's School of Public Health and Tropical Medicine, USAID is supporting the School of Public Health through tuition grants, faculty training, technical assistance, library resources, research equipment, and budgetary support. SPH offers a one-year program, equivalent to MPH degrees offered by accredited U.S. schools. Since the School opened in 1986, 62 Zairians have completed the program. Eighty-five percent of the graduates are medical directors working in USAID-assisted rural health zones. Over the next two years, the Basic Rural Health Project will finance the training of 35 more physicians. Scholarships are also being provided by UNICEF and WHO. By 1994, around 220 health professionals will have graduated from SPH.

With the benefit of USAID-supplied library and resource materials, SPH is now serving as a national and, increasingly, regional training and research center for a broad range of health issues including family planning, AIDS, and malaria control. Special courses and workshops are attracting people from other countries. Visitors from ten neighboring countries joined 160 Zairians for training in computer applications for primary health care. The centrally-funded Combatting Childhood Communicable Diseases Project is using the School as its health education training center for francophone Africa. The School promises to be an important training institution for many African nations.

1.b. Health Training Centers. The national Oral Rehydration Therapy Demonstration and Training Center at Mama Yemo Hospital in Kinshasa was established with USAID assistance. Centrally-funded projects are increasing the training capacity of family planning training centers through technical assistance, library resources, and curriculum development.

2. Agriculture

Training activities sponsored under agricultural projects are as diversified as those in the field of health. The role of extension agents is to motivate farmers to use improved seed varieties and farming practices. Effective training of these agents is critical to the achievement of project objectives. Over 200 extension workers in Bandundu and Shaba are receiving training in community development and agricultural extension. In Central Shaba, extension agents plan special training activities
each year for over 1,400 farmer leaders. They also organize field days to compare the results of traditional and improved farming practices. Last year more than 10,000 farmers participated in these events. USAID was assisted in some of this effort by Israeli trainers under a joint USAID-Israeli Government program. Other training activities have included skill training for craftsmen who manufacture agricultural tools and for mechanics and equipment operators involved in farm-to-market road rehabilitation.

As part of its efforts to improve small cultivators' access to the agricultural marketing system, USAID has provided assistance to the Bureau of Roads Training Centers in Lubumbashi and Kikwit. The Mission has also supported four Fish Farmer Training Centers, established under the Fish Culture Project with the Peace Corps. In addition to training activities at the centers, fish farmers and government extension agents in six regions receive ongoing, on-site training.

In-country training seminars and workshops are designed to address specific, local training needs. The 1990 in-country training plan for the Agricultural Policy and Planning Project (660-0119) illustrates the variety of training opportunities provided under one project. Short courses or seminars are being developed for research methodology, applied statistics, rapid reconnaissance methods, technical writing, and computer programming. Around 20 seminars will be held on technical, policy-related issues. In-country management training is a feature of this project, as well as all agricultural projects.

3. **Local Management Training Institutions**

USAID supports in-country training institutions through bilateral training activities and Human Resource Development Assistance (HRDA, 698-0463). With high priority given to management training, bilateral projects are sending project staff and beneficiaries to courses offered by in-country management training institutions. One of the objectives of HRDA is to stimulate, facilitate, and support national training programs.

After a review of the recommendations of the Coopers and Lybrand study and the HRDA Private Sector Assessment, the Mission selected the nine institutions named below for FY 1989 private sector training activities. These institutions offered 52 AID-sponsored seminars on a variety of management topics relevant to small and medium enterprises (SMEs), including marketing strategies, legal procedures, stock control, and management ethics. HRDA counterpart funds, valued at around $194,000, paid tuition, transportation, and per diem for nearly 1,500 seminar participants.
participants. Seminars ranged in length from three days to one month for a total of 525 instructional days.

-- CENACOF: Centre National de Coordination de la Formation
-- OPEZ: Office des Petites et Moyennes Entreprises du Zaire
-- CEPETEDE: Centre de Perfectionnement aux Techniques de Developpement
-- UNTZA: Union Nationale des Travailleurs du Zaire
-- CPA: Centre de Perfectionnement en Administration
-- CADICEC: Centre Chretien d'Action pour Dirigeants et Cadres d'Entreprises au Zaire
-- ISC: Institut Superieur de Commerce
-- CPCZ: Conseil Permanent de la Comptabilite au Zaire
-- SEVOZA: Studio Ecole de la Voix du Zaire

Various representatives of these organizations have participated in study tours and overseas training. Training institutions have also received budgetary support through U.S. counterpart funds. In FY 1987 - 89, the Department of Plan requested that over $534,000 in budgetary support be given to specific training institutions from the U.S.-generated counterpart fund. CENACOF, a national training institution established in 1980 with USAID assistance, received $222,000 for tuition grants and budgetary support. Other institutions receiving counterpart funds through the Department of Plan were OPEZ, $96,000; the Institut National de Preparation Professionnelle, $45,000; and several technical and vocational schools, $171,000.

4. English Language Instruction

In order to prepare participant-trainees for academic study in the United States, the Mission sponsors an intensive English language program at the Zaire American Language Institute (ZALI) in Kinshasa. In-country language training is cost effective and significantly reduces the period in which participants are separated from their families. Approximately 30 participant-trainees are enrolled in the 30 hour per week, nine-month program. In addition, ZALI offers 10 hours of weekly instruction for USAID candidates nominated or selected for short-term technical training in the United States, GOZ counterparts involved in the implementation of USAID projects, and USAID foreign service nationals.

For long-term participants, language study continues upon arrival in the United States, normally for a period of three
months. Most participants are enrolled at Georgetown University's American Language Institute or the Economics Institute in Boulder, Colorado. In addition to language instruction, participants at the Economics Institute attend economics and computer classes.

C. Participant Training

Through the provision of USAID scholarships, over 200 Zairians have received advanced degrees from U.S. universities since 1976. Around 70 percent of the degrees were at a master's level and 30 percent at the doctoral level. USAID uses participant training when required academic or technical training is either unavailable or inadequate in Zaire. Observational tours and technical seminars serve to keep Zairian professionals abreast of developments in their particular fields.

During FY 1987-89, an average of 150 participants were in training each year. Table G-4 shows the distribution according to the type of training (academic or technical), training location (United States or third country), and funding (through bilateral projects or regional training programs). Regional training programs include Human Resources Development Assistance (HRDA), African Manpower Development Project (AMDP, 698-0433), and African Graduate Fellowship Program (AFGRAD, 698-0463).

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 1987</th>
<th></th>
<th>FY 1988</th>
<th></th>
<th>FY 1989</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acad</td>
<td></td>
<td>Te</td>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral</td>
<td>63</td>
<td></td>
<td>31</td>
<td></td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td>13</td>
<td></td>
<td>7</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Third Country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral</td>
<td>-</td>
<td></td>
<td>24</td>
<td></td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td>-</td>
<td></td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>76</td>
<td></td>
<td>65</td>
<td></td>
<td>141</td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. Numbers of participants represent the sum of participant new starts during the FY and carryovers still in training from the prior FY.

Source: Congressional Presentation, Fiscal Year 1988, 1989, 1990
In January 1990, there were 85 Zairian participants in long-term academic studies in the United States and 31 in English language study at ZALI. Of those who were studying in the U.S., 52 percent were funded through bilateral projects and 48 percent through general training projects, broken down as follows: agriculture, 44 percent; AFGRAD, 37 percent; health, eight percent; HRDA, six percent; and AMDP five percent.

1. **Health**

Since 1985, over 170 Zairians have participated in United States or third country training under one of the bilateral or centrally-funded health projects. In 1989, 25 Zairians attended short courses or technical seminars outside Zaire in such areas as data analysis, primary health care management, reproductive health, AIDS prevention, and health financing. Seven Zairian health professionals are currently enrolled in graduate programs in the United States under bilateral health projects.

2. **Agriculture**

Graduate-level training is a major component of two agricultural projects. One of the objectives of the Applied Agricultural Research and Outreach Project (660-0091) is to train Zairians to carry out applied research on major food crops. By the end of this year, 35 Zairians will have enrolled in or completed graduate programs in the United States.

Another project with a sizable participant training component is the Agricultural Policy and Planning Project (660-0119). The implementing agency for this project is the Studies and Planning Service (SEP) of the Department of Agriculture. USAID has been supporting SEP since its inception in 1973. During a 15-year period, USAID provided scholarships for graduate study to 70 SEP professionals. Over one-fourth of the returned participants are still employed by SEP. The others hold responsible positions in various key government institutions, donor-funded projects, donor agencies, and private enterprises in the agricultural sector. The current assistance to SEP builds on this foundation and aims to strengthen the institution's capacity to develop and implement agricultural policies and investment plans. Sixteen SEP employees are presently enrolled in language or academic programs.
3. Regional Projects

3.a. HRDA. Target groups for HRDA training are policy-makers, government department advisors, financial leaders, faculty members of training institutions, professors, researchers, and private sector entrepreneurs. HRDA identifies individuals who work in USAID's priority sectors but are not associated with any technical project. Since other projects adequately cover the agricultural and health sectors, HRDA's long-term training focuses on economics, economic policy, management, finance, and other areas of increasing importance to Zaire's development.

The funding level for HRDA during FY 1988-90 was $3.7 million. Assuming an annual funding level of $1 million until the project's completion in 1995, the total budget will be over $8.5 million. Under HRDA, 18 Zairians will receive graduate degrees in economics, statistics and management. Five are currently in the States; 12 in language study at ZALI. In addition to long-term academic study, HRDA's training mechanisms include regional conferences on entrepreneurial development, francophone management seminars, observation tours on economic-related issues, internships for business school professors in U.S. firms, and the Entrepreneurs International Program.

3.b. AFGRAD. As the name suggests, AFGRAD is restricted to graduate-level training in the United States. AFGRAD is administered by the African-American Institute. The objective of AFGRAD is to prepare Africans to assume high-level positions of responsibility in government service, universities, or the private sector. From among a list of disciplines accepted by the AFGRAD program, USAID/Zaire has identified those fields which conform to the Mission's development priorities. The most talented individuals from any of these fields are potential candidates for scholarships. Zairians have recently been awarded AFGRAD scholarships in economics, business, management, civil engineering, demography, and animal and plant production.

Through central funding, 15 AFGRAD fellowships are being provided over a five-year period. Buy-ins, mostly financed by deobligations-reobligations, have made it possible for the Mission to supplement this program with approximately 15 long-term participants each year. From 1963-80, fifty-five Zairians received AFGRAD fellowships for M.S. or Ph.D. training. Since 1980, seven Zairians have completed their AFGRAD fellowships. Currently, 31 are studying in the U.S., and 26 are in language study at ZALI. Approximately two-thirds of the
AFGRAD participants will receive master's degrees; one-third will earn doctorate degrees.

D. Target Groups

Target groups for training fall under 4 general categories: (1) public sector, (2) private sector, (3) women, and (4) private and voluntary organizations (PVOs). There are various processes by which candidates are selected for training. Under bilateral projects, the relevant government department puts forth nominations for training. An individual's position in an organization, experience, and previous academic training are factors in the selection. General training programs, such as HRDA and AFGRAD, have a larger pool of candidates from which to choose since recruiting is not limited to project staff or government departments.

1. Public Sector

The human resources development strategy aims to strengthen GOZ capacity for data collection and analysis, policy formulation, and planning in areas crucial to the success of USAID's development program. To that end, people are being trained from the Departments of Public Health, Agriculture, Higher Education, and Plan, as well as from the National Rural Water Service, the National Bureau of Roads, GOZ management institutions, and the Bank of Zaire.

2. Private Sector

Development of the private sector through the promotion of small and medium scale enterprises supports economic liberalization measures. HRDA's training plan places high priority on the private sector, providing both in-country management training for SMEs and participant training. A delegation of five Zairian officials representing the university, the Chamber of Commerce, and the GOZ's private sector support agency toured the United States as part of a program on entrepreneurship. Several professionals from the Office of Small and Medium Enterprises have attended short courses or enrolled in long-term academic programs under HRDA.
3. **Private and Voluntary Organizations**

The role of private and voluntary organizations in Zaire's development cannot be overemphasized. The Church of Christ of Zaire, a national indigenous PVO, implements the Basic Rural Health Project. PVOs administer 75 percent of the health zones assisted by USAID. Training activities under family planning projects and the Kimbanguist Hospital Project also involve PVOs.

USAID-assisted agricultural projects in Bandundu and Shaba work closely with PVOs; sixty-five PVO extension agents associated with these projects receive periodic training. Training is also provided for agricultural inspectors and PVO representatives. Under the Small Project Support Project, PVO representatives working in the fields of agriculture, health, and transportation participate in financial management seminars.

4. **Women**

Until recently, few Zairian women had benefited from participant training. Project staff, counterparts, and beneficiaries were men; consequently, women were bypassed in the selection process. To rectify this situation, the Mission adopted the following policy, dated June 21, 1989:

USAID encourages the participation of women in all training programs. To the extent feasible, Project Officers and the Training Section should identify female candidates for training. Written exception must be prepared for the Director's signature if the percent of women participants in any training program is less than 25 percent.

The two national agricultural projects have fallen far short of meeting this objective. In the Applied Agricultural Research and Outreach Project, no woman is on the professional staff of the GOZ's implementing agency. Consequently, all 35 long-term participants are male. A similar situation prevails in the Department of Agriculture's Studies and Planning Directorate (SEP). Of the 70 Zairians trained under two previous projects assisting SEP, only one was a woman. Presently, there are 65 professionals on the staff of SEP. Six are women, but only two are at an educational level high enough to be considered for graduate training.

Agricultural projects working at the provincial level have been more successful in engaging women; a deliberate effort was made at the outset to employ women as project staff and to target women as beneficiaries.

G-23
Many women receive in-country training under USAID-supported health and family planning projects, but they are underrepresented in long-term academic programs. All of the Zairian medical directors of the USAID-assisted Basic Rural Health zones are men, and it is this group that is receiving MPH training at the School of Public Health. Of the ten SPH faculty members sent for Ph.D. training, two are women.

Although few women have benefited from long-term training under bilateral projects, they have received numerous AFGRAD and HRDA scholarships. Since 1980, Zairian women have been awarded 15 AFGRAD scholarships, representing 23 percent of the total. Of the 17 long-term HRDA participants, eight (47 percent) are women. A special effort is being made to ensure that women are included in HRDA-supported local management seminars for SMEs. In 1989, six management seminars for women were offered on such topics as "Women and Credit" and "Accounting Techniques for Women Entrepreneurs." A recent innovation is the provision of small local currency loans to women graduates of these seminars to help them in their micro-enterprises.

5. Returned Participants

Human resource development must be more than just the acquisition of certain skills. To stimulate changes required to achieve project goals and economic growth, individuals must be motivated to apply these skills to the long-term task of development. Professional organizations or support networks can offer a forum for the discussion of development issues and the dissemination of research findings. USIS provides facilities to the recently-established Zairian-American Alumni Association. USAID is considering funding a small library and an alumni newsletter. The Mission is also exploring the possibility of sponsoring a pre-departure orientation for participants under the auspices of the Zairian-American Alumni Association. The Mission Director hosts a biannual awards ceremony to recognize returned participants.

V. FUTURE HUMAN RESOURCE DEVELOPMENT ACTIVITIES

A. Continuing Program

With nearly 5,000 Zairians receiving training each year through USAID-assisted programs, human resource development represents a major investment in money, personnel, and time.
USAID's training programs cut across economic, social, and educational levels, from poor urban women trained in nutritional surveillance to government policy-makers trained in econometrics. USAID will continue to support a wide range of training during the next few years.

1. Health

Over 4,500 health care providers have been trained under the Basic Rural Health II Project, and 3,000 more are scheduled over the next three years. In-country training will continue for family planning service providers and health educators/motivators. Training has been a weak component of the centrally-funded Combatting Childhood Communicable Diseases Project; consequently, the Mission requested that the Center for Disease Control provide a technical training advisor. This individual, presently being recruited, will work with the Expanded Program of Immunization in improving the modules taught in nursing and medical schools and in instructing people in their use.

With the exception of Ph.D. training for the School of Public Health's faculty, nearly all long-term training for health professionals will be undertaken in Kinshasa at the SPH. Each year 20 to 25 physicians will graduate from SPH. In FY 1990 more than 25 Zairians will travel to a third country or to the United States for short-term training under one of the bilateral health projects. AIDS prevention will be the focus of several of these programs. As a way of assessing its training portfolio, USAID/Zaire's Health, Population and Nutrition Office recently sent a questionnaire to former USAID participants who had studied in a health or health-related field. This survey will provide information on participants' perceptions of the appropriateness and quality of their training.

2. Agriculture

The agricultural projects in Bandundu and Shaba will continue their emphasis on agricultural extension. A successful training activity which will be repeated on an annual basis is a two-week, in-country course conducted by Israeli trainers for project extension agents. Over the next four years, around 60 Zairians will be sent for short-term, technical training under the two agricultural projects working at the provincial level. Training will focus on agricultural extension, production, and management. Observation tours focused on seed production.
cooperatives and grain storage are under consideration. Long-term training is not included in these projects.

Long-term training is, however, a significant feature of the two agricultural projects operating at the national policy level. In January 1990, a training needs assessment was made of the Agricultural Policy and Planning Project. The Mission is reviewing the assessment to determine training requirements. The Applied Agricultural Research II Project (1990-2000) is under design. Currently, $4.1 million is earmarked for training.

3. Transport

Another project under design, the Transport Reform Project, will include a training component. The focus will be more on institution and team building for the advisors and counterparts than on technical skills. Zairians are now receiving short-term, third-country training in road management under the Agricultural Marketing Development II Project (660-0098).

4. PVOs and Private Sector

Two projects initiated in the last year will increase the number of training opportunities available to PVOs and the private sector. Seminars will be held for PVOs on accounting procedures, financial analysis, and financial projection under the Small Project Support Project. Training activities initiated under the Fish Culture Project will be incorporated under the Small Projects Support Project. Beneficiaries of training under the Private Sector Support Program will be representatives of financial institutions, business firms, and business associations. With more private sector activities anticipated under bilateral projects, there may be training opportunities for firms involved in social marketing, road construction and maintenance, and agribusiness.

5. Management Training

In-country management seminars for entrepreneurs of small and medium enterprises will continue under the HRDA local currency budget. Fifty seminars for 1,500 entrepreneurs are planned for FY 1990, including more seminars in USAID's two geographic regions of concentration in support of the GOZ's moves toward increased decentralization. Other SME in-country training programs under consideration include two to four weeks of
technical training for entrepreneurs in large, Kinshasa-based companies, on-the-job technical assistance to SMEs, and seminars organized by local banks on credit programs for entrepreneurs. In addition to these in-country activities, representatives from private sector firms, government departments, and training institutions will participate in management seminars in the United States. HRDA will also fund observation tours, entrepreneurial training programs, short-term technical courses, and regional seminars. In FY 1990 HRDA will provide funding for around 100 short and long-term participants. The total HRDA buy-in for FY 1990 is $1.3 million, and the same amount is planned in each of the next four years.

6. Long-Term Participant Training

Most long-term training outside bilateral projects will be provided through AFGRAD. Since USAID pays the tuition of HRDA participants but not of AFGRAD participants, the cost difference per participant is $20,000 at the master's level and $30,000 at the doctoral level. The AFGRAD budget for FY 1990 is $700,000. If funding levels remain the same, the Mission will support an average of 15 new AFGRAD participants each year.

B. Future Funding Commitments

Human resource development represents a sizable proportion of the Mission's total budget. Future funding commitments will depend in part on the results of a September 1990 Mission-wide evaluation of all training activities. The evaluation will assess training strategy and methodology, cost effectiveness, and impact. Furthermore, it will assist the Mission in developing a consolidated strategy with complementary training activities for the achievement of Mission objectives.


Smith, Robert Eugene. "L'enseignement secondaire au Zaire: Perspectives Africaines et internationales." (Unpublished)


G-29
ANNEX H

PL-480 FOOD AND FIBER ASSESSMENT

USAID/Zaire
# PL-480 FOOD AND FIBER ASSESSMENT

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>iii</td>
</tr>
<tr>
<td>I. OVERVIEW</td>
<td>1</td>
</tr>
<tr>
<td>II. ROLE OF PL-480 IN USAID/ZAIRE PROGRAM</td>
<td>1</td>
</tr>
<tr>
<td>A. Objectives</td>
<td>1</td>
</tr>
<tr>
<td>B. Food and Fiber Availability</td>
<td>2</td>
</tr>
<tr>
<td>C. Increased Production and Private Sector Employment</td>
<td>3</td>
</tr>
<tr>
<td>1. Value-Added</td>
<td>3</td>
</tr>
<tr>
<td>2. Employment</td>
<td>4</td>
</tr>
<tr>
<td>D. Balance of Payments</td>
<td>4</td>
</tr>
<tr>
<td>E. Demand for U.S. Agricultural Products</td>
<td>5</td>
</tr>
<tr>
<td>III. FOOD AND FIBER NEEDS ASSESSMENT</td>
<td>6</td>
</tr>
<tr>
<td>A. Summary</td>
<td>6</td>
</tr>
<tr>
<td>B. Methodology</td>
<td>7</td>
</tr>
<tr>
<td>C. Cereals</td>
<td>8</td>
</tr>
<tr>
<td>1. Maize</td>
<td>8</td>
</tr>
<tr>
<td>2. Rice</td>
<td>9</td>
</tr>
<tr>
<td>3. Wheat</td>
<td>9</td>
</tr>
<tr>
<td>D. Non-Cereals</td>
<td>10</td>
</tr>
<tr>
<td>1. Cassava</td>
<td>10</td>
</tr>
<tr>
<td>2. Plantain and Peanuts</td>
<td>10</td>
</tr>
<tr>
<td>3. Cotton</td>
<td>11</td>
</tr>
<tr>
<td>IV. DISINCENTIVE ANALYSIS</td>
<td>11</td>
</tr>
<tr>
<td>A. The Demand Side: Price and Income Effects Related to Staple Food Consumption</td>
<td>11</td>
</tr>
<tr>
<td>1. Cassava and Imports</td>
<td>12</td>
</tr>
<tr>
<td>2. Imported and Local Rice</td>
<td>13</td>
</tr>
<tr>
<td>3. Income</td>
<td>13</td>
</tr>
<tr>
<td>4. Price and Income</td>
<td>14</td>
</tr>
<tr>
<td>5. Non-Price Factors</td>
<td>15</td>
</tr>
</tbody>
</table>
IV. B. The Supply Side: Disincentive Effects

1. Rice
2. Cotton

V. USAID/ZAIRE PL-480 ASSISTANCE REQUEST FY 90-93

List of Tables

H-1: Zaire Wheat, Rice and Cotton Production and Imports, 1985-1989
H-3: CY 1990 Food Balance, Zaire
H-4: CY 1990 Cotton Balance, Zaire
H-7: Expenditure Elasticities for Selected Food Items - Kinshasa, 1986
H-8: Returns to Production of Selected Crops, Haut-Zaire, 1982/83
H-9: Real Producer and Consumer Prices for Rice and Maize and Marketing Margins, 1982-1986, Zaire
H-10: Cotton Production, Zaire
H-11: Comparison of Cotton Production in Zaire and Francophone West African Countries, 1986
H-12: Evolution of Seed Cotton Purchase Price and the Sale Price of Fiber to the Textile Mills, Zaire
H-13: Returns to Production of Selected Crops, Bas-Uele, 1986
H-14: Forecast of Zaire Wheat, Rice and Cotton Consumption, Production and Imports, 1990-1993

List of Figures

H-1: Real Retail Prices in Kinshasa, 1961-1988
H-2: Real Monthly Retail Rice Prices, Kinshasa, January 1985 - December 1988
GLOSSARY OF TERMS USED

A.I.D. : U.S. Agency for International Development
chikwangue : cassava meal
CIF : Cost-Insurance-Freight
cossette : dried cassava chip
CY : Calendar Year
EEP : Export Enhancement Program
FOB : Free On Board
fufu : thick dough made from cassava
FY : Fiscal Year
GDP : Gross Domestic Product
GOZ : Government of Zaire
HRW : Hard Red Winter wheat
IMF : International Monetary Fund
kg : kilogram
LDC : Less Developed Country
MT : Metric Ton
NPA : Non-Project Assistance
OFIDA : Office des Douanes et Accises
PL-480 : Public Law 480, the Agricultural Trade and Development Assistance Act of 1954, as amended
SAF : Structural Adjustment Facility
SEP : Service d'Etudes et Planification
USAID, USAID/Zaire: A.I.D. Mission in Zaire
UTEXCO : Zaire's largest textile firm
WFP : World Food Program of the United Nations
Z, zaire : Zaire, the local currency; in March 1990, U.S. $ 1.00 = Z 500
PL-480 FOOD AND FIBER ASSESSMENT

I. OVERVIEW

PL-480, Title I commodity financing assistance is a key element of the United States economic assistance program in Zaire. Over the FY 1986 - 1989 period, the annual value of this non-project assistance (NPA) almost doubled, from $13.0 million in FY 1986 to an average of $24.9 million in FYs 1987, 1988 and 1989, representing one-third to one-half of the USAID program. The commodities are imported exclusively through the private sector.

PL-480, Title I wheat, cotton and rice provide benefits to Zaire by alleviating the production shortfalls in basic foods and cotton fiber and by contributing to the national balance of payments. The commodities maintain private sector employment in two key industries and within the commercial sector. Furthermore, counterpart funds generated from PL-480 commodity sales support public and private sector development activities in Zaire.

The contribution of PL-480, Title I to increasing the demand for U.S. commodities is discussed in Section II below. A more detailed Food and Fiber Needs Assessment is found in Section III. The potential for PL-480 commodity imports to have a disincentive effect on agricultural production and rural income, is discussed in Section IV with the conclusion that virtually no disincentives accrue. Indeed, through more judicious use of conditionalities regarding agricultural policies, the Mission hopes to increase the positive impact of PL-480 on that sector in the future. Section V presents the Mission's request for PL-480 assistance at increased levels during the Action Plan period.

II. ROLE OF PL-480 IN USAID/ZAIRE PROGRAM

A. Objectives

The objectives of USAID/Zaire's PL-480 program are as follows:

1. To alleviate the production shortfalls in basic foods and cotton fiber through allocation of these commodities to experienced private entrepreneurs for direct sale or processing;
2. To maintain employment and Zairian value-added in two key industries and within the commercial sub-sector;

3. To supplement the supply of foreign exchange to finance the country's critical import needs for food and fiber commodities; and

4. To establish and/or increase demand for U.S. agricultural commodities by introducing standardized and guaranteed quality food and fiber products to local distributors and commodity processors.

B. Food and Fiber Availability

Zaire is among the richest of countries in sub-Saharan Africa in terms of its agricultural potential. The climate is favorable to cropping and livestock production, with droughts absent except for rare occurrences along the northern border. The country has a relatively high percentage of adequate-to-good quality soils and a huge surplus of unused or underutilized lands. Less than 3 percent of Zaire's land area is cultivated, and only about 1.5 percent of it is used for grazing.

Since independence in 1960 and until the mid-1980s, however, food output virtually stagnated while industrial and export crop output declined. This has resulted in an increase in food imports from zero in 1960 to 20 percent of total imports in 1985, and in a reduction of the share of agricultural exports to all exports from 41 percent in 1960 to a low of 8 percent in 1985. The rapid annual population growth rate of 3 percent, whereby the population has more than doubled since independence, has also contributed to the increased requirement for food.

In spite of the fact that domestic food production has increased at a slower rate than that of population, the per capita availability of calories remained virtually constant during this period. Rising food imports, of which PL-480 has been an important source, have alleviated the food gap. Of all the energy-type food imports, wheat is first in value (45 percent of wheat imports have been PL-480 financed since 1982) and rice is third (approximately 47 percent of rice imports have been PL-480 financed since 1987).

Wheat, rice, and cotton have been the only commodities imported under PL-480, Title I in recent years. Table H-1 provides figures on their production and imports, including PL-480 imports, since 1985. Local production of wheat is minimal with only small amounts grown in higher elevation areas of the eastern region of Kivu. PL-480 wheat has been a major source of
wheat supplies, averaging 30 percent of availability from 1985 to 1988. Domestic production of rice is much greater, and PL-480 imports have been less important, only beginning in 1987 and averaging 9 percent of availability. For cotton, PL-480 has been the sole source of imports since 1987. PL-480 cotton imports have averaged 35 percent of availability since 1985.

As discussed in Section III, cassava and maize are far more important components of Zairian caloric intake than wheat and rice. In the aggregate, imports do not make up a large part of the Zairian diet. PL-480 wheat and rice imports have generally comprised less than 1 percent of the total food supply, with wheat averaging less than 0.6 percent of total available calories since 1985 and rice averaging less than 0.3 percent since 1987.1

C. Increased Production and Private Sector Employment

PL-480 commodity imports have had a significant impact on value-added and employment. The program is additionally a key element in USAID's support to the GOZ's macroeconomic adjustment program.

1. Value-Added

PL-480 commodity financing assistance averaged the following over the FY 86-89 period:

-- $9.37 million worth of wheat (63,860 MT);
-- $5.20 million worth of cotton (3,900 MT); and
-- $9.43 million worth of rice (35,213 MT).

The total of $24.0 million thus represents approximately half of total annual USAID assistance to Zaire.

Net value-added of $50 million is generated each year by the $14.6 million worth of wheat and cotton imported. That is, for every dollar worth of PL-480 wheat and cotton imported, an average of $3.43 ($3.08 for wheat and $4.07 for cotton) of net

1 Total calorie availability is calculated by converting cassava, maize, wheat, rice, peanuts, and plantain availability into their calorie equivalent. Because these commodities are estimated to comprise approximately 80 percent of the Zairian diet, total calorie availability reached by multiplying by the aggregate calories of these six commodities by 1.25.
value-added is generated. Thus, PL-480 wheat and cotton generated a net value-added equivalent to nearly 1.0 percent of Zaire's 1989 recorded GDP. The figure would be larger if the impact of the PL-480 rice imports was also analyzed.

2. Employment

The retention of 42,000 jobs may be attributed to PL-480 imports. Wheat processing and bread sales account for 32,000 jobs, while cotton fiber processing and fabric printing account for 4,800. These estimates do not take into account the number of distributors of wheat flour and their work force, the number of women selling homemade wheat products, the wheat flour and fabric transporters and their work forces, nor the cloth retailers and their work forces. The Mission's current estimate is that these activities would account for at least another 3,200 jobs, bringing the total for jobs generated by PL-480 wheat and cotton imports to 40,000.

The impact of PL-480 rice on employment is more limited, given the dispersed nature of the distribution industry. During the FY 87-89 period, PL-480 rice imports averaged 35,213 MT per year, or 50.5 percent of Zaire's rice imports. Rice retailers, on the average, sell one 50 kg bag each 2.5 days. In order to sell 35,213 MT of rice, 704,260 person days would be needed. Thus, a minimum of 2,000 rice retailers are engaged in selling PL-480 rice each year.

D. Balance of Payments

Chronic foreign exchange shortages constrain economic growth and private sector development in Zaire. Official development assistance and IMF credits have helped Zaire to sustain imports, including necessary food, fuel, and industrial commodities. IMF, World Bank and USAID programs supported stabilization and structural adjustment during the 1980s. In fact, this external financing played an essential role in encouraging the GOZ to adopt and maintain the policies necessary to stimulate economic growth in the long-term. When net external financing declined in 1986-87, the GOZ suspended its IMF and World Bank programs, destabilizing the domestic economy. By early 1989, the GOZ's macroeconomic program was back on track. During 1989, Zaire's central bank sold approximately $30 million per month in foreign exchange to the private sector through the banking system. This helped to keep the private sector afloat and to stabilize the value of the national currency, the zaire. As of March 1990, foreign exchange prospects are poor, with the private sector
outlook depending on GOZ agreement on new macroeconomic measures and new increases in IMF and donor financing.

Although Zaire maintains a balance of trade surplus, high debt service dominates the balance of payments yielding a deficit on current account (excluding transfers) equal to $812 million, or an estimated 12.8 percent of GDP in 1989 (Table H-2). Zaire earned $2.2 billion on exports in 1988 and again in 1989. Prices for copper, which accounts for approximately one-half of all exports, were well above historical trends during the two years. Other significant exports include diamonds, cobalt, crude oil, and coffee. Imports increased at an average rate of 10 percent per year in 1988 and 1989 to $2.0 billion. Zaire's external debt totals $7.3 billion. Despite Paris and London Club reschedulings and debt forgiveness, debt service amounted to $324 million in 1988 (including IMF payments), and $220 million in 1989. IMF credits and foreign aid totaled an estimated $600 million and approximately $750 million in 1988 and 1989, respectively.

Trade prospects are less than promising for the next few years as Zaire faces increasing competition in world copper markets. Copper prices are expected to decline in the early 1990s. With debt service obligations of over $350 million, current account deficits are projected to exceed $600 million per year through 1993. The external financing gap (after existing commitments) is estimated at $150 million for 1990 and substantially higher in successive years. PL-480 imports will play a crucial role in helping to fill the gap while supporting Zaire's structural adjustment program and private sector activity.

E. Demand for U.S. Agricultural Products

U.S. origin rice commands a premium of 15-20 percent routinely in the Kinshasa market over rice of Asian origin. During the end of the year holidays and other festival seasons, a premium of 25-30 percent is quite common. The uniform long grain, the low level of brokens, and, most importantly, the very low level of foreign matter are the major factors which motivate consumers to pay this premium. Interviews undertaken by USAID suggest that there is so much foreign matter, including stones, in most Asian rices that the quantity of edible rice diminishes to the point where the cost of edible rice is above the market price of the U.S. product. Additionally some claim that it takes up to one half hour to clean a sufficient quantity of Asian rice to feed an average family. This last factor is cited by working women as a time savings that is especially important. When the cost of U.S. origin rice is within 10-15 percent of the price of
Asian rice for the same stated grade, importers thus prefer U.S. origin rice.

Wheat of U.S. origin is especially valued because of the availability of hard red winter (HRW) varieties which have superior baking quality to the soft wheats available from Europe. Zaire's largest private flour mill, Midema, a branch of U.S. Continental Grain, which has been the only importer of U.S. bulk wheat, uses a blend of not less than 75 percent HRW and not more than 25 percent soft wheat. Midema also cites the uniform quality of U.S. wheat and its low level of foreign matter as an advantage over some of the European wheats. Midema regularly purchases U.S. wheat under the Export Enhancement Program (EEP) to supplement the PL-480 financed wheat to meet its tonnage requirements. In the 1987-1989 period, such purchases averaged 79,000 MT per year.

The Zairian cotton importers request U.S. origin quality cotton again because of quality, primarily the uniformity of the long staple fiber. The local cotton is short staple of poor quality. Blending local cotton with superior cotton is required to produce cloth of a quality which can compete with imported fabric.

III. FOOD AND FIBER NEEDS ASSESSMENT

A. Summary

In order to determine the potential demand for PL-480 food commodities, USAID/Zaire arranged for a Food Needs Assessment of the 1990 food supply and utilization situation during December 1989. The commodities covered in the national level assessment included maize, rice, wheat, cassava, plantain, and peanuts. The assessment concluded that the outlook for 1990 is one of deficits for all commodities except cassava which shows a small surplus. Of the cereals, wheat registers the largest shortfall with a deficit of 118,572 MT (unmilled) before food aid; maize and rice show deficits in 1990 of 40,061 MT (unmilled) and 85,985 MT (milled), respectively. A surplus of 12,704 MT (milled) was evident for cassava indicating that domestic production is adequate to support average consumption levels of the past 5 years. Table H-3 presents the food balance situation by commodity for 1990.

The Mission also conducted a commodity gap analysis to ascertain the deficit/surplus situation for cotton in 1990. Given a production level of 13,222 MT and per capita utilization of 0.9 kg/year, a deficit emerges for seed cotton of 20,050 MT.
Converting seed cotton fiber at 35 percent yields a deficit for cotton fiber of 7,018 MT. Aid commitments of cotton fiber reduce the projected deficit for 1990 to 3,318 MT. The 1990 balance for cotton is shown in Table H-4.

The Mission estimated availability of maize, cassava, plantain, and peanuts in 1990 using an average of per capita availability over the past five years. For wheat and rice, the analysis used a linear trend based on the five year base period average to reflect rising urban demand. For the current year, the analysis multiplied per capita availability by the population to arrive at a total consumption requirement. It should be noted that per capita availability reflects apparent consumption, rather than actual food intake per person.

B. Methodology

The 1990 food needs assessment included six commodities covering a substantial part of the Zairian diet: maize, rice, wheat, cassava, plantain, and peanuts. These commodities combined contribute approximately 80 percent to total caloric intake.

Cassava emerges as the principal dietary staple with a share of 56 percent of total caloric intake, followed by maize at 9 percent, plantain at 5 percent, peanuts at 4 percent, rice at 3 percent, and wheat at 2 percent. These shares of the diet figures, however, are national averages and do not reflect regional or rural-urban differences. Significant differences in consumption across regions exist in Zaire. For example, maize rather than cassava predominates in the regions of Shaba, Kasai-Oriental, and Kasai-Occidental. Furthermore, some commodities are consumed almost exclusively in urban areas. Wheat, for instance, is the primary example of a food consumed in cities rather than in rural areas.

The period of analysis for the 1990 assessment includes calendar years 1985 - 1989. Data on production, imports/exports, non-food uses, and per capita availability were collected for five historical years.

The analysis adjusted gross production of all commodities downwards to account for seed requirements, feed use, and post-harvest losses. Net domestic production thus reflects what is available for human consumption after the harvest. In addition, milling extraction rates were applied to commodities included in the assessment as follows: maize (0.85), rice (0.60), wheat (0.75), cassava (0.30), plantain (0.90), and peanuts (0.70).
The weakness of statistical data is evident across all sectors in Zaire, with agriculture being no exception. Data on production, area planted and yields by crop are scarce, and if available are often inconsistent. Thus, data on agricultural production should be interpreted with caution. The sole source of agricultural production data used in this assessment is the Department of Agriculture's Service d'Etudes et Planification (SEP), which receives USAID technical assistance. Official statistics on the 1988 agricultural campaign are not yet officially released; linear trend estimates based on historical data are thus used to calculate domestic crop production for 1988 and subsequent years. Data on imports and food aid are those of the Office des Douanes et Accises (OFIDA), USAID/Kinshasa, and World Food Program (WFP). No reliable data were available for stocks in Zaire; therefore, no adjustment was made for stock changes.

C. Cereals

1. Maize

1.a. Production. Maize is cultivated throughout Zaire, with the regions of Shaba, Kasai-Oriental, and Kasai-Occidental emerging as the principal production zones. For the most part, production is characterized by traditional cultivation techniques with observed yields of 0.8 - 1.0 MT per hectare in 1986/87. Average yields per hectare in Zaire are low; improved seed varieties and fertilizer are not commonly used in maize cultivation. Although maize production projects in Shaba and Kasai-Oriental have recorded increases in output, data from the Department of Agriculture show that per capita maize production has stagnated since 1985, with production just keeping pace with population growth.

1.b. Per Capita Availability. Maize represents the principal cereal in Zaire, both in terms of production and consumption. Although cassava is the primary staple on a national level, maize figures prominently in the diet in certain regions. In addition, in some areas substantial quantities of maize are used to produce local beer. National per capita availability of maize has remained fairly stable over the base period, averaging 20.3 kg (unmilled)/year. Since 1985, official maize imports -- commercial and concessional -- have likewise remained stable averaging 55,000 MT/year. Although unofficial imports of maize flour from Zambia are widely acknowledged,
actual quantities crossing the border into the Shaba region are unknown.

1.c. **Food Balance.** With an 1990 estimate of gross production of 773,961 Mt and imports equal to last year's level, a deficit emerges for maize of 40,061 MT (unmilled).

2. **Rice**

2.a. **Production and Per Capita Availability.** Trends in rice production show some increase over the past five years, rising from 297,167 MT in 1985 to 314,370 MT (unmilled) in 1989. Similar to the case of maize, however, per capita rice production has stagnated since the mid-1980's. Imports of rice have increased rapidly contributing to a stabilization of national per capita availability at 7-8 kg(milled)/year.

2.b. **Food Balance.** A 1990 estimate of paddy production of 318,210 MT with projected commercial imports of 94,567 MT (milled), yields a deficit of 85,985 MT (unmilled) before food aid. After food aid commitments expected to arrive in-country during 1990 are considered, a shortfall of 30,177 MT of milled rice is forecast.

3. **Wheat**

3.a. **Production/Imports.** Very little wheat is produced in Zaire, with production reaching only 6,000 MT in 1989. However, wheat, and wheat equivalent in flour, imports are substantial, averaging 245,710 MT (unmilled) per year over the base period. Commercial wheat imports have increased in recent years rising from 113,352 MT in 1985 to 147,995 MT (unmilled) in 1989. On an annual basis food aid represents approximately 37 percent of total wheat imports.

3.b. **Food Balance.** In the past five years per capita availability of wheat has averaged 7.7 kg per year (unmilled). This figure, however, represents national availability and obscures differences in rural-urban consumption patterns. Wheat is consumed primarily in urban areas in the form of wheat flour and/or bread. For example, data from a 1986 household expenditure survey conducted by Hoyeux show that consumption of bread in Kinshasa averaged 19 kg/person/year. Assuming commercial imports in 1990 of 148,000 MT (unmilled) --

H-9
maintaining last year's level of imports -- wheat shows a substantial shortfall before food aid of 118,572 MT (unmilled). Food aid commitments to date reduce the projected wheat deficit to 80,572 MT (unmilled) in 1990.

D. Non-Cereals

1. Cassava

1.a. Production. Data on cassava production show a steady increase in output over the base period. Cassava is by far the dominant food crop across regions; in 1985 cassava represented approximately 50 percent of total area cultivated in staple crops. Although cassava is cultivated throughout the country, Kivu, Bandundu, Shaba, and Kasai-Occidental stand out as major producing regions in terms of hectares planted.

1.b. Per Capita Availability. As the primary dietary staple, cassava is consumed in both rural and urban areas. Annual per capita availability on a national basis has averaged 136.7 kg (milled) over the past five years. Although only cassava roots were considered in this analysis, both roots and leaves are consumed in Zaire. The roots are dried, ground into flour, and then prepared as a thick dough (chikwangu or fufu) served as the staple of the principal meal; the more nutritious cassava leaves are prepared as a vegetable dish mixed with palm oil and spices.

1.c. Food Balance. With cassava production estimated at 17,982,000 MT (unmilled) in 1990, the food balance situation is one of surplus. The surplus, albeit small, indicates that domestic production is adequate to support average per capita availability of the past five years.

2. Plantain and Peanuts

Domestic production of both plantain and peanuts has shown a slight increase over the last five years, with annual per capita availability averaging 49.5 and 9.9 kg respectively. In contrast to cassava, however, deficits emerge when calculating the food balance for plantain and peanuts. The results of this assessment indicate that domestic production of these two food crops is inadequate to support status quo consumption levels in 1990.
3. **Cotton**

The Mission conducted a commodity gap analysis to ascertain the deficit/surplus situation for cotton in 1990. Domestic production of seed cotton has been declining over the base period averaging 17,600 MT per year. Imports of cotton fiber, for the most part concessional, have contributed substantially to per capita utilization/availability over the past five years. Given an estimated production level of 13,222 MT in 1990 and textile industry requirements of 51,286 MT/year, a deficit emerges for seed cotton of 38,064 MT. Converting seed cotton to cotton fiber at 35 percent yields a deficit for cotton fiber of 13,322 MT. Aid commitments of cotton fiber reduce the projected deficit for 1990 to 9,622 MT. Table H-4 shows the 1990 balance for cotton before aid.

**IV. DISINCENTIVE ANALYSIS**

A. **The Demand Side: Price and Income Effects Related to Staple Food Consumption**

For Zaire, analysis of potential disincentive effects of food aid imports (or imports in general) on domestic production is hampered by the paucity of reliable national-level data on prices and quantities produced and consumed. On the production side, the vastness of Zaire, lack of transport and communications infrastructure, and meager public resources combine to seriously compromise the quality of aggregate production data as well as farm-gate price data. This is compounded by a strong suspicion that reported production figures are influenced by political considerations. On the demand side, while reasonably reliable urban wholesale and retail price data are available, time series on quantities consumed are not known with any degree of confidence. As a result, supply and demand elasticities are either unavailable, or if available, lack credibility.

The data employed in this section come from recent studies of the Kinshasa market. While consumption trends gleaned from these data cannot be extrapolated to the national level, the data are far more reliable than aggregate national data. In addition, the bulk of food aid imports are consumed in Kinshasa, so any disincentive analysis should be primarily geared to this market.
1. Cassava and Imports

Figure H-1 shows annual deflated retail prices of rice, bread, cassava cossettes (dried cassava chips), and chikwangue (cassava meal) from 1961 to 1988 for Kinshasa. Cossette and chikwangue exhibit a modest, long-term, upward price trend. Beginning in 1984, there is a sharp divergence with chikwangue prices rising and cossette prices falling. In contrast, rice and bread prices plummet dramatically in the early 1980's. By 1984, they are both at roughly one third of their 1977-78 levels.

Cossette prices have probably fallen for two reasons. First, increased wheat imports at low world prices are probably partly responsible for the slump in cossette prices since the 1970's. However, another factor is probably at least equally responsible. In the late 1970's, a section of the national highway was paved from the Kwilu sub-region of Bandundu to Kinshasa. Up until then, Kwilu's considerable agricultural potential had remained largely untapped, and the Bas-Zaie region had been the principal source for Kinshasa's food supply. The paving of the road has resulted in the Bandundu region being transformed into the dominant exporting region to Kinshasa of cassava, maize, and peanuts. These two factors have combined to lower retail cossette prices from Z 144/kg in 1978 to Z 85/kg in 1988.

On the other hand, chikwangue prices have risen from a low of Z 86 in 1981 to Z 151 in 1987. Because of its very short shelf life, chikwangue sources are limited to Bas-Zaie and parts of Bandundu that are closer to Kinshasa than Kwilu. As such, the paving of the Kinshasa-Kwilu axis had little effect on chikwangue supply. Therefore, price rises in the 1980's reflect the fact that production has not kept pace with rising absolute demand from the burgeoning Kinshasa population.

Reflecting these price changes, per capita cossette consumption has grown slightly since 1975 while consumption of chikwangue has fallen substantially (Table H-5). The slight rise in cossette consumption, combined with an estimated six percent annual population growth rate for Kinshasa, has produced a steadily growing demand for cossettes which has been primarily satisfied by increased shipments from the Bandundu region. Although per capita wheat consumption has risen (from 1.17 kg/month to 1.58 kg/month), there is no evidence of substitution of wheat for cossettes. There has definitely been substitution of wheat, rice, and maize flour for chikwangue as relative price

---

2 All real prices referred to in this section are in 1988 zaires.
changes have made these commodities more affordable to urban consumers. However, as explained above, this substitution effect is primarily the result of steady demand growth coupled with unchanged supply volumes. As such, there is no real evidence of a disincentive effect of imports on local production (which would presumably exert some downward pressure on chikwanguue prices).

2. Imported and Local Rice

Imported rice fetches a premium over domestically produced rice in Kinshasa. Since 1984, it has usually stood at 20-30 percent. The premium is related to greater purity and uniformity in quality. As Figure H-2 shows, imported and local rice prices are highly correlated. Therefore, increased supplies of rice imports at greatly reduced world prices compared to those prevailing in the 1970's has exerted downward pressure on local rice prices in recent years. This has resulted in a growth of demand for rice (see Table H-5) as per capita monthly consumption in Kinshasa swelled by nearly 45 percent from 1975 to 1986. Increasing import quantities satisfied a large share of this demand.

3. Income

A study that compares Kinshasa household consumption and expenditure survey data from 1969, 1975, and 1986 (Hoyeux, 1986) sheds further light on urban food demand as a function of the evolution of income and expenditure. As Table H-6 shows, real household expenditures have remained more or less constant over time. However, average household size appears to have risen substantially since 1975. Therefore, real per capita expenditure fell by 24.5 percent between 1975 and 1986.3

3 Effects of the fall in per capita expenditure on nutrition (with household expenditure remaining approximately constant) depend critically on how the age composition of households has evolved. If the increase in average household size is mainly attributable to a larger proportion of children (as opposed to adult relatives migrating from rural areas), negative consequences are not as serious because children's nutritional needs are lower than those of adults.
The income effect on food demand can be analyzed using expenditure elasticities that Hoyeux calculated for a variety of goods. Elasticities for major food commodities appear in Table H-7. Using the figure for local rice as an example, expenditure elasticities have the following meaning: a 1 percent rise in expenditure is associated with a 1.12 percent rise in demand for local rice, all other factors held constant.

In actuality, real per capita expenditure fell by roughly one quarter from 1975 to 1986. The second column identifies the magnitude of the effect of falling expenditure on demand. The fall in expenditure works in favor of locally-produced commodities (cassava products versus wheat, and local versus imported rice) as demand falls less sharply for them than for imports. These figures should be interpreted as rough tendencies, not exact magnitudes of change. In general, rises (drops) in income are associated with greater (reduced) demand for imports. The figures presented here are consistent with that widely recognized principle.

4. Price and Income

It is reasonable to conclude that the price effect of low world prices for rice and wheat have worked in the direction of substituting imports for locally produced rice and cassava, while the income effect (plus increasing volumes of cassava in the Kinshasa market which has kept prices low) has exerted a degree of countervailing pressure. Due to an absence of reliable time series data on quantities consumed, it is not possible to econometrically estimate which effect dominates.

An implication of this argument is that if the Zairian economy were to become healthier in the future, and international cereals prices were to remain low, the income and price effects would work in the same direction -- towards substitution of imported foodstuffs for domestic production. Zairian policy makers need to keep this in mind in considering ways to increase national food security through appropriate combinations of local production, commercial imports, and food aid.

For those commodities for which Zaire possesses a comparative advantage, investment in production and marketing infrastructure may be justified. If, for example, it is

---

4 Because income is not easily measured, expenditure is often used as a proxy. In LDC's, this is a reasonable approximation because savings rates and asset values are rather low for the bulk of households.
determined that Zaire has a comparative advantage in rice production, it may make economic sense to allocate additional resources to increasing production and improving marketing services. Improved grading could lower the premium that imported rice currently enjoys. But if comparative advantage lies with other exportable or import substitutes, resources would be best used in increasing production of those goods to increase foreign exchange availability for rice imports.

5. Non-Price Factors

Changes in tastes and preferences and ease of preparation are also very important elements in explaining consumption shifts in a rapidly urbanizing nation like Zaire. Although not quantifiable, part of the shift to bread and away from ready-to-consume items like chikwange stems from the fact that chikwange is eaten in combination with other foods like meat or fish. Bread can be eaten alone. Imported rice, which is already milled, is also easier to prepare than cossette which must be further processed before it is ready to cook. Finally, the status associated with eating more "modern" foods as opposed to cassava products provides an additional psychological incentive for wheat and rice consumption.

B. The Supply Side: Disincentive Effects

1. Rice

While the current wheat gap will never be filled by local production, this is not necessarily so for rice. Rice has historically been produced in significant quantities in Zaire, and the current gap is not as prohibitively large as that for wheat. There are numerous constraints to production of rice on a competitive basis, however, which will take years to overcome.

In the 1980's, low world prices combined with excessive marketing costs left a price to the farmer that was not attractive relative to alternative crops. In a study of labor utilization in the Basoko and Isangi zones of Haut-Zaire, Tshibaka (1989) identified returns for rice production relative to cassava, maize, and plantain (Table H-8). By examining...
average and marginal returns to labor,\textsuperscript{5} it is apparent that rice production is much less remunerative than production of the other crops (Table H-9). It should be mentioned that these data are rather old (based on a survey carried out in 1982/83). However, there is little evidence of any changes since then that would make rice more profitable than other crops. The abolition of exclusive buying rights for rice as part of the liberalization package of September 1983 has not resulted in a substantially higher real farm-gate price for rice. Moreover, continued deterioration of road and river transport infrastructure have led to wider marketing margins.

Any effort to produce rice on a competitive basis must first address itself to the serious decay in marketing infrastructure that has afflicted the rice sub-sector since independence. High marketing costs, as well as lack of grading (which reduces consumer confidence and is partly responsible for the imported rice premium), have seriously reduced the competitiveness of domestically produced rice in urban markets. Although there have been frequent calls to raise duties on imported rice, using tariff policy as a mechanism to protect local rice production without addressing domestic marketing constraints would probably only result in a loss of consumer welfare as the supply response would be insufficient to offset reduced import volumes.

2. Cotton

Cotton production has been in a state of steady decline since independence. As Table H-10 illustrates, production, yield, area, number of farmers planting, and area per planter have all deteriorated substantially. Production in 1986/87 was less than 10 percent of pre-independence levels.

While stagnating world prices may bear some responsibility for this state of affairs, they only tell part of the story. Table H-11 presents data from a World Bank sponsored study that compared cotton sub-sector performance with that of a number of Francophone West African countries. While subject to the same world prices, productivity at the farm and processing levels is far superior for the other African countries.

\textsuperscript{5} Returns to labor is used as the chief indicator of opportunity costs because labor is generally acknowledged as the scarce input for the small Zairian farmer. Land is still an abundant resource in many areas of the country, and is therefore a less binding constraint. Capital inputs (as well as purchased variable cost inputs) are almost completely absent from traditional cropping systems.
According to the World Bank assessment, a number of factors account for this poor performance. They include: poor management by the cotton companies; inadequate transport; late purchase of crops (or complete failure to purchase) and late distribution of seed; degeneration of seed stock; an unmotivated and poorly trained extension force; absence of pest control; and inadequate price incentives to farmers.

With regard to price incentives, the textile industry is oligopolistic, while each of the five cotton companies possess geographic monopsonies. The textile companies have historically paid cotton suppliers prices well below world market prices. In turn, the cotton companies have paid unremunerative prices to farmers. For example, in 1988, the largest cotton company operating in Zaire (La Cotonière) signed an agreement to supply UTEXCO (the largest textile firm) with cotton lint for less than 75 percent of import parity. La Cotonière then paid farmers a price for seed cotton that represented only 35 percent of the selling price to UTEXCO. In West Africa, the farm gate price is generally 45-50 percent of the selling price to the textile mills. Table H-12 shows that farm gate prices for cotton have rarely approached this 45-50 percent figure in the 1980's.

These elements of domestic market structure combine to create a strong disincentive for local producers. Table H-13 compares returns to labor for cotton, maize, and peanuts from a 1986 study in the Bas-Uele sub-region of Haut-Zaïre. Clearly maize and peanuts are far more profitable in terms of labor input than cotton. Although these findings are derived from a micro-level study, the aggregate figures cited above from the World Bank study, as well as GOZ annual production statistics, confirm that farmers have turned away from cotton to more lucrative crops.

The data on cotton sub-sector performance in other African countries indicate the potential for cotton production to become more attractive for Zairian farmers. For example, if yields per hectare were to double (to only two thirds the level in other countries as indicated in Table H-11) and farmers were paid a producer price more in accordance with those offered by cotton industries elsewhere (in terms of percent of selling price to textile firms), returns to cotton cultivation could approach or surpass returns to the more lucrative food crops and arabica coffee.

PL-480 cotton is imported by the textile mills at prevailing world prices and official exchange rates. In the past, USAID was criticized for offering repayment terms that were more generous than the textile companies could obtain from the local banking system for purchase of domestic cotton. In 1987, although U.S.
cotton was about 20 percent more expensive than local cotton, importers were allowed to stretch payments over 20 months with a three month grace period, no interest payments, and the exchange rate locked in at the time of opening the letter of credit. This was done to stimulate the textile industry, which was operating at about 30 percent of capacity, performing minimal maintenance and making no new investments in textile equipment. Local cotton producing companies could not compete with this price competition. As a result, the textile companies used PL-480 cotton to build up stocks and some temporarily halted their purchases of local production. However, the textile industry did turn around: plant utilization rates approached 100 percent for several years, maintenance is being performed regularly and some of the companies are investing in new equipment.

In 1988-1989, USAID negotiated modified payment terms in collaboration with the Bank of Zaire and the textile companies to rectify the situation. Payment terms for the 1990 PL-480 cotton import program will now include a schedule of down-payments over 180 days, with interest rates based on the Bank of Zaire rediscount rate. Therefore, this potential disincentive effect of PL-480 imports on local production no longer exists and finance is on purely commercial terms at international commodity prices.

V. USAID/ZAIRE PL-480 ASSISTANCE REQUEST FY 90-93

The Food and Fiber Needs Assessment in Section III and the Disincentive Analysis in Section IV demonstrate that recent levels of PL-480 assistance have met food and fiber shortages and have had no serious disincentive effect on local production. Given the installed factory capacity for cotton and wheat flour processing and the continuing need for balance of payments support, USAID plans to increase PL-480 assistance levels incrementally over the FY 90-93 period to $40 million per year.

Table H-14 provides approximations of the food and fiber gap for wheat, rice, and cotton through 1993. The table demonstrates that, with the possible exception of rice, it would require very large increases in PL-480 volumes over recent volumes to overshoot the projected gaps. For rice, great variability in commercial import volumes over the period from which the trend was extrapolated make the gap projections rather unreliable. In addition, these gap projections do not incorporate estimates of trends in non-PL-480 concessional imports. USAID will continue to monitor volume and timing of food aid from other donors to insure that total food aid volumes have no disincentive effect.
The higher levels will continue to directly support the Mission's Strategic Objective to improve health status by providing critical food commodities in an efficient and expeditious manner. They will additionally support achievement of a second Strategic Objective, to increase production and productivity of the private sector, through increasing the capacity utilization of private cotton and wheat mills and thus increasing Zairian value-added. At least 42,000 jobs in the private sector will thus be maintained. Finally, PL-480 Title I agreements will continue to include self-help measures regarding agricultural policy reform in support of a third Strategic Objective, to increase agricultural production, productivity and income.
Table H-1: Zaire Wheat, Rice and Cotton Production and Imports, 1985-89  
(Metric Tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHEAT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Production</td>
<td>3,000</td>
<td>4,000</td>
<td>5,000</td>
<td>5,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Commercial Imports</td>
<td>113,352</td>
<td>206,673</td>
<td>156,415</td>
<td>156,689</td>
<td>147,995</td>
</tr>
<tr>
<td>- of which US</td>
<td>19,653</td>
<td>156,566</td>
<td>101,593</td>
<td>94,118</td>
<td>56,473</td>
</tr>
<tr>
<td>Concessional Imports</td>
<td>99,478</td>
<td>56,233</td>
<td>93,978</td>
<td>98,882</td>
<td>56,670</td>
</tr>
<tr>
<td>- of which PL-480</td>
<td>92,645</td>
<td>51,471</td>
<td>71,258</td>
<td>81,462</td>
<td>51,670</td>
</tr>
<tr>
<td>PL-480 as % of: Wheat Availability</td>
<td>42.9%</td>
<td>19.3%</td>
<td>27.9%</td>
<td>31.3%</td>
<td>25.2%</td>
</tr>
<tr>
<td><strong>Total Calorie Availability</strong></td>
<td>0.9%</td>
<td>0.5%</td>
<td>0.6%</td>
<td>0.7%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RICE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Production</td>
<td>297,170</td>
<td>298,670</td>
<td>300,170</td>
<td>310,830</td>
<td>314,370</td>
</tr>
<tr>
<td>Commercial Imports</td>
<td>69,750</td>
<td>105,042</td>
<td>51,688</td>
<td>84,583</td>
<td>94,562</td>
</tr>
<tr>
<td>- of which US</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Concessional Imports</td>
<td>0</td>
<td>0</td>
<td>84,860</td>
<td>15,050</td>
<td>62,471</td>
</tr>
<tr>
<td>- of which PL-480</td>
<td>0</td>
<td>0</td>
<td>84,860</td>
<td>15,050</td>
<td>60,805</td>
</tr>
<tr>
<td>PL-480 as % of: Rice Availability</td>
<td>0.0%</td>
<td>0.0%</td>
<td>19.4%</td>
<td>3.7%</td>
<td>12.9%</td>
</tr>
<tr>
<td><strong>Total Calorie Availability</strong></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.5%</td>
<td>0.1%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEED COTTON</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Production</td>
<td>20,700</td>
<td>19,100</td>
<td>17,000</td>
<td>16,200</td>
<td>14,890</td>
</tr>
<tr>
<td>Commercial Imports</td>
<td>1,486</td>
<td>629</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>- of which US</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Concessional Imports</td>
<td>14,017</td>
<td>21,257</td>
<td>10,554</td>
<td>4,131</td>
<td>5,306</td>
</tr>
<tr>
<td>- of which PL-480</td>
<td>14,017</td>
<td>21,257</td>
<td>10,554</td>
<td>4,131</td>
<td>5,306</td>
</tr>
<tr>
<td>PL-480 as % of Availability</td>
<td>38.7%</td>
<td>51.9%</td>
<td>38.3%</td>
<td>20.3%</td>
<td>26.3%</td>
</tr>
</tbody>
</table>

---

Note: All rice figures in terms of paddy.

Source: USAID/Kinshasa, 1990
Table H-2: Zaire's Balance of Payments, 1984 - 1994  
(SUS millions)

<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>Exports, FOB</td>
<td>1917.8</td>
<td>1852.4</td>
<td>1845.5</td>
<td>1744.4</td>
<td>2304.5</td>
<td>2507.9</td>
<td>2571.8</td>
<td>2597.0</td>
<td>2784.6</td>
<td>2959.6</td>
<td>1615.6</td>
</tr>
<tr>
<td>Imports, CIF</td>
<td>-1399.1</td>
<td>-1412.9</td>
<td>-1528.5</td>
<td>-1653.8</td>
<td>-1954.6</td>
<td>-2228.2</td>
<td>-2406.6</td>
<td>-2548.0</td>
<td>-2683.8</td>
<td>-2823.8</td>
<td>-2972.2</td>
</tr>
<tr>
<td>Trade Balance</td>
<td>518.7</td>
<td>439.5</td>
<td>317.0</td>
<td>90.5</td>
<td>249.9</td>
<td>279.7</td>
<td>165.2</td>
<td>49.0</td>
<td>100.8</td>
<td>135.8</td>
<td>183.4</td>
</tr>
<tr>
<td>Receipts</td>
<td>141.5</td>
<td>153.3</td>
<td>189.0</td>
<td>261.2</td>
<td>186.7</td>
<td>213.6</td>
<td>233.8</td>
<td>253.4</td>
<td>275.8</td>
<td>299.6</td>
<td>326.2</td>
</tr>
<tr>
<td>Expenditures</td>
<td>-1068.1</td>
<td>-955.1</td>
<td>-1028.6</td>
<td>-1140.5</td>
<td>-1256.1</td>
<td>-1230.5</td>
<td>-1381.8</td>
<td>-1436.4</td>
<td>-1495.2</td>
<td>-1565.2</td>
<td>-1635.2</td>
</tr>
<tr>
<td>IMF Charges</td>
<td>-49.2</td>
<td>-56.8</td>
<td>-64.6</td>
<td>-62.1</td>
<td>-56.4</td>
<td>-56.5</td>
<td>-47.6</td>
<td>-36.4</td>
<td>-28.0</td>
<td>-22.4</td>
<td>-15.4</td>
</tr>
<tr>
<td>Interest</td>
<td>-376.2</td>
<td>-332.9</td>
<td>-393.3</td>
<td>-435.8</td>
<td>-494.4</td>
<td>-518.1</td>
<td>-623.0</td>
<td>-634.2</td>
<td>-656.6</td>
<td>-690.2</td>
<td>-722.4</td>
</tr>
<tr>
<td>Other Payments</td>
<td>-642</td>
<td>-565.4</td>
<td>-570.5</td>
<td>-643.9</td>
<td>-705.3</td>
<td>-655.9</td>
<td>-711.2</td>
<td>-765.8</td>
<td>-810.6</td>
<td>-851.2</td>
<td>-896.0</td>
</tr>
<tr>
<td>Services</td>
<td>-926.6</td>
<td>-801.9</td>
<td>-839.4</td>
<td>-879.3</td>
<td>-1070.7</td>
<td>-1018.3</td>
<td>-1148.0</td>
<td>-1181.6</td>
<td>-1219.4</td>
<td>-1265.6</td>
<td>-1309.0</td>
</tr>
<tr>
<td>Official</td>
<td>174.2</td>
<td>198.9</td>
<td>184.3</td>
<td>219.5</td>
<td>194.8</td>
<td>205.3</td>
<td>247.8</td>
<td>292.6</td>
<td>306.6</td>
<td>340.2</td>
<td>378.0</td>
</tr>
<tr>
<td>Private</td>
<td>-91.2</td>
<td>-54.8</td>
<td>-62.2</td>
<td>-69.8</td>
<td>-67.2</td>
<td>-70.3</td>
<td>-70.0</td>
<td>-70.0</td>
<td>-70.0</td>
<td>-70.0</td>
<td>-70.0</td>
</tr>
<tr>
<td>Unrequited Transfers</td>
<td>83.0</td>
<td>144.1</td>
<td>122.1</td>
<td>151.3</td>
<td>127.6</td>
<td>135.0</td>
<td>177.8</td>
<td>222.6</td>
<td>236.6</td>
<td>270.2</td>
<td>308.0</td>
</tr>
<tr>
<td>Current Account</td>
<td>324.9</td>
<td>-218.2</td>
<td>-400.3</td>
<td>-637.5</td>
<td>-691.9</td>
<td>-603.5</td>
<td>-805.0</td>
<td>-911.4</td>
<td>-882.0</td>
<td>-859.6</td>
<td>-819.0</td>
</tr>
<tr>
<td>Disbursements</td>
<td>135.3</td>
<td>157.3</td>
<td>770.0</td>
<td>420.3</td>
<td>412.4</td>
<td>465.7</td>
<td>526.4</td>
<td>539.0</td>
<td>555.8</td>
<td>595.0</td>
<td>637.0</td>
</tr>
<tr>
<td>Capital Account</td>
<td>-430.5</td>
<td>-452.7</td>
<td>-481.3</td>
<td>-515.9</td>
<td>-478.3</td>
<td>-604.9</td>
<td>-578.2</td>
<td>-670.6</td>
<td>-634.2</td>
<td>-614.6</td>
<td>-687.4</td>
</tr>
<tr>
<td>Amortization</td>
<td>-295.2</td>
<td>-295.4</td>
<td>-211.3</td>
<td>-86.6</td>
<td>-65.8</td>
<td>-139.2</td>
<td>-51.8</td>
<td>-131.6</td>
<td>-78.4</td>
<td>-19.6</td>
<td>-50.4</td>
</tr>
<tr>
<td>Official Capital</td>
<td>85.1</td>
<td>112.7</td>
<td>69.3</td>
<td>112.5</td>
<td>-14.8</td>
<td>34.4</td>
<td>70.0</td>
<td>70.0</td>
<td>70.0</td>
<td>70.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Errors and Omissions</td>
<td>-210.1</td>
<td>-182.7</td>
<td>-142.0</td>
<td>27.2</td>
<td>-80.6</td>
<td>-104.7</td>
<td>18.2</td>
<td>-61.6</td>
<td>-8.4</td>
<td>50.4</td>
<td>19.6</td>
</tr>
<tr>
<td>Overall Balance</td>
<td>-535.1</td>
<td>-400.9</td>
<td>-542.4</td>
<td>-610.3</td>
<td>-772.5</td>
<td>-703.3</td>
<td>-786.8</td>
<td>-973.0</td>
<td>-890.4</td>
<td>-809.2</td>
<td>-799.4</td>
</tr>
<tr>
<td>Debt</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>32.3</td>
<td>643.5</td>
<td>689.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>-28.2</td>
<td>-71.1</td>
<td>-26.9</td>
<td>-28.9</td>
<td>-32.2</td>
<td>-32.2</td>
<td>-26.6</td>
<td>-21.0</td>
</tr>
<tr>
<td>Arrears</td>
<td>-75.9</td>
<td>-51.8</td>
<td>-28.2</td>
<td>-38.8</td>
<td>616.6</td>
<td>660.0</td>
<td>-32.2</td>
<td>-26.6</td>
<td>-21.0</td>
<td>-21.0</td>
<td>-21.0</td>
</tr>
<tr>
<td>SAF</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>75.0</td>
<td>0.0</td>
<td>119.9</td>
<td>81.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Purchases</td>
<td>162.0</td>
<td>171.5</td>
<td>95.1</td>
<td>90.5</td>
<td>0.0</td>
<td>103.3</td>
<td>57.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Repurchases</td>
<td>-55.4</td>
<td>-105.6</td>
<td>-110.4</td>
<td>-161.6</td>
<td>-240.5</td>
<td>-213.6</td>
<td>-190.4</td>
<td>-109.2</td>
<td>-58.8</td>
<td>-99.4</td>
<td>-102.2</td>
</tr>
<tr>
<td>Net Fund Credit</td>
<td>0.0</td>
<td>0.0</td>
<td>-15.3</td>
<td>3.9</td>
<td>-104.8</td>
<td>-129.5</td>
<td>-51.8</td>
<td>-109.2</td>
<td>-58.8</td>
<td>-99.4</td>
<td>-102.2</td>
</tr>
<tr>
<td>Other Reserves</td>
<td>26.7</td>
<td>-30.5</td>
<td>36.4</td>
<td>-89.2</td>
<td>95.4</td>
<td>-27.6</td>
<td>-28.0</td>
<td>-28.0</td>
<td>-28.0</td>
<td>-28.0</td>
<td>-28.0</td>
</tr>
<tr>
<td>Debt Relief</td>
<td>477.7</td>
<td>417.2</td>
<td>549.4</td>
<td>733.2</td>
<td>166.6</td>
<td>1554.3</td>
<td>550.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Financing Items</td>
<td>535.1</td>
<td>400.9</td>
<td>542.4</td>
<td>609.0</td>
<td>773.8</td>
<td>708.3</td>
<td>786.8</td>
<td>973.0</td>
<td>890.4</td>
<td>810.6</td>
<td>799.4</td>
</tr>
<tr>
<td>Financing Gap</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1142.4</td>
<td>1003.8</td>
<td>959.0</td>
<td>950.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: USAID/Zaire, March 1990
Table H-3: CY 1990 Food Balance, Zaire

<table>
<thead>
<tr>
<th></th>
<th>Maize</th>
<th>Rice</th>
<th>Wheat</th>
<th>Cassava</th>
<th>Plantain</th>
<th>Peanuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Consumption (kg)</td>
<td>20.3</td>
<td>13.0</td>
<td>7.7</td>
<td>455.6</td>
<td>49.5</td>
<td>9.9</td>
</tr>
<tr>
<td>= Total Consumption Requirement</td>
<td>719,209</td>
<td>460,577</td>
<td>272,803</td>
<td>16,141,452</td>
<td>1,753,736</td>
<td>350,747</td>
</tr>
<tr>
<td>Gross Domestic Food Production</td>
<td>775,961</td>
<td>318,210</td>
<td>6,700</td>
<td>17,982,000</td>
<td>1,816,302</td>
<td>407,202</td>
</tr>
<tr>
<td>- Total Non-Food Use</td>
<td>139,313</td>
<td>38,185</td>
<td>469</td>
<td>1,798,200</td>
<td>199,795</td>
<td>73,296</td>
</tr>
<tr>
<td>= Net Domestic Food Production</td>
<td>634,648</td>
<td>280,025</td>
<td>6,231</td>
<td>16,183,800</td>
<td>1,616,509</td>
<td>333,906</td>
</tr>
<tr>
<td>- Net Change in Stocks</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>= Domestic Food Supply</td>
<td>634,648</td>
<td>280,025</td>
<td>6,231</td>
<td>16,183,800</td>
<td>1,616,509</td>
<td>333,906</td>
</tr>
<tr>
<td>Total Consumption Requirement (from above)</td>
<td>719,209</td>
<td>460,577</td>
<td>272,803</td>
<td>16,141,452</td>
<td>1,753,736</td>
<td>350,747</td>
</tr>
<tr>
<td>Domestic Food Supply (from above)</td>
<td>634,648</td>
<td>280,025</td>
<td>6,231</td>
<td>16,183,800</td>
<td>1,616,509</td>
<td>333,906</td>
</tr>
<tr>
<td>= Import Requirement</td>
<td>84,561</td>
<td>180,552</td>
<td>266,572</td>
<td>(42,348)</td>
<td>137,227</td>
<td>16,841</td>
</tr>
<tr>
<td>- Total Commercial Food Imports</td>
<td>44,500</td>
<td>89,875</td>
<td>148,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>= FOOD DEFICIT (UNMILLED)</td>
<td>40,061</td>
<td>90,677</td>
<td>118,572</td>
<td>(42,348)</td>
<td>137,227</td>
<td>16,841</td>
</tr>
<tr>
<td>- Food Aid Commitments</td>
<td>0</td>
<td>38,833</td>
<td>38,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>= Uncovered Food Deficit</td>
<td>40,061</td>
<td>51,844</td>
<td>80,572</td>
<td>(42,348)</td>
<td>137,227</td>
<td>16,841</td>
</tr>
<tr>
<td>X Milling Extraction Rate</td>
<td>85%</td>
<td>60%</td>
<td>75%</td>
<td>30%</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>= UNCOVERED FOOD DEFICIT (MILLED)</td>
<td>34,052</td>
<td>31,106</td>
<td>60,429</td>
<td>(12,704)</td>
<td>123,504</td>
<td>11,789</td>
</tr>
</tbody>
</table>

Source: Adapted from Lowdermilk (1990).

Notes: All quantities in metric tons and in unmilled terms unless specified otherwise;

- Base period is 1985-89 and years are calendar years;
- Per capita consumption for all commodities except rice is calculated as the base period average.
- For rice, consumption is calculated as a linear five year trend.
- Population based on 1984 census figures with 3% growth rate.

Non-food uses calculated as:

<table>
<thead>
<tr>
<th>Non-food uses</th>
<th>Maize</th>
<th>Rice</th>
<th>Wheat</th>
<th>Cassava</th>
<th>Plantain</th>
<th>Peanuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td>0.05</td>
<td>0.05</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.13</td>
</tr>
<tr>
<td>Feed</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Waste/Loss</td>
<td>0.1</td>
<td>0.07</td>
<td>0.05</td>
<td>0.08</td>
<td>0.10</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Table H-4: CY 1990 Cotton Balance, Zaire

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Requirements</td>
<td>51,286</td>
</tr>
<tr>
<td>Domestic Production</td>
<td>13,222</td>
</tr>
<tr>
<td>- Net Change in Stocks</td>
<td>0</td>
</tr>
<tr>
<td>- Total Food Exports</td>
<td>0</td>
</tr>
<tr>
<td>= Total Domestic Availability</td>
<td>13,222</td>
</tr>
<tr>
<td>Total Utilization (from above)</td>
<td>51,286</td>
</tr>
<tr>
<td>- Total Domestic Availability (from above)</td>
<td>13,222</td>
</tr>
<tr>
<td>= Import Requirement</td>
<td>38,064</td>
</tr>
<tr>
<td>- Total Commercial Imports</td>
<td>0</td>
</tr>
<tr>
<td>= DEFICIT (UNMILLED)</td>
<td>38,064</td>
</tr>
<tr>
<td>X Milling Extraction Rate</td>
<td>35%</td>
</tr>
<tr>
<td>= DEFICIT (MILLED)</td>
<td>13,322</td>
</tr>
</tbody>
</table>

Source: Lowdermilk, 1990
### Table H-5: Consumption of Selected Staple Foods in Kinshasa, 1969, 1975, and 1986
(In Per Capita Kg Per Month)

<table>
<thead>
<tr>
<th>Food Item</th>
<th>1969</th>
<th>1975</th>
<th>1986</th>
<th>% Change 75-86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cossette</td>
<td>4.174</td>
<td>4.049</td>
<td>4.292</td>
<td>6.0%</td>
</tr>
<tr>
<td>Chikwangue</td>
<td>1.037</td>
<td>1.097</td>
<td>0.243</td>
<td>-77.8%</td>
</tr>
<tr>
<td>Bread</td>
<td>1.770</td>
<td>1.172</td>
<td>1.575</td>
<td>34.4%</td>
</tr>
<tr>
<td>Rice</td>
<td>0.607</td>
<td>0.738</td>
<td>1.067</td>
<td>44.6%</td>
</tr>
<tr>
<td>Maize</td>
<td>0.267</td>
<td>0.222</td>
<td>0.308</td>
<td>38.7%</td>
</tr>
</tbody>
</table>


### Table H-6: Various Indices for Kinshasa Consumers 1969, 1975, and 1986

<table>
<thead>
<tr>
<th></th>
<th>1969</th>
<th>1975</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Price Index</td>
<td>100.0</td>
<td>244.0</td>
<td>27701.0</td>
</tr>
<tr>
<td>Nominal Expenditure Index</td>
<td>100.0</td>
<td>253.0</td>
<td>27253.0</td>
</tr>
<tr>
<td>Real Household Expenditure Index</td>
<td>100.0</td>
<td>103.7</td>
<td>98.4</td>
</tr>
<tr>
<td>Average Household Size</td>
<td>5.9</td>
<td>5.8</td>
<td>7.3</td>
</tr>
<tr>
<td>Real Per Capita Expenditure Index</td>
<td>100.0</td>
<td>105.3</td>
<td>79.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Elasticity</th>
<th>Change in Real Per Capita Expenditure 1975-1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported Rice</td>
<td>1.72</td>
<td>-42.1%</td>
</tr>
<tr>
<td>Maize Flour</td>
<td>1.64</td>
<td>-40.2%</td>
</tr>
<tr>
<td>Local Rice</td>
<td>1.12</td>
<td>-27.4%</td>
</tr>
<tr>
<td>Bread</td>
<td>0.91</td>
<td>-22.3%</td>
</tr>
<tr>
<td>ALL CEREALS</td>
<td>0.96</td>
<td>-23.5%</td>
</tr>
<tr>
<td>Cossette</td>
<td>0.41</td>
<td>-10.0%</td>
</tr>
<tr>
<td>Chikwangue</td>
<td>0.37</td>
<td>-9.1%</td>
</tr>
<tr>
<td>Cassava Flour</td>
<td>0.04</td>
<td>-0.9%</td>
</tr>
<tr>
<td>ALL FOODS</td>
<td>0.62</td>
<td>-15.2%</td>
</tr>
</tbody>
</table>

---

Note:

1. Elasticity multiplied by change in total per capita expenditures, - 24.5%.

Source: Hoyeux, 1986 and USAID/Zaire, 1990
Table H-8: Returns to Production of Selected Crops
Haut-Zaire, 1982/83

<table>
<thead>
<tr>
<th>Item</th>
<th>Rice</th>
<th>Maize</th>
<th>Cassava</th>
<th>Plantain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area cultivated (ha.)</td>
<td>0.36</td>
<td>0.19</td>
<td>0.29</td>
<td>0.08</td>
</tr>
<tr>
<td>Labor (man hours)</td>
<td>557</td>
<td>175</td>
<td>336</td>
<td>42</td>
</tr>
<tr>
<td>Output (kg. cereal equiv.)</td>
<td>325</td>
<td>213</td>
<td>2,225</td>
<td>133</td>
</tr>
<tr>
<td>Value of Output (Z/ha.)</td>
<td>5,576</td>
<td>11,876</td>
<td>24,563</td>
<td>9,763</td>
</tr>
</tbody>
</table>

Value of Average Product of Labor (Z/man hour)

<table>
<thead>
<tr>
<th></th>
<th>Rice</th>
<th>Maize</th>
<th>Cassava</th>
<th>Plantain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.60</td>
<td>12.92</td>
<td>21.19</td>
<td>18.58</td>
</tr>
</tbody>
</table>

Value of Marginal Product of Labor (Z/man hour)

<table>
<thead>
<tr>
<th></th>
<th>Rice</th>
<th>Maize</th>
<th>Cassava</th>
<th>Plantain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.50</td>
<td>8.15</td>
<td>20.76</td>
<td>15.76</td>
</tr>
</tbody>
</table>

Notes: Cereal equivalent conversion factors are: maize - 1.00; paddy - 0.60; cassava - 0.303; and plantain - 0.22. Marginal products computed by multiplying average products by their output elasticities.


Table H-9: Real Producer and Consumer Prices for Rice and Maize and Marketing Margins, 1982 - 1986, Zaire

<table>
<thead>
<tr>
<th>Year</th>
<th>Rice Producer Price</th>
<th>Rice Consumer Price</th>
<th>Marketing Margin</th>
<th>Maize Producer Price</th>
<th>Maize Consumer Price</th>
<th>Marketing Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>5.00</td>
<td>12.00</td>
<td>140.0%</td>
<td>1.30</td>
<td>3.50</td>
<td>169.2%</td>
</tr>
<tr>
<td>1983</td>
<td>3.18</td>
<td>8.91</td>
<td>180.4%</td>
<td>1.93</td>
<td>5.94</td>
<td>207.7%</td>
</tr>
<tr>
<td>1984</td>
<td>3.65</td>
<td>10.57</td>
<td>190.0%</td>
<td>1.46</td>
<td>4.38</td>
<td>200.0%</td>
</tr>
<tr>
<td>1985</td>
<td>2.87</td>
<td>8.05</td>
<td>180.0%</td>
<td>1.44</td>
<td>4.33</td>
<td>201.2%</td>
</tr>
<tr>
<td>1986</td>
<td>2.48</td>
<td>6.89</td>
<td>177.4%</td>
<td>1.43</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: COGEPAR, 1987
### Table H-10: Cotton Production, Zaire

<table>
<thead>
<tr>
<th>Campaign</th>
<th>Planters</th>
<th>Area (ha)</th>
<th>Production (MT)</th>
<th>Yield (kg/ha)</th>
<th>Area per Planter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958/59</td>
<td>877,698</td>
<td>369,382</td>
<td>179,462</td>
<td>486</td>
<td>0.42</td>
</tr>
<tr>
<td>1979/80</td>
<td>308,945</td>
<td>98,328</td>
<td>29,266</td>
<td>298</td>
<td>0.32</td>
</tr>
<tr>
<td>1980/81</td>
<td>306,578</td>
<td>83,726</td>
<td>21,150</td>
<td>253</td>
<td>0.27</td>
</tr>
<tr>
<td>1981/82</td>
<td>309,249</td>
<td>85,943</td>
<td>23,597</td>
<td>275</td>
<td>0.28</td>
</tr>
<tr>
<td>1982/83</td>
<td>283,616</td>
<td>76,014</td>
<td>26,786</td>
<td>352</td>
<td>0.27</td>
</tr>
<tr>
<td>1983/84</td>
<td>256,091</td>
<td>84,811</td>
<td>20,552</td>
<td>242</td>
<td>0.33</td>
</tr>
<tr>
<td>1984/85</td>
<td>224,218</td>
<td>68,565</td>
<td>22,391</td>
<td>327</td>
<td>0.31</td>
</tr>
<tr>
<td>1985/86</td>
<td>198,869</td>
<td>61,673</td>
<td>19,206</td>
<td>311</td>
<td>0.31</td>
</tr>
<tr>
<td>1986/87</td>
<td>138,422</td>
<td>44,720</td>
<td>16,765</td>
<td>375</td>
<td>0.32</td>
</tr>
</tbody>
</table>


### Table H-11: Comparison of Cotton Production in Zaire and Francophone West African Countries, 1986

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>Zaire</th>
<th>W.Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton Yields</td>
<td>kg/ha</td>
<td>325</td>
<td>1,074</td>
</tr>
<tr>
<td>Ginning Outturn</td>
<td>%</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>Fiber Production</td>
<td>kg/ha</td>
<td>117</td>
<td>426</td>
</tr>
<tr>
<td>Textile Mill Losses</td>
<td>%</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Usable Fiber</td>
<td>kg/ha</td>
<td>105</td>
<td>418</td>
</tr>
<tr>
<td>Purchase Price (1986)</td>
<td>Z/kg</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Gross Income</td>
<td>Z/ha</td>
<td>3,900</td>
<td>17,184</td>
</tr>
<tr>
<td>Cost of Inputs</td>
<td>Z/ha</td>
<td>0</td>
<td>4,800</td>
</tr>
<tr>
<td>Net Income</td>
<td>Z/ha</td>
<td>3,900</td>
<td>12,384</td>
</tr>
<tr>
<td>Average Area/Planter</td>
<td>ha</td>
<td>0.30</td>
<td>0.78</td>
</tr>
<tr>
<td>Average Production/Planter</td>
<td>kg</td>
<td>98</td>
<td>834</td>
</tr>
<tr>
<td>Net Revenue/Planter</td>
<td>Z</td>
<td>1,170</td>
<td>9,622</td>
</tr>
<tr>
<td>Fiber Produced/Planter</td>
<td>kg</td>
<td>35</td>
<td>331</td>
</tr>
<tr>
<td>Number of Man-Days/ha</td>
<td>day/ha</td>
<td>100</td>
<td>135</td>
</tr>
<tr>
<td>Financial Return/Man-Day</td>
<td>Z</td>
<td>39</td>
<td>92</td>
</tr>
</tbody>
</table>

### Table H-12: Evolution of Seed Cotton Purchase Price and the Sale Price of Fiber to the Textile Mills, Zaire (Z/kg)

<table>
<thead>
<tr>
<th></th>
<th>Farmgate Price</th>
<th>Equivalent Farmgate Price</th>
<th>Sale Price Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Northern Region</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1982/83</td>
<td>2.1</td>
<td>6.0</td>
<td>23.7</td>
</tr>
<tr>
<td>1983/84</td>
<td>5.0</td>
<td>14.3</td>
<td>51.0</td>
</tr>
<tr>
<td>1984/85</td>
<td>10.0</td>
<td>28.5</td>
<td>65.0</td>
</tr>
<tr>
<td>1985/86</td>
<td>11.0</td>
<td>31.4</td>
<td>85.0</td>
</tr>
<tr>
<td>1986/87</td>
<td>12.0</td>
<td>34.2</td>
<td>105.0</td>
</tr>
<tr>
<td><strong>Southern Region</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1982/83</td>
<td>3.5</td>
<td>10.0</td>
<td>39.4</td>
</tr>
<tr>
<td>1983/84</td>
<td>9.0</td>
<td>25.7</td>
<td>54.0</td>
</tr>
<tr>
<td>1984/85</td>
<td>10.0</td>
<td>28.5</td>
<td>85.0</td>
</tr>
<tr>
<td>1985/86</td>
<td>12.0</td>
<td>34.2</td>
<td>105.0</td>
</tr>
</tbody>
</table>

**Source:** World Bank (1988).

### Table H-13: Returns to Production of Selected Crops Bas-Uele, 1986

<table>
<thead>
<tr>
<th>Item</th>
<th>Cotton</th>
<th>Maize</th>
<th>Peanuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average yield (kg./ha.)</td>
<td>250</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Farm-gate price (Z/kg.)</td>
<td>11.1</td>
<td>6.7</td>
<td>2.64</td>
</tr>
<tr>
<td>Total Revenue (Z/ha.)</td>
<td>2,775</td>
<td>6,700</td>
<td>2,640</td>
</tr>
<tr>
<td>Labor (man days/ha.)</td>
<td>145</td>
<td>150</td>
<td>90</td>
</tr>
<tr>
<td>Returns per man day</td>
<td>19.14</td>
<td>44.67</td>
<td>29.33</td>
</tr>
</tbody>
</table>

**Note:** Cotton farm-gate price computed as Z 12/kg for high quality at 85%, and Z 6/kg for lower quality at 15%.

**Source:** Selected SEP commodity reports (1987).
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHEAT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>272,803</td>
<td>280,987</td>
<td>289,417</td>
<td>298,100</td>
</tr>
<tr>
<td>Gross Domestic Production</td>
<td>6,500</td>
<td>7,200</td>
<td>7,800</td>
<td>8,400</td>
</tr>
<tr>
<td>Imports Net of PL-480</td>
<td>205,800</td>
<td>209,100</td>
<td>216,000</td>
<td>221,100</td>
</tr>
<tr>
<td>Gap</td>
<td>60,503</td>
<td>64,687</td>
<td>65,617</td>
<td>68,600</td>
</tr>
<tr>
<td><strong>RICE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>460,577</td>
<td>474,394</td>
<td>488,626</td>
<td>503,285</td>
</tr>
<tr>
<td>Gross Domestic Production</td>
<td>322,000</td>
<td>330,000</td>
<td>337,900</td>
<td>345,900</td>
</tr>
<tr>
<td>Imports Net of PL-480</td>
<td>102,500</td>
<td>102,700</td>
<td>106,700</td>
<td>108,300</td>
</tr>
<tr>
<td>Gap</td>
<td>36,077</td>
<td>41,694</td>
<td>44,026</td>
<td>49,085</td>
</tr>
<tr>
<td><strong>SEED COTTON</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>51,286</td>
<td>51,286</td>
<td>51,286</td>
<td>51,286</td>
</tr>
<tr>
<td>Gross Domestic Production</td>
<td>13,100</td>
<td>11,600</td>
<td>10,200</td>
<td>8,700</td>
</tr>
<tr>
<td>Imports Net of PL-480</td>
<td>157</td>
<td>394</td>
<td>683</td>
<td>1,000</td>
</tr>
<tr>
<td>Gap</td>
<td>38,029</td>
<td>39,292</td>
<td>40,403</td>
<td>41,586</td>
</tr>
</tbody>
</table>

Notes: Consumption trend - for rice and wheat, based on 3% annual average population growth rate and same per capita consumption requirement as in Table 1. For cotton, based on no change in current installed capacity of textile plants.

Production trend - for rice and cotton, extrapolated from 1975 to 1989 data. For wheat, extrapolated from 1985-89 data.

Import trend - includes all commercial imports as well as all non-PL-480 concessional imports. Trend based on extrapolation from 1985-89 data.

Gap = Consumption - Production - Imports.

Figure H–1: Real Retail Prices in Kinshasa
1961 – 1988

Zaires per Kg.

Year

50 100 150 200 250 300 350 400 450

61 65 70 75 80 85 88

Source: DMPCC.
Figure H-2: Real Monthly Retail Rice Prices

Source: DMPCC.
ANNEX I

ENVIRONMENTAL CONSIDERATIONS

USAID/Zaire
# ENVIRONMENTAL CONSIDERATIONS

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>ii</td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. ZAIRE'S ENVIRONMENT</td>
<td>1</td>
</tr>
<tr>
<td>A. Bio-Ecological Summary</td>
<td>1</td>
</tr>
<tr>
<td>1. Ecological Overview</td>
<td>3</td>
</tr>
<tr>
<td>2. Vegetation</td>
<td>4</td>
</tr>
<tr>
<td>3. Fauna</td>
<td>5</td>
</tr>
<tr>
<td>B. Resource Use and Management</td>
<td>6</td>
</tr>
<tr>
<td>1. Human Impact</td>
<td>6</td>
</tr>
<tr>
<td>2. Conservation Efforts</td>
<td>11</td>
</tr>
<tr>
<td>C. GOZ and Donor Activities</td>
<td>13</td>
</tr>
<tr>
<td>1. Government of Zaire</td>
<td>13</td>
</tr>
<tr>
<td>2. Multilateral Donors</td>
<td>15</td>
</tr>
<tr>
<td>3. Bilateral Donors</td>
<td>15</td>
</tr>
<tr>
<td>III. GROWTH AND DEVELOPMENT: CONSTRAINTS AND ISSUES</td>
<td>16</td>
</tr>
<tr>
<td>A. Policy</td>
<td>17</td>
</tr>
<tr>
<td>B. Physical</td>
<td>17</td>
</tr>
<tr>
<td>C. Financial</td>
<td>18</td>
</tr>
<tr>
<td>D. Human Resources</td>
<td>18</td>
</tr>
<tr>
<td>IV. USAID ENVIRONMENT ACTIVITIES AND STRATEGY</td>
<td>18</td>
</tr>
<tr>
<td>A. Ongoing Activities</td>
<td>18</td>
</tr>
<tr>
<td>1. Agricultural Projects</td>
<td>19</td>
</tr>
<tr>
<td>2. Human Resource Development</td>
<td>20</td>
</tr>
<tr>
<td>B. New Initiatives</td>
<td>22</td>
</tr>
<tr>
<td>1. Small Project Support Project</td>
<td>22</td>
</tr>
<tr>
<td>2. Debt-for-Nature</td>
<td>23</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>AFDB</td>
<td>African Development Bank</td>
</tr>
<tr>
<td>AGF</td>
<td>Appui aux Gestions Forestières</td>
</tr>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>C</td>
<td>Centigrade</td>
</tr>
<tr>
<td>CATEB</td>
<td>Centre d'Adaptation des Techniques en Energie du Bois</td>
</tr>
<tr>
<td>cfs</td>
<td>Cubic feet per second</td>
</tr>
<tr>
<td>COI</td>
<td>Commission on Investments</td>
</tr>
<tr>
<td>DAFECN</td>
<td>Departement des Affaires Foncieres, Environnement et Conservation de la Nature</td>
</tr>
<tr>
<td>DGRNR</td>
<td>Direction des Ressources Naturelles Renouvelables</td>
</tr>
<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>ERTS</td>
<td>Etudes des Ressources Terrestres par Satellite</td>
</tr>
<tr>
<td>ExIm</td>
<td>Export-Import Bank</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FRCF</td>
<td>Fonds de Reconstruction du Capital Forestier</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>ha</td>
<td>Hectare; 1 ha = 2.47 acres</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>IIED</td>
<td>International Institute for Environment and Development</td>
</tr>
<tr>
<td>IUCN</td>
<td>International Union for the Conservation of Nature and Natural Resources</td>
</tr>
<tr>
<td>IZCN</td>
<td>Institut Zairois pour la Conservation de la Nature</td>
</tr>
<tr>
<td>km</td>
<td>Kilometer(s); 1 km = 0.62 miles</td>
</tr>
<tr>
<td>km²</td>
<td>Square kilometers; 1 km² = 0.3861 square miles</td>
</tr>
<tr>
<td>m³</td>
<td>Cubic meters</td>
</tr>
<tr>
<td>m</td>
<td>Meter(s)</td>
</tr>
<tr>
<td>mm</td>
<td>Millimeter(s)</td>
</tr>
<tr>
<td>MAB</td>
<td>Man and the Biosphere Program/Zaire (UNESCO)</td>
</tr>
<tr>
<td>MT</td>
<td>Metric ton</td>
</tr>
<tr>
<td>PL-480</td>
<td>Public Law 480, the Agricultural and Trade Development Act of 1954, as amended</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>SPE</td>
<td>Service Présidentiel d'Etudes</td>
</tr>
<tr>
<td>SPIAF</td>
<td>Service Permanent d'Inventaire et d'Amenagement Forestier</td>
</tr>
<tr>
<td>TFAP</td>
<td>Tropical Forest Action Plan</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Environmental, Social and Cultural Organization</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Childrens Fund</td>
</tr>
<tr>
<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
</tr>
<tr>
<td>USAID</td>
<td></td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>WWF</td>
<td>World Wildlife Fund</td>
</tr>
<tr>
<td>yr</td>
<td>year</td>
</tr>
</tbody>
</table>
ENVIRONMENTAL CONSIDERATIONS

I. INTRODUCTION

In response to Sections 118 and 119 of the U.S. Foreign Assistance Act, USAID/Zaire in 1987/88 initiated a series of in-country studies to improve its understanding of Zairian natural resource management issues. These studies culminated in the publication in late 1988 of a report, entitled "Conservation and Management of Tropical Forests and Biological Diversity in Zaire," which is summarized in Sections II and III of this annex. Although the report concluded that Zaire has environmental problems, it also pointed out that Zaire, with an extremely low population density and severely deteriorated internal transportation infrastructure, was on the whole not placing undue pressure upon its vast natural resource bases. Additionally, Zaire's lack of financial resources and inadequate human resource base ruled out an overly aggressive approach to its many problems. The report recommended that the donor community concentrate upon coordination, mobilization of resources, basic information gathering, and planning. The Government of Zaire (GOZ) has since published two significant documents, "Etude Institutionelle du Secteur Forestier," in October 1988, and "Plan Action Forestier Tropical: Etat d'Execution" in October of 1989, in its process of developing a Tropical Forest Action Plan. The preliminary plan will be presented at a roundtable meeting in May 1990 and will provide opportunities for further coordinated donor action.

USAID/Zaire has now been designated as a key country in Africa for the Global Warming Initiative (State 51831 and Kinshasa 02822). As a result, the Mission will increasingly become more active in the area of Zairian natural resource management issues. USAID/Zaire will work closely with A.I.D./Washington to develop an enhanced environmental action plan that will conform with the Global Warming Initiative.

II. ZAIRE'S ENVIRONMENT

A. Bio-Ecological Summary

Zaire is the third largest country in Africa, after Sudan and Algeria, and one of the most biologically and physically diverse. Stretching from about 5 degrees north to about 13 degrees south latitude, and from the East African rift valley to the Atlantic Ocean, it lies almost entirely within the Congo
The climate of Zaire is entirely tropical. The lowest precipitation (840 mm) occurs at the coast, but virtually all of the country receives over 1200 mm/yr and most of the "Cuvette Centrale" or Central Basin receives over 2000 mm/yr. Maximum temperatures are mostly in the 24-25C range, dropping to 18-20C at higher altitudes, and relative humidity is usually about 70-85 percent.

Zaire can be broken down geographically into several more or less discrete regions. The Cuvette Centrale is an area of about 750,000 km² dominating the west central portions of the country. It occurs at altitudes mostly under 700 m and roughly coincides with the major portion of the Congolese lowland rain forest block. The vast Kwango-Kwilu and Kasai plateaus surround the Cuvette Centrale to the south and east. These plateaus are highly incised and are characterized by vegetational gradation along a rain forest-savanna continuum. The high plateaus of Shaba dominate most of the southeastern portions of the country. Occurring at altitudes generally over 1000 m, they support woodland, savanna and grassland vegetation dissected by gallery forests and extensive papyrus swamps. The Bas-Zaire hills region occurs between Kinshasa and the coast. It formerly supported rain forest vegetation and limited coastal formations. The East African mountain region occurs in association with the rift valley system, and exceeds 5000 m in altitude in the Ruwenzori Range.

The vegetation of Zaire consists very generally of rain forest grading into woodland and savanna to the north and south, with major inclusions of grassland and steppe vegetation on the high plateaus and at higher altitudes in the mountains.

Most woodlands in Zaire are associated with the Zaire River, the eighth longest river (4700 km), second largest river in terms of discharge (1,400,000 cfs) and second largest watershed in the world. The Zaire watershed is roughly the shape of a shallow saucer and it includes numerous natural lakes of variable morphology. There also exists a major "inland delta" system comparable to the Sudd region of southern Sudan and the inland delta of the Niger River in Mali. Known as the Kamalondo Depression and found in the upper Lualaba watershed, this depression includes an area of about 10,000 km². The Kamalondo Depression is best described as a labyrinth of true swamps including dense stands of papyrus, periodically flooded grasslands, thickets of Ambatch trees, and floating water plants such as Nile lettuce and water chestnut. Other significant wetlands include the man-made lakes, Mwadingusha (400 km²), Nzilo (200 km²), and Koni (4.5 km²) in Shaba, and coastal wetlands associated with a shoreline of only 37 km including limited mangroves, coastal waters in the deep trench cut by the Zaire River, and open continental shelf.
1. **Ecological Overview**

Humans have exerted a tremendous pressure on African environments in the last million years, resulting in an extraordinary "environmental dynamic" of which extinction, speciation and change are integral parts. Because of this and the fact that so little taxonomic work has been done in Zaire in relation to the diversity of communities and species present, any ecological discussion of forest and biodiversity conservation must necessarily be both broad and provisional. Little work has been done on the species-rich lakes, rivers and wetlands of the country, and virtually no work has been done on Zaire's specialized habitats.

"Core forest areas," "centers of endemism," and "Pleistocene refugia" in Central and West Africa are typically characterized by both an unusually large number of species and in some cases an unusually large number of endemic taxa in contrast to the relative impoverishment of adjacent areas. It has been hypothesized that these areas persisted under forest cover during periods of relative aridity during the course of the Pleistocene, permitting the survival of forest species which later expanded their ranges outside of the "refugia" during times of increasing humidity, and thereby caused the currently observed pattern of core areas of high species richness surrounded by areas of lower species richness.

Major rivers, most notably the Zaire River system, also are believed to have exerted considerable influence on speciation throughout the country. Nonetheless, and regardless of their evolution, the fact remains that such core areas constitute areas of very high relative endemism.

The flora and fauna of Zaire remain especially poorly known. Various studies published since about 1974 indicate that there were well over 400 taxa identified from Zaire which were new to science during the period 1974-1987, including 2 families, 1 subfamily, 30 genera, 5 subgenera, 367 species and 16 subspecies. It is unlikely that more than 30 percent of all naturally occurring taxa in Zaire have been described to date, but the vast majority of those remaining undescribed should consist of invertebrates, fungi and nonvascular plants: of about 1.4 million species currently known to science, about 71 percent are invertebrate animals and about 18 percent are plants.
2. Vegetation

The Guineo-Congolean forest dominates the northwest, east central, and south central portions of Zaire. It typically occurs between about the 1200 and 3000 mm isohyets and consists of continuous stands up to about 50 m in height. Evergreen forest in Zaire occurs where rainfall generally exceeds 2000 mm and tends to be localized in the center of the Congo Basin where there are extensive developments of swamp forest. Semi-evergreen forest occurs where rainfall is between about 1200 and 2000 mm, and where rainfall is either well distributed and/or dry seasons are characterized by continuous high humidity or are tempered with moist air from the sea. Swamp forest is probably more well developed in Zaire than in any African country. Found on low-lying sites which are permanently waterlogged, this forest type is characterized by trees of up to 40 m in height and it is perhaps the system least affected by human activity in Zaire.

There were originally about 1.235 million km² of forest in Zaire covering about 53 percent of the country; if accurate, this figure would include about 47 percent of all of the closed tropical forest found in Africa and over 10 percent of all such forest remaining worldwide. The only published deforestation rate estimates available for Zaire are 1650 km²/yr (ca. 0.16 percent/yr) for 1967-80 and 1820 km²/yr (ca. 0.2 percent/yr) for 1981-85, but solid quantitative substantiation of this figure is unavailable. Nevertheless, deforestation rates in Zaire appear to be among the lowest in the world. Other vegetation types include two woodland, four savanna, one mangrove, and one papyrus swamp type, as well as 18 other types characterized by various admixtures of forest, woodland, savanna, and aquatic vegetation. Woodland vegetation, found most extensively in Shaba and to a lesser extent in Haut-Zaïre, originally covered an estimated 717,000 km² or about 31 percent of the country. Woodland systems typically consist of open stands of trees with canopies of 8-20 m in height covering at least 40 percent of the surface. Woodlands are distinguished from other vegetation types by the dominance of trees with typically light open canopies and the presence of typically heliophilous grasses. Ground cover includes mostly herbaceous geophytes, hemicyryptophytes and chamaephytes. The most extensive type of vegetation in Africa, woodlands are extremely variable in height, density, deciduousness and thorniness.

Savanna vegetation originally covered an estimated 381,000 km² or about 16 percent of Zaire, and is found most extensively in Shaba. Savannas are particularly well developed and grade into nearly pure or unwooded grasslands on the Bateke, Kwango and high Katanga plateaus, but are also found to a limited degree near the coast.
Other vegetational systems are extremely limited in Zaire, but include about 200 km$^2$ of mangrove vegetation near the coast and about 10,000 km$^2$ of papyrus swamp.

3. **Fauna**

The fish fauna of the upper Zaire Basin is largely isolated from the rest of the basin but contains both Zambezian and, surprisingly, Sudanian species which suggests a connection with Zambezian and Nile watersheds at some point in the past: capture of a portion of the Nile watershed by the Zaire River, for example, is postulated to have occurred near the Gates of Hell on the Lualaba River at Kongolo in North Shaba. While only 560 species of fish had been identified in the Congo Basin exclusive of the rift valley lakes as of 1967, 669 species had been documented about 15 years later, of which 558 were endemic. The rift valley lakes themselves contain the world's richest palustrine fish fauna, one family of which (Cichlidae) contains over 900 species. There is considerable variation, however, between lakes: in Lake Tanganyika alone there are an estimated 250 fish species of which 216 were endemic, and this lake is also well known for speciation of such groups as molluscs, crabs, planktonic copepods and crustacea. Lake Kivu, conversely, has only 16 fish species with an additional 16 species found in streams and pools within the catchment.

The herpetozoa fauna of the Zaire Basin contains fewer taxonomic groups than the Amazon Basin, though there are some notable exceptions such as the arboreal Elapidae, aquatic Colubridae and skink faunas. There is also a large number of endemics, including 16 frogs and 6 reptiles in the eastern Zaire refugium, and 8 amphibians and 12 reptiles in the central Zaire refugium identified as of about 1973.

Zaire is known to contain at least 1086 species of birds. The Guineo-Congolean center of endemism is estimated to contain 655 bird species, 36 percent of which are endemic, and the mountain and transitional forests of eastern Zaire contain at least 7 species known from only 1-3 sites each. There are an estimated 212-266 species of birds in the Congolean forest block alone, depending upon interpretation of forest habitat reliance.

There are an estimated 756 species of mammals in Africa, at least 409 of which are believed to occur in Zaire. In general, there are very diverse populations of savanna primate fauna and all ungulate faunas in Africa. The Guineo-Congolean center of endemism is estimated to contain 58 species of ungulates and diurnal primates alone, 45 percent of which are endemic. Zaire
in particular has more primate genera (13-15) than any other country in the world, and ranks second in the number of species, but contains no endemic genera and ranks only sixth in endemic primate species. There are, nonetheless, at least 16 endemic species or subspecies of primates in the cuvette region alone.

B. Resource Use and Management

1. Human Impact

1.a. Human Geography. Following are basic national statistics relevant to the conservation and management of tropical forests and biodiversity in Zaire.

Zaire is about a third the size of the continental United States and has a 1990 population of about 35.6 million, giving a 1990 average national population density of only about 14/km². The rural population density of the country, however, is only about 12/km² and varies considerably according to region. According to the most recent census, in 1984 Bas-Zaïre, Kivu and Kasai-Occidental had rural population densities well in excess of the norm, especially along the axis from the coast to Mbuji-Mayi (ca 300,000 km², 25/km²); along the eastern mountain axis (ca 70,000 km², 50/km²); and along a northern axis from about Gemena to Isiro (ca 120,000 km²). This constitutes only about 21 percent of the country, however, and population densities over most of the rest of Zaïre, especially in Shaba, Équateur, and Haut-Zaïre, are low to extremely low (6.3-8.1/km²). Indeed, densities in the central rain forests and in about 30 percent of Shaba often fall below 1/km². To put this into perspective, and while there remains considerable debate about what levels of population density can be supported under a shifting agricultural system, published estimates vary from 56/km² to as high as 123/km² which could be supported without destroying the environmental balance, depending upon the fertility of cultivable land.

Both the low overall population size of Zaïre in relation to its natural resources and the extremely low densities prevailing over vast areas of the country have led to speculation as to why the Congo Basin in general supports a human population that is far lower than similar habitats elsewhere in tropical Africa. Here, as elsewhere in Africa, statistics related to the two megatrends of rural-urban migration and movement from the agricultural to other economic sectors are particularly important. The percentage of the Zairian population that is considered urban increased from about 1 percent in 1900 to about 40 percent in 1990, with about 24 percent of the population
currently living in cities of over 100,000 population. While the average annual population growth rate of Zaire is now about 3 percent/yr, the urban growth rate is on the order of 5.2 percent and rural growth rate currently averages only about 1.3 percent/yr. Related to this phenomenon is a prevailing shift out of the agricultural sector, with the percentage of the Zairian labor force working in agriculture declining from about 83 percent in 1960 to about 70 percent currently.

The fact that overall population pressure on biological resources in Zaire is for the most part minimal (with notable exceptions such as the montane and urban halo areas) is also reflected in land use statistics. Of the entire country, about 78 percent was woodland or forest, 4 percent pasture, 2.7 percent farmland, 15 percent "other land", and 3.3 percent inland water in the early 1980's. More precise figures for 1981 show that only 2.1 percent of all land was in agricultural production, 90 percent of which was under traditional crops, and one particularly detailed study found that less than 0.5 percent of the geographical square degree of latitude and longitude around the city of Lubumbashi was under crop production. Moreover, the average rural Zairian, including each man, woman and child, had an average of about 13.6 ha at his or her disposal in 1970, varying from 5.4 ha in Bas-Zaire to 27.0 ha in Shaba, and probably has on the order of about 12 ha at his or her disposal today.

The facts of low overall national population and very low general rural population densities are also reflected in the extremely low estimated deforestation rate currently prevailing in Zaire, ca. 0.15-0.50 percent/yr. While from the global mass deforestation perspective the current situation in Zaire is therefore probably one of the "least bad" found anywhere in the world, in order to evaluate biodiversity issues it is necessary to assess the distribution of human impact in relation to important biological resources. There exist in Zaire, for example, areas where rural population densities are relatively high and where fallow periods are said to be significantly declining as a result of local population pressure and/or increasingly sedentary agricultural practices. There are also other areas where deforestation is relatively significant as a result of urbanization, mining, or other activities, and some of these areas, such as parts of Kivu, the Kisangani region, and certain areas affected by mining and industrial activities in Shaba happen to coincide with areas of particular global biological concern.

1.b. Agriculture. Zaire is an extraordinarily diverse country from the topographical, edaphic, hydrological, and climatic perspectives, and agricultural systems in Zaire are
concomitantly diverse. Agriculture can generally be broken down, however, into the traditional, the semi-traditional and modern subsectors. Traditional agriculture is the primary rural economic activity prevailing throughout Zaire. It accounts for about 78 percent of total agricultural production, is generally characterized by no use of pesticides or fertilizers, and is typically carried out in its entirety by manual labor. Although most rural groups have always adopted and produced a wide range of agricultural commodities in Zaire, cassava and maize are the most important crops since they have become dietary staples and often account for over 60 percent of total caloric intake.

Semi-traditional agriculture is said to be increasing in many parts of Zaire, e.g., in 6 of the 18 zones of Kivu. It is typically characterized by 1) greater intensity and lesser extensiveness than traditional agriculture, 2) shorter fallow periods, 3) increased use of leguminous crops and composting, 4) a general absence of mechanization, and 5) a general lack of pesticide use. Increasingly common in the more fertile mountainous areas of eastern Zaire, semi-traditional agriculture will probably continue to replace traditional agriculture in areas of higher population density. Zaire ranks 17th worldwide in coffee production (1.7 percent of the world's crop), and approximately 70 percent of the nation's coffee is said to be produced in village plantations. This represents, along with increased planting of cocoa and other tree crops, a shift from a purely traditional to a semi-sedentary or sedentary agricultural subsistence base.

The modern agricultural subsector in Zaire is characterized, as in most of Africa, by some degree of mechanization, use of fertilizers and pesticides, increasing use of improved genetic stock, and modern planting techniques. Major modern agricultural operations in Zaire include: 1) dairy, egg, swine, vegetable, maize, rice, and pineapple production in the urban Kinshasa, Lubumbashi and Mbuji-Mayi areas; 2) maize and soya production in Shaba, especially destined for mining centers; 3) 10,000 ha of sugar cane in Bas-Zaïre and 1200 ha in Kivu; 4) production of 50 percent of Zaïre's palm tree plantations (30,000 ha), 5000 ha of rubber, 3000 ha of cocoa, and 500 ha of tea throughout Zaïre; and 5) 10,000 ha of coffee plantation at Nogueira.

1.c. Hunting and Fishing. Fishing is the main occupation of only a handful of the ethnic groups of the Zaïre Basin, but hunting occurs almost everywhere. It has been estimated that 75 percent of all animal protein consumed by Zaïrians is bush meat and that an estimated 80,000-100,000 tons of game meat and 40,000 tons of insect protein are consumed annually. Wild herbivores are said to be particularly favored and wild game meat prices in cities and towns are said to be typically higher than for

I-8
domestic beef. The role of insects and molluscs is also substantial, and they are said to be the second dish of choice in many areas. Of particular importance are certain types of larvae, termites and grasshoppers, whose protein content may vary from 31-70 percent.

Game populations in Zaire have been severely depleted during the last 50 years due to better availability of firearms. Shot for food, sport, and animal products, the loss of game has probably meant a significant loss in the production potential of the environment in some areas. The relative impact of hunting on wildlife populations, however, depends upon population density, the nature of the game populations hunted, and game population dynamic phenomena in relation to hunting pressure.

1.d. Livestock. Until recently, relatively few Zairian ethnic groups kept cattle except in scattered locations in the west, northwest, southwest and southeast of the country. Large estates and ranches have long engaged in livestock raising, however, and the subsector employed about 364,000 workers in 1970. While the total amount of used pasture in Zaire is unknown, it was estimated in 1985 that 15.5 million ha or about 6.6 percent of the country consisted of "available pasturage." Goats, sheep and chickens are common, and pigs are raised in the southwest, parts of the southeast, and in some north central and eastern portions of the watershed. Pigeon raising takes place in the south central portions of the country.

1.e. Industry in Zaire. Industry in Zaire is important to conservation and management of tropical forests and biodiversity primarily insofar as the geographical distribution of industrial activities occurs in relation to important biological resources. Of particular consequence are the mining, hydroelectric, petroleum, ancillary manufacturing, and timber industries.

Mining in Zaire is concentrated in the four general areas of southernmost, and to some extent, central Shaba (copper, cobalt, zinc, manganese, gold, silver, cadmium, tin, and coal); the Mbuji-Mayi area of Kasai-Oriental and the Tshikapa area of Kasai-Occidental (diamond); central and eastern Kivu (gold); and eastern Haut-Zaïre (gold). The largest hydroelectric capacity is in Bas-Zaïre, where the Inga I and II facilities are located on the lower Zaïre River. There are approximately 30 other small-to medium-sized hydroelectric plants concentrated in Shaba and eastern Zaïre on the Lufira, Lualaba and Zaïre Rivers and their major tributaries, many of which were developed to serve the mining centers. A transmission line to move power from Bas-Zaïre to Shaba, the Inga-Shaba direct current (DC) line, was also completed in the early 1980s and transected a broad range of
forest, woodland and savanna vegetation types. Petroleum production in Zaire is limited to offshore production near Matadi, and all domestic refining of imported crude oil for gasoline, kerosene, and fuel and gas oils also is done on or near the coast.

Ancillary manufacturing takes place in scattered locations throughout the country, but is mainly centered in Kinshasa, Bas-Zaire, and Shaba, with secondary concentrations along the Kananga to Mbuji-Mayi axis, and on an axis from northeastern Haut-Zaire through eastern Kivu that again corresponds roughly with the mining centers. Ancillary manufacturing industries in Zaire are related to food, beverages, tobacco, textiles, leather, shoes, chemicals, and non-metallic minerals.

The timber resources of Zaire are vast, ranking second in the world with about 47 percent of total African reserves and 10.0 percent of total world reserves in the late 1970s. About 76 percent of these forest resources are considered exploitable, but only 0.30 percent were exploited in 1985. According to the Zairian constitution, all forested lands belong to the state. Cutting permits are issued for one year to small operators to cut areas of up to 100 ha. Although numerous, these small operators typically produce less than 1000 m$^3$/yr each. Their activities are negligible in terms of total volume cut. About 90 percent of all logs, sawnwood, and veneer in Zaire is cut by 7 companies, one of which accounts for nearly half of all production. It has been estimated that for every cubic meter of commercial wood exploited, about 3 m$^3$ of non-commercial timber is lost as a direct result of the cutting and extraction processes.

Most timber exploitation takes place in the Mai-Ndombe lake area in northern Bandundu and an area in northern Equateur between the Zaire and Ubangi Rivers, both of which are near the transportation facilities along the Zaire River. In the vast Cuvette Centrale, however, only about 60 percent of the timber is considered accessible. Desirable and less desirable species are intermixed, increasing the harvesting cost of marketable varieties. In the mid 1970s total production in Zaire was only about 500,000 m$^3$/yr, in contrast to the 9 to 30 million m$^3$/yr potential. This considerable underutilization in relation to potential was reflected in the fact that the timber industry accounted for only about 0.3 percent of Zaire's GDP in the late 1970s.

The timber industry continues to be constrained by relatively poor transportation infrastructure, particularly roads, and concomitantly high transport costs. Although there is considerable reliance upon the Zaire and Kasai Rivers for roundwood transportation, access to much of the central rain forest remains extremely limited.
2. Conservation Efforts

2.a. Status and Management of Protected Areas. The creation and management of protected areas in Zaire is a priority recognized at the highest levels of government. In 1970, the President of the Republic established as a goal that 12-15 percent of the country ultimately be set aside as "natural reserves." To date, in addition to ex-situ zoological and botanical gardens, about 181,000 km² (9.6 percent of the country) is believed to have some official protected status, and the establishment of an additional 1.0 percent of the country as national park is considered "imminent".

Of Zaire's existing protected areas, about 10, covering about 87,600 km² (3.7 percent of the country), can be considered major conservation areas. Zaire's protected areas currently include six principal types of conservation sites: 1) national parks, 2) UNESCO's Man and the Biosphere Reserves (MABs), 3) nature reserves, 4) forest reserves, 5) hunting reserves, and 6) "secteurs sauvegardes" or safeguarded sectors. The Institut Zairois pour la Conservation de la Nature (IZCN) is charged with management of national parks, nature reserves and hunting reserves, la Direction des Ressources Naturelles Renouvelables (DGRNR) is charged with management of forest reserves, and the MAB/Zaire Program is charged with management of Zaire's biosphere reserves.

In describing problems of conservation, the International Union for the Conservation of Nature and Natural Resources (IUCN) said the following: "Zaire has a good network of national parks and reserves and continues to promote an effective policy for the conservation of natural environment and fauna. Special attention should be given to the suppression of poaching and trans-frontier trafficking in, for instance, ...large quantities of ivory and leopard skins." The protected areas of Zaire face significant problems. Among these are a paucity of technical knowledge regarding the natural resources of the areas, inadequate statutory protection, and funding insufficient to adequately manage a system of this diversity in a nation the size of Zaire.

2.b. National Parks. Covering about 107,360 km² or about 4.6 percent of the country, the eight existing and three proposed national parks appear to include most of the major vegetation types and biotic communities of Zaire. Twelve of the 14 major types of biotic communities of West Africa found in Zaire occur within the boundaries of existing national parks. Floristic surveys are limited or nonexistent for most of Zaire's national
parks, and it is impossible to ascertain which of the major vegetation types found in Zaire are not included or are not adequately included in the national park system. This also holds true for the many minor vegetation types, such as those associated with copper or other mineral outcrops, as well as for animal species. About half of the non-marine species listed as threatened or endangered are known to be present in one or more of the national parks. Poaching is the most important management problem in 7 parks. Others are perimeter population pressures, illegal settlement, illegal mining, tree felling, general habitat destruction, cattle grazing, fires, fishing, and declining tourist revenues.

Although production, protection, and management plans for Zaire's national parks and the creation of new parks were priorities under the 1986-1990 Five Year Plan for Zaire, implementation was seriously hindered by lack of resources.

2.c. Reserves. Zaire has three UNESCO Man and Biosphere Reserves encompassing an area of 267,414 ha or about 0.1 percent of the country: the Yangambi Reserve in Haut-Zaïre and the Luki Reserve in Bas-Zaïre, where research on the ecological effects of human development impact on humid forests is carried out, and the Lufira Valley Reserve in Shaba where research on interactions between human activities and pastoral resources is conducted with a view towards developing a method to control soil erosion.

There are said to be 5 nature reserves in Zaire protected by IZCN. Information on their current legal and management status, as well as their biological resources, is currently unavailable.

In 1953, there were 181 forest reserves in Zaire. Today there are an estimated 117 forest reserves encompassing an area of at least 517,169 ha or 0.2 percent of the country. Most are in the Shaba, Bas-Zaïre, Kasai-Occidental and Haut-Zaïre regions, but there is virtually no available data on their biological resources or the pressures affecting them. All these reserves were established prior to 1960, and many have been abandoned in the last 20 years. They were originally created for silvicultural research and to promote the production of industrial wood and charcoal.

The legislation creating these reserves lapsed with independence. Their continued existence is based on official letters and circulars issued by the appropriate Minister. The relatively moribund state of the national forest reserve system will hamper future efforts to conserve and manage tropical forests in Zaire. DGRNR plans a future inventory of still viable reserves. Additional high priority measures that should be taken include: 1) a survey and inventory of the reserves for resource
content, viability, and income-generating potential; 2) selection of a subset of those reserves with the most important resources for concentrated attention; 3) provision of statutory or legislative protection for this subset; 4) development of management plans for the reserves; and 5) identification and acquisition of funding for DGRNR to effectively manage the reserves.

There are an estimated 57 hunting reserves that exist on paper in Zaire. Most were created during the colonial era, and most have been abandoned for financial or other reasons since independence in 1960. Many currently have no well-defined legislative status. Of the 57 listed, only about 19 are thought to be currently operational, i.e., to be controlled to some extent by IZCN. Eight are in Haut-Zaïre, 2 in Bandundu, 1 in Kinshasa, 3 in Kivu, 4 in Shaba, and 1 in Kasai-Occidental.

Since passage of the 1975 law creating the legislative framework within which safeguarded sectors may be established, no protected areas have been created in Zaire.

2.d. Ex-situ Conservation. Current ex-situ activities in Zaire primarily include those associated with botanical gardens, zoological parks, natural history museums, herbaria, captive breeding facilities, and seed banks. It is unlikely that ex-situ conservation activities will play a major role in biological resource conservation in Zaire in the near future.

C. GOZ and Donor Activities

1. Government of Zaire

The GOZ has in place several statutes relating to activities having an impact on the environment. The most important of these is probably GOZ Ordinance 75-231 (1975), which charges the Departement des Affaires Foncieres, Environnement et Conservation de la Nature (DAFECN) with promoting and coordinating activities relative to the environment. In urban areas, this mandate encompasses providing advice on all industrial or other projects likely to improve or degrade the quality of life; in rural areas, it includes creating and managing nature reserves, capture stations, and water and forest ecosystems.

Other GOZ decrees concerning the environment include: 1) Ordinance 41-88 (1953) relative to dangerous, unhealthy or noxious establishments; 2) Ordinance 69-041 (1969) relative to the conservation of nature, establishment of nature reserves, and
establishment of the IZCN; 3) Law 82-002 (1982) developing hunting regulations; 4) the Decree of 21 April 1937, as amended, regarding hunting and fishing; and 5) Ordinance-Law 85-211 (1985) establishing the Fonds de Reconstruction du Capital Forestier (FRCF). Legislation has also been prepared by UNDP under the auspices of the Department of Environment, but it is limited to water, air, and noise pollution, industrial nuisance and waste management problems, and other activities affecting urban areas.

DAFECN and UNESCO are currently developing a Plan of Action for the Management of Human Establishments. This Plan seeks to establish an environmentally-related data bank, establish an environmental code, and developing a plan for the protection and continued monitoring of major ecosystems.

Since 1987, DAFECN has also participated in the Tropical Forest Action Plan (TFAP) exercises initiated by FAO. DAFECN, assisted by the International Institute for Environment and Development (IIED) and the World Bank, produced the "Etude Institutionnelle du Secteur Forestier" in October 1988, to assist Zairian authorities and donors in preparing the Zairian TFAP. Care was taken to consult private and voluntary organizations (PVOs) having experience in rural development and conservation. The study covered forest and land use, conservation of forest ecosystems, wood energy, development of forest industries, and institutional development. It concluded that the GOZ's conservation institutions needed a coordinated national conservation strategy and increased funding and support to carry out any concerted effort at conservation. The study recommended that the GOZ call heavily on involved PVOs and other community groups. The study has helped create national awareness of the importance of sustainable natural resource utilization in Zaire. It has also stimulated dialogue among sectors and PVOs.

The Government of Zaire is now drafting its TFAP. Canada has taken the lead in assisting this effort. Also cooperating are the World Bank, the African Development Bank (AFDB), the UNDP, the European Economic Community (EEC), France, and Belgium. The study will consider such topics as the macroeconomy and planning of the forest sector, development of forest industries, wood energy, wildlife management, national parks and reserves, rural forestry and reforestation, and creation of conservation institutions for administration, training and research. Eight of nine sections have been completed, and the preliminary report will be presented at a roundtable meeting in May or June of 1990. The results of the TFAP will be integrated into the GOZ's Five Year Plan for 1991-1995.

Even though no systematic, institutionalized system of project environmental review per se exists in Zaire, individual institutions and organizations have the opportunity and/or
responsibility to provide environmental input to the project development process. The "lead agency" in this process is DAFECN, which has a permanent representative on the multi-departmental Commission on Investments (COI) under the Department of Plan. The COI, which can also employ individual technical specialists to consult on environmental and related matters, controls project environmental review by virtue of its authority to examine projects for conformity with management and coordination guidelines and its authority to issue exploitation permits.

### 2. Multilateral Donors

Multilateral donors with programs having an impact on the environment include the AFDB, the World Bank, the EEC, UNDP, FAO, and UNICEF. Of these, UNDP is the most active. It is the most important financing instrument of the UN, and often uses other UN institutions, including FAO, UNICEF and UNIDO, as executing agencies. UNDP plays an important role in ensuring the environmental acceptability of UN projects by providing institutional and technical assistance for studies, and by providing funds to improve projects proposed by the Government of Zaire's Cabinet. In addition, it directly supports such projects as rural resource planning in the Bandundu region and the Programme d'Etude des Ressources Terrestres par Satellite (ERTS).

EEC activities in Zaire are concentrated on the agricultural and rural development sectors in the Kivu, Kinshasa, Bas-Zaire and Bandundu regions. Requests for financing must be accompanied by an environmental impact review. Where prevention or mitigation is advised, the EEC has included environmental activities in its final project designs, e.g., reforestation on the Bateke Plateau including replanting of palm and eucalyptus plantations.

### 3. Bilateral Donors

Bilateral donors most actively involved in projects having an impact on the environment are Belgium, Canada, China, France, Great Britain, Italy, Japan, West Germany, and the U.S. Bilateral development projects presented to the executive branch are analyzed by different commissions, according to individual cooperative accords and conventions, taking account of priorities established by the GOZ.

Belgian bilateral assistance is characterized by a major concern for preservation of the environment, as evidenced by its
involvement in shifting agriculture, reforestation and remote sensing, and by its direct support to the IZCN.

Canada has taken the lead in assistance to the Tropical Forest Action Plan. It works to mitigate adverse impact through reforestation or the adoption of "environmental preservation techniques" and supports the Department of Plan through the Service Permanent d'Inventaire et d'Aménagement Forestier (SPIAF), the Appui aux Gestions Forestières (AGF), Centre d'Adaptation des Techniques en Energie du Bois (CATEB), and the Fonds de Reconstruction to Capital Forestier (FRCF).

Italy finances energy, road rehabilitation, and water quality projects which have an impact on the environment, but are said to undergo little or no environmental review. Most Italian agricultural activities are believed to be environmentally sound by virtue of their impact on reducing bush fires, their use of live anti-erosion techniques, and their incorporation of reforestation activities. Italy is also undertaking a pre-feasibility study of the possibility of draining about 10 percent of the water volume of the Zaire Basin into Lake Chad and has foreseen the need to consider and control the adverse environmental impact which could result.

Bilateral assistance from Great Britain is oriented primarily toward road infrastructure, the transport sector, and education, and essentially consists of material support without intervention in the management of projects or project-specific environmental review.

Japan's assistance, primarily economic and social in nature, does not undergo environmental review, but the Japanese fund an ecological, limnological and ichthyobiological project for the Lake Tanganyika region and furnish waste management equipment for the city of Kinshasa.

For the last two years, the West German project development process has incorporated an environmental review form. A negative impact determination involves the possibility that the project will be eliminated from further consideration. West German assistance also includes a project for protection of mountain gorillas in the Kahuzi-Biega National Park.

III. GROWTH AND DEVELOPMENT: CONSTRAINTS AND ISSUES

The foregoing overview of Zaire's environmental and natural resource situation reveals a basically positive picture with several potentially serious problems developing. While the GOZ and major donors are aware of the problem areas, there are
several constraints to quick and effective action needed to ensure the continued health of the country's environment. Based on the information in Section II, these are summarized below.

A. Policy

On paper, Zaire has an impressive array of national parks and other types of conservation reserves, and there is the potential to develop an effective nation-wide system of environmental protection. In practice, however, many of the parks and reserves have fallen into disuse with no staff and no funds for maintenance. Much of the legislation governing environmental and natural resource management issues dates from colonial times and has not been updated except through semi-official ministerial decrees. The GOZ has established the DAFECN, DGRNR, and IZCN to be responsible for the various parts of the sector, but they remain understaffed and underfinanced.

B. Physical

Fuelwood and agricultural production activities presently pose the greatest threat to natural resource management. Deforestation to support these activities is occurring in the transitional forests stretching from Kinshasa to Kivu and from Kivu south into the gallery forested savannah to Lubumbashi. Continued population pressures in these regions in conjunction with high rural-urban migration have resulted in ever-increasing demand for fuelwood. Deforested halos of 50 to 150 km surround major metropolitan areas, and forest resources are being increasingly exploited to supply growing energy demands.

Market-driven agricultural production activities in the gallery and transitional forest have caused degradation of the natural resource base. Traditional, sustainable shifting cultivation practices have given way to shorter fallows that are unsustainable in the long term. Shorter fallows result in increased mining (removal without replenishment) of soil nutrients. The consequent decrease in soil fertility has fueled demand for more fertile forest land and is increasing deforestation. Rapidly growing demand for agricultural production from urban areas accelerates both deforestation and extensification through cultivation of more marginal land. This abuse of the natural resource base will eventually constrain total production as forest reserves are depleted and production is limited to severely degraded land. In addition, the spiraling degradation process will progress much more rapidly as farmers
move from the more fertile transitional forest into the much less agriculturally suited rain forest and savannah.

C. Financial

The GOZ's finances are chronically in desperate shape. While there is awareness among high level government officials that environmental problems are developing, they are also aware that the situation is not yet critical and environmental concerns are not a top priority. Thus, in the competition for scarce GOZ resources, the environment will inevitably lose out to more urgently felt needs.

D. Human Resources

Zaire's education system is not well-suited to producing competent technicians and development professionals. Most management cadres, in both public and private sectors, have received traditional, classical training that in many cases handicaps the implementation of development activities. Natural resource management is an area that is especially lacking in formal training programs. The University of Kisangani is the only school in Zaire which has such a program, but until recently it was entirely classroom-based, with no field experience available. During the past two years a makeshift arrangement has been established with American researchers to have some students spend time in the Ituri forest, but this is seriously inadequate for the magnitude of the country's requirements in natural resource management.

IV. USAID ENVIRONMENTAL ACTIVITIES AND STRATEGY

A. Ongoing Activities

Given limited available funds and manpower, plus an already heavy workload, USAID/Zaire has addressed environmental and natural resource management issues through carefully chosen activities that mesh smoothly with its ongoing program. One of the most important components of the Mission's environmental program is the continued application of A.I.D.'s environmental examination procedures. Through this mechanism, the Mission continues to ensure that none of its activities will exacerbate the environmental problems that Zaire is facing. In addition, environmental issues are addressed specifically in three areas,
each of which is described in detail below: 1) several activities related to natural resource management are integrated into our agriculture projects; 2) the Mission's training program provides for environmental and natural resource management training; and 3) new initiatives will be launched in response to Zaire having been designated as a key country in the A.I.D. "Global Warming Initiative." In light of this recent designation, the Mission is also exploring the possibility of a debt-for-nature swap.

1. Agricultural Projects

The Mission's agriculture portfolio incorporates environmental and natural resource management components into its projects as follows:

Area Food and Market Development (PROCAR, 660-0102)

-- promote tree nurseries to address reforestation, soil fertility and crop protection;
-- cooperate with the Canadian aid program's Projet Pilote au Reboisement Communautaire;
-- work with PVOs to provide extension information regarding lengthened fallow periods;
-- promote river transport as an alternative to roads for evacuating agricultural produce; and
-- promote fixed market areas that limit environmental destruction.

Central Shaba Agricultural Development (660-0105)

-- promote anti-erosion and soil fertility methods to address soil degradation and deforestation; and
-- aid park rangers in protecting native flora and fauna in a national park.

Both of these projects benefit from research results of the national agriculture research program in alley cropping, cover crops, and nitrogen-fixing trees.

Applied Agricultural Research and Outreach (RAV, 660-0091) and its follow-on (660-0124).

Research subjects include:

-- biological control of food crop pests;
-- alley cropping, cover crops, and nitrogen-fixing trees;
-- crop rotations and fallow periods;
-- multiple cropping;
integrated pest management;  
soil amendments; and  
disease and insect resistant varieties.

2. **Human Resource Development**

As part of its general training program, in the past five years, USAID/Zaire has funded overseas training in wildlife management and in appropriate technology. Beginning with FY 91, the Mission will place added emphasis on both in-country and U.S.-based training sessions in the fields of conservation and natural resources management for students, faculty members and researchers, government officials, and policy-makers.

USAID/Zaire training strategy in the area of natural resources management has three key objectives:

-- To increase practical skills in conservation and natural resources management among university students through in-country, custom-designed, on-site practical training.

-- To increase technical skills among key government ministries and universities in appropriate technology and natural resources management through overseas training at the level of the Master's degree and/or through long-term certificate programs.

-- To strengthen public sector institutions overseeing conservation and protection of the environment through observation tours and short-term courses in Africa and in the U.S.

The following training plan covers the two-year period between 1990-1992.

**Objective 1.** To increase practical skills in conservation and natural resources management among university students through in-country, custom-designed, on-site practical training. An in-country program, to start in FY 91, is intended for faculty members and students of the University of Kisangani, in Haut-Zaire. The New York Zoological Society runs a rain forest research project in the Ituri forest of Haut-Zaire. The work includes research on the habitat of the okapi, an animal unique to Zaire. The proposed in-country training program covers conservation and rain forest management and is to be implemented by the two U.S. researchers living in the vicinity of the city of Epulu. The program will consist of three 4-week seminars and practical training in the conservation of the environment as well as botanical and okapi research. This program will be funded
from the local currency budget and will cover small building construction and training.

Objective 2. To increase technical skills among key government departments and universities in appropriate technology and natural resource management. One participant, from the Zairian parastatal office in charge of the promotion of small and medium sized enterprises, is in his second year at Humboldt State University and will complete his Master's in Appropriate Technologies in December 1990. A second participant will be a woman from the Executive Secretariat of Women's Affairs (Secretariat Executif pour la Condition Feminine et Famille), who is currently in the intensive in-country English program. She is scheduled to start at Humboldt State University in January 1991 for a Master's in Appropriate Technologies. A Ph.D. participant is at the University of Maine finishing a program in Wildlife Management and is expected to find employment both as a researcher/instructor at the university of Kinshasa and as consultant/advisor for the government of Zaire in conservation and management of natural resources.

Objective 3. To strengthen public sector institutions overseeing conservation and protection of the environment. It is proposed that an observation tour be scheduled for FY 91 for the environmental staff of the University of Kisangani, the Department of the Environment, and the "Institut Zairois pour la Conservation de la Nature" (IZCN), as well as a staff member from the Service Presidentiel d'Etudes (SPE). In addition two technical officers from IZCN will attend, in FY 92, a short course in integrated natural resources management. In order to prepare for the course, they will attend in-country English training classes in FY 90 and FY 91.

B. New Initiatives

USAID has carefully assessed the scope and complexity of Zaire's environmental problems in the context of the Mission's available human and financial resources, and determined that for the FY 90-93 period it will address the environment as a "target of opportunity" within its strategic plan. As discussed below, during this period the Mission will both initiate new activities specifically addressing environmental concerns as well as explore a longer-term commitment.
The target of opportunity is: increased protection of Zaire's tropical forests and biological diversity. Subtargets and Benchmark Indicators follow:

Subtarget 1.1: Protected areas increased.

a. Incorporation into Zaire's reserves of 2.2 million hectares currently identified as requiring protection.
b. An additional 6 million to 10 million hectares are identified for future incorporation into Zaire's reserves.

Subtarget 1.2: Increased funding for Zairian natural resource management.

a. A U.S. debt-for-nature swap reduces Zaire's external debt payments by $30 million to $60 million per year.
b. The GOZ contributes the equivalent of $10 million to $20 million per year to a PVO-administered fund for management of Zaire's protected areas.

A discussion of concrete actions to be initiated follows.

1. Small Project Support Project (660-0125)

The purpose of this project is to provide funding for small scale development activities undertaken by Zaire's very active PVO community, both indigenous and international, and the Peace Corps. While present activities are concentrated primarily in Shaba and Bandundu regions and in the sectors of agriculture, health, and rural infrastructure, the project is being amended. Additional funds will be added to the project specifically for activities related to environmental protection, and selection criteria for natural resource management institutions will be added. It is anticipated that for this component of the project, the Mission will work primarily with well known U.S.-based PVOs, such as the World Wildlife Fund and the New York Zoological Society. Activities funded will include basic research needed to identify and catalog both plant and animal species in Zaire's vast and almost unexplored tropical forests, renewable energy, park and reserve management, and general planning which could include a debt-for-nature swap (see Section B.2.). USAID has already received a preliminary proposal from the New York Zoological Society for support of its ongoing research and training activities in the Ituri forest.
2. Debt-for-Nature

Zaire has been designated by A.I.D. as a key country for the Congressionally-mandated Global Warming Initiative. As a result, USAID/Zaire will be exploring new targets of opportunity to address the global warming problem. One such opportunity the Mission is currently examining is a debt-for-nature swap. Zaire is one of the poorest countries in the world, and has almost half of Africa's and over 10 percent of the world's tropical forests that need to be protected and managed. Zaire also has a strong network of local PVOs. The opportunities for the U.S. to play a key role in Zaire's conservation policy formulation are immense.

The U.S. Government has already forgiven A.I.D. loans in return for Zaire's adherence to an IMF/World Bank structural adjustment program. Further consideration is underway in the U.S. Government about PL-480 loans. However, the largest part of Zaire's debt to the U.S. Government, of approximately $1.8 billion, is owed to the Export-Import (ExIm) Bank.

Under a debt-for-nature swap, the U.S. Government should consider forgiving ExIm payments on an annual basis, under the condition that one-third of the amount of payment, in local currency, be placed in a joint USAID/PVO fund for the management of protected areas. Administration of the fund would be turned over to a non-profit conservation group such as the World Wildlife Fund, or the World Resource Institute, both of whom have been active in Zaire. This plan has the dual advantage of alleviating Zaire's huge debt burden, and freeing up considerable resources for the conservation of a significant portion of the world's tropical forests.

While the details of this proposal remain to be worked out, it is not without precedent. Since 1987, several countries, starting with Bolivia, Ecuador, Costa Rica, and more recently Madagascar, have participated in debt-for-nature swaps, in which developing country debt is ultimately used to finance conservation activities. This process has the double benefit of alleviating a country's debt burden, while simultaneously guaranteeing money for embattled conservation projects in developing countries that have many competing demands for funds. One condition that all debt-for-nature swaps have followed is that the resulting funds are administered by local conservation groups.

In 1989, A.I.D./W issued guidance for the Debt for Development Initiative (State 04651). Under this initiative, A.I.D. finances purchases of developing country debt by non-profit organizations at a discount. A.I.D. then permits the
retirement of the debt, in exchange for resources that the debtor country will provide to PVO development programs. With additional legislation, this procedure could be adapted to address the massive ExIm bank debt. Zaire is appropriate for such a scheme. The U.S. government currently holds almost $1.8 billion of Zaire's foreign debt. Most of the U.S. loans to Zaire were made to finance the Inga and Inga-Shaba power projects. The ExIm Bank holds $885,000 as of 1989, as a result of Zaire's inability to service loans initially made by private suppliers and guaranteed by ExIm. Much of this debt has been consolidated and rescheduled in the Paris Club.

As of 1988, Zaire had 188 locations designated as protected areas, amounting to 22.5 million hectares, or about 9.6 percent of Zaire's area. Thirteen additional sites, totalling over 2.2 million hectares, have been proposed for designation as protected areas. President Mobutu has expressed the desire to move the percentage of protected land to 12 to 15 percent of the country by the end of the century. However, the areas currently protected suffer from lack of funds for maintenance, staff, and staff training.

The Mission will work with the U.S. environmental community to arrange a debt-for-nature swap. It is a plan that holds great potential for incorporating vast new stretches of tropical forest within a system of parks and reserves, and at the same time, insuring that funds will be available for developing an effective management system for both the old and newly incorporated forests. According to the World Wildlife Fund, debt-for-nature swaps dramatically increase the impact of conservation dollars. Zaire, with its large debts, and large areas to be conserved, should be a promising target for conservation groups.
ANNEX J

WOMEN IN DEVELOPMENT ACTION PLAN

USAID/Zaire
# WOMEN IN DEVELOPMENT ACTION PLAN

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>ii</td>
</tr>
<tr>
<td>I. OBJECTIVES</td>
<td>1</td>
</tr>
<tr>
<td>II. DESCRIPTION OF ACTIVITIES</td>
<td>3</td>
</tr>
<tr>
<td>A. Improve Health Status</td>
<td>3</td>
</tr>
<tr>
<td>B. Increase Agricultural Production, Productivity, and Rural Income</td>
<td>7</td>
</tr>
<tr>
<td>C. Improve Transport Infrastructure</td>
<td>9</td>
</tr>
<tr>
<td>D. Increase Production and Productivity of the Private Sector</td>
<td>9</td>
</tr>
<tr>
<td>E. General Training</td>
<td>10</td>
</tr>
<tr>
<td>III. STRATEGY FOR IMPLEMENTING AND MONITORING THE WID ACTION PLAN</td>
<td>11</td>
</tr>
<tr>
<td>A. Improve Health Status</td>
<td>12</td>
</tr>
<tr>
<td>B. Increase Agricultural Production, Productivity, and Rural Income</td>
<td>13</td>
</tr>
<tr>
<td>C. Improve Transport Infrastructure</td>
<td>13</td>
</tr>
<tr>
<td>D. Increase Production and Productivity of the Private Sector</td>
<td>14</td>
</tr>
<tr>
<td>E. General Training</td>
<td>14</td>
</tr>
<tr>
<td>F. Other Programs</td>
<td>14</td>
</tr>
</tbody>
</table>
GLOSSARY OF TERMS USED

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSI-CCCD</td>
<td>African Child Survival Initiative-Combatting Childhood Communicable Diseases</td>
</tr>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>AFGRAD</td>
<td>African Graduate Fellowship Project</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>BRH</td>
<td>Basic Rural Health Project</td>
</tr>
<tr>
<td>CYP</td>
<td>Couple Years of Protection</td>
</tr>
<tr>
<td>FPSP</td>
<td>Family Planning Services Project</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HRDA</td>
<td>Human Resources Development Assistance Project</td>
</tr>
<tr>
<td>ICRW</td>
<td>International Center for Research on Women</td>
</tr>
<tr>
<td>MPH</td>
<td>Master of Public Health</td>
</tr>
<tr>
<td>PAAD</td>
<td>Program Assistance Approval Document</td>
</tr>
<tr>
<td>PIE</td>
<td>Program Impact and Evaluation</td>
</tr>
<tr>
<td>PIR</td>
<td>Project Implementation Review</td>
</tr>
<tr>
<td>PSSP</td>
<td>Private Sector Support Program</td>
</tr>
<tr>
<td>PTMS</td>
<td>Participant Training Management System</td>
</tr>
<tr>
<td>RAV</td>
<td>Recherche Appliquee et Vulgarisation</td>
</tr>
<tr>
<td>SEP</td>
<td>Service d'Etudes et Planification</td>
</tr>
<tr>
<td>SPH</td>
<td>School of Public Health</td>
</tr>
<tr>
<td>TRP</td>
<td>Transport Reform Program</td>
</tr>
<tr>
<td>USAID</td>
<td></td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>WID</td>
<td>Women in Development</td>
</tr>
</tbody>
</table>
WOMEN IN DEVELOPMENT ACTION PLAN

I. OBJECTIVES

USAID/Zaire's Goal for the FY 1990 - 1993 period is: to contribute to sustainable, broad based, market-oriented growth and development. In pursuit of this Goal, the Mission focuses on four Strategic Objectives, which are summarized as: improve health status; increase agricultural production, productivity and rural household income; improve transport infrastructure; and increase production and productivity of the private sector. In support of this overall strategy, USAID/Zaire has adopted the following Women In Development (WID) objectives:

- Increase women's access to improved farming technologies;
- Improve the health status of women, especially those of child-bearing age;
- Provide opportunities for women to increase family income through greater involvement as project beneficiaries and participants; and
- Increase women's access to and participation in all USAID-sponsored training activities.

The Mission's WID objectives primarily address three issues: (a) women's access to inputs, services, training, and information; (b) reduction of women's time constraints; and (c) women's participation in the design and implementation of projects.

Zairian women play a critical role in the production, processing, and distribution of food. In most cases, Zairian men clear the land, and women sow, weed and harvest food crops. Production of cassava, the major food staple which supplies 60 percent of the country's caloric intake, is nearly the sole responsibility of women. In addition to providing food for the family, food crops are a source of income. Women help cultivate cash crops on their husbands' fields and contribute to family income by engaging in activities such as trade.

Studies in USAID project areas indicate that many women are heads of households. Seventeen percent of the 13,237 households surveyed in one zone in Bandundu region were headed by a woman, and in another zone, women headed 27 percent of the more than 17,000 households surveyed. A Central Shaba study revealed that there were 31 percent more women than men in the 15-years-and-
over age bracket, and that a high percentage of these women were widowed, divorced, or abandoned.

Numerous, closely-spaced pregnancies, as well as the labor and time required to meet family needs for food, water, fuel, child care, and consumer goods, take a heavy toll on women's health. These demands also limit the time available to women for participation in remunerative economic activities, community development projects, and educational programs.

As the World Bank's "Women in Development Country Assessment Zaire" (draft August 1989) has noted, "Alleviating women's time constraint is a prerequisite for improving their welfare and productivity." Staff involved in the implementation of agricultural projects confirm this observation.

Addressing women's time constraints requires a multi-sectoral approach, both at the project and at the policy level. By providing convenient, potable water, USAID-supported water activities are reducing the incidence of water borne illness, plus the task of water collection, a burden very much involving women. In the agricultural sector, at the policy level, USAID is also attempting to deal with time constraints. Through its policy dialogue with the GOZ, the Mission is advocating the elimination of compulsory cropping which still exists throughout the country. Compulsory fields are allocated on the basis of adult males, but cultivated almost exclusively by women. While men may find extra time for one-time clearing of additional land, this system seriously overburdens women who work with very simple tools and do nearly all of the field work. One of the consequences is that women do not have the time to adopt more intensive, productive farming techniques in their own fields.

The Mission is attempting to increase the number of female beneficiaries by increasing their access to agricultural extension and health services and by reducing time constraints. Efforts to increase the number of female participants who are actively involved in the design and implementation of projects are hampered by educational and cultural constraints. Only 13 percent of the students enrolled in universities and institutes of higher education are women. Just three percent of the students at the Higher Institute of Agronomic Studies and seven percent at the Higher Institute of Rural Development are women. Unless a deliberate effort is made to recruit women as project staff, few women are employed. In order to employ women as agricultural extension agents in the Central Shaba Project, USAID and project staff had to revise the requirement to have an agricultural degree, which was part of the selection criteria. Time constraints on married rural women and prejudicial attitudes
toward unmarried women working outside their own communities also inhibit participation.

Recognizing the educational limitations placed on women's participation, one of the Mission's WID objectives is to increase women's access to USAID-sponsored training activities. In June 1989, a Mission Order was issued which states: "To the extent feasible, Project Officers and the Training Section should identify female candidates for training. Written exception must be prepared for the Director's signature if the percent of women participants in any training program is less than 25 percent." Achievement of this 25 percent quota depends on the proportion of women in the group targeted for training, selection criteria, recruiting efforts, and on other factors, such as the provision of separate lodging facilities.

A Catch-22 situation sometimes prevails, however, making it difficult to reach the 25 percent target in bilateral projects. If women had more training, they could be considered for employment as project staff; since they are not employed as project staff, they are not eligible for training. In general training programs, such as Human Resource Development Assistance (HRDA) and African Graduate Fellowship (AFGRAD) Project, recruitment is not limited to project staff or government counterparts. As a result of a larger pool of candidates and aggressive recruiting, eight (47 percent) of HRDA's 17 long-term participants are women. In addition, using its counterpart funds, the Mission has financed several training programs specifically directed at hundreds of women micro-entrepreneurs.

II. DESCRIPTION OF ACTIVITIES

This Section reviews WID involvement in each of the Mission's projects and programs, identifies areas in which USAID/Zaire's activities have benefited Zairian women, points out constraints to their further participation, and proposes some additional measures to ensure that women are able to take advantage of increased opportunities. The discussion is arranged by summary Strategic Objectives and a general training category.

A. Improve Health Status

Basic Rural Health II (BRH) (660-0107)

This project aims to establish in 100 rural health zones a sustainable system of community-supported preventive, promotive, and basic curative primary health care with a focus on child
survival and safe motherhood. Maternal mortality in Zaire is estimated at six to eight maternal deaths per thousand live births. The Basic Rural Health (BRH) II project has provided over 350,000 women with access to prenatal care. By 1992, this number will have increased to 625,000. To further enhance maternal care, over 1,000 traditional birth attendants have been trained to recognize and refer high-risk cases and to provide safer home deliveries. Women and children are the target group for primary health care services provided through the project, which include oral rehydration therapy, family planning, nutrition surveillance, immunizations, presumptive malaria treatment and prophylaxis, and water and sanitation activities. BRH, by increasing the access of approximately 1.3 million persons to convenient sources of potable water, is improving sanitation, reducing the incidence of water-borne illnesses, and reducing the labor and time women spend collecting and carrying water.

Statistics are not readily available on the actual number of women trained under the project although it has been estimated that one-third of the nurses, auxiliaries, and technicians working in BRH health zones are women. Project staff have been instructed to report gender-disaggregated data when reporting on future training activities. Project water and sanitation coordinators are men, as are many of the nursing supervisors trained under the project. Eighty-eight of the medical directors in USAID-assisted health zones are receiving Master of Public Health (MPH) training. All Zairian medical directors in these zones are men. A recent survey of 71 community development committees in 20 BRH health zones found that, on average, 20 percent of the committees' members were women. These committees are responsible for health promotion and the selection of the project's village health workers.

Shaba Refugee Water Supply (660-0116) and Shaba Refugee Health (660-0114)

The Shaba Refugee Water Supply Project has made potable water accessible to approximately 160,000 individuals in the Lualaba subregion of Shaba. Efforts are being made to ensure that at least one of the ten members of each community water committee is a woman. The Shaba Refugee Health Project will provide approximately 340,000 people with access to health services. Through the construction of health facilities, infrastructure destroyed during the war is being rehabilitated. The project is fully integrated into the national primary health care system. Benefits received by women through these two projects are similar to those described in the Basic Rural Health Project. The water project ends September 30, 1990, and the health project March 31, 1991.
African Child Survival Initiative - Combatting Childhood Communicable Diseases (ACSI-CCCD) (698-0421)

This project targets vaccine-preventable childhood diseases through health zones serving 83 percent of Zaire's population. As the primary care providers of children, women significantly benefit from the prevention of illnesses. A child's illness places demands on a woman's time and on her physical, emotional, and financial resources. Media campaigns are being developed to improve mothers' knowledge of diarrhea and its treatment. The project also provides direct benefits to pregnant women through tetanus vaccinations and the prophylactic use of chloroquine.

Area Nutrition Improvement (660-0079)

During the first years of this project, the Mission provided assistance to the National Nutrition Planning Center. In its final stage, activities have centered on a pilot project aimed at preventing and alleviating malnutrition in 50,000 Kinshasa children each year. Title II commodities provide food for the rehabilitation program and generate income to support project activities. Over 44,000 persons are counseled each month on proper infant and child feeding practices. This information equips women to improve their own nutrition as well as their family's. More than 500 women have been trained as community outreach workers. The project will terminate in September 30, 1990.

School of Public Health (660-0101)

The establishment and development of the University of Kinshasa's School of Public Health (SPH) is a major endeavor by the Mission to develop human resources for the promotion of public health in Zaire. SPH's in-country, French language graduate program in public health could be instrumental in increasing women's participation since it eliminates or reduces the time women must be separated from their families. However, so far only one of the 62 SPH graduates is a woman, and only one woman is currently enrolled in the program. Two actions planned to increase the participation of women are the provision of separate dormitory space and a review of the current admission policy. The requirement that candidates must have spent at least two years of public service in a rural area eliminates many potential female candidates. In addition to its in-country MPH and short training courses, the project includes participant training. Of the 10 faculty members sent abroad for doctoral degrees, two are women. The project will ensure that at least
three women are among the 10 people chosen for AIDS-related training in the United States. SPH serves as a research center as well as a training institution. About one-half of its research staff is female.

**Family Planning Services (660-0094)**

The Family Planning Services Project (FPSP) is broadening access to family planning services through the public and private sectors by providing clinic-based services, community-based distribution, and contraceptive social marketing to pharmacies and wholesale outlets. Improved reproductive health and child spacing reduce female morbidity and mortality and increase participation by women in community development and in their local economies. The project aims to contribute toward an increase in contraceptive use, measured by a growth in Couple Years of Protection (CYP), from 18,000 in 1988 to 195,000 in 1992. FPSP is also raising awareness among policy-makers of the importance of population factors to the nation's development and is providing technical assistance for the formation of a Zairian population policy. The majority of people trained under the project are women, its director is a woman, and women comprise approximately 30 percent of the project's national headquarters staff.

**HIV/AIDS Prevention in Africa (698-0474)**

Patterns of sexual transmission show that the AIDS male/female infection rate in Kinshasa is unbalanced at 1:1.4. This difference is due to the large percentage of women aged 15-29 who are contracting the virus at a higher rate than men of the same age cohort. Thus, the project strategy is to develop mass media messages directed to women and men in the 15 to 29 age group. Prostitution is believed to be one of the reasons for the high infection rate among women. In 1990, an association of prostitutes in a large port city will participate in a pilot peer education study. The women will receive information on how HIV/AIDS is transmitted and how to avoid it. A control group will be studied, and periodic HIV and sexually-transmitted disease tests will be given to monitor the impact of this education effort. Prostitutes and their clients are also the primary targets of a condom social marketing campaign in hotels and bars in two major cities. This campaign will be expanded to three other cities in 1990-91.
B. Increase Agricultural Production, Productivity, and Rural Income

**Central Shaba Agricultural Development** (660-0105)

The Central Shaba Agricultural Development Project distributes improved seeds and disseminates information on improved farming practices. The project initially focused primarily on maize production; in order to increase women's involvement, the emphasis shifted to multi-cropping to include crops traditionally farmed by women, such as cassava, peanuts, and soybeans. A study of the integration of women as contact farmers was conducted during the second year of this 15-year project (contact farmers are trained by extension agents to provide information on improved farming practices to farmers within the project area). In February 1988, when the study was conducted, the 200 contact farmers and the extension agents selected to work with the project were men. The study identified constraints to women's participation and recommended interventions to ensure their integration. Subsequent targeting of women for recruitment and adjusting selection criteria has increased dramatically the number of women participants: four hundred of the 1,600 contact farmers, five of the 33 Zairian extension agents, and six of the 11 Peace Corps Volunteer extensionists are women. In addition, approximately one-third of the nearly 10,000 farmers participating in field days and extension meetings are women. Training sessions for extension workers include discussion of gender issues.

**Area Food and Market Development** (660-0102)

The Area Food and Market Development Project was designed to include a 14-month pilot research, training, and agricultural extension component which targeted women farmers in the Bandundu project area. The WID component is unique in two ways: women farmers are helping to determine interventions which address problems they have identified, and agricultural extension services are being provided by women to women. In May 1989, meetings were held with 1,500 women in 30 villages; among the problems identified by the women were soil depletion, low yields, deforestation, and compulsory cropping. The project's two extension specialists work with women farmers in 10 villages. These women farmers in turn disseminate information to other women in the community. Around 500 women participate in the pilot project's activities which include multi-cropping, tree planting, gardening, and the introduction of improved seeds.
Another aspect of the pilot project is the sensitization of male extension agents to women's role in agriculture and development. The International Center for Research on Women (ICRW) is the contractor; the pilot project's team leader, manager, anthropologist, and extension specialists/researchers are all American and Zairian women. Depending on the results of an assessment at the end of the pilot study, similar activities may be introduced in other areas.

In addition to the WID component of the Area Food and Market Development Project, other project activities, such as the construction of cassava soaking tubs and drying houses, are expected to have a direct impact on women. Initial tests show that the soaking tub/drying house process improves the quality of cassava and reduces post-harvest loss. However, the environmental consequences and time-use implications of fueling drying houses with firewood must still be examined. The overall project emphasis on marketing will benefit women in terms of improved transportation, storage, and market infrastructure improvements.

Applied Agricultural Research and Outreach (RAV) (660-0091)

The RAV Project develops improved seed varieties and farming practices, produces foundation seeds, and incorporates integrated pest management techniques into agricultural extension activities. Given access to these inputs, women farmers will be able to increase their production per unit of labor. USAID-assisted projects in Shaba and Bandundu make efforts to ensure that women farmers gain access to RAV's improved inputs and technologies. RAV is also trying to identify tillage and weeding practices that will reduce women's labor and time constraints, i.e., the use of legumes as ground cover in a multi-cropping system to control weeds. RAV's experiments with alley cropping as part of agro-forestry studies could also benefit women through the provision of fuel wood.

At present, no woman is on the project's professional staff; consequently, all 35 long-term training participants are men. The project does provide, however, in-country training for women employed as support staff. Special efforts will be made to recruit women as professionals and researchers in the follow-on project, Applied Agricultural Research and Outreach II, which begins in FY 1991. Two women are included on the project's design team.
Agricultural Policy and Planning (SEP) (660-0119)

This project identifies agricultural policies that contribute to improved economic conditions for men and women. Elimination of compulsory cropping and market seasons along with the rationalization of taxes and tariffs are policies that would benefit all farmers. The project is also analyzing ways in which savings and loan cooperatives can improve financial services in rural areas. The World Bank's WID study reported that women constitute between 10 to 35 percent of the cooperatives' membership and receive 20 percent of the loans. A recent SEP/Ohio State University study of financial intermediaries in the Bandundu and Shaba regions will provide additional information on households' access to credit.

Only one of the 70 Zairians who received graduate-level training under two previous projects assisting SEP is a woman; she is now an economic advisor to the Minister of Agriculture. Of the 65 professionals currently on the staff of SEP, six are women, but only two are at an educational level high enough to be considered for graduate studies. Of these two potential female candidates, one is in language study in preparation for graduate school; the family of the other is not supportive of long-term participant training.

C. Improve Transport Infrastructure

The Mission currently has four transport projects in its portfolio. Road rehabilitation will improve men's and women's access to markets, agricultural extension and inputs, and health services. The transport sector is dominated by men; consequently, men have been the beneficiaries of all transport-related training activities. One idea proposed for consideration is women's involvement in road maintenance. Mission studies are examining the impact of improved roads on labor productivity, per capita consumption of goods and services, nutritional status, and child survival. Gender-disaggregated data will help the Mission identify appropriate interventions.

D. Increase Production and Productivity of the Private Sector

Private Sector Support Program (660-0120)

The Private Sector Support Program (PSSP) supports the reform of the Zairian commercial banking sector in order to increase productive investment, primarily by small- and
medium-scale enterprises. The majority of Zairian women, as farmers or self-employed workers, rely on informal financial services. During the PSSP's design period, 38 medium-scale enterprises in Kinshasa were surveyed; one was owned by a woman, and women comprised, on average, three percent of their employees. Women's limited involvement in medium-scale enterprises and in the commercial banking system suggests that they will not be among the major direct beneficiaries of the program's loan programs. Additional information will be collected on women's participation in the formal private sector during the course of the program in order to determine ways of assisting female workers and business owners.

**Small Project Support Project (660-0125)**

This project seeks to support the activities of 10-15 PVOs involved in agriculture, public health, or rural infrastructure through the provision of small grants and technical assistance. To date, three activities have been approved for funding, one being the expansion of USAID/Peace Corps fish culture activities. Nearly all of the fish farmers associated with this sub-project are men. A recently-approved activity targeting the families of fish farmers will introduce improved varieties of cassava and will teach small-animal husbandry in an integrated agriculture mode. In selecting activities for funding, 10 points out of a scale of 100 are given to proposals that include women as participants and beneficiaries. Women's groups are specifically targeted as beneficiaries in the project, which was designed by and is now partly implemented by a women-owned firm. The project also requires the monitoring and evaluation of each sub-project's impact on women.

**E. General Training**

Few women are receiving long-term training through bilateral projects, but general training programs such as AFGRAD and HRDA are providing numerous opportunities for women. Since 1980, Zairian women have been awarded 15 of the AFGRAD scholarships, representing 23 percent of the total. The Mission has chosen to focus HRDA training on economics, management, and finance as areas in need of trained professionals in Zaire's evolving development situation. Out of 67 HRDA participants, 31 percent are women, representing 47 percent of long-term participants and 26 percent of short-term participants. Several professionals from the Office of Women's Affairs have attended management courses in the United States. In 1989, HRDA funded six in-country management seminars for women from small and medium enterprises on such topics as "Women and Credit" and "Accounting
Techniques for Women Entrepreneurs." Similar seminars are planned for 1990, with plans being developed for providing small loans to women micro-entrepreneurs.

III. STRATEGY FOR IMPLEMENTING AND MONITORING THE WID ACTION PLAN

Lessons learned from the activities described in Section II have shaped the Mission's strategy for implementing a WID Action Plan. Past experience indicates the importance of:

- ensuring that gender issues are considered during project design;
- recruiting women as project staff;
- assessing project impact on women during the early stages of the project so that necessary adjustments can be made;
- collecting gender-disaggregated data in order to plan appropriate interventions and determine project impact on women;
- carefully setting selection criteria and choosing training sites so that more women can take advantage of training opportunities;
- addressing policy issues that hinder the achievement of WID project objectives;
- testing new approaches in the delivery of services to women; and
- maximizing impact through donor coordination.

At the project design stage, the Mission is requiring that scopes of work for consultant design teams include specific instructions to consider gender issues. The Mission tries to select at least one team member with experience or expertise in integrating women into project activities. The same applies to evaluation teams. Greater effort will be made to recruit Zairian women for Mission and project staff positions in order to increase women's participation in project implementation and training activities. Until many women are recruited for these positions, projects will be unsuccessful in reaching the 25 percent target set in the June 1989 Mission Order. This target will also be unattainable in projects that train only a certain cadre of workers that is overwhelmingly male, i.e., medical directors.

J-11
The Mission will monitor WID objectives through Project Implementation Reviews (PIRs), the Participant Training Management System (PTMS), the Program Impact Evaluation (PIE) system, and project and program evaluations. In 1988, a Mission-wide WID evaluation was conducted. All future project and program evaluations will examine the impact of development activities on women. By December 1990, the PTMS will be fully operational. A Mission Order will be issued requiring Project Officers, beginning in September 1990, to report the number of women who were trained or were recipients of specific project inputs or services during the PIR reporting period.

The Mission's Program Impact Evaluation system will place heavy emphasis on the collection and use of gender-disaggregated data. Geographic data bases are being developed on variables such as health, nutrition, agricultural production, and household income and consumption. Annotated bibliographies and Mission-funded research studies will provide additional information on women's labor productivity, health, and welfare. These data bases will be used in evaluating and monitoring program impact on women and female-headed households.

Listed below are specific WID calendar-driven benchmark indicators in the mission's project portfolio for the period covered by the Mission's Action Plan.

A. Improve Health Status

**Basic Rural Health II.** Decrease the time and labor expended in collecting and carrying water by increasing women's access to in-village water sources; provide 280,000 women of child-bearing age with access to prenatal clinics; train 400 traditional birth attendants; increase education, information, and communication campaigns focusing on safe motherhood and nutrition in 50 health zones (1990-92); study different approaches to community development in selected BRH health zones and the level of women's participation in those areas (1990).

**School of Public Health.** Adjust the School's selection criteria to increase female enrollment (1990); expand dormitory space to provide separate lodging for women (1991); target women for 30 percent of AIDS-related participant training (1990).

**Family Planning Services.** Increase Couple Years of Protection (CYP) from all contraceptive methods in both private and public sectors from 18,000 CYPs in 1988 to 195,000 in 1992; achieve approval of a national population policy by 1991.
HIV/AIDS Prevention in Africa. Increase the target audience (15-29 years) receiving mass media information on AIDS by 200 percent by 1992; assess the pilot education program targeted at prostitutes to determine whether the program should be initiated in other communities (1990); expand the social marketing of condoms campaign directed at prostitutes and their clients to three new cities (1990-91).

B. Increase Agricultural Production, Productivity, and Rural Income

Applied Agricultural Research and Outreach II. Analyze women's access to improved agricultural technology and practices and the impact this technology has on women's labor, time, and revenue; identify interventions that will address the constraints of women farmers; identify ways of increasing the number of women participants (1990 project design).


Central Shaba Agricultural Development. Increase the number of women contact farmers in the project area by 15 percent and the number of women extension agents by 12 percent over the 1990-93 period; consider replication of the Bandundu WID pilot extension activity in Shaba (1991); improve grain storage facilities to reduce post-harvest loss (1990-91).

Area Food and Market Development. Increase the number of women contact farmers in the project area by 15 percent and the number of women extension agents by 12 percent over the 1990-93 period; increase women's access to market services, and assess the replicability of WID pilot activities in other areas of Bandundu (1991); construct 4-15 cassava soaking tubs and drying pits and study their effect on women's cassava sales and time (1990).

C. Improve Transport Infrastructure

Transport Sector Projects. During PAAD design for the Transport Reform Program (TRP), determine if there are any specific gender considerations that should be addressed in the Mission's transport activities (1990); conduct research studies in TRP, Agricultural Marketing Development III, and Central Shaba Agricultural Development to determine the impact of AID-supported
transport activities on women, the transport needs of women, and interventions to meet these needs.

D. Increase Production and Productivity of the Private Sector

**Private Sector Support.** Make recommendations for ways of increasing women's participation in the formal private sector on the basis of ongoing background studies in the Mission (1992).

**Small Project Support.** Carefully review proposals to ensure that women will be project beneficiaries and participants (1990); make early assessments of women's involvement so that adjustments can be made if necessary (1991).

E. General Training

**AFGRAD and HRDA.** Target at least 25 percent of AFGRAD scholarships and 35 percent or more of HRDA participant training opportunities for women; increase the participation rate of women in in-country management seminars for women entrepreneurs; draw the attention of the media and highly placed government officials to the importance of increasing training opportunities for women through a ceremony recognizing women's contribution to development (1990); and provide local currency loans to women micro-entrepreneurs who participate in such local training programs (1990).

F. Other Programs

**Project and Program Evaluations.** Examine project and program impact on women in all evaluations with recommendations for improving Mission effectiveness.
ANNEX K

PRIVATE AND VOLUNTARY ORGANIZATIONS

USAID/Zaire
# Table of Contents

Table of Contents
Glossary of Terms Used

## I. OVERVIEW

## II. PVO ROLES AND RELATIONSHIPS IN ZAIRE

### A. Past and Current Roles of PVOs

### B. Number and Types of PVOs

1. Zairian PVOs
2. International PVOs

### C. Relationship of the GOZ and PVOs

### D. Constraints to PVO Activities

## III. USAID/ZAIRE COLLABORATION WITH PVOS

### A. Improve Health Status

### B. Increase Agricultural Production, Productivity and Rural Income

### C. Improve Transport Infrastructure

### D. Increase Production and Productivity of the Private Sector

### E. Cross-Cutting Support

1. Small Project Support Project
2. Counterpart Fund Support to Department of Plan

## IV. USAID/ZAIRE COLLABORATION WITH THE U.S. PEACE CORPS

Attachment K-1: USAID/Zaire Collaboration with PVOs
## Glossary of Terms Used

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRA</td>
<td>Adventist Development and Relief Agency</td>
</tr>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>AIDRZ</td>
<td>Association Internationale de Developpement Rural au Zaire</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>BRH</td>
<td>Basic Rural Health</td>
</tr>
<tr>
<td>CBZO</td>
<td>Communauté Baptiste de Zaire de l'Ouest</td>
</tr>
<tr>
<td>CPF</td>
<td>Counterpart Funds</td>
</tr>
<tr>
<td>ECZ</td>
<td>Eglise du Christ au Zaire</td>
</tr>
<tr>
<td>EIL</td>
<td>The Experiment in International Living</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>GASPP</td>
<td>Gestion, Appui et Soutien aux Petits Projets</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>MOIZA</td>
<td>Mouvement Islamic au Zaire</td>
</tr>
<tr>
<td>MPR</td>
<td>Mouvement Populaire de la Revolution</td>
</tr>
<tr>
<td>MSI</td>
<td>Management Systems International</td>
</tr>
<tr>
<td>ORT</td>
<td>Organization for Rehabilitation through Training</td>
</tr>
<tr>
<td>OXFAM</td>
<td>Oxford Famine Relief</td>
</tr>
<tr>
<td>PROCAR</td>
<td>Projet de Developpement de la Production et Commercialisation Agricoles Regional</td>
</tr>
<tr>
<td>PNPF</td>
<td>National Family Fish Farm Project</td>
</tr>
<tr>
<td>PSI</td>
<td>Population Services International</td>
</tr>
<tr>
<td>PSSP</td>
<td>Private Sector Support Program</td>
</tr>
<tr>
<td>PVO</td>
<td>Private and Voluntary Organization; the same as an NGO, or non-governmental organization; PVO is used herein for simplicity's sake</td>
</tr>
<tr>
<td>RAV</td>
<td>Recherche Appliquee et Vulgarisation</td>
</tr>
<tr>
<td>SAP</td>
<td>Structural Adjustment Program</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>USAID, USAID/Zaire</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
</tbody>
</table>
PRIVATE AND VOLUNTARY ORGANIZATIONS

I. OVERVIEW

In 1989, it was estimated that private and voluntary organizations (PVOs) were responsible for the administration of 80 percent of primary education, 66 percent of secondary education, and approximately 50 percent of primary health care in Zaire. Importantly, these services are generally provided on a fee-for-service basis; over half of the recurrent costs are covered by such fees, greatly reducing the public sector burden. The PVOs themselves make up much of the difference, and contribute towards capital investment in facilities and equipment as well. They are thus a valued resource for development in Zaire.

The PVO community that accomplishes this and much else is a vast mixture of religious, secular, international, and indigenous organizations, and it works in virtually all sectors of the Zairian economy. Along with the government and the private sector, it has become a strong "third force" in directing and supporting development in Zaire.

USAID/Zaire works with PVOs as direct implementing agencies in pursuit of all four of its Strategic Objectives. It additionally provides training, technical, and financial support to strengthen individual organizations and the community as a whole. The Mission has found that working with established PVOs is both cost and program effective; the established organizations provide an in-place, institutional infrastructure, complete with motivated, field-tested personnel and a proven track record. It is estimated that more than 20 percent of A.I.D.'s annual resources in Zaire benefit or in some way particularly affect PVO operations. Indeed, given both the long and generally successful history of PVO involvement in Zaire and the erratic nature of GOZ development policies and actions, the Mission views the PVO community as key to many of its efforts to achieve its Goal of sustainable and broad based economic growth.

Section II of this annex summarizes the historical and current role of PVOs in Zaire, provides a brief description of the types of PVOs currently active, discusses the community's relationship with the GOZ, and presents some key constraints to their continued activity. Section III provides detail on USAID/Zaire's current and planned PVO support. Section IV summarizes USAID/Zaire's collaboration with a voluntary organization that is not private, the U.S. Peace Corps.
II. PVO ROLES AND RELATIONSHIPS IN ZAIRE

A. Past and Current Roles of PVOs

PVOs have been a key element in Zaire's development strategy since the colonial era. Catholic and, later, Protestant missionaries played an essential role in the health and education sectors, running virtually all health facilities and schools in the Belgian Congo. Smallholder agriculture, on the other hand, was organized by private traders, companies and plantations, or, to a limited extent, the State. There were strict controls on rural-urban migration, production quotas, fixed prices, and monopoly buying zones. Religious missions had their own fields and herds and were often self-sufficient. They trained rural workers in skills such as carpentry, masonry, and general construction.

During the two decades after independence, the rural areas of Bandundu and Shaba -- and other areas of the country -- suffered repeated shocks. In 1964, the Mulelist Rebellion destroyed much of the colonial infrastructure and decimated the young male population. In 1972-73, nationalization measures produced a second collapse of the rural economy as expatriate-owned plantations and commercial enterprises were handed over to inexperienced nationals. Demonetization in 1980 wiped out many rural people's savings. In Shaba, the Angolan civil war and invasions of 1977-78 devastated the Lualaba sub-region. The after-effects are still felt throughout the region, notably in the cutoff of railway access to the coast through Angola.

This twenty year period saw the exodus of many missionary groups, several of which have since returned to Zaire and are attempting to rebuild their activities. As stated in the Overview above, these religious PVOs have become essential to the continued operation of the education and health sectors in Zaire.

In addition to this key role in the social services, many of these PVOs have begun to concentrate on rural development in general and on agriculture in particular. These ventures must be seen in part as a response to the void created by the dissolution of the old system of agricultural production and marketing, a system dominated by plantations and monopsonies which provided services, road maintenance, and access to manufactured goods in return for guaranteed sale of crops to their enterprises. This system is in transition now as a result of liberalization measures aimed at opening agricultural trade to competition.

Thus, the PVOs' activities act as a buffer in this time of transition. They both address critical needs and help rural
communities to organize themselves in the face of changing economic circumstances which make new demands but bring new possibilities as well. Many PVOs are aware of the transitional nature of their activities and are actively working toward creating and aiding self-sustaining community groups for the production and marketing of crops, public health, water sources, or road maintenance. Traditional and governmental authorities are integrated, to every extent possible, into these efforts.

This pragmatic melding of PVOs and government creates problems in assessing the amount of the PVOs' contributions to Zaire's development. In terms of education, while the PVOs appoint their own administrators and teachers, send out their own inspectors, and frequently build their own schools, it is the GOZ that establishes educational policy and standards and pays the salaries of the administrators, teachers and support staff. Similarly in health, the GOZ pays base salaries for some zone, sub-regional, and regional personnel, and provides limited supervision and rehabilitation subsidies. The zones themselves, through user fees and PVO or other donor support, pay all operating and maintenance costs, often including substantial salary supplements to personnel paid by the GOZ. National trends in PVO contributions to agriculture and rural infrastructure are less well documented, but significant in specific areas.

B. Number and Types of PVOs

1. Zairian PVOs

It is difficult to ascertain the number of PVOs in Zaire. The Department of Plan, which encourages PVO activities, currently has three different PVO censuses, which vary by several hundred entries. The Department notes that in some regions alone, several hundred localized organizations have de facto recognition by regional authorities, although only a few may be formally registered at the national level. Some of these are also part of national consortia, and additionally may have separate affiliations with selected international PVOs. The prospect of compiling a definitive list and typology is daunting.

The Protestant Church, for example, has organized at the national level as the Church of Christ in Zaire (ECZ). ECZ is represented by 62 member communities, 26 of which have independent affiliations with U.S. PVOs. The Catholic Church is important at the national level, but in addition is represented by some 45 dioceses, most of which are located in rural areas. Each diocese has a separate Diocesan Development Committee, which has individual PVO status. Numerous active Catholic parishes
have similarly registered independently and have established
Zairian and/or international sources of financing. The Islamic
faith is represented by the Islamic Movement in Zaire (MOIZA),
based in Kinshasa, with affiliates in several eastern cities. An
indigenous church, the Kimbanguists, has several separately
recognized PVOs and receives in-country assistance from numerous
international PVOs, among which is the well-known Jewish group,
Hadassah.

As these groups have moved from purely social services and
into agriculture, infrastructure, and other productive ventures,
it has become more difficult to categorize them as "religious" or
"secular" PVOs. The Adventist Development and Relief Agency
(ADRA), for example, is well known for its work in primary health
care, with strong emphasis on self-financing facilities. The
Western Zaire Baptist Community (CBZO) is involved in rural
infrastructure, small-scale enterprise and agriculture. The
Mennonite Central Committee promotes agriculture throughout the
country.

There are additionally numerous wholly secular PVOs
operating in Zaire. The vast majority of these are community­
based organizations, often established for a specific function
such as managing a health center, water system, or small
agricultural enterprise. Under USAID's Small Project Support
Project (660-0125), for example, a traditional chief has
organized twelve villages to propose a reforestation effort which
will stabilize soil and, importantly, provide an ecologically
appropriate habitat for the area's chief source of protein, the
Saturniidae caterpillar. And under USAID's Basic Rural Health II
Project (660-0107), managed by ECZ and its local affiliates,
several hundred communities have organized Health Committees and
Water Committees to handle investments provided through the
project, which benefits 5 million people.

Additional community-based groups are formed through the
impetus of the Mouvement Populaire de la Revolution (MFR, Zaire's
political party). Others are organized under the tutelage of a
"favorite son" from the community who has risen to prominence
regionally and/or nationally, and who can provide initial
contacts for financial and technical assistance. For example,
under the Small Project Support Project, USAID/Zaire recently
approved funding for a community health committee to complete
construction of a rural health center in Shaba. The group was
organized and a sound project was brought to USAID's attention
through the efforts of a former Regional Governor, who is from
the village involved.
2. International PVOs

Zaire also has its own international PVO, the Association Internationale de Developpement Rural au Zaire (AIDRZ), which is essentially a reincarnation of the Belgian colonial "Fonds de Bien-Etre Indigene". AIDRZ is active in rural infrastructure and general rural welfare. USAID has worked with AIDRZ primarily as an implementing agency, notably in the rehabilitation or construction of over 600 improved potable water sources serving a population of 180,000 in the Lualaba sub-region of Shaba (660-0116).

Additionally, a number of American PVOs have become established, initially through A.I.D. financing, and then stayed on. Among these are TechnoServe, which completed its A.I.D. grant in 1989 (660-0113) and is now locally established and providing training and consultant services to other PVOs and A.I.D. projects throughout the country. The American ORT Federation has undertaken a number of A.I.D.-financed activities, among which is the establishment of a training center for road rehabilitation and repair in Lubumbashi (660-0028). As mentioned earlier, Hadassah has used its own and A.I.D. grant resources to assist the Kimbanguists in establishing and operating a 180-bed hospital serving 250,000 people in one of the poorest sections of Kinshasa (660-0122). The Experiment in International Living (EIL) entered Zaire in 1989 under a Cooperative Agreement with USAID to direct the umbrella management unit of the Small Project Support Project. With financing from the Family Planning Services Project (660-0094) and Combatting Childhood Communicable Diseases (698-0421). Population Services International (PSI) is implementing USAID's extremely successful Contraceptive Social Marketing and AID^ information programs.

Other international PVOs in Zaire include World Vision (U.S.), World University Services Association (Canada), OXFAM (U.K.), Ecumene (Spain), the Red Cross, the Salvation Army, and a number of small Belgian PVOs. Each of these has its own constituency and client group, but each contributes to the overall strength of the Zairian PVO community.

C. Relationship of the GOZ and PVOs

With the exception of the period of Zairianization in the mid-seventies, until recently the GOZ pursued a general laissez-faire policy towards the Zairian PVO community. In 1987, however, as part of the World Bank supported Structural Adjustment Program (SAP), and in order to reduce customs fraud, it eliminated the Zairian PVOs' duty-free status and began a push
towards regularizing PVO registration, rights, and responsibilities.

This change in policy, particularly the loss of duty-free status, was not well received by the PVOs. In order to implement its new policy, the GOZ then introduced legislation that was intended to impose registration and reporting requirements for the community. This threat to long-standing PVO autonomy was a second, in some ways greater, blow to the community. Recognizing the potential loss to the nation if the PVOs began to leave Zaire, as had happened in the mid-seventies, the UNDP was asked to help facilitate discussions between the GOZ and the PVOs. With the encouragement of the UNDP and USAID, the PVOs formed a Technical Monitoring Committee (the Comite Technique de Suivi). This committee currently consists of 10 members, representing the four major religious groupings (Catholic, Protestant, Islamic, Kimbanguist), indigenous secular PVOs, international PVOs, the UNDP, and the GOZ Department of Plan. It has met several times in the last two years and is working with the GOZ to develop a texte juridique, or legal statutes, that will govern PVO status and GOZ-PVO relationships in the coming years.

As part of its work with the Technical Monitoring Committee, in 1988 the GOZ Department of Plan initiated a series of PVO Roundtables in each region of the country. The purpose of the Roundtables is to establish regional PVO Coordinating Committees whose representatives will represent the regions at a national level Roundtable in late 1990 to finalize the legal statutes. Most have been well attended by religious and secular Zairian and international PVOs in the regions. At the end of the year, the results of these discussions will be incorporated into the new texte juridique. During 1990 the UNDP will also embark on a major census effort to document the number and types of PVOs operating in the country. These three actions -- the Roundtables, the new legal statutes, and a more comprehensive accounting of PVO activities and contributions to Zaire's development -- should provide a firm basis for renewed and productive collaboration in the coming years.

The Department of Plan has recently received notification from the GOZ Cabinet that a small amount of funding for PVO development activities will be made available this fiscal year. The Department is beginning to work on developing criteria and procedures for distributing such funding. This GOZ support, however small, will also facilitate stronger GOZ/PVO relationships in the coming years.
D. Constraints to PVO Activities

The change in GOZ policy towards PVOs in the last three years has posed the most immediate constraint to PVO activities. The loss of duty-free status in particular has resulted in a doubling of costs for many items, which has exacerbated already strained budgets. It is likely that the new texte juridique will include provision for case-by-case exceptions for specific imports for developmental purposes, which should ease the transition. It is likely, however, that as the GOZ continues its newest SAP, the PVOs will have to both pay duty and report more often on their contributions to national development. This change in status, affecting both budgets and autonomy, is likely to create stress on PVO activities in the near term.

In the longer term, the PVO community in Zaire operates within two basic sets of constraints. The first set is simply the problems of doing business of any sort in Zaire, and the second is more related to the organizational nature of PVOs. The effects of these constraints on PVOs' abilities to undertake development coinciding with USAID's strategic interests are summarized below.

The problems of doing business in Zaire are well documented. Zaire is vast (one-third the size of the U.S.) and has the fifth largest population in Africa. It was subject to one of the most repressive colonial regimes, coming to independence 30 years ago with approximately 12 college graduates. It has an estimated 200 ethnic groups with distinct languages, cultural, and historical characteristics. Zaire has about 150,000 kilometers of road which are mostly unpaved and in general disrepair. The cost of renting a small truck to transport goods is frequently estimated to be as high as $1.50 per kilometer. Zaire's 15,000 kilometers of rivers are generally uncharted and/or unbridged, and boats are subject to piracy. Its rail line suffers frequent delays and breakdowns. Communication facilities are weak. Moving goods from the port of Matadi to a PVO station can occupy one or two people for the best part of a year, and may end up costing more than double their purchase price. Although the GOZ and various national organizations try to effect coordination and to facilitate activities, the fact that PVOs are spread throughout the country means that communications are tenuous at best. Announcement of a training course may arrive two weeks after it is over. Availability of new varieties of seeds or cultivars from a research station may not become known for two to three years.

In sum, the sheer size and complexity of the Zairian socio-political and agro-climatic environment is a major constraint for any PVO working in Zaire. This has led to the establishment of
hundreds of small PVOs -- church parishes, community groups, special interest groups -- who focus their efforts at the local and regional levels. This plethora of small, autonomous PVOs operating at the local and regional levels means that each must be dealt with separately as an actor on the development scene. As described in Section II.B. above, there are numerous types of PVOs operating in Zaire. Their own organizational characteristics form the second set of constraints.

Each PVO has a particular mandate, which is derived from specific needs of a client group, generally the rural population in which it is situated. The mandate is also, however, derived from constituents who do not receive services from the PVO but rather believe in and support its mandate. Constituents include funding sources, such as sending churches, bilateral and international donors, other PVOs, wealthy individual patrons, and regional/national GOZ authorities. While client and constituent needs frequently overlap, problems arise when the needs of the clients are different from, or at odds with, the desires of the constituents.

In small community-based PVOs, the clients and constituents are generally the same, and fewer problems arise. With the exception of these groups, however, most PVOs in Zaire must rely on constituents different from their client group to provide funding. When they seek external funds, either from long-term constituents or from the GOZ or from A.I.D., the following problems arise:

-- PVOs view themselves as autonomous organizations with their own mandates and approaches to development which may not coincide with prospective donor interests. If the PVO is well established in a specific area, it may even have enough clout to hamper donor efforts if it disagrees with them.

-- Conversely, some PVOs are more opportunistic and respond to external funding availability with little regard for capabilities. Thus, the PVO may suffer a loss in credibility with both clients and constituents if it undertakes an activity for which it is ill-prepared, and fails.

-- PVOs would frequently prefer to adopt the least amount of administrative change necessary in meeting donor requirements. A locked strongbox and a trusted treasurer with a good memory may meet all its needs for accounting. Many constituents and donors, including A.I.D., however, require more formal management systems. This means that the PVO must change its basic administrative system, often at a cost, in order to access additional funds.
In summary, while PVOs have demonstrated over time their capacity to undertake development in Zaire, they do so within policy, environmental and organizational constraints. The efforts at improving the GOZ policy framework are discussed in Section II.C. above, and the PVO response to the environmental problems is noted in this section above. The following section discusses some of A.I.D.'s efforts to support PVOs as implementing agencies while helping them build organizational capacity to continue and expand their development work.

III. USAID/ZAIRE COLLABORATION WITH PVOs

USAID is currently working with over 50 different PVOs. In many cases, the PVOs are viewed strictly as the most appropriate implementing agencies, but they frequently also benefit in terms of institutional development. The Mission estimates that more than 20 percent of A.I.D. assistance to Zaire is channeled through or benefits the work of the PVO community.

Given both the success of PVO work in Zaire and USAID's emphasis on promoting sustainable development, the Mission intends to continue to increase this collaboration in future years. Support to PVOs both as direct implementing agencies and for PVO institutional development will continue to grow throughout the Action Plan period. In addition, USAID will place a greater emphasis on utilizing PVOs in promotion of improved natural resource management. Given the strong capabilities of U.S. PVOs in this field, it is likely that the Mission will call upon both U.S. and Zairian PVO capabilities.

Some current examples of USAID's collaboration with PVOs in support of USAID's Strategic Objectives are provided below. A more detailed listing is provided in Attachment K-1.

A. Improve Health Status

Under USAID's Basic Rural Health II Project (BRH, 660-0107, FY 85-92), the primary implementing agency is the Protestant PVO consortium, ECZ. The project has extended full primary health care services to five million people through over 90 of Zaire's 306 rural health zones. Of the 90, 75 percent are operated by PVOs in collaboration with community-based Health Committees. It has additionally improved potable water sources serving an estimated population of 1.2 million. The project has emphasized the development of a fee-for-service system that will increase the financial viability of health care in Zaire. A recent study
of the ten most progressive health centers documented that the BRH centers recover an average of 79 percent of their annual recurrent costs through user fees.

The Shaba Refugee Water Project (660-0116, FY 85-90) is implemented by the Zaire-based international PVO, AIDRZ. In the past five years, AIDRZ has completed capping 454 springs, rehabilitated and provided pumps for 163 existing wells, and constructed two piped water systems, for cumulative coverage of an estimated 160,000 persons.

Under the Shaba Refugee Health Project (660-0114, FY 85-91), the United Methodist Church of Shaba, under a USAID grant, is constructing and equipping a total of 45 rural health centers and two reference health centers as well as rehabilitating and equipping three rural general hospitals, all of which are administered by the PVO. It is estimated that this project has provided benefits to 340,000 rural Zairians.

The American PVO, Population Services International (PSI), is the chief implementing agent for two USAID efforts. Under the Family Planning Services Project (660-0094, FY 82-91), PSI is working in 15 cities and three regions throughout Zaire to increase the distribution of contraceptives by using innovative, private sector techniques within established commercial networks. This project component is having phenomenal results, with condom sales rising to 4,140,458 in 1989, a 443 percent increase over sales of the previous year. The commercial sales component is being extended to promote the use of condoms among targeted high-risk populations.

Through a Mission buy-in to the centrally-funded AIDS Prevention and Control Project (474-0474.60, FY 88-91), PSI is working in collaboration with the Zairian Central AIDS Coordinating Bureau to develop and implement a mass media information, education and communication program in Kinshasa and four interior regions of Zaire. The AIDS Mass Media project uses high impact, frequently aired radio and television spots, feature-length radio and television programs, popular music, and innovative print materials to disseminate AIDS educational messages intended to motivate behavioral changes necessary to reduce the transmission of HIV.
B. Increase Agricultural Production, Productivity and Rural Income

USAID is working through established PVOs with experience in agriculture in the major area-specific projects in Central Shaba and the Kwilu sub-region of Bandundu. It additionally collaborates with PVOs as part of its agricultural research outreach efforts.

USAID's Area Food and Market Development Project (660-0102, FY 85-95), known by the French acronym PROCAR, works with established PVOs in the Bandundu Region to catalyze their ongoing agriculture activities. The project currently works with two religious-based PVOs (Lusekele, which is supported by the American Baptists, and a Catholic Diocesan Development Committee in the area), two agricultural cooperatives and a rural credit and savings federation. The number of PVOs involved in PROCAR is expected to grow to 10-15 during the next four years. These PVOs serve as primary implementing agencies for PROCAR activities in agriculture. They additionally benefit from USAID assistance in institutional development through commodity procurement, technical training, management/financial training, and infrastructure improvements. It is estimated that nearly one million rural inhabitants, particularly women, will benefit from these activities.

Under the Central Shaba Agricultural Development Project (660-0105, FY 86-93), USAID is working with forty agricultural pre-cooperatives in field trials and production programs for improved maize, legumes, rice, and peanuts. It additionally works with a regional PVO Maman Kipendamo, which works with women's groups in all crops. Several Catholic Missions in Central Shaba, at Kayeye, Budi and Kabalo are also involved in project production and marketing activities. Approximately 10,000 farmers have already participated in these activities (30 percent of the participants were women), which will eventually bring benefits to the sub-region's population of 450,000.

And, as stated above, under USAID's Applied Agricultural Research and Outreach Project (RAV, 660-0091, FY 83-90), RAV Outreach Teams collaborate with numerous PVOs in Bas Zaire, Shaba and Bandundu Regions. The PVOs assist in both undertaking diagnostic studies and in facilitating farmer-managed field trials of new varieties. The follow-on to RAV now under design will place even greater emphasis on improving collaborative outreach with PVOs.
C. Improve Transport Infrastructure

The Agricultural Marketing Development III Project (660-0098, FY 84-94) seeks to improve road and river transport infrastructure in the Kwilu sub-region of Bandundu. In the past two years, it has worked with two local PVOs (the Catholic Mission at Sia and the Society of Jesus) in the construction of 24 improved water crossings, thus providing improved access to goods and services for an estimated 50,000 persons.

The Shaba Refugee Roads Project (660-0115, FY 84-90) is implemented by the American ORT Federation, which has to date completed 1158 kilometers of road rehabilitation in the Lualaba Region of Shaba.

D. Increase Production and Productivity of the Private Sector

In FY 90, the new Private Sector Support Program (PSSP, 660-0120, FY 89-94) anticipates providing support through cooperating Zairian commercial banks to several agricultural cooperatives and possibly other enterprises through its focused credit for small and medium scale enterprises.

E. Cross-Cutting Support

1. Small Project Support Project (660-0125, FY 88-94)

The Small Project Support Project (referred to by the French acronym GASPP) represents USAID/Zaire's latest effort to provide continuing support to PVOs for implementation and institutional development while reducing its own management burden. The umbrella project is currently funded at a level of $ 6 million, with an anticipated additional $ 6 million equivalent in counterpart funds available over the life of project. The primary implementing agency is the U.S. PVO, The Experiment in International Living (EIL), in joint venture with a small, women-owned firm, Management Systems International (MSI).

EIL/MSI has established a project management unit which provides administration of direct implementation grants to a variety of PVOs. It additionally provides training to PVOs in financial management, project design and limited strategic planning. Finally, it collaborates with the Department of Plan and other coordinating bodies in furthering PVO efforts in Zaire.
In this regard, it has provided partial funding for and participated in PVO Roundtables in both Bandundu and Shaba Regions.

The project purpose is to increase support for community-based small-scale development activities in rural areas which respond to USAID priorities in Zaire and can be sustained by the local population. Priority is given to activities in Shaba and Bandundu Regions. In its first six months of operation, GASPP reviewed 84 PVO proposals, of which one (a health center in Shaba) was approved. Following a training and consultancy process in early 1990, five more proposals are ready for funding, and an additional five are in the final stages of development. These activities range from caterpillar raising and animal traction to construction of rural bridges to small-scale palm oil processing. Based on the number of proposals regarding reforestation, conservation, and energy-saving technologies received to date, USAID is planning additional dollar funding beginning in FY 1990 to GASPP as part of its Global Warming initiative.

2. Counterpart Fund Support to Department of Plan

Prior to the inception of the GASPP project, USAID through the Department of Plan provided funding for support of PVO activities from the A.I.D. dollar-generated counterpart funds (CPF). With the establishment of the GASPP management unit, this funding has become less necessary. USAID will carefully monitor the proposed funding by the GOZ Cabinet (ref. Section II.C. above) to determine if continuation of CPF funding for such activities is merited.

IV. USAID/ZAIRE COLLABORATION WITH THE U.S. PEACE CORPS

Zaire is a model country for A.I.D.-Peace Corps collaboration. As of FY 90, about three-quarters of the 150 Peace Corps volunteers in Zaire were involved in collaborative projects with USAID in fish culture, agricultural extension, health and water. New initiatives are being considered in the environmental area.

USAID, Peace Corps and the GOZ have collaborated for more than 10 years in promoting on-farm fish culture in five regions of Zaire. Fish culture in small ponds had been known in Zaire for decades, but declined after independence. Its revival was first explored by the Peace Corps in Bandundu beginning in 1973, then became a joint USAID/Peace Corps project with the GOZ in...
1978. The National Project for Family Fish Farms (PNPF) is now co-financed by the GOZ, Peace Corps, and USAID through the Small Project Support Project.

Through PNPF, some 8,000 farmers have been trained to raise tilapia for family consumption and sale in five regions of Zaire, with a target of 2,000 additional farmers and one additional region (Shaba) under the current funding. Production in 1989 exceeded 120 metric tons, thus providing an excellent protein source in rural areas. Over 450 volunteers have worked in fish farming over the last decade, with the current level at 62. This is an excellent project in terms of food production, nutrition, employment, and revenue generation.

Peace Corps Volunteers are also helping rural inhabitants integrate fish farming with other agricultural activities. With additional funding through the Small Project Support Project, between 1990 and 1994 each of 45 new volunteers will assist 25 to 30 families each year, for a total of 2,700 farmers in integrated agriculture during the Action Plan period.

Volunteers are also active in USAID agricultural extension efforts in Shaba and Bandundu. Under the Central Shaba Development Project, 13 volunteers are working with local PVOs and farmers in testing new varieties and teaching new cultural techniques. Under PROCAR, 10 volunteers work with PVO extension agents in adaptive testing and training.

Finally, Volunteers conduct education activities at health centers and help cap and protect water sources in collaboration with the PVO ECZ and the GOZ under the Basic Rural Health II Project. Peace Corps volunteers with accounting backgrounds are being placed in health zones where there is an interest in improving financial management systems.

These and other collaborative A.I.D.-Peace Corps activities will be continued and enhanced during the Action Plan period.
USAID COLLABORATION WITH PVOs IN ZAIRE

USAID/Zaire has collaborated with PVOs in Zaire for over a decade. The following list presents, by USAID funding source, the organizations involved during the 1980s only.

1. Improve Health Status

The USAID projects Basic Rural Health I (660-0086, FY 81-88) & II (660-0107, FY 85-92). BRH I & II have supported the work of numerous indigenous PVOs over the years. The following lists these groups both by national affiliation (ECZ, Catholic, Kimbanguist) and international affiliation, when known.

Eglise du Christ au Zaire (Protestant)

Communauté Baptiste du Fleuve Zaire (CBFZ)
Communauté Baptiste au Kivu (CBK)
Communauté Baptiste du Zaire Ouest (CBZO)
Communauté Evangélique des Adventistes du Septième Jour (CEASJ)
Communauté Evangélique de l'Alliance au Zaire (CEAZ)
Communauté des Eglises Baptistes au Kivu (CEBK)
Communauté Evangélique au Centre de l'Afrique (CECA)
Communauté Evangélique du Christ en Ubangi (CECU)
Communauté des Eglises des Frères Mennonites au Zaire (CEFMZ)
Communauté des Eglises Libres du Zaire (CELZA)
Communauté des Eglises Pentecôte (CEP)
Communauté Evangélique en Ubangi-Mongala (CEUM)
Communauté Libre Méthodiste au Zaire (CLMZ)
Communauté Médicale Evangélique (CME)
Communauté Méthodiste au Sud-Zaïre (CMSZ)
Church Communauté Mennonite au Zaire (CMZ)

Communauté Méthodiste au Zaïre Central (CMZC)
Communauté Presbytérienne au Zaïre (CPZA)
Communauté Région de Sankuru (CRS)

International

Baptist Missionary Society
American Baptist Churches
Christian & Missionary Alliance Overseas
Conservative Baptist Foreign Missionary Society
African Inland Mission
Pinseveens Ytre Misjon
Free Methodist Church
United Methodist African Inter-Mennonite Mission Methodists
U.S. Presbyterian Church
Eglise du Christ au Zaire (Continued)
Institut Médical Chrétien Kasai (IMCK)
Institut Médical Evangélique (IME)
Paul Carlson Medical Foundation (PCMF)

Communauté Baptiste de Bandundu (CBB)

Communauté des Frères en Christ Gareenganze (CFCG)-
Salvation Army

Catholic Church
Diocèse de Bokoro
Diocèse de Butembo-Beni
Oeuvres Sociales Diocésaines de Bunia
Diocèse de Drodro
Diocèse de Dungu
Diocèse d'Idiofa
Diocèse d'Ikela
Diocèse de Kabinda
Diocèse de Kikwit
Diocèse de Kisantu
Diocèse de Kole
Diocèse de Musienene
Diocèse de Popokabaka
Diocèse de Tshumbe

Diocese de Bokoro
Diocese de Butembo-Beni
Oeuvres Sociales Diocésaines de Bunia
Diocese de Drodro
Diocese de Dungu
Diocese d'Idiofa
Diocese d'Ikela
Diocese de Kabinda
Diocese de Kikwit
Diocese de Kisantu
Diocese de Kole
Diocese de Musienene
Diocese de Popokabaka
Diocese de Tshumbe

Other PVOs with which USAID has worked or is working in support of its Strategic Objective in health include the following:

Indigenous PVO
Eglise Kimbanguiste
Communaute Methodiste au Sud-Zaire (CMSZ)

U.S. or International PVO
Adventist Development and Relief Agency (ADRA)
Association Internationale de Développement Rural au Zaire (AIDRZ)
American ORT Federation
Hadassah
Population Services International

USAID Project & Affiliate
Kimbanguist Hospital Assistance (660-0122, FY 86-89) with Hadassah
Shaba Refugee Health (660-0114, FY 85-91) with U.S. United Methodist Church
Small Project Support Project (660-0125, FY 88-94) for health center construction by indigenous PVO
Shaba Refugee Water (660-0114, FY 85-90)
Area Nutrition Improvement (660-0079, FY 82-90)
Kimbanguist Hospital Assistance (660-0122, FY 86-89)
Family Planning Services Project (660-0094, FY 82-91) for Social Marketing
AIDS Prevention and Control Project (474-0474.60, FY 88-91), mass media
2. Increase Agriculture Production, Productivity and Rural Income

Communaute Baptiste du Zaire Ouest (CBZO) 
Centre Agricole Lusekele 
Diocese d'Idiofa 
Technoserve 
Maman Kipendamo 

Catholic Mission - Kayeye 
Catholic Mission - Budi 
Catholic Mission - Kabalo 
Inter Aid Relief International Zaire (IRIZ) 
Salvation Army 
Eglise du Christ au Zaire (ECZ) 
Technoserve 
Diocese d'Idiofa 

Area Food and Market Development (660-0102, FY 85-95) 
" " " " " " 
Central Shaba Agricultural Development (660-0105, FY 86-93) 
" " " " " " 
Applied Agricultural Research and Outreach (660-0091, FY 83-90) 
" " " " " " 

3. Improve Transport Infrastructure

Diocese d'Idiofa 
Diocese de Kikwit 
Society of Jesus (Jesuits) 
American ORT Federation 

Agricultural Marketing Development III (660-0098, FY 84-94) 
" " " " " " 
Agricultural Marketing Development II (660-0028, FY 81-88) Roads Training Center in Lubumbashi Shaba Refugee Roads (660-0114, FY 84-90) 

4. Increase Production and Productivity of the Private Sector

Communaute Evangelique de Centre de lAfrique (CECA) 
Diocese d'Idiofa 
Eglise du Christ au Zaire (ECZ) 
African Institute for Social and Economic Development (INADES) 

Technoserve 
Experiment in International Living 

PVO Economic Support (660-0097, FY 83-89) for mini-hydroelectric " " for bridges " " for basic rural health 

Appropriate Rural Technology Development (660-0104, FY 85-87) 

Private Management Support (660-0113, FY 84-88) 
Small Project Support Project (660-0125, FY 88-94)
ANNEX L

RESEARCH AND EVALUATION

USAID/Zaire
# EVALUATION AND RESEARCH

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>i</td>
</tr>
<tr>
<td>Glossary of Terms Used</td>
<td>ii</td>
</tr>
<tr>
<td>I.  INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. EVALUATION PLANS</td>
<td>2</td>
</tr>
<tr>
<td>III. IMPLEMENTATION OF RESEARCH-BASED EVALUATION</td>
<td>4</td>
</tr>
<tr>
<td>A.  Program Impact Evaluation Data Bases</td>
<td>4</td>
</tr>
<tr>
<td>1.  Defining Impact</td>
<td>4</td>
</tr>
<tr>
<td>2.  Data Base Development</td>
<td>5</td>
</tr>
<tr>
<td>3.  Research Coordination</td>
<td>6</td>
</tr>
<tr>
<td>B.  Mission Research Activities</td>
<td>7</td>
</tr>
<tr>
<td>1.  Research for Program Impact Evaluation</td>
<td>7</td>
</tr>
<tr>
<td>2.  Project and Non-Project Research</td>
<td>8</td>
</tr>
<tr>
<td>IV. CONCLUSION</td>
<td>10</td>
</tr>
</tbody>
</table>
### Glossary of Terms Used

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.I.D.</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>BRH</td>
<td>Basic Rural Health</td>
</tr>
<tr>
<td>CEPLANUT</td>
<td>Centre de Planification de la Nutrition</td>
</tr>
<tr>
<td>CFNPP</td>
<td>Cornell Food and Nutrition Policy Program</td>
</tr>
<tr>
<td>INS</td>
<td>Institut National de la Statistique, the census bureau</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>GOZ</td>
<td>Government of Zaire</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>KAP</td>
<td>Knowledge, Attitudes, and Practices</td>
</tr>
<tr>
<td>PIE</td>
<td>Program Impact Evaluation</td>
</tr>
<tr>
<td>PIR</td>
<td>Project Implementation Review</td>
</tr>
<tr>
<td>PSSP</td>
<td>Private Sector Support Program</td>
</tr>
<tr>
<td>RAV</td>
<td>Recherche Appliquee et Vulgarisation</td>
</tr>
<tr>
<td>SAM</td>
<td>Social Accounting Matrix</td>
</tr>
<tr>
<td>SEP</td>
<td>Service d'Etudes et Planification</td>
</tr>
<tr>
<td>TRP</td>
<td>Transport Reform Program</td>
</tr>
<tr>
<td>USAID,</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
<tr>
<td>USAID/Zaire</td>
<td>The A.I.D. Mission in Zaire</td>
</tr>
</tbody>
</table>
I. INTRODUCTION

USAID/Zaire spends approximately $7.8 million per year on activities related to monitoring, evaluation, design, research, and management consultancies. Dollar funding totals $5.3 million: approximately $1 million is Project Development and Support funds and the balance is project-funded. Counterpart funds cover the additional $2.5 million in research-related costs. From FY 1989 to the present, the Mission has completed or initiated 129 separate research-related activities, as identified by individual earmarking actions or authorizations.

The magnitude of these resources and the importance of monitoring and evaluation activities prompted USAID to hire a full-time Personal Services Contractor as a research coordinator in FY 1988. This has resulted in significant improvements in research management and in cost effectiveness; use of existing or secondary data is an important source of cost savings. USAID is also taking advantage of recent advances in micro-computers for data base management. By using and linking past census and survey data, the Mission is reducing the need to commission expensive, time-consuming primary data collection activities. Where data gaps exist, new surveys are being conducted, but are coordinated with existing data bases and with information derived from ongoing projects.

The Mission has also expanded its collaboration with local researchers and institutions, which increases the cost-effectiveness of research activities, while building local research capacity. USAID collaborates with local, private consultants as well as numerous Zairian organizations including the Institut National de la Statistique (INS, the census bureau), the Department of Agriculture's Studies and Planning Service (SEP), the Centre de Planification de la Nutrition (CEPLANUT), the Presidential Studies Group, and the University of Kinshasa's faculty and School of Public Health.

Improved data and local collaboration are allowing the Mission to produce more rigorous evaluations. In order to break the cycle of evaluations conducted by large, multi-disciplinary teams of expatriate consultants with relatively little time in country, the Mission is planning ahead and systematically pursuing background research and data base development in all of its activities. This will provide a stronger basis for smaller teams of physical and social scientists to evaluate program impacts.
II. EVALUATION PLANS

The Development Fund for Africa (DFA) requires USAIDs to clearly define the anticipated people-level impact of their interventions and to quantitatively measure that impact. In response to this requirement, and based upon the "Program Log Frame," USAID/Zaire has developed the Program Impact Evaluation (PIE) framework, discussed in Section III of this Annex, for data collection and analysis of critical linkages between project interventions (inputs and outputs) and achievement of the strategic objectives and goal. Within this framework, data bases are being constructed that will facilitate measurement of program performance and country trend indicators; these data bases are being assembled from project level data developed to quantify performance and impact through benchmark indicators.

USAID will continue evaluations of special concerns and specific project or non-project assistance, including start-up, mid-term, and final evaluations. However, within its evolving system of research and evaluation, two changes are anticipated. First, as PIE data bases are developed, USAID will depend less on evaluation by large multidisciplinary teams and more on research results for evaluation of project performance and measurement of benchmark indicators. Thus, project-level evaluations will increasingly focus on technical and administrative problem solving. Second, program impact evaluation at the strategic objective level will increase in importance and will provide the basis for improved management decisions on resource allocations. USAID/Zaire's evaluation schedule for the Action Plan period is listed in Table L-1.
Table L-1: Planned Evaluations, FY 1990 - 1993

<table>
<thead>
<tr>
<th>Project/Program</th>
<th>Type</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Survival Program</td>
<td>Impact</td>
<td>1990</td>
</tr>
<tr>
<td>Human Resources Development</td>
<td>Special Concern</td>
<td>1990</td>
</tr>
<tr>
<td>Family Planning Services (660-0094)</td>
<td>Mid-term</td>
<td>1990</td>
</tr>
<tr>
<td>Assessment of Water Activities (660-0107, 660-0116)</td>
<td>Review</td>
<td>1990</td>
</tr>
<tr>
<td>School of Public Health (660-0101)</td>
<td>Mid-term</td>
<td>1991</td>
</tr>
<tr>
<td>Applied Agricultural Research II (660-0124)</td>
<td>Start-up</td>
<td>1991</td>
</tr>
<tr>
<td>HIV-AIDS Prevention in Africa (698-0474.60)</td>
<td>Final</td>
<td>1991</td>
</tr>
<tr>
<td>Bandundu Regional Impact</td>
<td>Impact</td>
<td>1991</td>
</tr>
<tr>
<td>Central Shaba Development Project (660-0105)</td>
<td>Mid-term</td>
<td>1992</td>
</tr>
<tr>
<td>Shaba Regional Impact</td>
<td>Impact</td>
<td>1992</td>
</tr>
<tr>
<td>Agricultural Policy and Planning (660-0119)</td>
<td>Mid-term</td>
<td>1992</td>
</tr>
<tr>
<td>Basic Rural Health II (660-0107)</td>
<td>Final</td>
<td>1992</td>
</tr>
<tr>
<td>Shaba Refugee Projects (660-0114, -0115, -0116)</td>
<td>Final/Impact</td>
<td>1992</td>
</tr>
<tr>
<td>Agricultural Marketing Development Project (660-0098)</td>
<td>Mid-term</td>
<td>1993</td>
</tr>
<tr>
<td>Transport Reform Program (660-0126)</td>
<td>Start-up/Impact</td>
<td>1993</td>
</tr>
</tbody>
</table>
III. IMPLEMENTATION OF RESEARCH-BASED EVALUATION

Both project- and program-level evaluations are supported by data base development and research activities. Each project and non-project has a monitoring and evaluation plan. In addition, the Mission conducts program impact analysis and research activities in the context of its evolving Program Impact Evaluation (PIE) framework. Over the course of this Action Plan, the Mission will strive to improve coordination among project and program monitoring and evaluation activities, and to better define and implement the benchmark, program performance, and country trend indicators specified in the FY 1990 to 1993 strategy.

A. Program Impact Evaluation Data Bases

The proliferation of information collection and analysis activities, coupled with human resource and financial constraints, requires the Mission to coordinate data base development and research. The Mission's PIE approach addresses this need by defining the critical variables for analysis of goal and strategic objective level impact, placing emphasis on the use and dissemination of existing data, and providing guidelines for the development of compatible data bases.

1. Defining Impact

Program impact evaluation measures achievement of the Mission's goal and strategic objectives. Interventions in the health and family planning, agriculture, transport, and private sectors are intended to contribute to the Mission's goal: "...sustainable, broad-based, market-oriented economic growth and development." In order to manage the task of measuring goal and strategic objective achievement, the Mission's program-level indicators and evaluations will focus on four measures of people-level impact: labor productivity, per capita consumption of goods and services, child survival, and nutritional status.

Labor productivity and consumption are measures of economic welfare. Increases in productive capacity are required for sustainable growth. Since population density is low and there is little open unemployment in Zaire, economic growth is constrained by labor rather than land. This has led to the selection of labor productivity indicators as measures of goal-level impact and performance with respect to the agriculture and private sector strategic objectives. Transport, health, and family
planning interventions also contribute to greater labor productivity. At the same time, the proximate and visible impact of economic growth is realized through consumption of goods and services. Per capita consumption indicators will be analyzed to measure goal-level impact and program performance in all sectors. Measurement in per capita terms underscores the importance of reducing population growth over time to achieve growth in per capita consumption.

Child survival and nutrition indicators measure physical quality of life. Child survival is an essential measure of performance with respect to the health and family planning strategic objective. Child survival is also affected by USAID programs in other sectors, and thus is measured at the goal level as well. In the future, the Mission expects to measure nutrition status primarily at the goal level because, although nutrition is not a specific program target, interventions in all sectors, particularly health and agriculture, affect nutrition in the long run.

Additional research will be conducted to further define the relationships between U.S. assistance and impact, as defined by these measures, with emphasis on evaluation of impact at the strategic objective level.

2. Data Base Development

Many of USAID's project interventions direct development resources to specific locations within Zaire. This is particularly true for the agricultural development, roads, and health services projects. Other interventions, such as policy-based, non-project assistance and institutional strengthening activities, are regional or national in scope. This distinction is the reason for the parallel development of two different types of data bases: location specific and non-location specific. A third type consists of annotated bibliographies on research topics related to USAID's programs.

Location specific data bases are being assembled for those areas in which USAID projects are operating and are expected to show development impact, particularly Bandundu and Shaba. Standard geographical units of analysis have been defined. Using existing data from the 1984 census, health zone records, and USAID project-financed surveys, location specific analysis of child survival, demographic, agricultural production, and rural consumption variables is possible. The Mission can now compare levels of impact among administrative units and relate differences to levels of project inputs or investment. This approach has been applied in the baseline study of the Shaba
Refugee Projects, and considerable progress has already been made in developing a location specific data base for the planned FY 1991 Bandundu Regional Impact Evaluation. Location specific data will facilitate the application of geographic information systems (GIS) research techniques. USAID, in collaboration with Ohio State University's Department of Geodetic Sciences and Surveys, is experimenting with the application of GIS techniques for Mission impact evaluation.

Non-location specific data bases are being developed to analyze non-project assistance and cross-cutting concerns. The principal activity in this domain is USAID's collaboration with the Cornell Food and Nutrition Policy Program (CFNPP). CFNPP is analyzing the impact of structural adjustment programs on nutrition and poverty. This analysis will be based on the development and application of a social accounting matrix (SAM) of the Kinshasa-Bandundu economic region. The SAM methodology provides a framework for the organization of data linking the various economic actors and activities. It is expected that the SAM approach will help the Mission to relate otherwise independent research activities to one another and to identify critical gaps in the monitoring and evaluation system.

Annotated bibliographies of existing research are being compiled by the Mission to reduce duplication of effort and to ensure that the Mission builds on what has been learned in the past. Material for these bibliographies is gathered as part of USAID design and evaluation consultancies, through contracts with local researchers, and through the project information units in Bandundu and Shaba.

3. **Research Coordination**

USAID is developing specific guidelines for both primary and secondary data collection, from design to tabulation, which will be incorporated into future research. These guidelines will deal with data collection, scientific sampling, analysis, management of electronic data processing, and presentation. These standards will allow analysis across specific data sets. USAID's Program Office is coordinating this process, through a Mission Research Committee involving all technical offices, to ensure effective two-way, horizontal communication and to economize research efforts in support of Mission strategic objectives.
B. Mission Research Activities

1. Research for Program Impact Evaluation

To support program impact evaluation and data base development, USAID is engaged in a number of research activities, including the collaborative research with CFNPP mentioned above. Some of these activities and their relationship to PIE are summarized below.

USAID/Zaire's relationship with CFNPP is through a buy-in to an Africa Bureau cooperative agreement. The CFNPP/Zaire activity is structured to include several components, culminating in the construction of a SAM as a basis for a general equilibrium model of the Kinshasa-Bandundu food economy. Intermediate research outputs on agricultural production, household consumption, marketing, and transport and related issues are being produced by local researchers under the coordination of CFNPP and USAID. An important local collaborator is the Institut National de la Statistique (INS). INS is processing 1984 census data in support of the CFNPP research and other program impact evaluation activities in Bandundu and Shaba. Other local collaborators include faculty from the University of Kinshasa and the Department of Agriculture's Studies and Planning Service. Thus, the CFNPP research ties in with USAID's area development projects in Bandundu (660-0098 and 660-0102), as well as the Agricultural Policy and Planning Project (660-0119). CFNPP research is also expected to provide a foundation for analysis of the impacts of transport and private sector non-project assistance.

USAID and Ohio State University's Department of Geodetic Sciences and Surveying are collaborating in the experimental use of a GIS for mapping and analyzing health, demographic, and agricultural data for Bandundu by PIE standard geographic units. This analysis is expected to demonstrate whether or not the GIS methodology will be useful for impact evaluation research. The preliminary analysis will be completed by June 1990.

Working with students from the USAID-supported School of Public Health, the Mission has undertaken analysis of health zone data from project areas in Bandundu. This work supports development of the location specific data base for the Bandundu region and will contribute to future evaluations in the health sector.
2. Project and Non-Project Research

USAID supports a wide range of research activities to support the design, implementation and evaluation of project and non-project assistance. Often this research is an integral part of the technical assistance provided to local institutions. In other instances, it is commissioned primarily to meet the management information needs of the Mission. The results of these research activities support both project/non-project and program level monitoring and evaluation. Project/non-project level research will be the principal source of information for reporting on Action Plan benchmark indicators. Major research activities for the FY 1990 - 1993 period are summarized below.

Child Survival: Through the Basic Rural Health II (BRH, 660-0107) and School of Public Health (660-0101) Projects, USAID is monitoring and analyzing mortality and growth rates of infants and children, as well as coverage rates for vaccination and malaria treatment programs.

Demand for Health Services: The BRH Project also involves studies on household demand for health services and on health financing issues.

Family Planning: Through centrally-funded projects, A.I.D. is studying contraceptive distribution and family planning knowledge, attitudes, and practices (KAP).

HIV/AIDS: USAID collaborates with the Centers for Disease Control and local institutions on HIV/AIDS research. Activities include KAP studies and pre-testing of educational materials.

Agricultural Research and Extension: During FY 1989, USAID conducted assessments of the Agricultural Research and Outreach Project (RAV, 660-0091) to determine rates of adoption of improved maize and cassava varieties and impacts on production and incomes. Further monitoring and impact analysis activities will be incorporated into the RAV-II Project (660-0124).

Agricultural Marketing: A major thrust of USAID's research in the agricultural sector is marketing. Under the Agricultural Policy and Planning Project (660-0119), USAID, and SEP will study food security strategies, food markets in Kinshasa, and the effects of tariff policies on export crops. The Central Shaba Development Project (660-0105) information unit will study markets for domestically-produced maize, as well as imports from Zambia. SEP and the Bandundu and Shaba information units are major sources of information for the PIE geographic and SAM data bases.
Rural Finance: USAID, Ohio State University, and SEP are collaborating on research on rural financial markets and particularly the role of rural savings and credit cooperatives.

Household Surveys: A survey of farming household production, incomes, and expenditures will be conducted under the Central Shaba Project.

Natural Resource Management: Barundi and Shaba project information units will study natural resource management issues. USAID is also working with the Office of the President to interpret satellite photos of Bandundu to identify deforestation and changes in land use.

Transport Institutions and Financing: As part of the design of the Transport Reform Program (TRP, 660-0126), and in cooperation with the World Bank and the GOZ, USAID has been studying and contributing to the development of an institutional reform program involving Zaire's road transport institutions, the Office des Routes, the Service National des Routes de Desserte Agricole, and regional governments. Through research under a buy-in to the centrally-funded Decentralization: Finance and Management Project, the Mission is significantly influencing the GOZ's attempts to decentralize road maintenance authority and financial responsibility. An additional TRP design study has examined petroleum sector issues relating to the fuel tax which is the primary source of funding for road rehabilitation and maintenance, and has proposed a set of needed policy changes.

Traffic Counts and the Transport Industry: As part of its ongoing transport projects, USAID will monitor and analyze road and river traffic in Bandundu and Shaba. This information will be used in the implementation and evaluation of transport projects. In addition, under the TRP, the Mission will examine the performance and constraints of the private transport industry.

Financial Sector Efficiency: In order to support policy dialogue under the Private Sector Support Program (PSSP, 660-0120), USAID and the Bank of Zaire will study the determinants of the large gap between interest rates on savings and credit at commercial banks.

Private Sector Development: Additional PSSP research will explore the PSSP's impacts on manufacturing and agribusiness, and on women. The Mission will also study Zaire's informal sector and its contribution to economic growth.
IV. CONCLUSION

USAID has, within current resource constraints, laid out an evolving framework for the examination of critical linkages between project inputs, targets, strategic objectives, and the program goal, in support of impact reporting and the targeting of assistance. Impact analysis will focus on labor productivity, per capita consumption, nutritional status, and child survival as related to the achievement of these objectives. The principal foundations are geographic information and social accounting matrix data bases. Program impact evaluation will complement proven components of USAID's monitoring and evaluation system, the PIR, project evaluations, strengthened research, and reporting through the PIR Overview Statement or Assessment of Program Impact.