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FOOD FOR DEVELOPMENT

IN

SUB-SAHARA AFRICA

Ph. 480

Africa Bureau
Office of Development Resources

March 1980

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TABLE OF CONTENTS

I. FOOD AVAILABILITY IN SUB-SAHARA AFRICA

1. Food Availability
2. Food For Development
3. Purpose and Organization of the Food for Development Study
4. Conclusion

II. P.L. 480 IN AFRICA: A BACKGROUND

1. Stated Purpose of P.L. 480
2. Concessional Sales - Title I
 - 2.1. General Role of Title I
 - 2.2. Title I and Economic Development
3. Loan Forgiveness - Title III
 - 3.1. General Role of Title III
 - 3.2. General Eligibility Requirements for Title III
4. Grant Programs - Title II
 - 4.1. General Role of Title II
 - 4.2. Title II Programming Organizations
5. Conclusion

III. AN ASSESSMENT OF PROGRAM AND POLICY CONSIDERATIONS OF FOOD ASSISTANCE TO SUB-SAHARA AFRICA

During the Decade of the Seventies

1. Historical Perspective
 - 1.1. Unique Character of the African Situation
 - 1.2. Development of Food Deficits and Food Aid
2. Decade of the Seventies
 - 2.1. Market Stabilization Programs

- 2.2. Changing Nature of Food Aid Programs
- 2.3. Constraints for Food Aid Use by PVO's
 - 2.3.1. Constraints to Program Types
 - 2.3.2. Constraints to Organizations
 - 2.3.3. Summary
- 2.4. Program Management
- 3. Analysis of Food Assistance Programs
 - 3.1. P.L. 480 Country Recipients
 - 3.2. Food Need
 - 3.3. Title I - III
 - 3.3.1. Program Allocations in Sub-Sahara Africa
 - 3.3.2. Program Constraints
 - 3.3.3. Title I - III Summary
 - 3.4. Title II
 - 3.4.1. Program Allocations in the Sahel
 - 3.4.2. Program Constraints
 - 3.4.3. Importance of Food for Development
 - 3.4.4. Private Voluntary Organizations
 - 3.5. Summary of Food Assistance Programs Analysis
- 4. A Perspective for Food Assistance for the Eighties
 - 4.1. Titles I and III
 - 4.1.1. Program Country Allocations
 - 4.1.2. Program Procedures Recommendations
 - 4.2. Title II
 - 4.2.1. Program Country Allocations
 - 4.2.2. Program Procedures
 - 4.2.3. Future Role of Private Voluntary Organizations
- 5. Summary of Food Aid Considerations for the Seventies

IV. COUNTRY SITUATION ANALYSIS

1. Country Situation Summaries

2. Working Tables

2.1. Organization

2.2. General Overview

2.2.1. Population

2.2.2. Gross National Product (GNP)

2.3. Financial Relations

2.3.1. Inflation

2.3.2. Total Reserve Position

2.3.3. Import Coverage

2.3.4. Debt Service Ratio

2.3.5. Total External Debt

2.3.6. Estimated Debt Service Payments

2.3.7. Current Account Balance

2.3.8. Other Donor Assistance

2.4. Food Situation

2.4.1. Caloric Consumption

2.4.2. Recommended FAO Intake

2.4.3. Intake as Percentage of Recommended Minimum

2.4.4. Unmet Food Needs

2.4.5. Food Production Indices

2.4.6. Selected Food Production and Net Food Imports

2.5. P.L. 480 History

V. FOOD AID PRIORITY RANKING PROCEDURE

1. Introduction

- 1.1. Statement of Purpose
- 1.2. Organization
2. Country Food Aid Rankings
 - 2.1. Statement of Purpose and Organization
 - 2.2. Need Variables
 - 2.2.1. Relative Food Gap
 - 2.2.2. Per Capita GNP
 - 2.3. Effectiveness Variables
 - 2.3.1. Rationale
 - 2.3.2. Financial Policy Performance
 - 2.3.3. Agricultural Policy Performance
 - 2.3.4. Equitable Growth Commitment
 - 2.4. Summary of Need and Effectiveness Variables
 - 2.5. Relative Ranking in the Food Aid Priority Procedure
 - 2.5.1. Food Aid Priority Value Formula
 - 2.5.2. Rationale and Values Given to FPV Relationships and Policy Weights
 - 2.5.3. Data
 - 2.5.4. Country Rankings
3. Contributing Capability Analysis
 - 3.1. Statement of Purpose and Organization
 - 3.2. The Titles (Categories)
 - 3.3. Eligibility Criteria
 - 3.3.1. Preliminary Criteria Design
 - 3.3.2. Principles of Criteria Design
 - 3.3.3. The Four Types of Eligibility Criteria
 - 3.3.4. Criteria Ratings
 - 3.4. Country Category (Title) Classification: First Choice

- 3.5. Country Category (Title) Classification: Second and Third Choice
 - 3.5.1. Explanation of Choices
 - 3.5.2. Types of Food Aid Recommended: First, Second, and Third Choices
- 3.6. Summary of Contributing Capabilities Analysis
4. Combining FAP Rankings with Preliminary Contributing Capabilities Analysis
 - 4.1. Statement of Purpose
 - 4.2. Combined FAP and Preliminary Contributing Capabilities Results
5. Food Type Decision and Allocation

VI. COUNTRY NUTRITION PROFILE

VII. CONCLUSION

I. FOOD AVAILABILITY IN SUB-SAHARA AFRICA

1. Food Availability

World food production increased approximately 2.5% in 1978. All of the major developing country regions exceeded this rate, except Africa, where the growth in output was much smaller. Per capita food production in the developing countries remained unchanged in 1978. Analyzing the past 15 years shows that all the major developing country regions have increased their per capita levels by an average of 15%, except Africa, where per capita production has decreased by 10%. Africa's population growth rate (2.9%) is predicted to remain above its cereal production growth rate (1.8%). The situation will not improve without significant outside developmental assistance to help Africa solve its food problem. The assistance must be forthcoming before the problems reaches crisis proportions.

2. Food for Development

Because of the increasing magnitude of the food problem, the Africa Bureau is re-examining its use of PL 480 in order to transform it into a more effective development resource. As a starting point, the Bureau is conducting this study on food needs and food for development opportunities in sub-Saharan Africa. This study is predicated on the seriousness of the emerging food deficit in Africa. We are concerned that available resources be programmed to meet identifiable food needs, that programs attack the cause of the need, that they contribute toward equitable growth and meet basic human needs. The study draws heavily on data and reports from UN/FAO, USDA, World Bank, IMF, IDA, and AID. Using this information, we have devised a Food Aid Priority (FAP) procedure which identifies and ranks countries. Several areas which were closely examined were a country's specific food grain needs, effectiveness in managing the food and financial sectors of its economy, commitment toward equitable growth and its contributing capabilities for developing and managing food for development program. The decade of the seventies clearly demonstrated that food availability is the most critical issue for most sub-Saharan African countries. The majority

have as a priority goal food self-sufficiency or at a minimum food self-reliance. The U.S., through the Congressional Mandate and AID policy directives, has as the highest priority in foreign assistance "food and nutrition". Emphasis is also placed on food availability through increased production, improved distribution systems and facilities, and equitable marketing and pricing policies.

The Africa Bureau has long been a proponent of food for developmental purposes. However, circumstances have resulted in large-scale relief feeding programming with very little attention given to development. Widespread and prolonged drought, civil disturbance, floods, war and poverty have resulted in emergency programming year after year, with what may be termed food for survival rather than food for development. Title I programs also have been approved for reasons other than development (i.e. foreign policy considerations). Experience has resulted in a reactive rather than an active attitude toward food aid programming. There is a response (reactive) to a circumstance where many times the proper action (active) at a prior time would have attacked the cause for need and possibly could have helped prevent the circumstance. The Bureau is committed to food for development. A first result of this commitment is this major study on food availability and food assistance programs in sub-Saharan Africa.

3. Purpose and Organization of the Food for Development Study

The study is designed to yield data for use by policy and program managers in making decisions on a variety of related subjects. It is primarily directed toward food assistance and specifically the use of PL 480 resources in development. It does not take into account disaster or humanitarian relief. Basic components of the study are:

1. An overview of PL 480 with background information on program emphasis and program levels for the period FY 75-FY 79, and projected levels for the period FY 80-FY 85. No attempts are made to justify or support budget levels and types of food aid programs discussed in the FY 80 Congressional Presentation or the FY 82 Country Development Strategy Statements

- ii. An assessment of food assistance programs for the decade of the 1970s. This includes the types of programs authorized, the effectiveness of the implementation, an evaluation of the strengths and weaknesses, and for future programming purposes, the applicability of lessons learned.

- iii. A country situation summary which takes into account a variety of internationally accepted base-line data, reports, and studies for each country resulting in a rank order for food assistance planning purposes. This ranking relies heavily on the individual country's percentage food deficit, the overall financial performance, per capita gross national product, agricultural policy performance, and commitment to development. The primary purpose of this section is to provide policy and program planners a point of reference. The aim is to aid in determining the most appropriate type, size, and priority of food aid program for a recipient country based on the legislative mandates of the country's need for outside assistance and its ability to effectively utilize the food aid. The premise is Food For Development. It does not take into account issues such as political expediency or foreign policy. It does not take into account the desire to respond to short-term disaster relief and target humanitarian supplemental feeding activities. What this section does provide is a rationale for selecting the instruments (titles of PL 480) through which to deliver or program food for development. Included are alternatives or fall-back positions.

- iv. A nutrition country profile which focuses on the effects of the food gap on the people, particularly the poorest of the poor. The data will include specific information on the nutritional well-being of the most vulnerable group.

II. THE BACKGROUND OF P.L. 480 IN AFRICA

1. Stated Purpose of P.L. 480

Public Law 480 (PL 480) has as its specific purpose: "To increase the consumption of United States agricultural commodities in foreign countries, to improve relations of the United States and for other purposes". Section 2 states: "The Congress hereby declares it to be the policy of the United States to expand international trade; to develop and expand export markets for United States agricultural commodities; to use the abundant agricultural productivity of the United States to combat hunger and malnutrition and to encourage economic development in the developing countries, with particular emphasis on assistance to those countries that are determined to improve their own agricultural production; and to promote in other ways the foreign policy of the United States".

PL 480 resources have been programmed to assist African countries

(a) to meet shortfalls in the domestic commercial market food grain requirements; (b) to furnish industrial commodities such as raw cotton to industry; (c) to develop and implement supplemental feeding programs for target or at-risk groups of children; (d) to provide partial payments of wages in kind for individuals engaged in self-help economic and/or community development activities; (e) to establish food grain reserves or buffer stocks as a part of grain stabilization; and (f) when conditions warrant, to help meet the supplemental feeding requirements for peoples adversely affected by drought, flood, famine, war, civil strife, etc. To the extent practicable, PL 480 resources are programmed to complement other AID resources by being integrated at both the planning and project level. Consistent with the legislation, it is the Africa Bureau policy that the availability of PL 480 commodities in recipient countries be used constructively. These must not provide an easy alternative to the development and implementation of sound policies and programs which address the cause for the need for PL 480 support. In keeping with the self-help provisions of the law, recipient governments are expected to design and implement activities which improve the lives of the poorest of their people and the capacity of these people to participate in the development of their country.

4. Conclusion

This study and its findings are not intended to preclude flexibility in the decision-making process. However, as indicated above, there are several essential elements that must be considered in any policy or program decision. More and better information is needed in order to program food for development, in order to respond to the needs of the poor, in order to compete for and allocate scarce resources. The needs are far, far greater than most responsible persons realize.

2. Concessional Sales - Title I:

2.1 General Role of Title I

Title I is the authority to " . . . negotiate and carry out agreements with friendly countries to provide for the sale of agricultural commodities for dollars on credit terms . . ." The Act requires that in exercising Title I the following items, among other must be considered:

- " take into account efforts of friendly countries to help themselves toward a greater degree of self-reliance . . . ;
- take reasonable precautions to safeguard usual marketings of the U.S. and to assure that sales under this title will not unduly disrupt world prices . . . or normal patterns of commercial trade with friendly countries;
- make sales agreements only with those countries which . . . (are) friendly to the U.S.;
- give special consideration to the development and expansion of foreign markets for U.S. agricultural commodities . . . ;
- obtain commitments from purchasing countries that will prevent resale or trans-shipment to other countries . . . commodities purchased under this title . . . "

2.2 Title I and Economic Development

Title I agreements must include a provision which ensures that the proceeds from the sale of commodities in the recipient country are used for economic development purposes which directly improve the lives of the poorest people and their capacity to participate in the development of their country. Greatest emphasis is to be placed on programs of agricultural development, rural development, nutrition, and population planning.

The Self-Help Requirement provision of Title I requires that before entering into sales agreements, consideration must be given to what self-help measures are being undertaken to increase the per capita production and improve the means for storage and distribution of agricultural commodities. Measures include, but are not limited to:

- devoting land resources to the production of needed food rather than production of non-food crops.
- training and instructing farmers in agricultural methods and

techniques.

-constructing adequate storage facilities.

-improving marketing and distribution systems.

-policies to insure adequate incentives to producers.

-institutions for adaptive agricultural research.

3. Loan Forgiveness - Title III:

3.1 General Role of Title III

The legislation states: "The overall goal of assistance under this title shall be to increase the access of the poor in the recipient country to be a growing and improving food supply through activities designed to improve the production, protection, and utilization of food and to increase the well being of the poor in the rural sector of the recipient country". The incentive for Title III is ". . . (to permit) the funds accruing from the local sales of such commodities to be applied against the repayment obligation of governments receiving concessional financing under this Act." The Act requires that beginning in FY 80, and each fiscal year thereafter, not less than 15% of the aggregate of all agreements entered into under Title I for that year shall be used for Title III purposes.

3.2 General Eligibility Requirements for Title III

To be eligible for Title III, a country must qualify for assistance under Title I and have a per capita income of \$580 or less (FY 79). Additionally, the country must: (a) need the external resources to improve its food production, marketing, distribution and storage systems; (b) be able to use effectively the resources made available by the sale of the commodities for the agreed upon development effort; and (c) indicate a willingness to improve its food production, marketing, distribution and storage systems.

To be considered for Title III assistance a country, if necessary with U.S. assistance, must develop a multiyear use plan which includes: (a) the annual value or amount of commodities required; (b) the annual

plan for the use of the commodities or local currency generated; (c) the specific nature and magnitude of the problems to be addressed; (d) the relationship among the projects, activities or programs to be supported; and (e) how the assistance under Title III will be integrated into and complement the country's development plan and donor assistance.

4. Grant Programs - Title II

4.1 General Role of Title II

Section 201 provides in part that commodities may be furnished

" . . . to meet famine or other urgent or extraordinary relief requirements; to combat malnutrition, especially in children; to promote economic and community development in friendly developing areas; and for needy persons and non-profit school lunch and pre-school feeding programs outside the United States."

Section 206 provides that: "Except to meet famine or other extraordinary relief requirements, no assistance under this title shall be provided under an agreement permitting generation of foreign currency proceeds unless (1) the country receiving the assistance is undertaking self-help measures in accordance with section 109 of this Act, (2) the specific uses to which the foreign currencies are to be put are set forth in a written agreement between the United States and the recipient country, and (3) such agreement provides that the currencies will be used for increasing the effectiveness of the programs of food distribution and increasing the availability of food commodities provided under this title to the neediest individuals in recipient countries."

4.2 Title II Programming Organizations

Title II commodities have been furnished to sub-Saharan Africa under government-to-government arrangements, through U.S. non-profit voluntary agencies such as Catholic Relief Service (CRS) and Cooperative Americans for Relief Everywhere (CARE), and through multilateral organizations such as UNICEF and World Food Program (WFP). Programs have concentrated on supplemental feeding for victims of disaster or emergency

conditions, rehabilitation and/or resettlement of displaced persons, small-scale self-help development activities through food-for-work activities, nutrition activities primarily through maternal child health centers, and some other child feeding programs such as primary school lunch support.

There have been several special programs such as grain stabilization and grain reserves. This type of program has been approved for Chad and Tanzania. The special feature included the pre-positioning of foods stocks and allowing Title II commodities to be sold in the local markets (i.e. currency generation).

It is Bureau policy, to the extent possible, to use the Title II resource for developmental purposes with emphasis on improving the well-being of the rural poor, particularly the malnourished child. One of the primary concerns is the problem of creating dependence on grant food rather than using grant foods to alleviate the cause for need for grant supplemental food programs. This and other concerns remain visible as programs are designed. Where possible, Title II resources are to be supportive of other AID interests.

5. Conclusion

This summarizes the instruments currently in use in Africa. Attached are a series of self-explanatory tables which set forth the history of food assistance programs, current status, and projections through Fiscal Year (FY) 1985. The Tables are as follows:

Table 1. PL 480 Program Levels, FY 75-FY 78,

Table 2. PL 480 Program Levels, FY 79-FY 80 and

Table 3. PL 480 Program Levels, FY 81-FY 85.

TABLE 1
P.L. 480 PROGRAM LEVELS
FY 1975-FY 1978
(Millions \$)

<u>Country</u>	<u>FY 75</u>	<u>FY 76^{1/}</u>	<u>FY 77</u>	<u>FY 78</u>
Angola				
Title I	-	-	-	-
Title II	-	-	0.2	0.5
Benin				
Title I	-	-	-	-
Title II	0.5	0.6	0.6	0.8
Botswana				
Title I	-	-	-	-
Title II	2.6	2.9	2.5	2.8
Burundi				
Title I	-	-	-	-
Title II	0.7	1.5	1.0	1.8
Cameroon				
Title I	-	-	-	-
Title II	0.7	2.2	0.6	1.3
Cape Verde				
Title I	-	-	-	-
Title II	0.1	2.1	3.2	2.1
Central African Empire				
Title I	-	-	-	-
Title II	0.3	0.4	0.1	0.3
Chad				
Title I	-	-	-	-
Title II	0.3	0.9	5.3	4.4
Congo, Republic of				
Title I	-	-	-	-
Title II	0.7	0.7	0.8	0.6
Djibouti				
Title I	-	-	-	-
Title II	-	-	-	-
Ethiopia				
Title I	-	3.4	-	-
Title II	5.2	4.2	4.6	3.8

^{1/} Includes Transitional Quarter

TABLE 1

<u>Country</u>	<u>FY 75</u>	<u>FY 76^{1/}</u>	<u>FY 77</u>	<u>FY 78</u>
Gabon				
Title I	-	-	-	-
Title II	0.2	0.1	-	-
Gambia, The				
Title I	-	-	-	-
Title II	1.0	1.1	0.7	0.8
Ghana				
Title I	-	-	-	-
Title II	2.8	6.1	6.5	3.2
Guinea				
Title I	8.6	7.5	0.7	5.5
Title II	2.4	1.2	0.4	6.6
Guinea-Bissau				
Title I	-	-	-	-
Title II	-	0.1	1.0	3.5
Ivory Coast				
Title I	-	-	-	-
Title II	1.2	0.5	0.1	0.2
Kenya				
Title I	-	-	-	-
Title II	1.0	2.4	1.5	0.8
Lesotho				
Title I	-	-	-	-
Title II	3.6	6.2	4.4	3.7
Liberia				
Title I	-	-	-	-
Title II	1.1	0.7	0.1	0.1
Madagascar				
Title I	-	-	-	-
Title II	0.2	0.7	0.8	1.1
Malawi				
Title I	-	-	-	-
Title II	0.4	0.4	0.5	0.2
Mali				
Title I	-	-	-	-
Title II	8.9	0.2	-	3.0

^{1/} Includes Transitional Quarter

11

TABLE 1

<u>Country</u>	<u>FY 75</u>	<u>FY 76^{1/}</u>	<u>FY 77</u>	<u>FY 78</u>
Mauritania				
Title I	-	-	-	-
Title II	2.4	4.1	1.7	2.3
Mauritius				
Title I	-	-	-	-
Title II	2.2	0.8	0.2	0.2
Mozambique				
Title I	-	-	-	-
Title II	-	0.8	5.2	6.0
Niger				
Title I	-	-	-	-
Title II	7.8	4.2	0.4	2.0
Nigeria				
Title I	-	-	-	-
Title II	2.3	0.4	-	-
Rwanda				
Title I	-	-	-	-
Title II	2.1	1.5	1.5	1.6
Sao Tome & Principe				
Title I	-	-	-	-
Title II	-	-	-	0.1
Senegal				
Title I	-	-	-	-
Title II	2.1	2.7	2.9	9.4
Seychelles				
Title I	-	-	-	-
Title II	0.2	0.1	0.1	0.1
Sierra Leone				
Title I	-	-	1.3	1.3
Title II	2.2	3.0	1.1	0.9
Somali Republic				
Title I	-	-	-	7.0
Title II	4.6	2.3	0.8	6.3
Sudan				
Title I	-	-	4.6	10.3
Title II	8.2	1.6	1.8	1.9

^{1/}Includes Transitional Quarter

TABLE 1

<u>Country</u>	<u>FY 75</u>	<u>FY 76^{1/}</u>	<u>FY 77</u>	<u>FY 78</u>
Swaziland				
Title I	-	-	-	-
Title II	0.8	0.2	0.1	0.4
Tanzania				
Title I	7.6	4.3	7.6	6.5
Title II	16.0	23.4	10.3	1.8
Togo				
Title I	-	-	-	-
Title II	2.0	2.5	2.6	1.4
Uganda				
Title I	-	-	-	-
Title II	0.3	0.3	-	-
Upper Volta				
Title I	-	-	-	-
Title II	3.6	3.6	8.1	8.1
Zaire				
Title I	-	12.4	22.7	18.0
Title II	0.4	0.2	0.1	0.4
Zambia				
Title I	-	1.6	5.4	8.5
Title II	0.2	0.1	0.2	-
Portuguese Africa				
Title I	-	-	-	-
Title II	-	0.1	0.1	-
CWAR				
Title I	-	-	-	-
Title II	0.1	-	-	-
Total	107.6	114.7	114.4	142.5
Title I	16.2	27.6	42.3	57.3
Title II	91.4	87.1	72.1	85.2

^{1/}Includes Transitional Quarter

SOURCE: (1) U.S. Overseas Loans and Grants and Assistance From International Organizations - Obligations and Loan Authorizations July 1, 1945 - September 30, 1977

(2) Congressional Presentation, Fiscal Year 1980--Main Volume.

118

Table 2
P.L. 480 PROGRAM LEVELS
FY 1979-FY1980
(Millions)

Country	FY 79 (actual)			FY 80 (est.)		
	Total	Title I	Title II	Total	Title I	Title II
Angola	1.1	-	1.1	0.9	-	0.9
Benin	0.8	-	0.8	0.8	-	0.8
Botswana	2.6	-	2.6	3.9	-	3.9
Burundi	2.1	-	2.1	3.5	-	3.5
Cameroon	1.5	-	1.5	0.7	-	0.7
Cape Verde Islands	2.8	-	2.8	4.7 ^{b/}	3.2 ^{b/}	1.5
Central African Republic	0.2	-	0.2	0.4	-	0.4
Chad	4.1	-	4.1 ^{a/}	2.3	-	2.3
Comoro Islands	-	-	-	0.2	-	0.2
Congo	0.9	-	0.9	0.4	-	0.4
Djibouti	0.4	-	0.4	0.8	-	0.8
Ethiopia	9.1	-	9.1	6.4	-	6.4
Gabon	-	-	-	-	-	-
Gambia	0.8	-	0.8	0.9	-	0.9
Ghana	15.1	10.0	5.1	17.5	12.7	4.8
Guinea	6.0	6.0	-	6.0	6.0	-
Guinea-Bissau	0.1	-	0.1	0.4	-	0.4
Ivory Coast	0.1	-	0.1	-	-	-
Kenya	1.3	-	1.3	10.5 ^{b/}	6.9 ^{b/}	3.6
Lesotho	5.6	-	5.6	7.2	-	7.2
Liberia	0.1	-	0.1	0.2	-	0.2
Madagascar	2.1	-	2.1	1.6	-	1.6
Malawi	0.2	-	0.2	0.5	-	0.5
Mali	1.1	-	1.1	0.6	-	0.6
Mauritania	1.1	-	1.1	3.2 ^{b/}	1.0 ^{b/}	2.2
Mauritius	3.1	2.8	0.3	3.2	2.8	0.4
Mozambique	13.7	5.0	8.7	8.2	5.0	3.2
Niger	0.1	-	0.1	0.8	-	0.8
Rwanda	1.0	-	1.0	2.1	-	2.1
Sao Tome & Principe	0.1	-	0.1	0.1	-	0.1
Senegal	6.0	-	6.0	13.1 ^{b/}	7.0 ^{b/}	6.1
Seychelles	0.1	-	0.1	0.2	-	0.2
Sierra Leone	2.2	1.2	1.0	3.2	1.2	2.0
Somalia	16.2	10.7	5.5	24.3	11.7	12.6
Sudan	21.3	20.0	1.3	27.1	20.0	7.1
Swaziland	0.3	-	0.3	0.3	-	0.3
Tanzania	2.5	-	2.5	7.4	5.0	2.4
Togo	2.7	-	2.7	5.0	-	5.0

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TABLE 3
P.L. 480 PROGRAM LEVELS
BUDGET PROJECTIONS FY 1981-FY 1985
(Millions \$)

Country	FY 1981		FY 1982		FY 1983		FY 1984		FY 1985	
	Title	Title	Title	Title	Title	Title	Title	Title	Title	
	I	II	I	II	I	II	I	II	I	II
Benin	-	1.1	-	0.6	-	0.6	-	0.6	-	0.6
Botswana	-	2.2	-	2.0	-	1.0	-	0.8	-	0.5
Burundi	-	3.5	-	5.3	-	5.8	-	6.2	-	6.6
Cameroon	-	0.9	-	0.6	-	0.6	-	0.6	-	0.6
Cape Verde ^{2/}	2.7	-	-	-	-	-	-	-	-	-
Central African Republic	-	0.3	-	-	-	-	-	-	-	-
Chad	-	1.7	-	0.8	0.8	0.4	0.8	0.2	0.8	0.2
Congo	-	0.4	-	-	-	-	-	-	-	-
Djibouti	-	-	-	2.0	-	2.0	-	2.0	-	2.0
Ethiopia	-	3.0	6.0	14.6	6.0	13.6	6.0	10.2	-	8.0
Gambia	-	1.1	-	-	-	-	-	-	-	-
Ghana ^{3/}	10.0	5.0	20.0	5.9	15.0	6.1	5.0	6.3	5.0	6.5
Guinea	7.0	0.1	8.0	-	8.0	-	9.0	-	9.0	-
Guinea-Bissau	-	0.5	-	-	-	-	-	-	-	-
Kenya	13.8	3.4	10.7	4.0	12.2	5.0	13.6	5.0	16.3	6.0
Lesotho	-	6.6	-	6.0	-	5.5	-	5.5	-	6.0
Liberia	-	0.2	2.2	-	2.2	-	-	-	-	-
Madagascar	-	3.0	-	2.0	-	2.0	-	2.0	-	2.0
Malawi	-	0.5	-	-	-	-	-	-	-	-
Mali	-	-	-	-	-	-	-	-	-	-
Mauritania ^{2/}	2.7	1.3	3.5	-	3.5	-	3.5	-	-	-
Mauritius	-	0.6	-	0.8	-	0.5	-	0.5	-	0.4
Mozambique	5.0	3.1	5.0	2.0	3.0	2.0	2.0	3.0	2.0	3.0
Namibia	-	-	2.0	4.0	2.0	4.0	2.0	-	2.0	-
Niger ^{4/}	-	3.1	2.1	0.7	2.1	0.7	-	0.7	-	0.7
Rwanda	-	2.6	-	2.5	-	2.5	-	3.0	-	3.5
Senegal ^{1/}	7.0	6.1	8.0	5.0	8.0	5.0	8.0	5.0	9.0	6.0
Seychelles	-	0.2	-	0.1	-	0.1	-	0.1	-	0.1
Sierra Leone	1.3	2.4	1.8	1.9	1.8	1.9	1.8	1.9	1.8	1.9
Somalia	15.0	2.5	6.0	2.0	4.0	1.5	-	-	-	-

Vii

Table 3, page 2

Country	FY 1981		FY 1982		FY 1983		FY 1984		FY 1985	
	Title I	Title II								
Sudan ^{1/}	29.0	4.9	30.0	-	25.0	-	25.0	-	20.0	-
Swaziland	-	0.6	-	-	-	-	-	-	-	-
Tanzania ^{3/}	5.0	7.1	-	2.5	-	2.0	-	1.6	-	?
Togo	-	6.6	-	1.0	-	0.8	-	0.8	-	0.8
Upper Volta ^{4/}	-	11.5	-	3.5	-	3.7	-	4.0	-	4.2
Zaire	10.0	-	17.5	-	15.0	-	12.5	-	10.0	-
Zambia	10.0	-	10.0	0.5	8.0	0.2	6.0	-	6.0	-
Totals	<u>118.5</u>	<u>86.1</u>	<u>132.8</u>	<u>70.3</u>	<u>116.6</u>	<u>67.5</u>	<u>95.2</u>	<u>60.0</u>	<u>81.9</u>	<u>59.5</u>
GRAND TOTAL	<u>204.6</u>		<u>203.1</u>		<u>184.1</u>		<u>155.2</u>		<u>141.5</u>	

1/ Title I to be programmed as Title III

2/ Title I to be programmed as Title III or Title II-206

3/ Title I with possibility of being programmed as Title III

4/ All or part to be programmed as Title II, Section 206

SOURCE: Country Development Strategy Statements for FY 1981
PDC/FFP Budget Tables
USAID's Planning discussions
Figures include World Food Program (WFP)

WFP

III. AN ASSESSMENT OF PROGRAM AND POLICY CONSIDERATIONS OF FOOD ASSISTANCE TO SUB-SAHARA AFRICA DURING THE DECADE OF THE SEVENTIES ¹

1. Historical Perspective

1.1. Unique Character of the the African Situation

Since the enactment of P.L. 480 in 1954, the countries of Sub-Saharan Africa have been recipients of a variety of food assistance programs under this act. However, the pattern of program selection has differed in Africa from that in other geographic areas. At the time of the passage of P.L. 480, most of the continent of Africa was comprised of colonies of European nations. In other geographic areas, the former colonies had acquired independence earlier and were functioning countries while African countries were still suffering from numerous aspects of colonial rule. Among these were a shortage of educated and trained personnel, limited infrastructure, heavy demands on small budgets, poor quality of statistical data, and political instability. In addition, there were few AID Missions in the emerging countries and the U.S. Embassies were small and oriented towards political objectives.

1.2. Development of Food Deficits and Food Aid

Although prior to World War II Africa had been a good exporting region, by the late fifties and early sixties, as the countries obtained independence, food shortages were beginning to develop because of the loss of experienced expatriate agricultural managers, a reduction of production requisites such as fertilizers and herbicides, and changing weather patterns. In response to requests from the host governments, the U.S.

^{1/} This section was prepared by Edwin K. Fox who is on loan to the Africa Bureau from PDC/PMS. During his research, he visited with the various PVO's discussed in this section.

began to respond with food assistance. Because of the previously discussed deficiencies of the host governments, in the early stages it did not appear that the more complicated requirements of sales agreements would be appropriate in most countries. Therefore, most of the food assistance was on a grant basis either through voluntary agency programs, or, to a lesser extent, through government-to-government arrangements. Meanwhile, in other geographic areas, because of the stronger capabilities of the host governments concessional sales agreements were becoming the more frequently used vehicles. While some aspects of development were being included in the agreements through the self-help requirements, in Africa the food assistance was for the most part confined to use as political and humanitarian aid.

2. Decade of the Seventies

With the advent of the seventies, the overall social, economic political, and geographical parameters in Africa had not changed appreciably. It is within this context, that food policy programs were designed and implemented.

This section discusses the market price stabilization programs aborted by extensive drought, the changing nature of food assistance programs for both public and private organizations, constraints to food assistance, both by program and organization type, and program management.

2.1. Market Stabilization Programs

One of the more innovative programs launched established a Regional Grain Stabilization Program in Senegal, Mali, Upper Volta, and Niger. The program was designed to reduce the rather violent market price fluctuations in the local markets through a buffer stock. The buffer stock was to operate through sales of grain furnished by the U.S. on a grant basis under Title II during periods of shortage and purchases of grain on the local

markets during periods of surplus. As a result of a more stabilized market price, both consumers and producers would benefit. However, before the program became fully operational, the Sahel drought intervened and the grain reserve was used and depleted for emergency purposes.

2.2 Changing Nature of Food Aid Programs

As the severity of the drought intensified, U.S. food aid was increasingly supplied on a grant basis through the medium of government-to-government arrangements. To a limited extent, the commodities were sold in the urban markets and the currencies generated used by the host governments for previously agreed upon activities related to food.

Concurrent with the increased emphasis upon government-to-government grant food aid, the private voluntary organizations (PVOs) continued to operate their humanitarian programs. These PVO programs were primarily directed toward the fields of Maternal Child Health (MCH), School Feeding (SF), and Food for Work (FFW). The static nature of these programs in terms of recipient levels is indicated in Table 1.

Table 1

	Title II Recipients in Sub-Sahara Africa (Millions)				
	Total	SF	FFW	MCH	Disaster
1970*	10.5	1.2	2.5	.8	5.9***
1971*	11.7	1.4	1.2	1.3	7.4***
1972*	10.4	1.2	5.5**	1.6	1.9
1973*	8.9	1.4	1.9	1.6	2.0
1974*	7.2	1.4	1.1	1.6	3.1
1975	10.7	1.3	1.8	1.7	5.5
1976	5.4	1.2	.8	1.5	1.7
1977	7.3	1.2	.7	1.4	2.9
1978	11.6	1.2	.9	1.7	7.1

Figures Based on Annual Reports to Congress

* Recipients for Algeria, Morocco, and Tunisia Deducted

** Includes Emergency Programs

**** Includes 3.0 Recipients in Nigeria

**** Includes 3.0 Recipients in Nigeria

Table 2 shows the distribution of Title II funds by region worldwide. Again, Africa has, by far, the largest decrease in funding in both relative (percentage) and absolute (total) terms.

Table 2.
Title II World Wide Summary
(in Millions of Dollars)

	<u>1979</u>	<u>1980 (est.)</u>	<u>1981 (proj.)</u>
Asia	192.8	181.5	212.5
Africa	87.1	105.1	86.1
Near East	56.2	48.9	63.2
L.A.	63.3	66.5	69.7

2.3. Constraints to Food Aid Use by PVO's

The private voluntary organizations (PVO's) in Sub-Saharan Africa each have a number of limited advantages and face a variety of constraints. This section discusses the recent history of the three basic PVO program types (MCH, SF, and FFW) and the different PVO's involved, as well as the factors which constrain both the programs and agencies.

2.3.1. Constraints to Program Types

The Maternal Child Health and School Feeding programs have been noteworthy for their stability in numbers of recipients from 1970 to 1978 as indicated in Table 1. Program size tends to be a function of government-provided support for storage space, logistics, and the managerial capabilities of counterpart organizations.

In contrast, the Food for Work programs have declined in the number of recipients reached by about 600% from 1972 to 1978. The PVO's indicate that one difficulty in undertaking Sub-Saharan Food for Work projects is competition

with the World Food Program. While the U.S. provides only a limited range of commodities, including processed cereals, vegetable oil, and non-fat dry milk, the World Food Program offers a much wider range, including sugar, butter, oil, tinned meat and fish, cheese, tea, and coffee. In addition, programming procedures for a World Food Project are simpler than those for a U.S.-sponsored Food for Work project. After a project agreement is finalized, the commodities are provided to the host government with minimal consequent monitoring by the World Food Program. Furthermore, all agencies face an inhibiting legacy of the colonial period. During the period of colonial rule in Africa, food was often given in payment for work. As a consequence, an unpleasant association has developed in the minds of many Africans and Food For Work programs are viewed with distaste and suspicion.

2.3.2. Constraints to Organization

Unlike other regions of the world in which a number of private voluntary organizations operate, only the Catholic Relief Services (CRS) and Concerned Americans for Relief Everywhere (CARE) operate in Sub-Saharan Africa. Furthermore, CARE operations are limited to Chad.

CARE's limited activity is a function of several factors. Most importantly, CARE requires host governments to sustain the full cost of supporting their operations in a recipient activity. The absence of this support is a reflection of either the low priority accorded to food assistance programs by host governments, or the unavailability of budget resources for that purpose. In the recent past, CARE terminated a program in Sierra Leone because of government failure to fulfill its support obligations. An earlier program in Liberia was phased out for the same reason. CARE in Chad

receives considerable support from the USAID Mission. CARE indicates that a second contributing factor to the limited CARE involvement in Sub-Saharan Africa is World Bank's and other donors' activities which do not leave many opportunities for CARE to operate within its program context. A third constraint toward expanded program involvement faces CARE. In each country, CARE must identify an appropriate counterpart organization; usually one of several government entities. In contrast, the Catholic Relief Service does not face this constraint because local church organizations serve as counterparts. However, this convenient arrangement is not without its shortcomings. Often the indigenous organizations have policy and program objective which are not fully in line with those of the national government.

CARE's future plans entail negotiation of agreements in several countries. If expectations are realized, Maternal Child Health, School Feeding, and Food For Work projects would be developed. CARE anticipates considerable investment of their own resources to support the programs for the first two years. As a result, the host governments would have ample opportunity to organize and operationalize their own support functions. Ideally, CARE would like to negotiate about three agreements a year to reach a total of twenty country programs.

2.3.3. Summary

In summary, the private voluntary organizations in Africa each have their limited advantages and constraints. Program management is addressed in the following section.

2.4. Program Management

Program management has been a consistent problem in the Sub-Sahara countries. Establishment of AID offices and posting of Food For Peace Officers has improved the situation to some extent. However, in order to attain a satisfactory level of program management, AID offices and missions must place increased emphasis on the use of food assistance. As part of this process, it is important that broader recognition be accorded to the private voluntary organizations and their unique capabilities.

It should be candidly noted that the Catholic Relief Services has experienced its share of management problems. In the past, there has been a shortage of personnel with proper training and experience.

In the past several years, however, Catholic Relief Service has shown a gradual improvement in their level of management performance. In this view, Catholic Relief Services is displaying considerable initiative through usage of an increased number of nutritionists and technical specialists in its programs.

There is a final aspect of the voluntary agency programs that should be mentioned. Increasing African nationalism has brought with it expanded resentment against foreign organizations working in the countries. This could cause additional operating problems, if not complete withdrawal, in the future.

3. Analysis of Food Assistance Programs

The following section examines P.L. 480 country recipients, Sub-Saharan food needs, and Titles I, II, and III program allocations and constraints for the decade of the seventies.

3.1. P.L. 480 Country Recipients

Of the twenty-nine countries in the world designated by the United Nations as "least developed", eighteen are in Sub-Saharan Africa. All of these countries are currently receiving food assistance of some type under P.L. 480. In addition, twenty-four other countries are recipients of food aid. Therefore, the only Sub-Saharan countries not receiving U.S. food aid are: Republic of South Africa, Rhodesia, Gabon, Nigeria, and Equatorial Guinea. Table 3 presents the food aid programs of each country.

Table 3

African Countries Receiving Assistance under PL 480
During FY 1979

Countries Identified as LDCs by the U.N.

- | | |
|-------------------------------|---------------------------------|
| 1. Benin (CRS, WFP) | 10. Malawi (WFP) |
| 2. Botswana (WFP) | 11. Mali (WFP) |
| 3. Burundi (CRS, WFP) | 12. Niger (WFP) |
| 4. Central African Rep. (WFP) | 13. Rwanda (CRS, WFP) |
| 5. Chad (CARE, WFP) | 14. Somalia (Title I, WFP) |
| 6. Ethiopia (CRS, WFP) | 15. Sudan (Title I, CRS, WFP) |
| 7. Gambia (CRS, WFP) | 16. Uganda (CRS) |
| 8. Guinea (Title I) | 17. Tanzania (CRS, G-to-G) WFP) |
| 9. Lesotho (CRS, WFP) | 18. Upper Volta (WFP) |

Other Countries Receiving Food Assistance

- | | |
|--------------------------------------|---------------------------------------|
| 1. Angola (UNICEF) | 12. Mauritania (CRS, WFP) |
| 2. Cape Verde (Title I, G-to-G, WFP) | 13. Mauritius (Title I, WFP) |
| 3. Cameroon (CRS, WFP) | 14. Mozambique (Title I, WFP, G-to-G) |
| 4. Congo (WFP) | 15. San Tome and Principe (WFP) |
| 5. Djibouti (G-to-G) | 16. Senegal (CRS, WFP) |
| 6. Ghana (CRS, WFP, Title I) | 17. Seychelles (CRS) |
| 7. Guinea-Bissau (WFP) | 18. Sierra Leone (Title I, CRS, WFP) |
| 8. Ivory Coast (WFP) | 19. Swaziland (WFP) |
| 9. Kenya (CRS) | 20. Togo (CRS, WFP) |
| 10. Liberia (WFP) | 21. Upper Volta (CRS, WFP) |
| 11. Madagascar (CRS, WFP) | 22. Zaire (Title I, WFP) |
| | 23. Zambia (Title I, WFP) |

3.2. Food Need

Although there is serious paucity of nutritional data on the Sub-Saharan countries no question exists regarding the prevalence of malnutrition in the region. Meanwhile, individual country statistics indicate that there are food supply gaps which are not being closed. On a regional basis, the food gap has increased over recent years. According to available statistics, the cereal gap in the period 1961-1965 was 5,629,000 MT of wheat equivalent. For the period of 1976-78, the gap had increased to 12,886,000 MT. During the period 1960-75, the growth rate for the production of cereals was an unimpressive 1.8 percent. Meanwhile, the rate of population growth is projected to increase from 2.6 percent during the period from 1960-65 to 2.9 percent during the period from 1975-1990. Therefore, while it cannot be said that African food needs are being ignored, the question can be posed whether the U.S. is furnishing enough assistance and whether it is of the appropriate kind.

3.3. Title I-III

3.3.1. Program Allocation in Sub-Saharan Africa

During the first half of the Decade of the Seventies, Title I programs were at a modest level as well as limited to only a few countries. However, the second half of the Seventies saw a considerable increase in the number of countries receiving agreements. Further, the African total value of agreements and percentage of the world-wide total expanded significantly. Table 4 below indicates this increased programming.

Table 4

Title I Agreements in Sub-Sahara Africa
(in Millions of Dollars)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Ethiopia							3.6				
Ghana	13.4	10.5								10.0	10.0
Guinea	4.3	5.0	.5	4.6	6.3	9.1	7.9	3.0	5.5	6.0	6.0
Liberia	1.0		1.6								
Madagascar										1.4	1.4
Mauritius										2.8	2.8
Mozambique										5.0	
Sierra Leone		.8						1.3	1.3	1.2	1.2
Somalia									7.0	10.7	11.7
Sudan				2.5	3.2			4.8	10.3	20.0	20.0
Tanzania						8.0	4.5	7.6	6.5		
Zaire	2.2			2.9			13.0	13.5	18.0	17.0	15.7
Zambia							1.6	4.6	8.5	10.0	10.0
Total	18.7	18.5	2.1	10.0	9.5	17.1	30.6	34.8	57.1	78.8	84.1
World-Wide Total Title I	732.1	875.7	1077.7	757.1	494.3	972.2	1032.8	762.5	814.0	785.0	785.0
Africa percent of Total	2.5	2.1	.019	1.3	1.9	1.8	3.2	4.6	7	10	10.7

Figures taken from Annual Reports and FY 1980 CP.

It would be encouraging to assume that the increase in the number of countries receiving programs beginning in 1977 was the result of a process of natural selection. However, one must remember that the increase followed the change in the legislation requiring that 75 percent of the food aid programmed must go to countries which meet the International Development Association poverty criteria. In the early 1970s, heavy food assistance was being programmed to South East Asian countries which did not meet those legislative requirements, and it was necessary to change the programming pattern to qualifying countries.

3.3.2. Program Constraints

Titles I and III program implementation capacity has been most seriously constrained by the limited expertise of both the recipient nations and USAID. For example, although it is one of the more advanced countries in the area, the recent Title III submission states, "While Senegal has developed some indigenous technical and administrative expertise, it still lacks the necessary personnel, particularly at the middle level, to carry out its development program."

From the USAID side, only a thin layer of personnel existed at both embassies and missions, who were available for the preparation of necessary documentation for justification of Title I programs. The submitted proposals were often inadequate in depth and detail to justify programs. Proposals further suffered from lack of quality in program justifications and timeliness in proposal submissions. For example, in response to a request from PDC/FFP for justifications for the division of the Title I reserve held for FY '79, the Asia Bureau submitted a two page explanation for increasing a program in

one country. The Africa Bureau submitted one sentence each for six different countries. In fact, at times AFR has defaulted in its program responsibilities and deferred to the decisions and judgments of other offices in State and AID. However, in all fairness, the consensus is that there has been some overall improvement in the Africa Bureau's performance in this area in recent years. Certainly, the justification for the Title III program in Senegal is one of the most comprehensive and thoroughly prepared documents produced for a Title III program in any geographic region in AID.

A shortage of reliable data presents a constraint toward satisfactory program planning for Title I and Title II. Multi-year projections of food requirements to establish a base for a Title III agreement also provides an inhibiting factor. Projection difficulties are particularly serious in the Sahelian zone where the variations of weather are extreme.

3.3.3. Title I-III Summary

In summary, the Sub-Sahara Africa region has not been a strong contender for Title I and Title III agreements. For the most part, the region has been the residual recipient of program levels in the allocation process, after security assistance countries and perennial recipient (client) countries have been accommodated. Finally, to a large extent, the African recipients have been selected on political grounds without any real regard for development objectives.

3.4. Title II

3.4.1. Program Allocations in the Sahel

There is a strong sentiment that the most appropriate type of food assistance for the Sahelian countries and the smaller countries of Africa is a Title II

grant program with provision for the sale of commodities. It is believed that a Title I/Title III sales agreement is too complicated for these governments to handle with their limited management skills. A straight Title I is particularly inappropriate because it increases the external debt burden, which is usually strained to begin with. In addition, there is less bureaucratic delay in the implementation of a Title II grant.

3.4.2. Program Constraints

In addition to U.S. and African administrative constraints, legal provisions further inhibit Title II food aid programs. Title II grants for sales under Section 206 of P.L. 480 are limited by provisions of the law. According to the statute, not less than 1,300,000 metric tons, of the 1,600,000 metric ton minimum that must be distributed under Title II, are required to be distributed through the non-profit voluntary agencies and the World Food Program. The remaining 300,000 metric tons are available for emergencies, a contingency reserve, and use under Section 206. The Office of Food For Peace indicates that only an approximate 50,000 metric tons would be available for the latter use. In addition, under current legislation, currencies derived from sales can only be used for increasing both the effectiveness of food programs and the availability of food provided under Title II to the neediest individuals.

The Cape Verde Islands case provides a good example of the effect induced by legal constraints. Prior to a 1977 legislative change in P.L. 480, it was possible to adopt a program under Section 206 that could attain development objectives. Such a development-oriented program was implemented in the Cape Verde Islands. The islands of Cape Verde are rocky, mountainous, and have a paucity of top soil. A large proportion of cultivation is done

on hillsides and in pockets of soil that are deposited in ravines. Rainfall, when it does occur, tends to be torrential, so that waters rush down the hillsides and through the ravines, washing the top soil down to the sea. The Government of Cape Verde has a program to build stone catchment dams in the ravines to arrest the flow of water and trap the top soil. In 1977, Cape Verde was in the throes of a severe drought that had begun several years previously. Production of corn was down, foreign exchange holdings were low, and the ability to absorb international indebtedness was poor. A direct Food for Work grant was inappropriate because there is a strong bias in the country that payment in food has a colonialist imprint. Therefore, a Title II program was instituted under Section 206 through which the commodities were sold and the currency proceeds were used in payment to workers in the government's water management control program.

3.4.3. Importance of Food for Development

Due to a variety of geographical demographic, economic, political, and technological factors, Sub-Saharan Africa will most likely be subjected to food shortages and emergencies in the future. Under these circumstances, it is imperative that food aid be focused not just upon humanitarian relief, which merely serves to perpetuate the problem. Instead, food aid must be utilized for the purpose of economic development. In particular, programming should be oriented toward easing the binding constraints to African food production. Only with a predominant economic development focus can food aid provide other than short-term, perpetual humanitarian relief for political purpose.

3.4.4. Private Voluntary Organizations

A peculiarly African situation emerges concerning the role and effectiveness of the private voluntary organizations with Title II programs. The Maternal Child Health program has received the greatest attention, because the recipients most vulnerable to the damages of malnutrition, the age group of 0-3 years, are in this group. However, due to the lack of trained personnel and an effective delivery system of feeding centers, the Maternal Child Health program can only be implemented through take-home feeding and not through on-site feeding. In this process, the food taken home is shared with the rest of the family. As a result, the targeted recipients receive only a partial benefit.

The second of the three basic private voluntary organization program types - the School Feeding program, provides an excellent opportunity to efficiently utilize scarce resources. Although the School Feeding Program is not the highest priority among competing alternatives, the existing delivery system of the schools represents a cost-effective means by which to reach primary school students. It is expected that nutrition studies will show a fairly high level of both first and second degree malnutrition among these students.

The third of the three basic private voluntary organization program types, Food For Work, is constrained in its effectiveness by uniqueness of the African situation. Food For Work has most successfully been applied in public works projects conducted in countries with large population concentrations, such as in South Asia. In contrast, the Sub-Saharan countries have neither a tradition for public works projects implemented through cooperative

efforts, nor large population concentrations. Thus, Sub-Saharan Food For Work projects may be most effective with small-scale village projects responding to local needs.

As discussed in Section III 2.3.1. African Food For Work projects have suffered somewhat from competition with the World Food Program. Although the World Food Program has the commodity advantage, the effectiveness of even their programs is hampered by the lack of indigenous personnel to provide the necessary management. Poor logistical systems and inadequate storage facilities also limit the efficacy of World Food Project Programs.

3.5. Summary of the Food Assistance Programs Analysis

In summary, this section has analyzed food assistance programs of the seventies in terms of program constraints for Titles I, II, and III, examined program allocations, considered the role of private voluntary organizations, and emphasized the importance of a food for development food aid approach. The following section examines food assistance for the next decade. Program allocations, procedures, and private voluntary organizations receive attention for Titles I, II, and III.

4. A Perspective for Food Assistance for the Eighties

Section III.4. examines food assistance for the decade of the eighties; the previous section analyzed food assistance for the past decade. First, program country allocations and program procedures recommendations for Titles I and III will receive attention. Second, program country allocations, program procedures recommendations, and the role of private voluntary organizations for Title II will be examined.

For all Titles, if the Africa Bureau is to obtain a higher percentage of

food assistance and to achieve a more effective use of food for development, a broader base of interest by program planners and a stronger commitment by all to the use of food aid is required.

4.1. Titles I and III

4.1.1. Program Country Allocations

In chapter V of this study, the Sub-Saharan African countries are ranked according to their Food Aid Priority (FAP) and classified according to their recommended program type. Of the forty-three countries eligible for food assistance, only fourteen are considered appropriate for Titles I and III. Deficiencies in country development provide the rationale for this small proportion of total country allocation to Titles I and III.

The levels of Title I and Title III programs are controlled by ceilings imposed by the Office of Management and Budget. The Africa Bureau must compete with the other Bureaus for its share in the allocation process. Accordingly, the success of the Africa Bureau depends upon several factors, including the quality, integrity, and timing of the submissions. The quality factor is least under Bureau control and most subject to long time-lags. This could be improved through improved statistics. Improved statistics could be obtained through inclusion into each Title I agreement of a self-help obligation by which to strengthen the statistical capacity of the recipient government. A similar requirement should be included as a project or sub-project under any Title III agreement.

4.1.2. Program Procedures Recommendations

A number of recommendations follow to improve the efficacy of the Title I and Title III programs:

(i) The Bureau should consider designation of a Food For Development Officer(s). This officer(s) would assist the Missions in preparation of submissions. The recently prepared proposals for Title III programs in Senegal and the Sudan could serve as models. In addition, this officer would also serve as a clearing house for other submissions.

(ii) Title III legislation requires that annual reviews be conducted in each recipient country. The AFR Evaluation Office should use these reviews as a vehicle to synthesize the collective experience gained in the Africa region for future programming guidance.

(iii) Waivers should be applied that permit U.S. finance of ocean freight and inland transportation costs for shipments under Title III to landlocked countries. With eighteen of the twenty-eight RLDC's in Africa, a significant number of these countries have substantial budgetary limitations in providing the required financing. Section 304(d) of P.L. 480 specifies that a Presidential waiver may be obtained that would permit U.S. financing of transportation. The Bureau has already expressed its position that the exercise of waivers for ocean freight and overland transportation should be standard procedure for agreements with the RLDC's. However, no waivers of any type have thus far been approved by the Office of Food For Peace.

(iv) Waivers should also be applied for the numerous program documentation requirements for Title III. Waiver authorities exist that relate to the formulation of multi-year plans and their integration with other forms

of development assistance. Again, the Office of Food For Peace has yet to approve waivers of any type.

4.2. Title II

4.2.1. Program Country Allocations

Fourteen countries are categorized under Title II by the Food Aid Priority procedure of African countries. These Title II sales would be made under Section 206 of P.L. 480. As previously indicated, the Office of Food for Peace has estimated that about 50,000 metric tons of commodities could be available in this category, barring an unexpectedly high level of emergencies -- the highest priority of assistance. The estimate of need for Title II sales in Africa for Fiscal Year 1981 alone is 67,203 metric tons.

Given this situation, the Africa Bureau has proposed that an amendment to Section 206 of P.L. 480 be sponsored. Not less than 100,000 metric tons of commodities would be made available annually for development activities consistent with the intent of Title III under this proposed amendment. First claimants would be the RLDCs. Such an amendment would be consistent with the fifteen percent minimum of Title I set aside for Title III. This amendment would provide a means through which Food For Development could be programmed to these RLDCs that do not have the capacity to implement Title III agreements. One emphasis of this program is to bring the Title II Section 206 countries up to the level at which they can effectively manage Title III agreements.

4.2.2. Program Procedures

AID Missions should make a greater effort to assure that as much complementarity exists as is possible between regular Title II programs and regular AID activities. This cannot be accomplished merely through review of the AERs, but must be an on-going, year-round exercise.

4.2.3. Future Role of Private Voluntary Organizations

Additional room for expansion of private voluntary activities still exists in Sub Saharan Africa. CARE should be encouraged to increase its programming.

Maternal Child Health programs should generally continue to receive higher priority than School Feeding efforts. If Maternal Child Health program management capability has reached its operational limit and there is still room for expansion of School Feeding programs, then consideration should be given to an increase in recipients. However, School Feeding should not be increased due to greater ease in implementation. Instead, expanded efforts should be given to improve the efficiency of Maternal Child Health programs if the efforts are sufficiently warranted.

4.3. Summary of Food Assistance for the Eighties

A number of recommendations have been given for food assistance in the upcoming decade. Program country allocations and programming procedures for all titles received attention, as well as the role of private voluntary organizations for Title II programming.

5. Summary of Food Aid Considerations for the Seventies

After a review of P.L. 480 history in Sub-Saharan African countries, constraints to food aid programming by private voluntary agencies was considered.

Three program types and their constraints were examined: Maternal Child

Health; School Feeding; and Food for Work. Salient inhibiting factors for all three were found to include limitations of storage, space, logistic; and managerial capabilities. Furthermore, Food for Work was found to face an inhibiting colonial legacy as well as commodity competition by the World Food Program . Only two food aid private voluntary organizations operate in Sub-Saharan Africa, the Catholic Relief Services and CARE. CARE was found to suffer from restrictive programming requirements and competition from other donors. Program management for all agencies concerned in food aid suffers from managerial limitations.

The third section examined food assistance programs by country recipients, food need, and by title. Country recipients were found to strongly require food assistance. Titles I and III program implementation are both most seriously affected by the limited expertise of both the recipient nations and USAID. It was emphasized that Title I and Title III programs in Sub-Saharan Africa tend to be politically allocated and are residual recipients. Title III programming was found to be constrained by the lack of waivers for ocean and inland freight transport and legal documentation requirements as well as by administrative limitations.

In the fourth section, food assistance for the eighties was examined. Country program allocations by Title type were considered. Four recommendations were then made that directly attack the program constraints. Finally, it was noted that there is additional potential for private voluntary agencies in Sub-Saharan Africa.

IV. COUNTRY SITUATION ANALYSIS (MACRO)

1. Country Situation Summaries

The country analyses provide a statistical and analytical basis for making informed food for development decisions on a country-specific basis. The Country Situation Summaries (CSS) are divided into two categories. The first category is a set of two page working tables which summarizes each country's statistics. The second category is the working notes, condensed from IMF, World Bank, AID and other country reports. These working notes furnish highlights condensed from various sources which provide clarification of the working table statistics and information about areas of concern not currently quantified. Both categories are explained in greater detail below. The two page working tables for each country are included in this report (see Appendix I). The working notes are kept in AFR/DR/ARD offices in Washington.

2. Working Tables

2.1 Organization

The two page working tables for each country in this report are divided into four major sections: (i) general overview; (ii) financial relations (internal and external); (iii) food situation; and (iv) food aid history. The variables in each section are defined and their sources documented below.

2.2 General Overview

The first of the four major working table sections provides a general overview. In turn, two sub-sections comprise general overview, population and gross national product, both of which are presented in the first page of the tables.

2.2.1. Population

The 1978 population estimates, both totals and growth rates, are from the World Bank Atlas, 1978. Growth rates calculated for one time period, 1967-1977, are in real terms and were computed using the least squared method of linear regression analysis. The other years were taken from earlier WB documents.

2.2.2. Gross National Product (GNP)

GNP measures the total domestic and foreign output claimed by the residents of a country. It is comprised of Gross Domestic Product (GDP) plus income accruing to residents from abroad (such as investment receipts and worker's remittances), less the income earned in the domestic economy accruing to persons abroad. Recall that GDP measures the total final output of goods and services produced within the country measured by market prices. GNP per capita and real rates of growth are both taken from the World Bank Atlas, 1978.

2.3 Financial Relations

The second of the four major sections of each country's two page working tables is financial relations, both external and internal. A number of components comprise the financial relation variable, all of which appear on the first page of the tables.

2.3.1 Inflation

In general, inflation is an increase in the overall price level. Inflation is measured by the movement of the consumer price index, extracted from the monthly IMF International Financial Statistics of March, 1979.

2.3.2. Total Reserve Position

Total reserve position comprises the sum of a country's holding of gold, SDR's reserve position of IMF members, and holding of foreign exchange. This information is extracted from the monthly IMF International Financial Statistics of March, 1979.

2.3.3. Import Coverage

Import coverage entails the ration of reserves to imports computed in weeks. This information is obtained from the Report Assessing Global Food Production and Needs (referred to as The Global Assessment)¹ of March, 1979.

1/ Prepared by the Foreign Demand and Competition Division of the ESCS/
USDA.

2.3.4. Debt Service Ratio

Debt service is the sum of interest payments and repayments of principal on external public and publicly guaranteed debt. The ratio of debt service to exports of goods and services is a commonly used rule of thumb assessment of debt servicing capacity. The source is The Global Assessment.²

2.3.5. Total External Debt

Total external debt represents the amount of public and publicly guaranteed loans which have been dispersed net of cancelled loan commitments and repayments of capital. The source is The Global Assessment, 1979.

2.3.6. Estimated Debt Service Payments

Estimated debt service payments are the principal interest payments on outstanding debt for the years 1977 - 1980. These estimates are obtained from World Debt Tables, 1978, 1979, World Bank, as well as monthly supplements.

2.3.7. Current Account Balance

Current account balance is the difference between exports of goods and services plus inflows of unrequited transfers and import of goods and services plus unrequited transfers to the rest of the world. The balance data are obtained from The Global Assessment of March 31, 1979.

2.3.8. Other Donor Assistance

This category entails the economic programs of other countries, including assistance from international agencies and official development. The Congressional Presentation 1980, Africa Annex provides the requisite information. Note that the donation from the countries are not included in the 19 totals.

2.4. Food Situation

The third of the four major sections of each country's two page working tables is the food situation in each country. The food situation variable is further divided into a number of components, all of which appear on the second page of the working tables.

2.4.1. Caloric Consumption

Caloric consumption is the average caloric consumption per day assuming uniform consumption by the country's population. In particular, this category considers the quantity of food available for human use measured in calories per capita per day. Further, measurement is made at the retail level after

2/ Though published by F.D.C., U.S.D.A., the information is received from the World Bank.

provision is made for seed and industrial purposes, and quantities lost in collection, processing, and marketing. Since caloric consumption is estimated for a uniform distribution of a country's population, no provisions are made for differential rates of caloric consumption by social class, age, sex, occupation, rural or urban location, and other factors which would influence differential food intake. The source of information is The Global Assessment of 1979, USDA, although the statistics are originally from the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO).

2.4.2. Recommended FAO Intake

The recommended FAO caloric intake deficit is the daily deviation in consumption below the minimum. This minimum incorporates such factors as body size, climate influences, age and sex distribution, and other FAO criteria. The source is The Global Assessment of 1979.

2.4.3. Intake as Percentage of Recommended Minimum

Intake as percentage of recommended minimum is the average 1976-1978 intake of food caloric as a percentage of the recommended minimum allowance. A country falling below 85 percent has a poor nutritional status. The source is The Global Assessment of 1979.

2.4.4. Unmet Food Needs

Unmet food needs measures national per capita food supply in metric tons in wheat equivalence. Either a uniform or skewed distributional measure can be used. Uniform unmet food needs provides a per capita measure of food supply that does not consider any special demographic characteristics of the population -- it assumes that each person consumes exactly the same amount of food with equal accessibility to supplies of food. In contrast, the skewed measure explicitly accounts for such demographic factors as age and sex distribution, socio-economic class, and other demographic characteristics of the population. The exact factors considered depend upon the type, quantity, and quality of information available. The skewed measure of unmet food needs clearly provides a better indicator of need. The Global Assessment of 1979 provides the requisite information.

2.4.5. Food Production Indices

Food production index numbers measure the relative level of the aggregate volume of agricultural production for each year in comparison to the base period of 1969-1971. These indices are based upon the sum of price-weighted quantities of different agricultural commodities produced after deduction of quantities used as seed or feed. The FAO monthly bulletin of statistics, provides the data.

2.4.6. Selected Food Production and Net Food Imports

The selected food production and net imports provides cereal production and net import data relative to crops harvested for grain purposes only. Cereal crops harvested for hay, green feed, and silage, or used for grazing are therefore excluded. Other crops are chosen for their suitability of production and their wide availability in sub-Saharan Africa. The FAO production yearbook served as the primary source, supplemented by monthly supplements.

2.5. PL 480 History

The fourth of the four major working table sections for each country is the history of PL 480 food aid. Two sub-sections comprise PL 480 history, the first of which is past programming of Titles I, II, and III. The second sub-section is components of programming, which includes private voluntary organizations, multilaterals, and government assistance. Both of these two sub-sections are on page two of the working tables. All measurements are either in metric tons (MT) or thousands of dollars (000\$). Several sources were consulted: Food for Peace Annual Reports; Africa CP 1980; and other Food for Peace documents.

V. FOOD AID PRIORITY RANKING PROCEDURE

1. Introduction

1.1 Statement of Purpose

The country Food Aid Priority (FAP) procedure was developed to rank all Sub-Saharan countries in terms of food aid priority and suggest likely P.L. 480 categories (Titles) for them. Presidential and Congressional legislative directives provide the rationale. These directives state that foreign assistance will be directed toward countries which need outside assistance and which will "make the most effective use of such assistance to help the poor to a better life". In this FAP procedure, humanitarian/ disaster relief programs are not directly included. Instead Food for Development programs are the primary emphasis. The countries are examined and ranked strictly along socio-economic development criteria. Political and foreign policy considerations do not enter the analysis. Policy-makers will address those considerations and modify the conclusions of this analysis accordingly.

An implicit assumption in this analysis is that all countries have viable food for development projects. The reality of the situation (i.e., no visible known projects) enters the analysis when the actual budget requests are made. This assumption is necessary to place all countries on an equal basis for food for development considerations.

1.2. Organization

The Food Priority (FAP) procedure^{1/} is divided into four sections: (i) country food aid ranking; (ii) country categorization by PL 480 title; (iii) merging of ranking and categorization; and (iv) decisions and allocation of food aid. The first of these four sections (V.2.) ranks the countries in terms of their effectiveness and relative need. This ranking lists the countries in terms of food aid priority. The second of these four sections (V.3.) analyzes the capacity of the countries to effectively utilize the Food for Development aid. From these results, the countries are classified according to which Title would best correspond to their abilities. The results would also indicate under which Titles the Sub-Saharan countries tend to fall. The third of these four sections (V.4.) combines the findings of the first two in order to indicate the category (Title) to which the higher priority countries correspond. The fourth of these four sections (V.5.) treats the factors external to this study which determines the actual allocation of food aid among countries. The absolute size of the food aid needed is dealt with as an allocation issue. Again, recommendations are made entirely on socio-economic development considerations.

^{1/}The rationale and methodology are similar to the Indicative Planning Allocation (IPA) procedure developed by AID to allocate the budget. See (9) and (10).

2. Country Food Aid Rankings

2.1. Statement of Purpose and Organization

This section describes the procedure for determining the Food Aid Priority (FAP) ranking for the Sub-Saharan countries. The discussion includes the definitions of the variables constructed and a description of the data used to measure need and effectiveness. Also presented is the importance attached to these variables by policy-makers; the manner in which the variables are combined into a single country measure; and what the results do and do not show. First, the variables representing the need for outside assistance are examined. Second, the effectiveness variables are presented. Finally, the procedure for combining the need and effectiveness variables is explained.

2.2. Need Variables

Two variables were selected to reflect need for foreign assistance. They are: (i) relative size of the food gap, which represents the extent of the food problem; and (ii) per capita Gross National Product, which represents the total pool of resources potentially available to address the situation.^{1/}

^{1/}For further information regarding this variable, see the Country Situation Summaries section, or Sections IV. 2.4.4. to 2.4.4.

2.2.1. Relative Food Gap

The food gap measure is actual average caloric consumption as a percentage of FAO recommended minimum, assuming a uniform consumption distribution.^{1/} Using this relative measure, two countries with different levels of absolute food gap, but the same percentage food gap, would receive the same priority ranking, all other things equal. Absolute size of the food gap was not used, because the purpose of this section is not to allocate food aid, but to establish priorities. For treatment of absolute food gap size see V.4. below. Thus, with this relative measure, the smaller the size of the relative food gap, the lower relative priority for food aid. With this variable, countries with a larger relative food gap are viewed as having more of a need than those with a smaller food gap.

2.2.2. Per Capita GNP

The per capita Gross National Product (GNP) is representative of need in that it "reflects the domestic resources available to a country to cope with poverty" (5, p. 3 section 2). Although other variables were examined, per capita GNP will be used until more information is available. Consistently, countries with a high per capita GNP figure would be viewed as having less of a need than low per capita GNP countries.

^{1/}Others in AID have been examining this issue, but nothing concrete has been concluded.

The two need variables would not be good indicators if one need variable were already adequately incorporated in the other. Theoretically, given that these are less developed economies and much occurs outside the monetized sector, the food gap and per capita GNP measures do not seem in conflict. In fact, their correlation is an acceptable 34 percent. Table 1 summarizes the need variables.

Table 1 - Need Variables

<u>Variable</u>	<u>Measure</u> ^{1/}
Relative size of food gap	Actual average caloric consumption as a percentage of FAO recommended minimum average daily caloric consumption, assuming a uniform consumption distribution. Units = %.
Per capita Gross National Product	World Bank estimates, units = US \$.

^{1/}All quantitative measures were taken from the Country Situation Summaries. See the Summaries for the sources.

2.3 Effectiveness Variables

2.3.1. Rationale

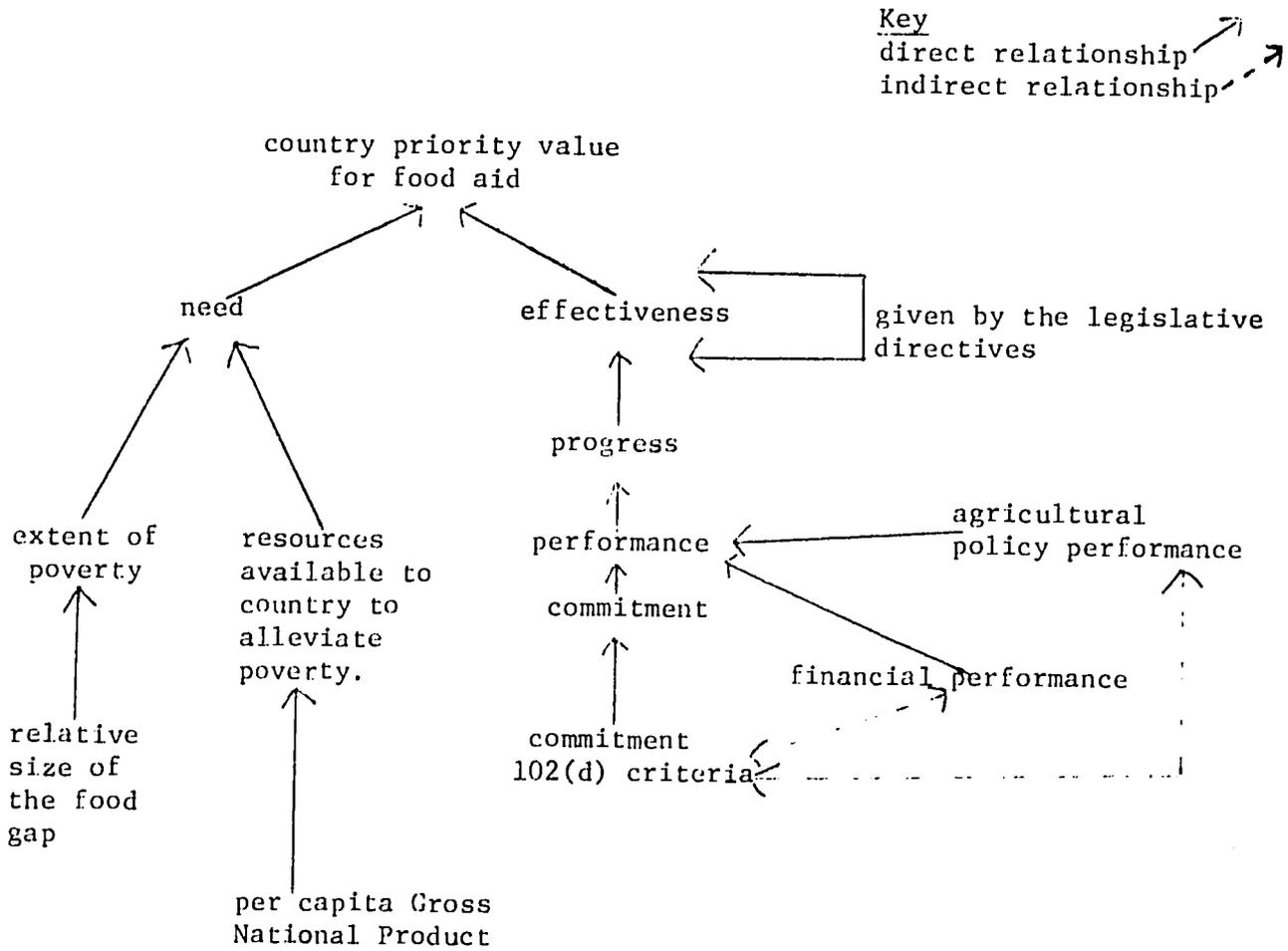
The three variables selected to indicate effectiveness are (i) financial policy performance; (ii) agricultural policy performance; and (iii) commitment toward equitable growth. As these three effectiveness variables are subjective in nature the selection requires an explanation.

Theoretically, the commitment toward equitable growth variable should adequately account for both financial and agricultural policy performance. Currently, this variable represents a ... "general informal appraisal by Program Policy Coordination (PPC) staff and the regional bureaus..." (5,p. 4). This generation of commitment values is "explicitly provisory", and a more systematic procedure is planned in the future. Additional information provided by the 102(d) exercise will be incorporated^{1/}. As the current commitment measure is suspect, and because of the importance of a country's financial and agricultural policy in PL 480 matters, the commitment toward equitable growth variable was divided into two additional variables: financial and agricultural policy performance.

A conceptual presentation and discussion of the current situation is given by Figure 1.(A) of Appendix II, while the theoretical ideal is presented in Figure B. (B).

^{1/}See (3) and (12) for further details.

Figure 1. Procedure Rationale Linkages^{1/}



^{1/}The hypothesized relationship between the variables is not intended to be exclusive. The relationships shown here reflect those which are assumed to dominate.

2.3.2. Financial Policy Performance

The financial policy performance variable was constructed to reflect a country's financial responsibility, both domestic and international.

Financial responsibility entails such factors as a favorable debt service ratio, satisfactory balance of payments, stability and strength of currency, maintenance of international agreements (especially recent IMF agreements), and the requisite supportive fiscal and monetary actions. For example, two countries may both receive windfall returns from an export commodity with a history of widely fluctuating world prices, such as natural rubber or cocoa. A country with a poor financial policy performance might subsequently utilize the export earnings to purchase nonproductive imported luxury consumption goods. After the windfall gains have been exhausted, this country subsequently borrows heavily from the international private capital markets in order to sustain the initial expansionary aggregate demand. In contrast, a more financially responsible country would display satisfactory financial responsibility in their external financial relationships and keep the economy under sound financial control.

The variable was constructed so as not to discriminate against those countries which have recently improved their performance relative to those countries which have had satisfactory long-term performance. The short-term performance of a country weights more heavily than does its long-term history. Thus, a country with a history of serious financial

problems, whose newly formed government has adopted austere fiscal and monetary measures, could receive the same financial policy rating as one who has had a satisfactory financial history over a longer period of time. With this approach, the correlation between effectiveness and resource availability will not be biased against recently formed governments. The same analysis applies to countries which might have different balance of payments histories. The standards used to rate countries are based heavily upon the International Monetary Fund (IMF) country reports. Although the IMF does not publish a set of standards, their reports provide a detailed analysis of country's activities, and provides an appraisal of the situation. The absolute level of financial resources which could be directed toward food aid is not included in this variable. A later section incorporates this absolute level. The countries were assigned a performance rating with a corresponding numerical value of: POOR = 1; FAIR = 2; and GOOD = 3. Appendix III explains in greater detail the process by which a country is assigned a rating.

2.3.3. Agricultural Policy Performance

The agricultural policy performance variable was constructed to reflect the measures that a country has actually taken toward its food economy.

The procedure considered the available reports and studies on each country to determine if there was a constructive and organized rationale explaining its actual performance. Factors such as price policy, extension and research efforts, availability of seeds and fertilizer, rural road construction, credit policy, and other related items were examined.

Ratings of negative, indifferent, and positive were attached to the variable, with a corresponding numerical scale from 1 to 3. A country with a positive rating could include one which explicitly states a goal of food self-sufficiency through domestic production, but actually has policies which favor export crop production to finance imports, including foodstuffs and self-reliance. On the other hand, a country pursuing an agricultural policy which places severe strains on the other sectors of the economy would receive an indifferent rating. In order to receive a negative rating, a country must currently pursue policies which diminish the supply of food. As with the financial performance variable, the agricultural policy variable favors a country's recent performance. The same rationale applies to both. In addition, the country's rating was biased upward to reduce the probability of a Type I error.^{1/} This upward bias reflects the possibility that a country does have a constructive rationale

^{1/}For review, Type I error is the error incurred by rejecting the rating when the rating is accurate while the Type II error is the error incurred by accepting the rating when it is inaccurate. The two types of error are inversely related.

for its program, even though it cannot be deduced from the information currently available. Appendix IV explains in greater detail the means by which a country was assigned to a particular rating.

2.3.4. Equitable Growth Commitment

The third and final variable included to indicate a country's effectiveness or effective use of foreign assistance is commitment toward equitable growth. This variable provides an appraisal of a country's overall policy with respect to equitable growth as delineated in the foreign assistance legislation. As previously mentioned, the commitment variable was calculated by AID during the indicative planning process.^{2/} Since the final criteria to calculate the 102(d) are still being researched, the ranking decided by PPC and the regional bureaus are preliminary. The completeness of the final 102(d) criteria may influence the structure of this procedure.^{3/}

The commitment ratings are poor, indifferent, fair, and good. A numerical scale of 1 to 4 was attached to this rating. Appendix V describes the factors considered in the Agency's decision.

^{2/}These results helped determine the Agency's future budget allocations. For background and reports, see (9), (3), (12), and (10).

^{3/}Completeness is defined here as being representative of the theoretical ideal described in Figure 1 (b) of Appendix II.

Table 2 - Effectiveness Variables

<u>Variable</u>	<u>Measure</u>
Financial Performance	(i) Source: reference readings, and Country Summary Statements (ii) Unit: scale (1 to 3), rating: poor, fair, good
Agricultural Policy	(i) Source: reference readings, and Country Summary Statements. (ii) Unit: scale (1 to 3), rating: negative, indifferent, positive
Commitment Toward Equitable Growth	(i) Source: AID, IPA, Report (9) (ii) Unit: scale (1 to 4), rating: poor, indifferent, fair, good.

2.4. Summary of Need and Effectiveness Variables

To summarize, the two need variables provide a measure of the (uniform) food gap and per capita Gross National Product. The three effectiveness variables include financial policy performance, agricultural policy performance, and commitment. Figure 1 diagrams the relationships of all the variables and how they relate to need, effectiveness, and finally the country food aid priority ranking. With the variables explained, the ranking formula can be presented.

2.5. Relative Ranking in the Food Aid Priority Procedure

2.5.1. Food Aid Priority Formula

To compare countries, the variables are combined into a single measure of a country's need and effectiveness. The same general methodology used in the IPA process is used here. The following relationship is used to calculate the measure on country food aid priority value:

$$FPV = (FG)^a (s-t [PCY])^b (FN)^c (AP)^d (CM)^e, \text{ where: } FPV =$$

country's food aid priority value;

FG = country's food supply as percent of recommended minimum
(uniform distribution) need;

PCY = country's per capita Gross National Product (need);

FN = country's financial policy performance (effectiveness);

AP = country's agricultural policy performance (effectiveness);

CM = country's commitment toward equitable growth (effectiveness);

a, b, c, d, e, s, and t = policy weights decided by policy makers.

2.5.2 Rationale and Values Given to FPV Relationship and Policy Weights

A country's food aid priority value (FPV) is a measure of the effects from the two need and three effectiveness variables. Several formulations are possible for the FPV relationship. However, the AID rationale for this particular form was accepted because it best expressed policy-makers' decision criteria. The implications of this specific function form are discussed in Appendix VI; the multiplicative function in part I of that appendix and the use of exponents instead of simple coefficients as policy weights in part II of Appendix VI. Appendix VIII analyzes the effect upon the Food Aid Priority country rankings of a different functional form than the one actually adopted. The relationship for per capita GNP utilized is:

$$(s-t(PCY))^b.$$

Again, several different forms are possible. However, during the IPA process, AID decided that a linear relationship was most appropriate. Thus s is the vertical intercept and t the slope of this linear function. Appendix VII explains the logic of this specific functional form.^{1/}

The exponents a, b, c, d, and e as well as the coefficients s and t are policy weights which reflect the importance that policy-makers attached to the different variables. The greater the importance attached to a variable by a policy-maker, the larger the absolute value of the policy weight.

^{1/}The appendices draw heavily from work done by Michael Crosswell, IIA/EA/PP in source (5). They were only slightly modified by the authors. Note that because of this formulation, the exponent b is no longer negative.

Exponents b, c, d, and e are positive, reflecting, for example, that the higher the commitment value, the higher the food aid priority value.

The value of the uniform food gap exponent a was set at -1. The size of the food gap is an important criteria for food aid assistance. For example, the smaller the food gap (or inversely, the larger the food supply of the recommended minimum), the lower the need for food aid. See Section 3 of Appendix VI for a more detailed and extensive discussion of this policy weight. The exponent for per capita GNP, b, was placed at 1, because linearizing the variable was considered a sufficient adjustment.^{1/}

The commitment toward equitable growth exponent e was given a value of 0.5 to reflect the importance that policy-makers felt this variable deserved.^{2/}

The overriding reasons were the subjective and qualitative nature of this variable.^{3/} The effect was to reduce the range of this variable from (1 to 4) to (1 to 2). This reduction diminishes the likelihood of a country arbitrarily receiving a strong penalty or reward in its relative food aid priority ranking. The same rationale was used to set the values of the financial policy performance exponent c and the agricultural policy performance exponent d as well. However, the range of these variables was reduced from (1 to 3) to (1 to 1.73). Values for the vertical intercept s

^{1/}From discussions with Michael Crosswell who worked closely on the IPA model.

^{2/}The policy-maker who made the decision in the IPA process was Acting AID Administrator, Robert H. Nooter.

^{3/}See (9, p. 4) for the discussion of weighting this variable.

and slope t of the linear per capita GNP relationship were calculated by the same procedure used in the IPA. Again, for a more detailed discussion, see Appendix VII. Appendix VIII presents the results of a sensitivity analysis in which different values are used for the policy weights.

2.5.3 Data

Table #1 of Appendix I contains the data used in the Food Aid Priority (FAP) procedures. Those countries which did not receive a commitment rating from USAID arbitrarily received a 2 or indifferent rating for the purpose of this analysis. As a result, the countries were neither penalized nor rewarded. Countries without available data for several of the FAP variables were eliminated from the ranking procedure.^{1/}

2.5.4 Country Rankings

Calculating the Food Aid Priority Value (FPV) provides the single measure which can be used for comparison between countries. The resulting rankings of countries from the suggested highest to lowest food aid priorities are presented in Table 3. Appendix VIII presents a sensitivity analysis of Food Aid Priority rankings. The effect of changes in policy weights, data, and functional form upon the FAP country rankings are analyzed.

^{1/}In countries eliminated owing to insufficient data are Djibouti, Gabon, Mauritius, Sai Tome, Principe, and the Seychelles. These countries have been eliminated from all discussions and tables to follow.

Table 3
Countries Ranked by Their FAP Values

<u>Rank</u>	<u>Country</u>	<u>Rank</u>	<u>Country</u>
1	Ethiopia	20	Togo
2	Upper Volta	21	Madagascar
3	Somalia	22	Zaire
4	Niger	23	Cameroon
5	Chad	24	Guinea
6	Rwanda	25	Sierra Leone
7	Tanzania	26	Mauritania
8	Mali	27	Ghana
9	Cape Verde	28	Nigeria
10	Burundi	29	Uganda
11	Guinea-Bissau	30	Benin
12	Kenya	31	Angola
13	Malawi	32	Sudan
14	Gambia	33	Liberia
15	Lesotho	34	Senegal
16	Botswana	35	Zambia
17	Central African Republic	36	Congo
18	Mozambique	37	Swaziland
19	Comoros Islands	38	Ivory Coast

3. Contributing Capabilities Analysis

3.1 Statement of Purpose and Organization

Calculating the FAP ranking is only the first step in the procedure. The next step presents the Titles and the available terms or criteria under each Title as they relate to the rankings in this study.

3.2 The PL 480 Titles (Categories)

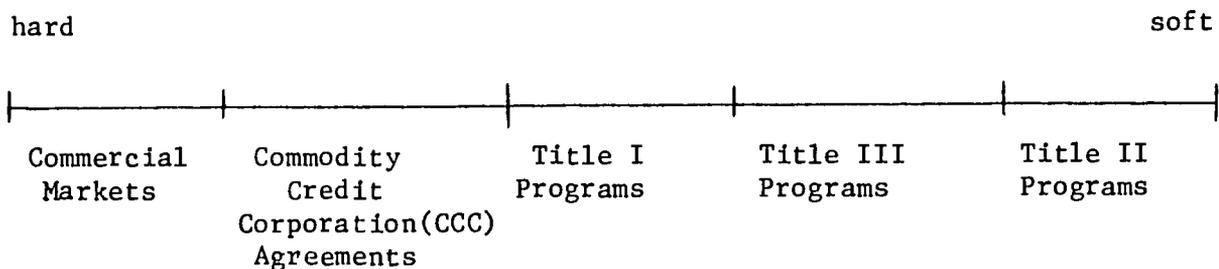
PL 480 assistance is intended to encourage economic development, particularly in countries determined to improve their own agricultural production. It

is further intended to make up for food deficits which occur in the local market places.

There are two major aspects of terms in food aid for the purposes of this study. Concessionality of the terms of the actual commodity transfer and where commodity sales are allowed, the stiffness of regulations of the uses of local currency generated by these sales.

The terms of commodity transfer are conceived here to lie on a continuum of concessionality which ranges from hard to soft. This concept is illustrated in figure 2 below with commercial markets at one end and Title II humanitarian relief programs at the other.

Figure 2. Relationship of the Various Types of Commodity Transfer Mechanisms^{1/}



Each of these larger categories can be broken down further into the sub-continuum of terms of food aid shown in figure 3.

^{1/}The spaces between categories are drawn equidistant for schematic purposes only.

To put this second breakdown into the larger context, the strictest or hardest criteria for a Title I agreement would be the most lax offered under a CCC agreement. For the purposes of classification in this study, countries which qualify for Title I programs are considered here to receive the softest terms possible for Title I. This involves waivers on specific harder requirements.

For Title III, on the other hand, the assumption here is that the entire range of options under Title III are available. The specific package recommended in this study depends on the specific country situation. Some countries receive waivers on specific criteria while others do not. As seen on the continuum, Title III has generally softer terms for commodity transfers than does Title I. These softer criteria include the loan forgiveness provision and the multi-year program option which reduce the foreign exchange burden and the uncertainty of future food supplies for the recipient countries. On the other hand, Title III has stiffer requirements for uses of local currency generated by commodity sales than does Title I. Title II is viewed for the purposes of this study as having two major sub-categories: The Section 206 grouping and the general humanitarian grouping.

Title II, Section 206 involves commodity sales and incorporates a stated focus on development planning as does Title III. However, the advantages to

the recipient over Title III include--reduced reporting and documentation requirements, and more flexibility in programming. A further advantage is that all transportation costs to the host country's border are paid by the U.S. Title II, section 206 is seen as an interim program which emphasizes experience and developing management capability. This should enable countries currently incapable of managing Title III programs to do so in the future.

The second Title II program, humanitarian relief, is assigned here to countries in which a development effort is not determined viable at this time. Title II also deals with commodity grants. Sales are nearly always prohibited. This is the softest Title in PL 480 - both in terms of commodity transfer and uses. A positive development impact may result from specific humanitarian programs but development is not the primary aim of food for maintenance programs.

In actual practice, reversals may occur in the relative concessionality between Titles. For example, it is possible that food aid received under Title III could be more costly in foreign exchange and administrative expenditures than a Title I food aid package of a similar size. However, these reversals were not intended in Congressional food aid legislation. They occur when guidance and jurisdictions are unclear among the parties responsible. The continuum set forth above is the ideal towards which U.S. lending agencies continue to work.

Within the context of the continuum presented above, it is now useful to examine the application of Titles I, II and III to Africa.

3.3 Eligibility Criteria Design

This section develops criteria for assessing eligibility of African countries for specific Titles of food aid. The criteria presented here are to be used in conjunction with additional policy-level inputs and in-field research components to determine final judgements of eligibility by the Africa Bureau. This is therefore a preliminary analysis. However, few substantial changes are expected as a result of these additional inputs.

3.3.2 Principles of Criteria Design

The general principle behind the U.S. food aid program is to minimize the role of the U.S. Government. The approach seeks, therefore, to encourage the involvement of the recipient country to manage and finance food aid programs. In those countries where adequately trained manpower does not exist to meet these responsibilities, it is the aim of the U.S. Government to help train personnel to take over management of food aid as rapidly as possible.

By stressing more host country involvement, food aid will be made attractive to only those countries which need it. It will be less attractive to those that do not.

The level of U.S. Government involvement in food aid are measured in dollars and administrative costs per unit. The PL 480 Titles ranked by level of USG involvement are from the least with Title I to the most with

Title II. The inverse is expected for the involvement of the recipient governments. These relationships are summarized in figure 4 below.

Figure 4. Principles Used in Establishing Country's Food Aid Receiving Capabilities

Title I	Title III	Title II
	(Sec. 206 Type)	(Humanitarian Type)
hard	-----terms of food aid agreements-----	-----soft
low	-----USG involvement (\$US & administrative cost/unit)-----	-----high
high	-----Recipient Government involvement (\$US & administrative costs/unit)-----	-----low

3.3.3 The Four Types of Eligibility Criteria

Four types of eligibility criteria for the different categories of food aid were developed in this study. The first criterion evaluates the management capacity of the country. This was further divided into government planning/design and implementation capabilities. Planning/design includes the capacity to design projects, negotiate the agreements, and plan the overall program. Implementation stresses government ability to implement the logistics of commodity transportation and carrying the project to completion.

The second eligibility criterion for the different categories (Titles) of food aid reflects the transportation capacity of a country. This includes both

external and internal structure. External structure was included to take account of differences in facilities available to countries which are land locked and countries with operating ocean ports. Internal structure considers such factors as roads, waterways, and railways, as well as the availability of vehicles.

The third eligibility criterion considers the institutional strength of the implementing organization. This is examined because some countries have the management capability, although the laws of the country may effectively render the Ministry powerless. Also analyzed in this division was the country's ability to actually finance the food aid and related costs. (These costs include such additional expenditures as transportation and increased institutional costs of monitoring.)

The fourth eligibility criterion involves an assessment of domestic commodity storage capabilities.

3.3.4 Criteria Ratings and Sources

All four of these divisions are given one of the following ratings:

- (1) good: possessing the capacity to accomplish the task adequately;
- (2) fair: possessing the capacity to accomplish the task marginally; and
- (3) poor: not possessing the capacity to accomplish the task.

Country ratings for these criteria were determined through analysis of the country working paper summaries. The summaries are part of the country situation analyses presented earlier.^{1/}

3.4. Country Category (Title) Classification: First Choice

Having established the preliminary criterion for assessment of a country's capacity to manage and absorb food for development effectively, the ratings were divided across the various titles. For example, to be considered for a Title I program, necessary but not sufficient conditions, include the presence of a good planning/design and implementation capability. Table 5 summarizes the association between the level of competence required by each point and the various Titles.

^{1/} For a review of the sources included in this work see Chapter IV, above.

Table 5 - Preliminary Contributing Capabilities Analysis

<u>Contributing Capability</u>	<u>Title I</u>	<u>Title III</u>	(206 Type)	<u>Title II</u> (humanitarian)
Management				
(i) Planning/Design	G	G	G/G	F/P
(ii) Implementation	G	G/F	G/F	P
Transportation Structure (internal & external)				
(i) Vehicles(trucks, etc.)	G	G/F	P	P
(ii) lanes(roads, etc.)	G/F	F	F	P
Institutional Strength				
(i) implementing Ministry	G	F/F	G/F	P
(ii) absolute ability to pay (financial aspect)	G	F/F	G/F	P
Storage Capabilities	G	G	F	F/P

G = Good, country has the capacity to do the task adequately

F = Fair, country has the capacity to do the task marginally

P = Poor, country does not have the capacity to do the task marginally

The procedure for assigning ratings was to examine the CDSS and related reports to be able to answer the points in Table 5. For the purposes of this preliminary analysis of a country's capabilities to handle food aid, the four topic areas: management, transportation, institutional strength and storage capabilities were allotted equal importance. A slightly heavier weighting was used for management in those cases where a country was borderline between two Titles. This points to a shortcoming of the present analysis. The current ratings are based on historical information even though the current situation may have changed. When a country requests a food for development program, a new assessment will have to be completed in order to judge whether the suggested form of food aid remains appropriate. Of course, once the field analysis component has been added to the individual country assessments, AID will be in a better position to make more accurate recommendations.

Before the results are presented, it should be stated again that this step only provides the first choice of the type of food aid recommended. The second and third choices are discussed later. Table 6 presents these first choice results. The majority of the countries fall under the Title II category. However many countries show potential as Title II - Section 206 aid recipients. The second largest groupings of countries is under Title III and the least fall under Title I.

Table 6 - Type of Food Aid Recommended, First Choice*
(based on historical information)

Concessionality of Food Aid			
HARD ←			→ SOFT
<u>Title I</u>	<u>Title III</u>	<u>Title II</u>	
		(Section 206)	(Humanitarian)**
Ivory Coast	Botswana	Central African Republic	Angola
Kenya	Cameroon	Congo	Benin
Nigeria	Ethiopia	Gambia	Burundi
	Guinea	Ghana	Cape Verde
	Lesotho	Madagascar	Chad
	Liberia	Mali	Comoros Islands
	Malawi	Mozambique	Guinea-Bissau
	Senegal	Niger	Mauritania
	Swaziland	Rwanda	Uganda
	Tanzania	Sierra Leone	Zaire
	Togo	Somalia	
		Sudan	
		Upper Volta	
		Zambia	
TOTAL	3	11	14
		14	10

* Countries are listed alphabetically under each Title.

**The countries on this list have been evaluated as unprepared to undertake Food for Development as discussed in this paper. However they still have a defined food need. These countries have thus been designated eligible for Title II - humanitarian food aid. At the time when Programmers consider Food Assistance, prevailing circumstances may warrant inserting criteria which may move a country from this category to another.

NOTE: Countries excluded due to lack of data are again Djibouti, Gabon, Mauritius, Sao Tome and Principe, and the Seychelles.

3.5 Country Category (Title): Next Best Choice

3.5.1 Explanation of Choices

As there are limited resources available under the various titles, selection of only a first or best Title choice for a country is insufficient. If for some reason the first choice is unavailable a fall back or next best choice of Title should be available for each country. Criteria used for next best choices were ability to pay and management capability. The progression from first choice of Title to next best is indicated below:

	<u>First Choice</u>	<u>Second</u>	<u>Third</u>
A.	I	III	II-206
B.	III	II-206	I
C.	II-206	II-Humanitarian	III
D.	II-Humanitarian	II-206	Nothing

The availability of Waivers under each Title and overlapping criteria allow for flexibility in adjusting second best choices to country situations. In Case A, the progression is from hard to soft. Case B also shows the same progression: hard to soft, if the most lenient criteria are invoked for Title I.

The same hard to soft movement is desired in line C. The Title II, Humanitarian suggested in line C, column 2 would be on the hardest terms-requiring a development component. This Title II - Humanitarian type would resemble Section 206 as closely as possible. The Title III recommended in the third column in line C would represent the softest criteria including waivers for payment of transport, requirements for a national development plan and reporting.

In case D, the change is from Humanitarian type to Section 206 type food aid under Title II. The conditions under Section 206 in this case would be the softest terms, possibly including some direct distribution.

3.5.2 Types of Food Aid Recommended: Second and Third Choices

Table 7 presents the results of this food aid ranking.^{1/}

^{1/} Again, countries not included due to lack of data are Djibouti, Gabon, Mauritius, Sao Tome and Principe, and the Seychelles.

Table 7 - Types of Food Aid Recommended: First, Second & Third Choices*
(Based on Historical Information)

<u>Country</u>	<u>First</u>	<u>Second</u>	<u>Third</u>
1. Angola	II-H	II-S	-
2. Benin	II-H	II-S	-
3. Botswana	III	II-S	I
4. Burundi	II-R	II-S	-
5. Cameroon	III	II-S	I
6. Cape Verde	II-R	II-S	I
7. Central African Republic	II-S	II-R	III
8. Chad	II-R	II-S	-
9. Comoros Islands	II-R	II-S	-
10. Congo	II-S	II-R	III
11. Ethiopia	III	II-S	I
12. Gambia	II-S	II-R	III
13. Ghana	II-S	II-R	III
14. Guinea	III	II-S	I
15. Guinea-Bissau	II-R	II-S	-
16. Ivory Coast	I	III	II-S
17. Kenya	I	III	II-S
18. Lesotho	III	II-S	I
19. Liberia	III	II-S	I
20. Madagascar	II-S	II-R	III
21. Malawi	III	II-S	I
22. Mali	II-S	II-R	III
23. Mauritania	II-R	II-S	-
24. Mozambique	II-S	III	I
25. Niger	II-S	II-R	III
26. Nigeria	I	III	II-S
27. Rwanda	II-S	II-R	III
28. Senegal	III	II-S	I
29. Sierra Leone	II-S	II-R	III
30. Somalia	II-S	II-R	III
31. Sudan	II-S	II-R	III
32. Swaziland	III	II-S	I
33. Tanzania	III	II-S	I
34. Togo	III	II-S	I
35. Uganda	II-R	II-S	-
36. Upper Volta	II-S	II-R	III
37. Zaire	II-R	II-S	-
38. Zambia	II-S	II-R	III

*Countries listed alphabetically

Key: I = Title I
 III = Title III
 II-S = Title II - Section 206
 II-H = Title II-Humanitarian

3.6. Summary of Contributing Capability Analysis

This step of the FAP procedure has sorted the countries according to the type of food aid they could most effectively manage. Most of the countries evaluated fell within the Title II continuum. This includes both Section 206 programs and humanitarian programs. The second largest number of countries fell under Title III. Only three countries were evaluated as being fully capable of handling and managing a Title I effectively. In the next step (Section 4) these results will be combined with those of the country food aid priority ranking.

4. Combining FAP Rankings with Preliminary National Contributing Capabilities Analysis

4.1. Statement of Purpose

As discussed above (V.1.1), the country Food Aid Priority (FAP) procedure was developed to rank all sub-Saharan African countries in terms of food aid priority and suggest P.L. 480 categories or Titles for them. This process has four steps. The first step provides a country FAP ranking, and the second step categorizes countries by P.L. 480 title. The third step of four, discussed in this section, combines the findings of the first two steps in order to indicate the category or Title under which the higher priority countries tend to fall.^{1/} The procedure simply takes the results from Table 6 and ranks the countries in terms of their FAP.^{2/}

^{1/}If conversely, all the countries had been ranked under each Title, it would have been impossible to determine which countries have a higher food aid priority, irrespective of the type of food aid. This method would have limited the usefulness in arguing for a change in the allocation of the type of food aid the Africa Bureau receives and the placement of Food for Development emphasis. However, a function which includes all the factors does have its usefulness after the field country assessments are complete and the relationships of the contributing capabilities analysis are more fully understood. Once this additional information is available, experimentation with different methodology may be justified.

^{2/}Calculated in Table 3 on page 52 above.

4.2. Combined Results: FAP and Preliminary Historical Contributing Capabilities

Results from combining the findings of the first two steps -- the FAP and arrangements by Title -- are presented in Table 8. Countries which fall in the upper 20 percent of all countries surveyed become countries of high food aid priority. These high priority countries arrange themselves by Title as follows: one under Title III; five under Title II-Section 206; one under Title II - humanitarian.

This clustered distribution suggests that Title II-Section 206 may be the most appropriate tool for food aid in Africa at the present time. Titles I and III appear to be too expensive for the limited foreign exchange holdings.

Table 8 - FAP and Preliminary Historical Contributing Capabilities
Results Combined*

Hard ←-----Concessionality of Food Aid-----→ Soft

<u>Title I</u>	<u>Title III</u>		<u>Title II-8</u>	<u>Title II-H***</u>
12 Kenya**	1 Ethiopia	↑ High	2 Upper Volta	5 Chad
28 Nigeria	7 Tanzania		3 Somalia	9 Cape Verde
38 Ivory Coast	13 Malawi		4 Niger	10 Burundi
	15 Lesotho		6 Rwanda	11 Guinea-Bissau
	16 Botswana		8 Mali	19 Comoros Islands
	20 Togo	FOOD	14 Gambia	22 Zaire
	23 Cameroon	AID	17 Central African	26 Mauritania
	24 Guinea	PRIORITY	Republic	29 Uganda
	33 Liberia		18 Mozambique	30 Benin
	34 Senegal		21 Madagascar	31 Angola
	37 Swaziland		25 Sierra Leone	
			27 Ghana	
			32 Sudan	
			35 Zambia	
		↓ low	36 Congo	

*Countries not listed due to lack of data are:

Djibouti
Gabon
Mauritius
Sao Tome and Principe
Seychelles

**Number indicates FAP rank from Table 4. Total of 38 countries listed.

***This list of countries has been evaluated as unprepared to undertake Food for Development as it is presented in this paper. However they still have a defined food need. These countries have thus been designated eligible for Title II-humanitarian. At the time Programmers consider Food Assistance, prevailing circumstances may warrant inserting criteria which may move a country from one category to another.

5. Food Aid Type: Actual Decisions and Allocations

Actual decisions about food aid allocation ultimately rely on considerations outside the focus of this report. Judgements on such factors as the type of commodity that the U.S. will export, the amount to be exported, and the countries to receive limited food aid are not and should not be based exclusively on the findings of this study.

As mentioned throughout this report, many other important considerations intervene in the final decisions. United States Foreign Policy concerns, though not dealt with here, are of major importance. Responsibility for articulating these political evaluations rest with AID/Washington and the Department of State. In addition, Congress has prohibited by law the allocation of food aid to certain countries.

Other considerations also play important roles. The availability of specific commodities is an additional determinant. If the U.S. Government is unable to provide a specific category of food items the country requesting this item may seek satisfaction elsewhere. In the same vein, the range of food aid packages offered by the U.S. Government

cannot always compete with other donor countries and agencies (see chapter III above).

A final important consideration not explicitly addressed in this study is the constantly changing economic and political climate in any country which cannot be incorporated into this theoretical analysis. The ability to maintain an accurate and up to date data base in AID/Washington relies heavily on in-field analysis and communication from the mission.

Absolute size of the food gap is also important in actual allocation. To have introduced the absolute size criterion earlier would have biased the priority rankings given here in favor of larger countries with correspondingly larger food gaps. Up to now the relative measure has been used in order to establish a system of priorities (see section 2.2.1 in this chapter). Though absolute size has been omitted from this ranking process, in actual practice allocation of food aid may be determined by large absolute need. For the sake of information and comparison, FAO estimates of absolute food gap are given in Table 9 below.

Table 9 - Average Absolute Size of the Food Gap Under
Different Assumptions. 1976-1978*

<u>Country</u>	<u>Uniform Distribution (000MT)</u>	<u>Skewed Distribution</u>
Angola	5,498	13,027
Benin	634	1,065
Botswana	51	91
Burundi	(79)**	113
Cameroon	(10)	321
Cape Verde	20	47
Central African Republic	9	106
Chad	270	509
Comoros Islands	(1)	15
Congo	19	92
Ethiopia	2,499	4,361
The Gambia	(1)	24
Ghana	477	1,079
Guinea	208	434
Guinea-Bissau	(0)	25
Ivory Coast	(397)	(138)
Kenya	165	874
Lesotho	15	81
Liberia	16	109
Madagascar	(148)	252
Mali	387	711
Mauritania	69	138
Mozambique	698	1,213
Niger	194	490
Nigeria	2,953	6,701
Rwanda	210	470
Senegal	(106)	228
Sierra Leone	30	205
Somalia	258	473
Sudan	389	1,390
Swaziland	8	32
Tanzania	857	1,688
Togo	28	146
Uganda	642	1,344
Upper Volta	490	837
Zaire	1,108	2,378
Zambia	65	320

*Source: Country Summary Tables. Countries listed alphabetically.

**Denotes surplus

VI. Country Nutrition Profile

6.1 Nutrition Focus in Food Programs

Malnutrition is the primary health problem in Africa - the most "basic human need". Reflecting this, better nutrition is the stated goal of the largest category of AID funds: Food and Nutrition.

Although AID has many programs in food production and donated food, we still lack the kind of analysis that shows whether there is actually a direct impact on the malnutrition problem. Improving nutrition can be very difficult because malnutrition is often caused by poor child feeding habits rather than an actual lack of food. On the other hand, malnutrition can be caused by seasonal food variations or unexpected drought.

In order to discover the type of approach needed to deal with malnutrition, we need basic information describing who the malnourished people are and the major causes in each African country. This kind of analysis is essential in planning donated food programs in addition to other criteria we have described. This analysis is also essential to determine the effect of the programs.

Unfortunately, this kind of analysis is very rare in African countries where little survey work has been done. An AID effort to secure this kind of information would be welcomed by African planners and other donors who are anxious to investigate the malnutrition situation.

This type of nutrition analysis can be termed a "Nutrition Country Profile", not unlike the health country profiles prepared by WHO. The main elements of this profile include:

--- geographical description of most severely malnourished people in each country and the type of malnutrition.

--- causes:

e.g. drought, seasonal food shortages

family feeding practices

government marketing practices

diseases aggravating malnutrition, etc.

--- current programs expected to have an impact on malnutrition including production and donated food programs.

--- a method to keep track of the distribution of donated food in relationship to nutrition needs of the population.

At the beginning, survey work will be necessary to establish the malnutrition situation.

6.2 Country Nutrition Profile

The nutrition data currently available is insufficient to translate macro-level food gaps into individual or even regional food needs. Problems of nutrition are sufficiently important to require independent in-depth studies.

Nutritional information is crucial for efficient and equitable allocations of scarce food resources. At present, only the crudest statistical food indicators are being used. We anticipate that the Africa Bureau's nutritionists will initiate a series of sample assessments. The findings will be used in conjunction with this discussed food aid methodology to provide a more detailed and accurate analysis of the countries' situations. In the future this will improve AFR's food aid distribution procedure in achieving maximum impact with scarce resources.

VII Conclusions

The methodology presented here is an attempt to improve the current decision making procedure in PL 480 programs in the AID African Bureau. An effort has been made to keep subjective judgments at a minimum in order that a statistically stable procedure could be employed.

The present study will be updated every year in the light of new data, new insights and changing situations. AFR/DR/ARD welcomes comments and suggestions from other offices as an integral part of this revision process. Two areas which will receive particular attention in future editions are the Nutritional Profiles and Individual Country Assessments.

This study is intended as a constructive reference point in making scarce food aid more effective in Sub-Saharan Africa. It will serve this purpose best if it remains a flexible tool of the Africa Bureau receptive to changes and improvements.

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LIST OF APPENDICES

- I. Country Working Tables
- II. Hypothesized Relationship Between the Effectiveness Variables
- III. The Financial Performance Variable
- IV. The Agricultural Policy Performance
- V. The Commitment Variable
- VI. The Food Aid Priority Value
- VII. The Straight-Line (Linear) Adjustment of Per Capita Gross National
Product
- VIII. Sensitivity Analysis of the Food Aid Priority Values by Policy
Weights and Data

APPENDIX I. Country Working Tables

The following countries are arranged alphabetically

ANGOLA	LIBERIA
BENIN	MADAGASCAR
BOTSWANA	MALAWI
BURUNDI	MALI
CAMEROON	MAURITANIA
CAPE VERDE	MAURITIUS
CENTRAL AFR. REP.	MOZAMBIQUE
CHAD	NIGER
COMOROS	NIGERIA
CONGO	RWANDA
DJIBOUTI	SAO TOME
ETHIOPIA	SEYCHELLES
GABON	SENEGAL
GAMBIA	SIERRA LEONE
GHANA	SOMALIA
GUINEA	SUDAN
GUINEA-BISSAU	SWAZILAND
IVORY COAST	TANZANIA
KENYA	TOGO
LOSOTHO	UGANDA
	UPPER VOLTA
	ZAIRE
	ZAMBIA

COUNTRY: Angola

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	
1970	5632		(1)	NA												
1971	5710															
1972	5798															
1973	5891															
1974	5895		390		(2) 36.2 (71-75)											
1975	6051		340													
1976	6178		310													
1977	6321		330													
1978	6468															
1979																
1980																

1. All estimates are tentative
2. See notes

80

CCOUNTRY: Angola

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)						P.L. 480 HISTORY											
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FMO Minimum Caloric Intake: 2300 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent - Distrib. - Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Yams	TITLES										
															I	III	II	Components							
																		PVO	Multi-Lat.	Gov.-Gov.					
---	---	---	MT (\$000)	---	---	---																			
1970						166.7	153.4																		
1971						107.7	98.2	582 (69-71)	540	92		58	1600	147	0		0	0	0	0	0	0	0	0	0
1972						101.8	92.0					50	1134	150	0		0	0	0	0	0	0	0	0	0
1973						111.5	99.3					29	928	130	0		0	0	0	0	0	0	0	0	0
1974						109.6	95.3	(148)	(272)			17 (27)	1205	145	0		0	0	0	0	0	0	0	0	0
1975	1975 (71-75)	375				87.4	81.0	555 (182)	(55.0)			20 (110)	1100	130	0		0	0	0	0	0	0	0	0	0
1976						81.5	69.0	568 (143)	600	93		30 (60)	900	115	0		0	0	0	0	0	0	0	0	0
1977						74.5	68.0	573	600	93		25	900	110	0		1749	0	1749	0	1749	0	0	0	0
1978	1550 (76-78)	700	69.0	634	1065	10.0	64.5	50.7	600	93					0		1997	0	(2)	1997	0	(2)	1997	(521)	0
1979															0		0	0	0	0	0	0	0	0	0
1980															0		0	0	0	0	0	0	0	0	0

AFR/DR/ARD

18

COUNTRY: Benin

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	2710	N/A		5.1	N/A									N/A	N/A	
1971	2785			3.7							42 ⁽¹⁾	77	-35			
1972	2863			0.6		28.4	1.6				36	93	-57			
1973	2944			5.0		33.1	16.3			-11	44	112	-68			
1974	3029			-3.0		37.4	12.2	5.0	138	2	43	148	-105			
1975	3112		160	-2.0		15.0	4.2	5.0	153	-22	30	188	-158			
1976	3197		180	-3.0		19.2	4.7	2.0	205		22	210	-188			
1977	3286		200	8.0		20.6	4.3		(9.4) ⁽²⁾		33	256	-223			36.6
1978	3379			4.0		15.5 (32)	2.4		(8.7)							41.5 ⁽³⁾
1979									(7.7)							
1980									(7.5)							

1. Numbers should be considered with more than the usual caution.
2. Estimated debt service payments
3. Excl. OAC

AFR/FR/ARD 5.15.79

22

COUNTRY: Benin

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2300 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Yams	TITLES					
								+ + + +	+ + + +	+ + +	Production + + +	+ + + +	+ + + +	I	III	Components				
																II	PVO	Multi-Lat.	Gov.-Gov.	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
1970									229									0	0	0
1971						100	97	266 (69.7)	175	16 (69-71)	91		1215	615	0	0	0	0	0	0
1972						100	95		207				1240	630	0		0	0	0	0
1973						101	93		238				1265	645	0		0	0	0	0
1974						98	88		229			(2.7)	1300	660	0		0	0	0	0
1975	2070 (71-75)	230				96	84	299 (10.7)	217 (.9)			(2.5)	1330	675	0		1478	306	1173	0
1976						106	90	310 (29.9)	221	15	84	(3)	1360	690	0		956	462	494	0
1977						110	91	336 (74)	200 (16)	12	98	(2.0)	1400	710	0		1346	551	1395	0
1978	2150 (76-78)	150	94 (76-78)	55 (76-78)	220 (76-78)	36 (76-78)				13	100				0		3330 (769)	1173	2157	0
1979															0		2756	1431	1521	0
1980																	390	390	0	0

AFR/DR/ARD

43

COUNTRY: Botswana

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS	
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports		(1975 = 100)
1970	598			24.1	N/A	N/A	N/A	(1) 2.7		N/A							
1971	610			21.7				1.9									
1972	624			20.9				2.6									
1973	637			11.0				2.6									
1974	651			11.0				2.7	179								
1975	665		340	11.0				3.1	184		121	181	-60				
1976	693		390	10.0				2.5	213		180	200	-20				
1977	710	2.5 (6771)	440	10.0			18.0 ⁽²⁾		(4.7)								56.1
1978	729			5.0					(6.2)								17.0 ⁽⁴⁾
1979									(7.2)								
1980									(7.9) ^B								

AFR/DIR/ARD 5.15.79

1. Numbers should be considered with more than the usual caution
2. Est., notes.
3. Est. debt service payments
4. Excl. DAC

f.s

COUNTRY: Botswana

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY									
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2320 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent - Distrib. - Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum	Rice Paddy + + +	Cassava + + + +	Pulses + + + +	TITLES									
															I	III	II	PVO	Multi-Lat.	Gov.-Gov.	Components			
																					MT	(\$000)		
1970						92	92					(9)	(9)											
1971						111	109	(52	11	5	36			12	0		2367	0	2367	0				
1972						102	97	(←-----							0		2923	0	2923	0				
1973						112	105								0		749	0	749	0				
1974						121	110		(12)	(10) ¹					0		5736	0	5736	0				
1975	2025 (71-75)	295				118	105	61	25 (10)	5 (40) ¹	30		15	0		5042	0	5049	0					
1976						133	116	123 (35)	62 (10.4)	10 (25) ¹	56		17	0		4097	0	4097	0					
1977						130	110	83 (37)	42 (10.8)	5 (26)	35		18	0		4899	0	4899	0					
1978	1705 (76-78)	615	73	51	91	5.4								0		7557	0	7557 (2806)	0					
1979														0		5149	0	5149 (1763)	0					
1980																0	0	(809)	0					

¹Includes Millet and Sorghum.

AFR/DR/ARD

85

COUNTRY: Burundi

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	3350			12.3				2.3		N/A						N/A
1971	3431			1.1				2.8								
1972	3514			1.5		18.5		6.6						90		
1973	3600			1.0		21.7		2.7						105		
1974	3681			4.1		14.5		2.7	48					112		
1975	3763		110	2.0		30.6	26.4	5.7	67		32	61	-29	100		
1976	3874		120	7.8		49.1	45.5	4.6	75		60	56	+4	258		
1977	3966	1.5 (677)	130	5.8		94.8	66.8		(3.4) ⁽¹⁾		90	74	+16	521		
1978	4050			4.5		81.7	56.1		(2.1)					271		
1979									(2.3)							
1980									(2.4)							

AFR/DR/ARD 5.15.79

26

COUNTRY: Cameroon

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	6783			8.0												
1971	6926			4.0						207	250	-43				
1972	7072			2.4	43.6					221	303	-82	68			
1973	7221			3.9	9	51.2			-17	369	335	34	83			
1974	7373			3.5	15	78.5		4.4	579	-17	478	437	41	109		
1975	7528		290	3.0	12	28.8	2.5	5.4	705	-153	474	599	-125	100		
1976	7688		310	3.0	9	43.8	3.8	6.0	899	-108	511	609	-98	131		
1977	7851	1.8 (67-77)	340	4.0	13	43.0	2.9		(64) ⁽¹⁾		704	783	-79	241		188.1
1978	8018			5.0			3.4		(75)							102.1 ⁽²⁾
1979									(80)							
1980									(81)							

1. Estimated debt service payments

2. Excl. DAC

AIR/DI/ARD 5.15.79

22

COUNTRY: Cameroon

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY							
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2320 (Calories)	Intake as % of Recommended Minimum (Z)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Served (000MT)	1961-1978 Inter-annual Variations (Z)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + + +	Sorghum + + + +	Rice Paddy + + + +	Cassava + + + +	Yams & Sweet Potato + + + +	TITLES							
															I	III	Components					
																	II	PVO	Multi-Lat.	Gov.-Gov.		
1970						100	100		263	312		14	890	265								
1971						103	101	694 (69-71)	355	331		14	910	270								
1972						104	100		319	339		11	930	275	0		440	440	0	0		
1973						104	98		300	321		8	950	280	0		221	221	0	0		
1974						113	105	(81)	377 (.9)	350 (.16)		24 (17)	970	285	0		2035	343	1568	123		
1975	2385 (71-76)	(65) ¹				109	99	752 (69)	350 (1)	386 (1.7)		20 (1.7)	990	290	0		1792	369	592	830		
1976						110	97	764 (74)	355 (1)	390 (.08)		12 (7)	1010	295	0		1628	661	2345	0		
1977						113	99	746 (106)	350	395		12 (23)	1030	300	0		746	733	13	0		
1978	2335 (76-78)	(15)	101	(10) (76-78)	321 (76-78)	2.7 (76-78)									0		4130	1178 (402)	2952 (876)	0		
1979															0		(833)	(339)	(436)	0		
1980															0		(447)	(447)	0	0		

AFR/DR/ARD

¹Surplus

19

COUNTRY: Cape Verde Islands

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	268			N/A		N/A		N/A	N/A	N/A				N/A	N/A	
1971	274															
1972	279															
1973	285															
1974	291															
1975	297		140	4.0 (70-75)	40.0 (74-75)		28.0 ⁽¹⁾				13	51	-18			
1976	303		140								10	40	-30			
1977	309	2.0 (67-77)	140													12.4
1978	315															1.1 ⁽²⁾
1979																
1980																

1. USDA
2. Excl. DAC

23

COUNTRY: Cape Verde Islands

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY								
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2310 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.-Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + + +	Sorghum + + + +	Rice Paddy + + + +	Cassava + + + +	Roots & Tubers + + + +	TITLES								
															I	III	Components						
																	II	PVO	Multi-Lat.	Gov.-Gov.			
---	---	--- MT ---	---	---	---																		
1970						N/A																	
1971								2 (69-71)	2					14	0			0	0	0			
1972															0			0	0	0			
1973															0			0	0	0			
1974								(45)	(37.5)			3.5			0			0	0	0			
1975	2080 (71-75)	230						5 (40)	5 (33)			1.6		16	0		362	0	362	0			
1976								4 (28)	17 (22)			2.6		24	0		12703	0	1298	11475			
1977								2 (38)	2 (32)			2.5		21			4764	0	4764	0			
1978	1770 (76-78)	542	77.0 (76-78)	20 (76-78)	47 (76-78)	17.2 (76-78)											18184 (2150)	0	1293 (313)	15016 (4837)			
1979															0		(3564)	0	91 (463)	1439			
1980															0		(6)	0	(6)	0			

AFR/DR/ARD

COUNTRY: Central African Republic

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS	
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	(\$ mil)	
1970	1984							3.2							N/A	N/A	
1971	2022							2.2			32	32	0				
1972	2062					1.7	2.7	1.6			39	35	4				
1973	2099				5	1.8	1.9	4.4		-3	37	52	-15				
1974	2139				13	1.7	1.8	8.1	86	-15	42	46	2				
1975	2179		220	5.0	15	3.2	3.0	10.3	111	-37	45	65	-20				
1976	2223		240	3.0	5	18.6	18.5	7.2	102	5	56	53	3				
1977	2268	1.1 (67-77)	250	3.0	6	20.5	20.2		(10) ⁽¹⁾		85	66	19				
1978	2314			2.0		23.7			(12)								
1979									(13.5)								
1980									(13.5)								

1. Est. debt service payments

AFR/DR/ARD 5.15.79

92

COUNTRY: Chad

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPGR COVERAGE (weekn)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	3640			-4.1				3.9						N/A	N/A	
1971	3713			1.0				8.8			28	62	-34			
1972	3791			-11.5				10.1			36	61	-25			
1973	3869			-6.0	5			1.5		-7	38	82	-44			
1974	3449			10.0	12			15.3		-4	37	87	-50			
1975	4030		120	-	15			3.1		-60	45	126	-81			
1976	4115		120	-22.0	3.4			23.3		-5	56	113	-57			
1977	4200	2.1 (67-77)	130	-0.7	8.0			19.0		(12.7) ⁽¹⁾	107	142	-35			74
1978	4285			-0.9						(13.7)						40 ⁽²⁾
1979										(13.3)						
1980										(13.4)						

1. Estimated debt service payments
2. Excluding DAC

AFR/DR/ARD 5.15.79

94

COUNTRY: Chad

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2380 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum	Rice Paddy + + +	Cassava + + + +	Sweet Potatoes + + + +	TITLES					
															I	III	Components			
																	II	PVO	Multi-Lat.	Gov.-Gov.
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
1970						97	97	690 (69-71)	9	631		42	55	52						
1971						101	99								0		137	0	137	0
1972						85	82								0		101	0	101	0
1973						82	78								0		3081	0	3081	0
1974						94	88	(496)	(11)	(26)		(.7)			0		36678	0	4928	0
1975	1820 (71-75)	500				98	90	564 (9.4)	10	523		30 (.5)	54	46	0		821	0	821	0
1976						96	87	569 (19.4)	10	507 (10)		50 (.5)	56	46	0		748	628	120	0
1977						99	88	606 (18)	10	507		20	59	46	0		19603	1266	5379	12957
1978	1820 (76-78)	560	76	270	509	5.3									0		20878	2632 (132)	6042 (1284)	11495 (2430)
1979															0		(1005)	(929)	(1100)	
1980																	(1650)	(939)	(711)	0

AFR/DR/ARD

95

COUNTRY: Comoros Islands

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)	
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports		
	(000)	(%)	(\$)	(%)							---	(\$ mil)	---	(1975 = 100)	(1975 = 100)		
1970	266				N/A	N/A	N/A										
1971	272																
1972	278																
1973	284																
1974	291																
1975	297		200	-1.0 (71-75)				5									
1976	303		130				5.7	32									
1977	310	2.5 (67-77)	180					.5									
1978	316							.7									
1979								.7									
1980								.7									

9/6

COUNTRY: Comoros Islands

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY						
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2270 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Shewed (000MT)		1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum	Rice Paddy Production + + +	Cassava + + + +	Roots & Tubers + + + +	TITLES					
																I	III	Components			
																		II	PVO	Multi-Lat.	Gov.-Gov.
1970						N/A											0	0	0	0	
1971								13 (69-71)	4			9	70	81			0	0	0	0	
1972																	0	0	0	0	
1973																	0	0	0	0	
1974								(18.6)				(16.5)					0	0	0	0	
1975	2285 (71-75)	-15						16 (12.7)	4			12 (10.4)	80	93			0	0	0	0	
1976								19 (10)	4			15 (8)	81	94			0	0	0	0	
1977								20 (11)	4			15	83	97			0	0	0	0	
1978			101	-1 (76-78)	15	2.4											3	0	3	0	
1979																	0	0	0	0	
1980																	0	0	0	0	

AFR/DR/ARD

97

COUNTRY: Congo

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	(\$ mil)
1970	1191	N/A						11.3								
1971	1219							10.5			40	82	-42			
1972	1249					10.3	6.0	8.7			78	91	-13			
1973	1280				3	7.9	3.5	6.4		-78	123	126	-3			
1974	1312				6	24.1	9.3	5.5	521	-36	261	124	137			
1975	1345		540	0.0	17	13.8	4.5	7.3	520	-224	171	151	20			
1976	1380		530	1.0	5	12.1	3.8	6.3	669		174	166	8			
1977	1416		500	1.0		13.4	3.4		(53)		193	216	-23			
1978	1453			3.0			1.6		(62)							
1979									(63)							
1980									(63)							

8

COUNTRY: Congo

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY									
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2220 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Roots & Tubers	TITLES									
								++ + + +	++ + + +	++ +	Production + + +	+ + + + +	+ + + + +	+ + + + +	+ + + + +	I	III	Components						
																---	---	II	PVO	Multi-Lat.	Gov.-Gov.			
1970						98	98																	
1971						102	100	8 (69-71)	5			3	551	638				0	3535	0				
1972						97	93								0		1272	0	1272	0				
1973						98	92								0		2603	0	2603	0				
1974						98	89	60							0		2441	0	2448	0				
1975	2235 (71-75)	(15)				105	73	20 (75)	13			7	662	761	0		2087	0	2087	0				
1976						113	98	22 (79)	14			8	761	868	0		2016	0	2016	0				
1977						115	96	23	14			8	769	871	0		2750	0	2750	0				
1978	2100 (76-78)	120 (76-78)	95	19 92 (76-78)	4.4 (76-78)										0		2405	0	2405	0				
1979															0		3627	0	2627 (365)	0				
1980															0			0	(387)	0				

AFR/DR/ARD

69

COUNTRY Djibouti

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
					(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)		(\$ mil)		(1975 = 100)		(\$ mil)
1970	156								N/A							
1971	168															
1972	180															
1973	194															
1974	210															
1975	226		1940	8.6 (70-75)												
1976	245		417 (2)													
1977	265	7.8 (1) (67-77)														
1978	285															
1979																
1980																

1. Includes high immigration
2. SPS, AID 1974

AFR/DR/ARD 5.15.79

100

COUNTRY: Djibouti

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAC Minimum Caloric Intake: Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total Per Capita 1961-1965=100	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	TITLES							
													I	III	Components			Multi-Lat.	Gov.-Gov.	
							+++	+++	+++	Production +++	+++	+++	---	---	II	PVO	MT	---	---	
							---	---	---	-(Net Imports)-	---	---	+++	+++	+++	(\$000)	+++	+++	+++	
1970		N/A			>												0	0	0	
1971																	0	0	0	
1972																	0	0	0	
1973																	0	0	0	
1974																	0	0	0	
1975																	0	0	0	
1976																	0	0	0	
1977								(31)									0	0	0	
1978																	0	0	2810	
1979																	0	0	0	
1980																	0	0	0	

AFR/DR/ARD

101

COUNTRY: Ethiopia

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS		
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							(%)	(\$ mil)	(weeks)	(%)	(\$ mil)		(\$ mil)	Exports
1970	25168			3.7				11.3										
1971	25826			4.5				10.5			126	189	-63					
1972	26506			4.8		92.6	95.4	8.7			167	188	-21					
1973	27204			2.8	8	176.9	42.5	6.4		75	238	213	25					
1974	27921			2.6	9	257.9	50.2	5.5	566	55	267	273	-6					
1975	28657		100	1.0	6	287.9	47.8	7.3	674	-46	240	313	-73	100	100			
1976	29411		100	2.0	28	305.9	45.2	6.3	698	-33	480	352	-72	177	106			
1977	30198	2.6 (67-77)	100	1.0	17	225.9	33.2				333	352	-19	180	114		124.4	
1978	30953			1.0	15	165.9	23.8		(1) (28.3)					174	123		(2) 36.6	
1979									(28.5)									
1980									(26.7)									

1. Debt Service payments estimates
2. Excl. DAC

AFR/DR/ARD 5.15.79

102

COUNTRY: Ethiopia

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY								
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2340 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Wheat	TITLES								
								++ + + +	++ + + +	++ +	Production + + +	++ + + +	++ + + +	++ + + +	I	III	Components				Multi-Lat.	Gov.-Gov.	
																	---	---	II	PVO			MT
+	+	+	+	+	+	+	---	---	---	---	---	---	---	---	---	---	---	---					
1970	2150	190				102	102						840										
1971						96	99	4355 (69-71)	909 (69-71)	117 (69-71)	827 (69-71)		876	0	0	3548	0	115	3429				
1972						94	99						782	0	0	10142	0	400	9741				
1973						92	99						545	0	0	1837	0	490	1336				
1974						91	101	(-4)				(1)	500 (-4)	0	0	59251	0	20872	38378				
1975	2015 (71-75)	325				92	104	(0)				(1)	480 (0)	0	0	12717	0	7891	8726				
1976						91	106	4480 (16)	986	199 (-)	803	(1)	460 (15)	0	0	9880	0	695	9184				
1977						87	103	4016 (153)	827	198 (10)	671		420	0	0	21137	0	20139	998				
1978	1610 (76-78)	730	69.0	2499	4361	7.9		3858	800	190	713			0	0	24480 (3830)	0	16965	6514				
1979														0	0	20778 (13747)	0	(4395)	(9079)				
1980														0	0	(6567)	0	(6869)	0				

AFR/DR/ARD

103

COUNTRY Gabon

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)		
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance		Unit Value	
	(000)	(%)	(\$)	(%)							(\$ mil)	(\$ mil)	(\$ mil)		Exports	Imports
1970	493		NA				5.5				NA					
1971	498						7.2									
1972	503					23.3	9.1	7.2								
1973	508				6	47.9	19.9	14.3								
1974	514				12	103.3	14.9	4.3								
1975	519				28	146.1	17.9	5.8								
1976	525				20.2	116.2	12.5	6.7								
1977	531				14	10.1		(160)	(1)							
1978	536							(203)								
1979								(195)								
1980								(195)								

1. Debt service payments - estimates

AFT/PR/ARD 5.15.79

COUNTRY: Gabon

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY						
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Roots & Tubers	TITLES						
															I	III	Components				
																	II	PVO	Multi-Lat.	Gov.-Gov.	
							+++	+++	+++	Production	+++	+++	+++	---	---	---	MT	---	---		
1970	←-----N/A-----→					100	101														
1971						102	102	2 (69-71)	2			171	221	0		364	0	364	0		
1972						103	104							0		306	0	306	0		
1973						102	105							0		276	0	276	0		
1974						103	106							0		301	0	301	0		
1975						102	106	4	2		2	180	231	0		549	0	549	0		
1976						102	108	4	2		2	180	231	0		245	0	245	0		
1977						103	109	4	2		2	180	231	0		0	0	0	0		
1978														0		0	0	0	0		
1979														0		1098 (229)	0	1098 (229)	0		
1980																(429)	0	(429)			

AFR/DR/ARD

105

COUNTRY: Gambia

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports	
	(000)	(%)	(\$)	(%)								(\$ mil)		(1975 = 100)		
1970	463				NA			0.7		NA				NA	NA	
1971	473							1.0								
1972	484							1.2								
1973	495							1.3								
1974	510							0.8	22							
1975	524		180	4.0				0.6	22		42	54	-12			
1976	538		180	0.0				0.7	49		32	70	-38			
1977	553	20 (67-77)	200	0.0					(.3) ⁽¹⁾		52	85	-33			
1978	566			1.0					(.4)							
1979									(.5)							
1980									(.6)							

1. Est. of debt service payments
2. Excl. DAC

AFR/DK/ARD 5.15.79

1009

COUNTRY **Ghana**

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)	
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports		
1970	8638							4.9							NA	NA	
1971	8871							7.1			344	421	-77				
1972	9111					107.4	9.4	3.2			432	293	139				
1973	9357					189.0	11.2	2.2		127	630	453	177				
1974	9609					93.8	3.0	2.4	897	-172	755	822	-67				
1975	9809		380	0.0		149.9	9.9	3.3	794	-2	807	791	16				
1976	10135		370	-3.0		104.2	6.4	4.6	835	-89	804	845	41				
1977	10410	2.7 (67-77)	380	-1.0		162.3	-		(2) (30)								(1) 42.7
1978	10695			0.0		271.0	-		(33)								2.85
1979									(31)								
1980									(34)								

1. Excl. DAC
2. Estimated debt service payments on debt outstanding.

AFR/DR/ARD 5.15.79

102

COUNTRY: Ghana

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY									
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2300 (Calories)	Intake as % of Recommended Minimum	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava		TITLES									
															I	III	Components							
																	II	PVO	Multi-Lat.	Gov.-Gov.				
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---							
1970	2200	100				101	101					80	940	1459										
1971						102	104	687	417	120	147	67	965	1486				5684	3443	0				
1972						95	100					72	995	1574	0		4636	4309	359	0				
1973						97	105					75	1020	1534	0		4436	4410	24	0				
1974						105	116	(176)	(10)			73 (39)	1030	1575	0		6392	4665	1727	0				
1975	2240 (71-75)	60				87	100	671 (72)	(-13)			70	1080	1625	0		7838	6907	156	0				
1976						83	98	457 (162)	352 (11)	70 (-)	81	64 (43)	110	1675	0		8374	6647	1927	0				
1977						79	96	601 (289)	305 (47)	70 (30)	85	60 (43)	1140	1725	0		24800	12198	2598	10004				
1978	1930 (76-78)	370	84 (76-78)	447 (76-78)	1079 (76-78)	6.7 (76-78)			400	130	150				0		11681 (3153)	7835	3846	0				
1979															68		14862 (4271)	12516 (3671)	2345 (599)	0				
1980															68		(3534)	(3284)	(250)	0				

AFR/DR/ARD

109

COUNTRY: Guinea

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports	
	(000)	(%)	(\$)	(%)								(\$ mil)				
1970	3925				NA	NA	NA	28.7		NA				NA	NA	
1971	4007			2.1				37.2								
1972	4094			2.9				28.6								
1973	4184			6.9				36.0								
1974	4280			9.0				20.1	890							
1975	4379		200	9.1				10.5	915		105	140	25			
1976	4481		210	11.0				20.8	952		200	110	90			
1977	4580		230	5.0				(148) ⁽²⁾								6.4
1978	4696							(133)								16.9 ⁽³⁾
1979								(127)								
1980								(104)								

1. Smuggling problems exist
2. Est. debt service payments on debt outstanding
3. Excluding DAC

AFR/DR/ARD 5.15.79

COUNTRY: Guinea

YEAR	FOOD SUPPLY DATA						FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)						P.L. 480 HISTORY							
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2310 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Sweet Potato	TITLES							
								++ + +	++ + +	++ +	Production	++ + +	++ + + +	++ + + +	I	III	Components				Gov.- Gov.	
																	II	PVO	Multi-Lat.	MT		
1970						100	100		165	72			480	92		0						
1971						101	99	808	170	74		364	490	95		0	743	0	743	0		
1972						94	90		174	76			505	97		0	5371	0	5371	0		
1973						89	83		174	78			520	100		0	1390	0	1390	0		
1974						91	83	(63)	178 (14)	78	(3)	(30)	530	102		0	2693	0	113	110		
1975	2010 (71-75)	300				94	84	685 (67)	182 (8)	80		(36)	540	104		0	9127	0	956	8171		
1976						100	86	770 (41)	188 (0)	80		375 (13)	550	106		0	4236	0	403	3826		
1977						100	84	765 (51)	170 (-)	80 (-)		326 (35)	560	108		0	516	0	516	0		
1978	1920 (71-75)	390	83	208	434	2.8						350			23 (5.5)	0	18486	0	164	18321		
1979															23 (6.0)	0	0	0	0	0		
1980															26 (6.0)	0	0	0	0	0		

AFR/DR/ARD

COUNTRY: Guinea-Bissau

YEAR	POPULATION:		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports	Balance	Exports	Imports	
1970	487				NA	NA	NA	NA	NA	NA				NA	NA	
1971	492															
1972	498															
1973	507															
1974	544															
1975	590		120	7.1 (71-75)							12	38	-26			
1976	600		140								10	30	-20			
1977	610	0.8	160 (67-77)								13	36	-23			24.4
1978	619															(1) 2.8
1979																
1980																

1. Excluding DAC

AFR/DR/ARD 5.15.79

112

COUNTRY: Guinea Bissau

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2310 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total Per Capita 1961-1965=100	Cereals + + + + - - - -	Maize + + + + - - - -	Millet + + + - - - -	Sorghum + + + - - - -	Rice Paddy + + + - - - -	Cassava + + + + - - - -		TITLES						
														I	III	Components				
																II	PVO	Multi-Lat.	Gov.-Gov.	
1970					N/A															
1971									6 (69-71)								0	0	0	
1972																	0	0	0	
1973																	0	0	0	
1974							(32)	(1.1)		(31)							0	0	0	
1975	2315 (71-75)	5					47 (16)	(0.2)		5 (14)							0	0	0	
1976							106 (35)	(6.5)	7	5 (11)				0	0	464	0	464	0	
1977							55 (27)		4	5 (13)				0	0	4420	0	0	4420	
1978	N/A		100	0	25	15				6				0	0	13386	0	5156	8229	
1979														0	0	2138 (477)	0	2138 (472)	0	
1980														0	0	(455)	0	(455)	0	

AFR/DR/ARD

COUNTRY: Ivory Coast

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	
1970	3625							6.7								
1971	3825			4.7				7.7			457	400	57			
1972	6030			3.7		87.2		8.2			553	454	99	66.9	62.2	
1973	6247			4.5	12	88.4		7.2		-219	858	-110	148	86.2	65.8	
1974	6471			3.6	18	65.7		8.0	1196	-61	1214	964	295	110.7	90.7	
1975	6703		570	8.0	12	102.8	4.8	9.1	1527	-384	1181	1127	54	110.0	100.0	
1976	6944		650	12.5	12	76.5	3.1	9.1	2221	-206	1631	1296	335	139.1	106.6	
1977	7190	3.6 (67-77)	710	7.8	26	185.7	5.5		(243) ⁽¹⁾		2157	1756	401	226.9	118.6	
1978	7379			2.9		293.5	5.9		(308)							
1979									(328)							
1980									(341)							

1. Estimated debt service payments

AIR/DR/ARD 5.15.79

114

COUNTRY: Ivory Coast

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY								
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2310 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava			TITLES							
																I	III	Components				Gov.- Gov.	
																		II	PVO	Multi-Lat.	MT		
---	---	---	---	---	---	---	+++	+++	+++	---	---	---	---	---	---								
1970						102	101	461 (66-70)					540	1551									
1971						104	106			31 ←-----	14 (69-71)	355 -----→	567	1555	0	0		0	3147	0			
1972						103	108						585	1520	0	0	6206	0	6206	0			
1973						107	115						624	1624	0	0	5631	0	5631	0			
1974						106	115						625	1680	0	0	1388	0	1388	0			
1975	2630 (71-75)	(320) ¹				114	129	563					1146	2206	0	0	3583	0	3583	0			
1976						116	135	617 (131)	1015	41	32	426 (30)	1200	2030	0	0	483	0	483	0			
1977						118	141	663 (317)	1150	40	35	440 (144)	1100	1900	0	0	132	0	132	0			
1978	2680 (76-75)	(370)	116 ←-----	(397) (76-78)	(138) -----→	2.9					35	430			0	0	448	0	448	0			
1979															0	0	443 (167)	0	443 (167)	0			
1980															0	0	(31)	0	(31)	0			

¹Surplus

AFR/DR/ARD

115

COUNTRY: Kenya

YEAR	POPULATION:		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	11430							5.5								
1971	11807			7.0				5.4			312	562	-250			
1972	12197			6.8	202.0	19.6	6.2				359	535	-176	57	44	
1973	12600			5.5	233.0	19.4	5.6		-126		477	619	-142	66	53	
1974	13016			4.1	193.3	9.8	4.3	776	-308		603	1025	-422	87	79	
1975	13446		230	0.7	173.4	9.5	4.3	1090	-215		606	944	-338	100	100	
1976	13890		250	5.0	275.5	14.8	5.0	1249	-84		794	969	-225	136	116	
1977	14350	3.3 (67-70)	270	4.5	523.3	21.1	5.0 ⁽¹⁾	(65) ⁽²⁾			1137	1289	-152	193	125	256
1978	14846	(1) 3.5		4.5	355.7	13.9	17.0 ⁽¹⁾	(79)								(3) 150
1979								(87)								
1980								(98)								

1. World Bank est. March 1979
2. Debt service payments - est.
- 3/ Excluding DAC

AIR/DR/ARD 5.15.79

COUNTRY: Kenya

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)						P.L. 480 HISTORY										
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2320 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Showed (Q. %)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum	Rice Paddy Production + + +	Cassava + + + +	Vegetables + + + +	TITLES									
															I		III		Components		II	PVO	Multi-Lat.	Gov.-Gov.
															- - -	- - -	- - -	- - -	- - -	- - -				
1970						102	107				29	N/A	180											
1971						97	100	2034	1423	127			250	0	0	4159	4159	(0					
1972						98	105				30		365	0	0	2889	2144	745	0					
1973						96	106				36		384	0	0	1812	1812	0	0					
1974						93	106				33		404	0	0	1228	1228	0	0					
1975	2190 (71-75)	160				92	108	(-53) (71-76)			32		425	0	0	2085	2085	0	0					
1976						95	116	2286 (-107)	1650 (-113)	135			420	0	0	3724	3724	0	0					
1977						101	127	2355 (52)	1700 (-8)	140			430	0	0	2975	2975	0	0					
1978	2220 (76-78)	100	96.0 ←-----	165 874 (76-78)	2.8 -----→			219	1600	140				0	0	2517	2517	0	0					
1979														0	0	7540	7540	0	0					
1980																	(2412)	0	0					

AFR/DR/ARD

117

COUNTRY: Lesotho

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	(\$ mil)
1970	1066			NA	NA	NA	NA	(1) 9.6		NA				NA	NA	
1971	1090							7.1								
1972	1115							5.1								
1973	1141							3.2								
1974	1166							2.1	18							
1975	1192		190	7.3 (70-75)				3.2	23		13	126	-113			
1976	1220		210					3.5	29		18	140	-122			
1977	1248	2.1 (67-77)	230						(.45)							26
1978	1276								(.45)							(2) 23.2
1979									(.46)							
1980									(.47)							

1. Numbers should be treated with more than the usual caution.
2. Excl. DAC

AFR/DR/ARD 5.15.79

118

COUNTRY: Liberia

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports	Balance	Exports	Imports	
1970	1342							7.2		NA						
1971	1384							6.6								
1972	1428							6.0			270	179	91	52.4		
1973	1473				19			5.2			324	193	131	58.1		
1974	1519				19	13.6		4.7	211		460	288	112	76.4		
1975	1567		360	-1.1	14	13.9	2.2	5.1	276		394	331	63	100.0		
1976	1616		410	3.1	6	17.2	2.2	4.3	348		457	399	58	106.8		
1977	1666	3.1 (67-77)	430	3.0	6	27.3	3.0		(1) (25)		448	464	-16	118.3		40.2
1978	1717				10	18.0	2.0		(25)							(2) 44.4
1979									(31)							
1980									(32)							

1. Estimated debt service payments.

2. Excluding DAC

AFR/DR/ARD 5.15.79

COUNTRY: Madagascar

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	6800							3.5								
1971	6967							4.3			147	214	-67			
1972	7137					52.2	13.4	3.8			166	205	-39			
1973	7312				6	67.9	18.4	5.3		-11	203	203	0			
1974	7491				22	49.4	8.5	3.0	240	-24	244	281	-37			
1975	7675		190	1.0	8	35.6	5.1	4.0	293		294	366	-72			
1976	7863		200	.5	5	42.2	7.7	5.0	326		266	285	-19			
1977	8055	2.1 (67-77)	210	NA	3	68.9			(16) ⁽¹⁾							73.2
1978	8252			NA		59.2			(15)							(2) 34.1
1979									(13)							
1980									(16)							

1. Est. debt service payments .
2. Excl. DAC

AFR/DR/AND 5.15.79

122

COUNTRY: Madagascar

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY																														
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2240 Caloric Deficit (Calories)	Intake as % of Recommended Minimum	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)		1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum	Rice Paddy Production + + +	Cassava + + + +	Sweet Potatoes + + + +	TITLES																													
																I	III	Components				Multi-Lat.	Gov. Gov.																						
																		II	PVO	MT	(\$000)																								
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+																										
1970	2350						126.7		105				1218	350																															
1971							128.9	1990 (69-71)	113			1865 (69-70)	1213	328	0	0	0																												
1972	2376						130.9		108				1233	345	0	0	0																												
1973	2319						123.1		107				1175	300	0	0	0																												
1974	2386						133.1	(101)	119			(86)	1378	309	0	0	0																												
1975	2380 (71-75)						134.8	(113)	122 (.5)			(63)	1400	279	0	0	0																												
1976							139.6	2179 (113)	131			2043 (71)	1400	280	0	0	0																												
1977							140.8	2354 (149)	121			2250 (96)	1425	300				1164	1139	30	0																								
1978	2425 (76-78)		107	148	252	2.3	129.6	1962										2801	1164	0	0																								
1979															5	0	7103 (2407)	5977 (2040)	1126 (367)	0																									
1980															0	0	(2112)	(1744)	(347)	0																									

AFR/DR/ARD

123

COUNTRY: Malawi

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	4441															
1971	4552			10.5							71	108	-37			
1972	4666			7.7		36.2					79	128	-49	60.2	52.3	
1973	4791			7.8	5	66.4				-28	98	141	-43	67.2	60.9	
1974	4916			5.0	15	81.8		8.0	322	-35	121	188	-67	85.3	82.3	
1975	5044		130	5.8	15	61.5	16.5	7.0	332	-78	109	197	-88	100.0	100.0	
1976	5175		130	7.0	4.3	26.2	7.9	6.0	343		137	171	-34	111.7	114.4	
1977	5309	2.5	140	5.7	4.5	88.0	24.9		(1) (13.8)		160	184	-24	149.6	128.2	123.9
1978	5449			5.7	8	78.1	21.3		(15.8)					137.0 (29)		(2) 42.7
1979									(15.1)							
1980									(15.2)							

1. Estimated debt payments or debt outstanding
2. Excluding DAC

AFR/DI/AND 5.15.79

124

COUNTRY: Malawi

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY							
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2320 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent - distrib. - Uniform Shewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum Production + + +	Rice Paddy + + +	Cassava + + + +	Peanuts + + + +	TITLES							
															I		III		Components		Multi-Lat.	Gov.- Gov.
																	II	PVO	MT			
1970	2150	170				92	114.4				9	144	155									
1971						109	132.0	(1168)	1066		78	145	170	0	0	167	167	0	0			
1972	2411	+91				114	147.5				30	147	170	0	0	335	202	133	0			
1973	2435	+115				110	140.0				18	150	165	0	0	515	185	330	0			
1974	2397	+77				108	144.8	(17)	(.5)	(.3)	39 (11)	100	165	0	0	210	5	205	0			
1975	2375 (71-75)	+55				103	131.4	(41)	(20.5)	(1.2)	32 (.5)	80	165	0	0	333	0	333	0			
1976						109	140.8	1134 (43)	1100 (10.6)		105 (1.2)	32 (-7)	80	169	0	0	333	0	333	0		
1977						112	129.6	1257 (10)	1250		105	32 (-10)	80	173	0	0	801	0	801	0		
1978	2165 (76-78)	155	93	92	411	6.7	104	143.7	1400	1250	105			0	0	609	0	609	0			
1979														0	0	2422 (617)	0	2422 (617)	0			
1980																(930)	0	(930)	0			

AFR/DR/ARD

1980

COUNTRY: Mali

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	5141							1.8								
1971	5207					2		1.6			3.6	60	-24			
1972	5257					4	2.6	1.4			42	79	-37			
1973	5396					4	1.8	6.0		-28	53	127	-74			
1974	5527					6	1.6	3.0	450	-36	64	180	-116			
1975	5803		100	14.1		4	1.2	3.0 (25.0)	481	-53	51	168	-117			160
1976	5960		100	9.0		7	2.5	3.0	560	-33	82	144	-62			216
1977	6110	2.2 (67-77)	110	7.4		8	1.9		(27)		130	165	-35			207
1978	6266			.7		10	3.1		(23)							
1979									(27)							
1980									(26)							

1. Actual payments to IDA alone would amount to a 25% debt service ratio in 1975.
2. Est. debt service payments on debt outstanding.

AFR/DR/ARD 5.15.79

12/6

COUNTRY: Mali

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDECES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY									
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2350 Caloric Deficit (Calories)	Intake as % of Recommended Minimum	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + + - - - -	Maize + + + + - - - -	Millet + + + - - - -	Sorghum + + + - - - -	Rice Paddy + + + - - - -	Cassava + + + + - - - -	Roots & Tubers + + + + - - - -	TITLES									
															I	III	Components				Multi-Lat.	Gov.-Gov.		
																	II	PVO	MT	(\$000)				
1970	2170	180				101	102.1		80			138	155											
1971	2303	47				96	97.2		80	787		150	150	0	0	21144	0	2377	24766					
1972	1753	597				79	82.0		60			140	140	0	0	15734	0	2601	13132					
1973	1750	600				66	81.6		80			140	140	0	0	32967	0	9204	23762					
1974	1774	576				70	81.3	(227)	60 (46)	(101)		150	140	0	0	95885	0	12605	83280					
1975	1810 (71-75)	540				84	71.6	1012 (117)	60 (28)	(25)		155	150	84	0	0	44450	0	2123	42346				
1976						88	112.0	1150 (59)	60	804 (10)		155 (-3)	155	85	0	0	148	0	148	0				
1977						87	110.5	1146 (50)	60	850 (10)		160 (-10)	160	86	0	0	154	0	154	0				
1978	1780 (76-78)	570	76 (76-80)	381 (76-80)	711 (76-80)	5.0 (76-80)	113.5			900					0	0	23376	0	13394 (1871)	10002 (1109)				
1979															0	0	2765 (497)	0	2764 (492)	0				
1980															0	0	(299)	0	(299)	0				

AFR/DR/ARD

161

COUNTRY: Mauritania

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	1275							3.2								
1971	1305							3.3								
1972	1335					13.5	10.0	8.6								
1973	1366				7	42.2	18.2	5.5	14							
1974	1398				13	103.8	43.7	6.0	373	47						
1975	1431		240	-71	11	47.7	16.2	70.0	413	-43	167	156	+13			
1976	1464		250	8.9	14.1	82.0	23.0	37.0	619	-56	184	185	-1			
1977	1495	2.0 (67-77)	270	-7	10	50.3	12.7		(1) (43)		155	205	-50			35
1978	1529			.0		79.9	19.5		(56)							(2) 7.8
1979									(55)							
1980									(53)							

1. Est. debt service payments
2. Excl. DAC

AFT/DIR/ARD 5.15.79

128

COUNTRY: Mauritania

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY											
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2310 (Calories)	Intake as % of Recommended Minimum (%)	Dietary Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum	Rice Paddy + + +	Cassava + + + +	Roots & Tubers + + + +	TITLES											
															I	III	II	PVO	Multi-Lat.	Gov.-Gov.						
1970						101	101																			
1971						96	97	94	4	89		1		6	0	0	7878	688	7210	0						
1972						88	92								0	0	16118	118	16000	0						
1973						72	76								0	0	14579	0	14579	0						
1974						69	74	(126)	(5)	(70)		(32)			0	0	51129	0	1499	0						
1975	1840 (71-75)	470				66	73	(120)	(5)	(71.7)		(30)			0	0	6720	0	83	6637						
1976						72	82	38 (137)	3 (5)	60 (73)		4 (35)		5	0	0	6968	0	3961	3007						
1977						72	83	69 (140)	3 (5)	45 (73)		5 (34)		5	0	0	7392	759	5591	1043						
1978	1860 (71-75)	450	81 (76-78)	69 (76-78)	138	4.0	83	54	3	50		5		5	0	0	20657	190	10467	10000						
1979															0	0	5805 (1274)	4551 (1134)	504 (140)	0						
1980																		(810)	(224)	(1529)						

AFR/DR/ARD

129

COUNTRY: Mauritius

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	829							3.7	NA	NA	NA		NA			
1971	843							5.0								
1972	852					70.1	32.6	2.1								
1973	860				14	66.8	21.8	1.7								
1974	872				29	131.1	22.0	1.0								
1975	883		580	5.8 (71-75)	15	166.0	27.5	1.0								
1976	895		680		13.4	89.5	17.9	1.0								
1977	909	1.0 (67-77)			9	66.7	7.5		(4) (1)							31.3
1978	926				9	47.3			(5)							(2) 34.3
1979									(6)							
1980									(7)							

1. Estimated debt service payments
2. Excl. DAC

AFR/DR/ARD 5.15.79

130

COUNTRY: Mauritius

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY									
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended P.M.D Minimum Caloric Intake: Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Shewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava		TITLES									
								+++	+++	+++	Production +++	+++	+++	---	---	II	PVO	Multi-	Gov.-					
								---	---	---	(Net Imports) ---	---	---	+++	+++	+++	MT	Lat.	Gov.					
														I	III	Components								
1970	←-----		-N/A-				95	95																
1971							99	98	1 (69-71)				1		8	0	0	6013	0	4288	1725			
1972							114	111								0	0	7361	0	5037	2264			
1973							114	108								0	0	8485	0	4561	3924			
1974							112	105	(160)	(23)	(.04)		(27)			0	0	8368	0	3334	3034			
1975							86	79	2 (149)	(2.3)	(.04)		(20)	10		0	0	4608	0	571	2097			
1976							113	111	2 (177)	(2.4)	(.05)		1 (91)	11		0	0	2174	0	520	1653			
1977							129	115	2 (138)		1		1 (65)	12		0	0	269	0	269	0			
1978																0	0	450	0	450	0			
1979																0	0	2021	0	2021 (486)	0			
1980																0	0		0	(768)	0			

AFR/DR/ARD

131

COUNTRY: Mozambique

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	
1970	8151							NA								
1971	8333															
1972	8519															
1973	8708															
1974	8903															
1974	9101		150								202	417	-215			
1975	9304	2.0	150	-25.0							190	350	-170			
1976	9510	2.0	150	- 5.0							NA	NA	NA			
1977	9751			- 5.0												
1978																
1979																
1980																

COUNTRY: Mozambique

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Served (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + + +	Sorghum + + + +	Rice Paddy Production + + + +	Cassava + + + +	Roots & Tubers + + + +	TITLES					
															I	III	Components			
														II	PVO	Multi-Lat.	Gov.-Gov.			
1970						100														
1971						98	101.1	665 (69-71)	364 (71)											
1972						100	105.0													
1973						100	110.0													
1974						96	106.0													
1975	1960 (71-75)	380				83	93.0													
1976						81	100	542 (176)	450 (20)	8	250	41 (35)	1344	2378						
1977						80	100	756 (110)	400 (40)	8	230	45 (40)	1292	2486	0	0	24291	0	1505 22786	
1978	1710 (76-78)	630	73.0	698 1213	4.5		90	645	300	7	200	35	1300	2534	0	0	450	0	450 0	
1979															(500)		(300)	-	- -	
1980															-	-	-	-	- -	

AFR/DR/ARD

183

COUNTRY: Niger .

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	4024															
1971	4126										38	54	-16			
1972	4243					41.4					54	66	-12			
1973	4304				12	50.8				25	62	86	-24			
1974	4476				3	45.5		3.0	146	-13	53	97	-44			
1975	4600		120	1.1	9	50.3	26.8	5.0	158	-8	87	97	-10			160
1976	4724		150	18.7	23.5	82.5	35.4	3.0	178		129	122	7			128
1977	4850	2.7 (67-77)	160	4.0	23	101.4		(5.9) ⁽¹⁾								174.4
1978	4798			7.0	12	90.0		(6.3)								
1979								(6.6)								
1980								(6.4)								

1. Est. debt service payments on debt outstanding.

AFR/DR/ARD 5.15.79

134

COUNTRY: Niger

YEAR	FOOD SUPPLY DATA						FOOD PRODUCTION INDEXES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2350 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.-Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum + + +	Rice Paddy + + +	Cassava + + + +	Roots & Tubers + + + +	TITLES						
															I	III	Components				
																	II	PVO	Multi-Lat.	Gov.-Gov.	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
1970	2180	170				96	116		2			37	200								
1971						93	111	1272	2	899 (69-71)	305	27	200	75	0	0	4841	0	N/A	N/A	
1972						86	94		1			32	200	75	0	0	12918	0	3072	9846	
1973						63	83		3			46	200	75	0	0	34840	0	5796	2904	
1974						75	123	(143)	4 (22)		(70)	30	200	75	0	0	113204	0	15666	9803	
1975	1830 (71-75)	520				66	87	871 (-38)	5 (3)		(-44)	55 (1)	200	75	0	0	32952	0	6109	2684	
1976						89	148	1339 (19)	5 (6)	581	234	39 (4)	200	75	0	0	21422	0	422	210	
1977						75	129	1317 (-3)	2 (6)	1195 (-30)	308	36 (4)	205	75	0	0	452	0	102	0	
1978	2005 (76-78)	345	85.0	194	490	7.0	63	96		1000	250				0	0	16948 (2024)	0	6941 (967)	100 (107)	
1979															0	0	1060 (204)	0	1060	0	
1980															0	0	(2597)	(2379)	(218)	0	

AFR/DR/ARD

135

COUNTRY: Nigeria

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	55074							4.1		NA						
1971	56511							3.0			1316	1515	302			
1972	58020					376	25.5	2.7			2147	1501	646	23		
1973	59607				5	583	25.9	4.0			3466	1865	1601	37		
1974	61275				12	5626	82.3	2.0	1695		9213	2776	6442	97		
1975	63049		360	1.7	34	5609	48.2	3.0	1598		7775	6041	1735	100		
1976	64850		400	12.5	22	5203	32.9	2.0	1420		10,085	8213	1872	111		
1977	66828	2.7 (67-77)	420	6.6	21	4259	20.0		(209)		11,518	11095	423	131		
1978	68383			7.0	22	1917	8.7		(92)							
1979									(92)							
1980									(103)							

AFR/DI/ARD 5.15.79

136

COUNTRY: Rwanda

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	3683			10.7				1.3								
1971	3788			1.2				1.9			22	33	-11			
1972	3896			-2.0	6.4	9.6	2.2				19	35	-16	83		
1973	4008			6.6	9	15.2	23.2	0.3		22	34	35	-1	94		
1974	4123			1.2	31	13.0	16.3	1.0	63.0	1	37	58	-21	111		
1975	4238		110	9.3	36	25.6	14.1	1.0	82.0	-10	42	96	-54	100		
1976	4357		120	7.0	6.9	64.3	32.3	1.0	100.0	17	81	103	-22	176		
1977	4480	2.8	130	7.0	14	82.9	31.9		(1) (9)		92	114	-22	296		86.2
1978	4612			6.5	11	87.6	39.0		(1)							(2) 22.8
1979									(1)							
1980									(1.1)							

1. Est. debt service payments
2. Excl. DAC

AFR/DR/ARD 5.15.79

1/88

COUNTRY: Rwanda

YEAR	FOOD SUPPLY DATA						FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2320 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum Production + + +	Rice Paddy + + +	Cassava + + + +	Sweet Potatoes + + + +	TITLES						
															I	III	Components				
																	II	PVO	Multi-Lat.	Gov.-Gov.	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
1970						102	102		64	158			245	413							
1971						102	105		56	142			372		0	0	2873	2873	0	0	
1972						95	101		52	146			380	415	0	0	1783	1783	0	0	
1973						97	105		55	145			369	425	0	0	1330	1330	0	0	
1974						99	105	(3)	64	128			365		0	0	1333	1333	0	0	
1975	2105	215				108	119	(8)	68				365		0	0	7341	2486	0	4872	
1976						107	126	(8.7)	39	120	155		370		0	0	2718	2718	0	0	
1977						108	126	(8)	58	146	153		385		0	0	5092	2098	494	2500	
1978	1905	415	82	210	470						180				0	0	5761	4873	1347	0	
1979															0	0		4596 (1333)	1456 (168)	0	
1980															0	0	(1814)	(1678)	(136)	0	

AFR/DR/ARD

199

COUNTRY: Sao Tome

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS	
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	Exports	Imports (\$ mil)	Balance	Exports (1975 = 100)	Imports	(\$ mil)	
1970		NA ←															
1971										NA							
1972																	
1973																	
1974																	
1975			460														
1976																	
1977																	
1978																	
1979																	
1980																	

140

COUNTRY: Seychelles

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS	
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports		
	(000)	(%)	(\$)	(%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)		(\$ mil)		(1975 = 100)		(\$ mil)	
1970				NA			NA										
1971																	
1972																	
1973	56																
1974	57																
1975	58		580														
1976	59																
1977	60	20															
1978	61				92.3												
1979																	
1980																	

A/R/D/R/AND 5.15.79

142

COUNTRY: Seychelles

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY						
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum + + +	Rice Paddy + + +	Cassava + + + +			TITLES					
																I	III	Components			
																		II	PVO	Multi-Lat.	Gov.-Gov.
1970	←-----					N/A		-----													
1971																0	0	309	309		
1972																0	0	215	215		
1973																0	0	194	194		
1974																0	0	83	83		
1975																0	0	377	377		
1976																0	0	217	217		
1977																0	0	178	178		
1978																0	0	235 (92)	235 (92)		
1979																0	0	(198)			
1980																		(179)			

AFR/DR/ARD

149

COUNTRY: Senegal

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS	
	Total	Growth Rate	Per Capita	Real Growth Rate	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	Exports	Imports	Balance	Exports	Imports	(\$ mil)	
	(000)	(%)	(\$)	(%)	(%)							(\$ mil)		(1975 = 100)		(\$ mil)	
1970	4327							2.4									
1971	4450					29.0		5.0			125	219	-94				
1972	4575					39.0	6.2	3.7			216	280	-64	52.5	57.9		
1973	4705				7	12.0	1.8	8.0		-101	195	361	-166	62.2	66.0		
1974	4838				14	6.0	0.6	5.0	421.0	-66	391	498	-107	118.2	94.4		
1975	4975		380	1.5	22	31.0	2.9	5.0	519.0	-83	441	555	-114	100.0	100.0	167.4	
1976	5115		410	-2.3	6	25.0	2.1	6.0	598.0		467	619	-152	95.5	118.5	194.8	
1977	5260	2.8 (67-70)	420	4.5	7	28.0	NA	11.5	(2) (55)								
1978	5399			-5.0	6		NA	(1) 17.2	(64)								
1979									(60)								
1980									(57)								

1. Notes

2. Estimated debt service payments on debt outstanding

AFR/DR/ARD 5.15.79

144

COUNTRY: Senegal

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY							
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended P.A.C. Minimum Caloric Intake 2330 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.-Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Roots & Tubers	TITLES							
								+ + + +	+ + + +	+ + +	Production + + +	+ + + +	+ + + +	I	III	Components				Gov.- Gov.		
																II	PVO	Multi-Lat.	Gov.- Gov.			
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
1970								39				91	270									
1971						82	82	39	543			108	270	0	0	14504	0	4546	495			
1972						111	88	30				37	270	0	0	28603	0	2664	2518			
1973						74	70	45				64	270	0	0	16733	2897	2099	1173			
1974						92	86	(326)	42			16	119	0	0	47530	1681	684	3332			
1975	2230 (71-75)	50				122	111	786 (211)	49			186	109	118	0	0	7986	2693	933	435		
1976						140	124	714 (278)	47 (13)	555		112	113	123	0	0	8663	4648	4025	0		
1977						127	110	(485)	32 (21)	432		62 (218)	112	135	0	0	9560	7986	1573	0		
1978	2505 (76-78)	-175	108	106	228	7.0	98	83		575				0	0	65807 (9419)	16429 (4150)	24549 (2794)	24000			
1979														0	0	24303 (5155)	20618 (4625)	3684 (530)	0			
1980														0	0	25400 (5919)	(4560)	(520)	0			

AFR/DR/ARD

1/15

COUNTRY: Sierra-Leone

YEAR	POPULATION:		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports	
	(000)	(%)	(\$)	(%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)		(\$ mil)		(1975 = 100)	(\$ mil)	
1970	2694			3.4				10.0								
1971	2758			-0.9				7.6			101	113	-12			
1972	2826			1.4		46.5	25.3	8.0			115	119	-4			
1973	2897			1.4	4	51.8	16.8	8.2		-29	129	156	-27			
1974	2971			2.0	14	59.6	11.9	8	158	-61	144	220	-76			
1975	3043		190	2.0	20	28.4	8.8	9	186	-63	115	165	-50			
1976	3114		190	-1.0	17	25.2	8.9	21	183		105	146	-41			
1977	3190	2.4 (67-77)	200	1.0	9	33.4	8.3		(22) ⁽²⁾		141	206	-65			
1978	3274			3.3	8	34.0	8.6		(20)							(1) 1.8
1979									(17)							
1980									(14)							

1. Excl DAC

2. Est. debt service payments on debt outstanding.

AFR/DIR/ARD 5.15.79

1/1/8

COUNTRY: Sierra Leone

YEAR	FOOD SUPPLY DATA						FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY								
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2300 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Sweet Potatoes	TITLES									
								++ + + +	++ + + +	++ +	Production + + +	++ + + +	++ + + +	++ + + +	- - - - -	- - - - -	- - - - -	- - - - -	Components					
																			I	III	II	PVO	Multi-Lat.	Gov.-Gov.
1970	2240	60				99	94		11				495	63										
1971						101	103	518	11	9	10	488	585	64			4358	4305	54	0				
1972	2280	20				100	104		11				550	68	0	0	5601	3499	101	0				
1973	2258	42				96	103		12				560	70	0	0	4821	4641	180	0				
1974	2224	76				92	103		12				576	72	0	0	4164	3515	649	0				
1975	2245 (71-75)	55				96	108	556	12				576	74	0	0	6566	5956	609	0				
1976						97	112	613	14	9	11		585	76	0	0	5911	5080	830	0				
1977						93	116	635	13	9	11			75		0	3731	3351	380	0				
1978	2220	80	97	30	205	4.8				9	11				(1.3) mil	0	2306 (864)	1914 (788)	393 (76)	0				
1979																0	6670 (2081)	6367 (1975)	303 (1241)	0				
1980																0	1930 (1903)		(321)					

AFR/DR/ARD

COUNTRY: Somalia

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports	Balance	Exports	Imports	
	(000)	(%)	(\$)	(%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)		(\$ mil)		(1975 = 100)		(\$ mil)
1970	2806															
1971	2872															
1972	2941					31.4	21.8									
1973	3011				7	35.1	16.7			-39				56.9	68.3	
1974	3083				18	42.4	17	4	368	-52				75.2	90.1	
1975	3158		100	-2.0	19	68.5	23.5	3	439	0	88	154	-66	100.0	100.0	
1976	3234		110	.0	14	85.0	41.7	3	596	-69	85	106	-21	123.4	104.5	
1977	3310	2.4	110	-2.3	11	120.5	30.6	(1) 9.6	(3) (10)		(2) 103	(2) 103	(3) ---	119.8	119.1	284
1978	3403		110	NA	11		38.3		(11)							244
1979									(14)							
1980									(18)							

1. Estimate from notes, debt service expected to increase above 9% in 1978.
2. Based on 2 quarts estimates.

3. Estimated debt service payments on debt outstanding.

AFR/DR/ARD 5.15.79

142

COUNTRY: Somalia

YEAR	FOOD SUPPLY DATA						FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAD Minimum Caloric Intake 2310 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent - Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum Production + + +	Rice Paddy + + +	Cassava + + + +			TITLES					
																Components					
																I	III	II	PVO	Multi-Lat.	Gov.-Gov.
1970						100	100										0		0		
1971						99	101	242	115		126		25				1753	0	0	1753	
1972	1191	1119				105	110										0	0			
1973	1935	375				96	104										0		0	0	
1974	1822	488				85	74	(31)	(11)				(17)				2	0	1.8	0	
1975	1880 (71-75)	430				87	99	206 (188)	100				5 (21)	28			17032	0	114.8	16918	
1976						92	108	217 (111)	120	(14.7)	120 (14.7)		6 (12)	29			10000	0	0	10000	
1977						92	110	207 (122)	170 (50)	(14.7)	120		6 (15)	30			1933	0	1933	0	
1978	1730 (76-78)	580	77	258	473	4.0									33 (7000)	0	24527	0	919 (423)	23608 (5911)	
1979															61 (10700)	0	21054	0	4387 (1150)	16191 (3070)	
1980															85 (11700)	0	(2540)	0	(2540)	0	

AFR/DR/ARD

119

COUNTRY: Sudan

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports	
	(000)	(%)	(\$)	(%)								(\$ mil)				
1970	13661							10.3								
1971	14071							13.2			328	331	-3			
1972	14493							13.3			357	320	37			
1973	14920				16	61.3		11.4	25		434	436	-2			
1974	15376				25	124.3		13	1264	-275	350	711	-361			
1975	15836		270	3.9	20	36.4	2.0	18	1535	-430	438	956	-518			
1976	16313		270	7.3	1.7	23.6	1.3	17	2062	-166	554	980	-426			
1977	16802	2.2 (67-77)	300	NA	11	23.2	1.1				661	1059	-398			622
1978	17306					28.4	1.3	28	(2) (296)							(1) 114
1979									(303)							
1980									(299)							

1. Excl. DAC

2. Estimated debt service payments on outstanding debt.

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COUNTRY: Sudan

YFAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2330 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + +	Sorghum Production + + +	Rice Paddy + + +	Cassava + + + +	Wheat + + + +	TITLES					
															I	III	Components			
																	II	PVO	Multi-Lat.	Gov.-Gov.
1970	2130	220				100	100		37			134	115							
1971						102	105		9	424 (69-70)		134	13	0	0	143	0	143	0	
1972	2101	249				99	105		9			140	140	0	0	135	45	89.8	0	
1973	2036	314				94	103		20			140	152	(2200)	0	10997	9563	1434	0	
1974	2074	276				108	172		15			150	236	(3000)	0	6331	2442	3389	0	
1975	2125 (71-75)	225				104	121		15			150	273	0	0	7995	470	7525	0	
1976						89	107		21	430	1762 (20)	150		0	0	1425	713	711	0	
1977						96	119		22	410	1600	150		(4800)	0	10198	231	4966	0	
1978	2180 (76-78)	170	93	389	1390	3.3				420	1600			100	0	6030 (1929)	648 (341)	5381 (1583)	0	
1979														153	0	(4046)	1331 (676)	21051 (3418)	0	
1980															0	(3117)	(131)	(2386)	0	

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151

COUNTRY: Swaziland

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports (\$ mil)	Balance	Exports	Imports	
1970	419			26.1	NA	NA	NA	4.7		NA						
1971	431			9.8				5.1								
1972	443			7.7				9.0								
1973	455			2.9				9.5								
1974	468							2	60							
1975	481		470	12.3				1	67		152	137	-15			
1976	494		540	NA				1	67		140	150	-10			
1977	508	2.8	580	NA			(1) 30				NA	NA	NA			50.3
1978	522			NA					(3) (3.4)							(2) 29.8
1979									(4.1)							
1980									(5.3)							

1. Estimate drawn from IMF. 2. Excl. DAC. 3. Estimated debt service payments.

AFR/DR/ARD 5.15.79

152

COUNTRY: Swaziland

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY									
	Average Caloric Consumption/Day Caloric Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2320 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (Z)	Unmet Food Needs in Wheat Equivalent -distrib.-Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (Z)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Roots & Tubers	TITLES									
								+++	+++	+++	Production +++	+++	+++	+++	---	---	---	---	---	---	---	---		
1970						102	102																	
1971						100	103	86 (69-71)	75		3	7		13	0	0	1576	0	1576	0				
1972						111	117								0	0	1129	0	1129	0				
1973						103	112								0	0	570	0	0	0				
1974						109	121			(15)					0	0	775	0	775	0				
1975	2120 (71-75)	200				96	121	101 (13) 71-75	94	2 (14)	4	(-25)		11	0	0	968	0	968	0				
1976						96	110 (14)	118 (12)	110	3 (15)	5	(-20)		14	0	0	429	0	429	0				
1977						106	125	94 (12)	85	3 (15)	5	(-22)		14	0	0	193	0	193	0				
1978	2170 (76-78)	150	94	8	32	2.5	107	130							0	0	1016	0	1016 (377)	0				
1979															0		498	0	498	0				
1980																	0	(496)	0					

AFR/DR/ARD

153

COUNTRY: Tanzania

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports (\$ mil)	Imports (\$ mil)	Balance	Exports	Imports	
1970	13273			6.8												
1971	13634			3.2							279	381	-102			
1972	13966			6.0	119.6	15.4	10.9				319	406	-87	54	42	
1973	14377			4.0	144.6	14.9	7.4		-108		367	497	-130	60	52	
1974	14732			2.2	50.2	3.5	6.5		-273		401	753	-352	94	88	
1975	15155		170	4.6	65.2	4.4	7	60	-238		370	776	-406	100	100	
1976	15563		180	5.0	112.3	9.1	7	67	-3		490	639	-149			
1977	15981	2.6	200	3.9	281.8	20.3	8	67			504	723	-219			320.7
1978	16435			3.5	116.7	8.2		(42) (2)								143 (1)
1979								(44)								
1980								(46)								

1. Excluding DAC

2. Estimated debt service payments on debt outstanding.

AFR/DR/ARD 5.15.79

COUNTRY: Tanzania

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY						
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake: 2320 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Sweet Potatoes	TITLES						
															I	III	Components				
														II	PVO	Multi-Lat.	Gov.-Gov.				
														---	---	MT	---	---			
														+++	+++	++ (\$000)	+++	+++			
1970	1760	560				105	105														
1971						95	98	1432 ←-----	817 (69-71)	181 -----→	203	172	2074	300			10072	7557	2515	0	
1972	1898	422				97	102						2177	300			5628	4220	1468	0	
1973	1976	344				94	103						2200	300			8310	6109	2202	0	
1974	2003	317				89	103	(430)	(250)	(4)		(71)	2300	296		0	8857	5801	3056	0	
1975	1945 (71-75)	375				90	104	(461)	(183)	(.4)		(64)	2516	300		0	4868	5187	12765	2973	
1976						91	119	1516 (97)	897 (72)	130	260	172 (9)	2640	305		0	45025	10068	7905	2706	
1977						91	113	1625 (146)	965	150	240	194 (52)	3850	310		0	26394	4659	1645	1999	
1978	1870 (76-78)	450	81	857	1688	3.4		1547	950	140	240	150				18	0	3757	3757	0	0
1979																	58920 (4855)	2819 (1814)	1415 (500)	5468	
1980																	(5435)		(876)		

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155

COUNTRY: Togo

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY							
	Average Caloric Consumption/Day (Uniform Distribution) (Calories)	Recommended FAD Minimum Caloric Intake: 2300 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Served (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals	Maize	Millet	Sorghum	Rice Paddy	Cassava	Yams	TITLES							
															I	III	Components					
																	II	PVO	Multi-Lat.	Gov.-Gov.		
---	---	---	---	---	---	---	+++	+++	+++	---	---	---	---	---	---	---	---					
1970	2160	140				102	101			100		18	430	445								
1971						108	111	301 ←-----	80 (69-71)	121 -----→		24	440	445	0	0	5186	1435	3750	0		
1972						78	82		76			15	450	465	0	0	2172	1677	495	0		
1973	2188	112				78	85		91			11	460	475	0	0	4496	3284	1202	0		
1974	2110	184				60	67	(5.9)	116 (.6)			13 (.1)	475	490	0	0	4770	2773	1958	0		
1975	2165 (71-75)	135				62	71	273 (13.8)	120 (.6)			13 (10)	490	505	0	0	5884	5584	4097	0		
1976						61	72	289 (14)	135 (.7)	120		15 (4)	505	520	0	0	5903	3688	2215	0		
1977						63	76	289 (42)	80 (9.5)	107 (2.2)		14 (.37)	520	535	0	0	10293	2809	2135	535		
1978	2195 (76-78)	105	45	28	146	3.0									0	0	8005 (1485)	1516 (433)	6489 (1005)	0		
1979															0	0	9530 (2505)		(471)	0		
1980															0	0	(1704)		(255)	0		

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10.1

COUNTRY Uganda

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total	Growth Rate	Per Capita	Real Growth Rate	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	Exports	Imports	Balance	Exports	Imports	(\$ mil)
	(000)	(%)	(\$)	(%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)		(\$ mil)		(1975 = 100)		(\$ mil)
1970	9806							3.2								
1971	10127							3.6								
1972	10462					14.9	4.8	4.2								
1973	10810				25	16.2	2.0	7.4		43						
1974	11172				6	6.2	.4	5.0	251	-24						
1975	11546		250	-2.0	17	3.7	1.1	4.0	237	-56	230	184	46			
1976	11432		250	-.4	55	1.0	.3	3.0	241	43	362	171	191			
1977	12330		260	4.0		5.4	1.0				765	NA	NA			
1978	12718			1.2		10.5	2.7									
1979																
1980																

159

Upper Volta

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPRV COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports	
	(mill)	(%)	(\$)	(%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)	(\$ mil)			(1975 = 100)	(\$ mil)	
1970	5462							3.9								
1971	5584							4.0			16	57	-41			
1972	5706					47.5	4.1	3.0			20	69	-49	61.3	64.4	
1973	5829				7	62.6	4.4	3.3		3	25	99	-74	67.5	58.9	
1974	5955				9	83.6	2.9	3.0	147	-4	36	145	-109	99.2	86.5	
1975	6085		100	7.3	19	76.5	27.8	6.0	190	-42	42	144	-102	100.0	100.0	
1976	6217		100	5.8	-10	71.5	26.9	4.6	248		51	139	-88	141.0	113.8	
1977	6350	2.2	110	2.2	33	56.5	13.6		(5.7)		58	218	-160	154.6	122.8	68.4
1978	6498			5.8	30	40.3	9.7		(5.9)							(1) 26.8
1979									(6)							
1980									(6.9)							

1. Excl. DAC
2. Estimates of debt service payments on outstanding debt.

COUNTRY: Zaire

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION (%)	TOTAL RESERVE POSITION (\$ mil)	IMPORT COVERAGE (weeks)	DEBT SERVICE RATIO (%)	TOTAL EXTERNAL DEBT (\$ mil)	CURRENT ACCOUNT BALANCE (\$ mil)	TRADE			Unit Value (1975 = 100)		OTHER DONOR ASSISTANCE COMMITMENTS (\$ mil)
	Total (000)	Growth Rate (%)	Per Capita (\$)	Real Growth Rate (%)							Exports	Imports	Balance	Exports	Imports	
1970	21638			10.1			4.4							NA	NA	
1971	22713			5.9			4.9				687	620	67			
1972	22722			2.5		178.4	14.8	8.0			692	625	67			
1973	23254			6.3	15	234.6	16.2	8.4		-279	1004	754	250			
1974	23284			3.5	27	140.2	6.9	13.0	2611	-472	1294	1051	244			
1975	23860		130	-6.1	29	58.2	3.4	16.0	3004	-600	865	905	-40			
1976	24450		130	-1.4	88	60.9	4.7	12.0	3307		904	668	236			
1977	25669		130	1.5	63	144.9	12.4		(378)		988	609	379			198.1
1978	25704	24 (67-77)		1.5	55	156.0	15.2		(454)							(1) 14.5
1979	26354								(448)							
1980									(459)							

1. Excl. DAC

2. Estimates of debt service payments on outstanding debts.

A/P/DR/ARD 3.15.79

162

COUNTRY: Zaire

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)							P.L. 480 HISTORY					
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAD Minimum Caloric Intake: 2220 Caloric Deficit (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent - Distrib. - Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total Per Capita 1961-1965=100	Cereals + + + + - - - -	Maize + + + + - - - -	Millet + + + + - - - -	Sorghum + + + + - - - -	Rice Paddy + + + + - - - -	Cassava + + + + - - - -		TITLES						
														I	III	Components				
																II	PVO	Multi-Lat.	Gov.-Gov.	
1970	2040	190				101	101													
1971						99	101	673	426	22		184	9475		0	0				
1972	1815	415				98	103						8975	0	0	3082	806	2275	0	
1973	1844	386				98	105						8950		0	2392	2216	190	0	
1974	1865	345				98	108	(338)	(180)			(13)	9500	0	0	1514	1514	0	0	
1975	1876 (71-75)	354				97	1101	769 (378)	(200)			(10)	8879	0	0	757	757	0	0	
1976						96	112	790 (456)	510 (210)	26		212 (69)	9172		0	0	0	0	0	
1977	1820	400				95	113	804 (390)	515 (205)	26		330 (40)	9832		0	0	0	0	0	
1978	1845 (76-78)	375	83 -----	1108 1316 (76-78) --	3.7 (61-78)				520	26		279	9800 9500	66.2 (18)	0	3297	0	0	3297	
1979														(17)	0	2387 (531)	0	2387 (531)	0	
1980														(15.7)			0	0	0	

AFR/DR/ARD

1/6/79

COUNTRY **Zambia**

YEAR	POPULATION		GROSS NATIONAL PRODUCT		INFLATION	TOTAL RESERVE POSITION	IMPORT COVERAGE	DEBT SERVICE RATIO	TOTAL EXTERNAL DEBT	CURRENT ACCOUNT BALANCE	TRADE			Unit Value		OTHER DONOR ASSISTANCE COMMITMENTS
	Total	Growth Rate	Per Capita	Real Growth Rate							Exports	Imports	Balance	Exports	Imports	
	(000)	(%)	(\$)	(%)	(%)	(\$ mil)	(weeks)	(%)	(\$ mil)	(\$ mil)		(\$ mil)		(1975 = 100)		(\$ mil)
1970	4240							5.4		NA						
1971	4367							9.9								
1972	4500					161.0	21.1	10.3						91.8	57.3	
1973	4639				6	194	25.0	28.8						136.8	65.0	
1974	4784				9	171.6	14.6	5.0	1192					165.2	80.0	
1975	4936		440		10	148.9	6.8	9.0	1502		810	1138	-328	100.0	100.0	
1976	5092		450	1.9	19	99.6	6.5	9.0	1605		1040	798	+242	121.7	111.60	
1977	5250	3.1 (67-77)	450	2.5	19	73.5	4.7		(185) ⁽²⁾		893	819	+74			112.9
1978	5415			1.0		56.2	3.6		(211)							(1) 25.5
1979									(211)							
1980									(177)							

1. Excluding DAC
2. Estimated debt service

APR. 1980 5.15.79

164

COUNTRY: Zambia

YEAR	FOOD SUPPLY DATA					FOOD PRODUCTION INDICES		SELECTED FOOD PRODUCTION AND NET IMPORTS (000MT)						P.L. 480 HISTORY										
	Average Caloric Consumption/Day Uniform Distribution (Calories)	Recommended FAO Minimum Caloric Intake 2320 (Calories)	Intake as % of Recommended Minimum (%)	Unmet Food Needs in Wheat Equivalent -distrib.- Uniform Skewed (000MT)	1961-1978 Inter-annual Variations (%)	Total 1961-1965=100	Per Capita	Cereals + + + +	Maize + + + +	Millet + + + +	Sorghum + + + +	Rice Paddy + + + +	Cassava + + + +	Roots & Tubers + + + +	TITLES									
															I		III		Components		II	PVO	Multi-Lat.	Gov.-Gov.
															- - - -	- - - -	- - - -	- - - -	MT	- - - -				
+ + + +	+ + + +	+ + + +	Production + + + +	+ + + +	+ + + +	+ + + +	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -							
1970	2040	280				95	95					143	4											
1971						103	106	971 (69-71)	843	79	49	145	6	0	0	248	0	248	0					
1972	2021	299				102	108					175	6	0	0	568	0	568	0					
1973	1975	345				100	109					174	15	0	0	279	0	279	0					
1974	2052	268				105	119	(95)		(.4)		173	44	0	0	121	0	121	0					
1975	2045 (71-75)	275				107	125	1142 (164)				172	50	0	0	773	0	773	0					
1976						110	132	1220 (171)	1070	90	54	170	55	0	0	336	0	336	0					
1977						107	133	1123	980	86	51	170	55	0	0	535	0	535	0					
1978	2215 (76-78)	105	95 ←----- (76-78) -----→	65	320	2.6 (61-78)			1000	90	52			38	0	40	0	40	-					
1979														45	0	273 (93)	0	273	-					
1980																								

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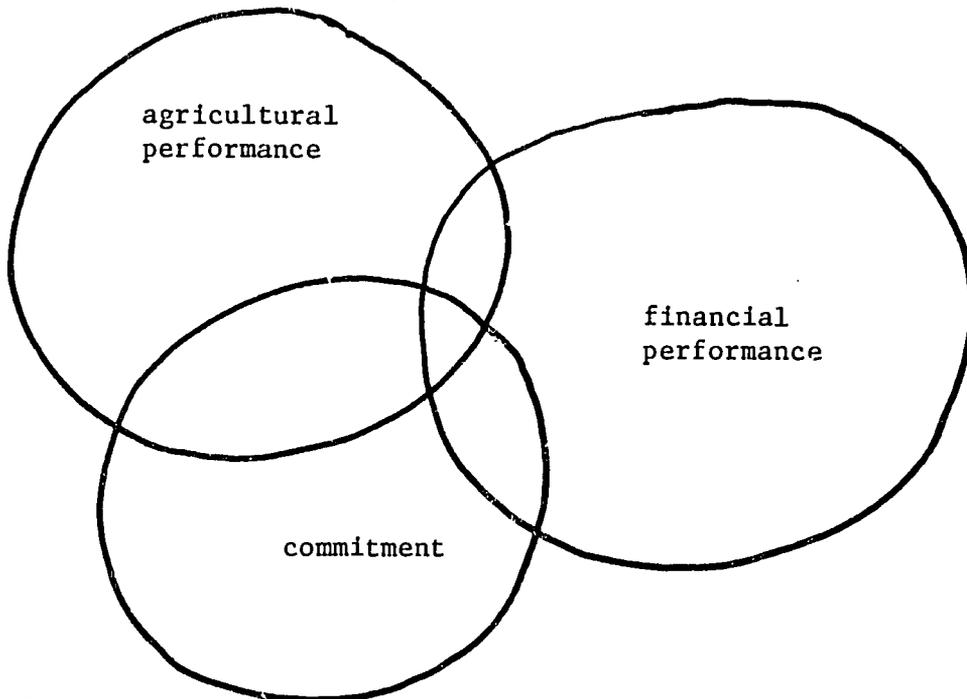
165

Appendix II

Hypothesized Relationships between the Effectiveness Variables¹

A. Present Situation

Present situation concerning the completeness of the 102(d) commitment variable based on the informal appraisal by PPC staff and the regional bureaus, compared to the financial and agricultural policy performance variables.

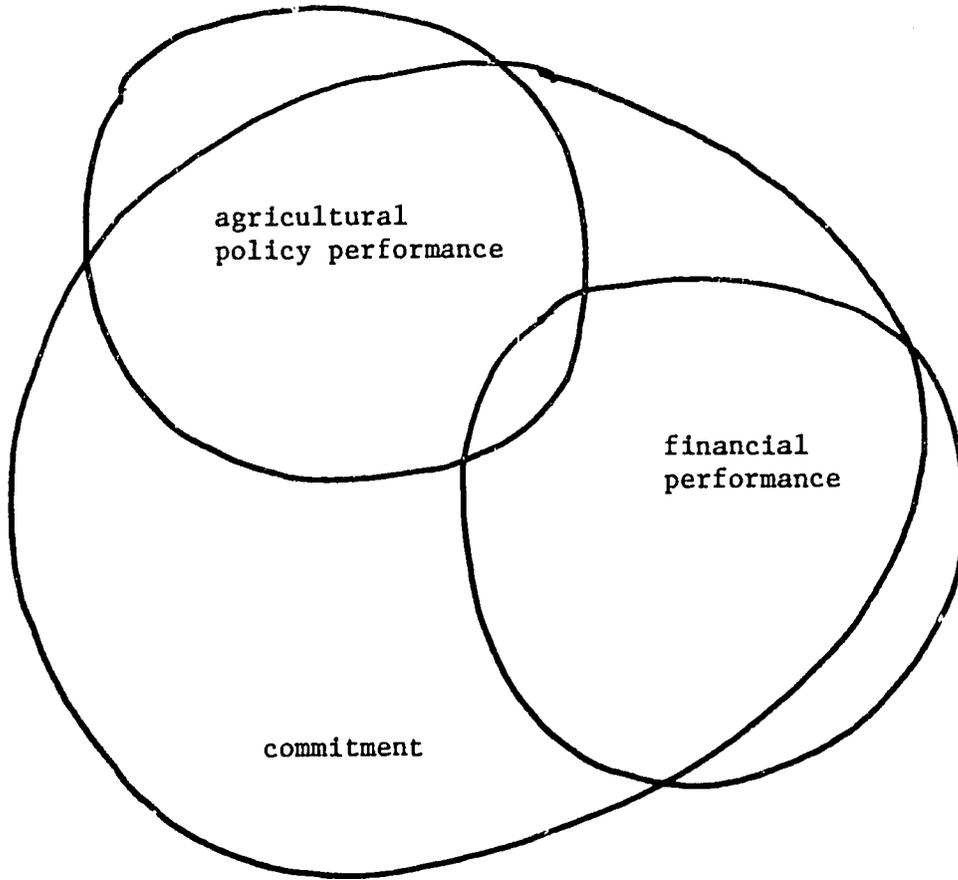


B. Theoretical Ideal

Theoretically, with a more systematic procedure of utilizing 102(d) information, the commitment variable may adequately encompass the financial and agricultural performance variables. This remains to be seen.

¹ The intersection of the circles are intended for diagrammatic purposes only, and are not intended to show any estimated levels of overlap.

166



Appendix III

The Financial Performance Variable

1. Principles of Variable Design

The first of the three variables utilized to indicate effective use of foreign assistance is financial performance. In particular, the financial performance variable ascertains the financial conditions and performances of the Sub-Saharan countries. A country's responsibility concerning both their domestic and international finances received consideration.

The variables included on the first page of the tables and defined in the introduction to the country situation summaries are commonly used measures to suggest a weak, strong, or stable financial condition. Analysis of these variables over time suggests actual performance and progress. In addition, a reading of the IMF narratives provides a clear expansion and understanding of the factors which contribute toward either regressions or improvements.

2. Criteria

A number of criteria were selected to provide ratings of Sub-Saharan countries' financial performances. The criteria chosen were predicated upon financial performance measured by past progress and qualitative information provided by the country narratives. The following five criteria were utilized.

(1) Per Capita GNP Growth Rate:

Clearly a satisfactory growth rate of per capita GNP reflects, among other factors, the financial performance of a country;

(2) Policies Affecting Efficient Resource Mobilization and Allocation:

Different government policies can cause either incentives or disincentives to efficient resource mobilization and allocation in both the

public and private sectors;

(3) Domestic Revenues, Budgetary Deficits, and Foreign Aid as Percentages of

Government Expenditures:

Other things being equal, trends toward higher percentages for domestic revenues and lower percentages for deficits and aid auger best for sustainable growth;

(4) Public and Private Sector Savings and Capital Formation:

Generally, higher rates of savings lead to higher rates of both public and private investment, leading in turn to greater productivity;

(5) Debt Obligations, Possible Rescheduling, and Debt Repayments:

Countries which responsibly manage internal and external borrowing;

(6) Trade:

Interrelationships with current account balances, adequate import coverages, tied with reserves.

3. Financial Performance Ratings:

One of three possible ratings could be given to any of the Sub-Saharan countries, depending upon the results of the financial performance analysis: poor; fair; good. In general, a poor financial performance rating was based upon negative rates of economic growth, increasing trade deficits, relatively weak import coverage and reserve positions, and mounting debt obligations. A fair ranking was given to countries that were initiating marginal improvements in financial performance, were attempting to tighten their belts through improvements in external trade with the subsequent savings in foreign exchange, and actively altering fiscal and monetary policies to satisfactorily manage aggregate demand. A rating of good was given to countries which were practicing responsible trade relations with other countries, and showing an increased government capability to effectively plan, finance, and implement development programs.

APPENDIX IV
The Agricultural Policy Performance Variable

1. Principles of Variable Design

The agricultural policy performance variable is the second of the three effectiveness variables used in the Food Aid Priority (FAP) procedure. As discussed in section V.1., the FAP procedure indicates countries which will most effectively use foreign assistance to help the poor to a better life. This variable was chosen to ascertain both the long-term and short-term performance of a country's agricultural sector. This sector's past and present record in food production and distribution, increasing rural incomes and employment, and promotion of increased equity all received attention. Since the agricultural policy performance variable is theoretically implicit within the commitment variable (see section V.2.2.1.), there will of necessity be a substantial degree of overlap in the two discussions.

2. Criteria

A number of criteria were utilized to provide a measure of the agricultural performance variable for each country. The six criteria selected are discussed below.

2.1. Price Policy

Price policy naturally received a great deal of attention. The price policy components examined include:

(1) Price controls:

Constraints to producers and specific agricultural commodity prices received by producers below free market prices causing production disincentives (the degree depending upon the short-and long-run price elasticities of supply);

(2) Procurement Policy:

Non-competitive purchasing, which may or may not act as a disincentive;

(3) Export Controls and Taxes:

The specific effects depend upon the particular conditions faced and institutional organization: stabilized producer commodity prices and incomes, production and marketing disincentives, prohibition of foreign sales, finance of research and investment;

(4) Import Subsidation:

Governments importations at one price and sales of a lower price, distorted exchange rates (e.g., overvalued exchange thereby subsidizing large-scale, labor-displacing agricultural machinery), interest rates set at other than the free market rate (e.g., low interest rates again leading to overcapitalization, labor displacement, increased dependence and depleted foreign exchange reserves);

(5) Inter-Sectoral Terms of Trade:

Terms of trade (relative prices) between the rural-agricultural and urban-industrial sectors of the economy other than at free market levels, leading to undue extraction of agricultural economic surplus, production disincentives, reduced levels of investment, heavily subsidized wage good (food grains) for the urban sector;

(6) Subsidized Inputs:

Subsidized inputs (factors of production) can perform useful functions up to a point (such as reduce the risk of adopting innovations). However, undue reliance upon these subsidies can introduce undesirable long-term socio-economic distortions.

2.2. Other Criteria:

(1) Restrictions on Land Tenure and Credit:

Serve as barriers to increased agricultural production and rural incomes, desired output composition, and equity, depending upon the amounts and percentages of agricultural land under owner-operators, absentee landlords, commercial arrangements, share-cropping arrangements, and wage-labor working conditions;

(2) Government Expenditures on Agricultural Development Projects:

Government expenditures affect all aspects of the agricultural-rural economy, whether focused on production, marketing, infrastructure, or research and design;

(3) Levels of Subsistence Agriculture:

3. Agricultural Performance Ratings

Each of the Sub-Saharan countries could potentially have received one of the three ratings, based upon the evaluation of the performance of their agricultural sector: poor (negative); indifferent; or favorable (positive). However, none of these countries received a poor or negative rating on their agricultural performance. As was also the case with the commitment variable in the IPS procedure, some countries did not encourage small-holder production, but none actually adversely affected their food availability through implementation of a disruptive policy.

Although no poor ratings were given to countries for their agricultural performance, some countries adopted policies that have exacerbated other sectors of the economy. Countries such as these received an indifferent rating. For example, an indifferent rating was given to those countries in which agricultural programs placed severe strains on the rest of the country.

Positive ratings were given to countries with explicitly stated goals of food self-sufficiency backed by the appropriate policies. These self-sufficiency goals can be achieved through actual self-sufficiency in food production, utilization of the resulting foreign foodstuffs, or a combination of both.

APPENDIX V

The Commitment Variable

1. Principles of Variable Design

The third of the three variables selected to indicate effective use of foreign assistance is commitment. This variable provides an assessment of a country's socio-economic commitment and progress toward broadly participatory, poverty-alleviating development -- in short, effective dedication toward equitable socio-economic development and growth. Currently, this approach has no exact parallel among other major aid programs, bilateral or multi-lateral.

Application of a variable such as this presents conceptual difficulties as well as problems of definition and comparability, even in those cases in which accurate and pertinent data are readily available. As a consequence, broad scope will be allowed for judgmental factors involving countries' commitments and probable future progress; the increased probability of type I errors is explicitly considered. Further, limitations in country statistical systems clearly necessitate more liberal interpretations in many instances.

The approach adopted is one currently in the process of development by PPC. As this procedure is refined, the specific details presented in this section may be subject to change. None-the-less the guiding principles are clear.

2. Criteria^{1/}

The first six criteria presented below provide standards of commitment assessments that relate directly to specific aspects of development identified in Sections 102(c) and 192(d) of the Foreign Assistance Act. The seventh criterion is an additional criterion on education. Several interpretative factors are listed under each criterion. These factors are the indicators

^{1/}For work on a process to more clearly delineate the above criteria, see (3). Further details can be obtained from Mike Crosswell, IIA/EA/PP.

by which a country's performance under a criterion can be assessed. There are three primary interpretive factors under each criterion sufficiently universal to be applicable in some degree in every country. In addition to the primary factors, there may be a varying number of supplementary factors. The supplementary factors provide useful assistance in cases of gaps in data, unique country-specific developmental or economic circumstances, changed international conditions, and so forth. The seven criteria are:

(1) The Extent of Participation in Economic Development by the Poor:

Assesses numbers of people below the poverty line and changes over time, trends in participation by the poor at all levels, amounts and percentages of government expenditures benefiting the poor (especially for agriculture, health, education, and family planning), levels and annual changes in per capita income for the poorest forty percent of the population, and evidence on progressiveness of the tax system.

(2) The Extent to which Government Policies Contribute to Sustainable Economic Growth:

Assumes growth rates for total and per capita gross domestic product, government and private savings and capital formation, policies that affect efficient resource mobilization and allocation in the government sector and private sector growth, rates of inflation, the extent to which actual expenditures coincide with both announced budgets and long-range development plans, and domestic revenues, budgetary deficits, and foreign aid as percentages of government expenditures.

(3) The Extent to Which Government Policies Increase the Productivity and Utilization of Labor:

Assesses changes in sectoral employment, government and private policies and actions to promote labor-intensive programs for infrastructure and research and development for labor-intensive technologies, where appropriate, and capital-output ratios.

(4) The Appropriateness of Policies to Increase Small-Farm Productivity:

Assesses real value of agricultural output per person in the agricultural sector, government expenditures for agriculture, land tenure, and terms of trade between sectors.

(5) The Extent to which Health Services and Policies Encourage Low-Cost, Accessible Delivery:

Assesses infant mortality rates, expenditures on total health services, average life expectancies, child mortality and crude death rates, nutritional intake, and policies that affect private supply and access to publicly supplied preventive medicine and low-cost health services.

(6) The Extent of Attention to Accessible Family Services and Motivation for Smaller Families:

Assess rates of demographic change, percentages for population activities in total government expenditures, contraceptive usage, and institutions, laws, and economic policies that explicitly or implicitly encourage smaller family size.

(7) The Access to Education for Basic Life Skills:

Assesses literacy rates, public expenditures for all education, access by low income rural family members to education and training oriented at improving health, nutrition, and productive skills, percentages of rural as well as total primary school age populations enrolled in rural and primary schools, percentages of total and rural adult populations that have completed at least primary or first-level schooling, and per student expenditures.

APPENDIX VI

THE FOOD AID PRIORITY VALUE

1. Food Aid Priority Value Functional Form

1.1. Purpose and Organization

A number of different functional forms are potentially available for the Food Aid Priority function for food aid allocation. Different functional forms would provide different food aid allocations. Section 1 of this appendix examines this issue on a relatively theoretical basis. Appendix VIII empirically analyzes the issue. In order to contrast and illustrate the FAP functional form selected, an additive linear function receives attention. The following subsections first consider weighted measures, followed by an examination of functional form, the properties of functional forms, the implications upon food aid allocation of different functional forms, and other relevant discussions of this issue in Food Aid Priority study.

1.2. Weighted Measures

In effect, a country's food aid priority value (FPV) is an exponentially weighted measure of the two need and three effectiveness independent variables. In contrast, is the simple arithmetic mean, the type of average usually computed for everyday affairs. For this arithmetic mean each of the variables linearly affects the overall mean by an equal proportion; in this FAP case of five variables, each variable would have a 20% effect. In a weighted measure, different independent variables affect the overall value to different degrees (proportions), depending upon the policy weight attached to each variable.

1.3. Functional Form

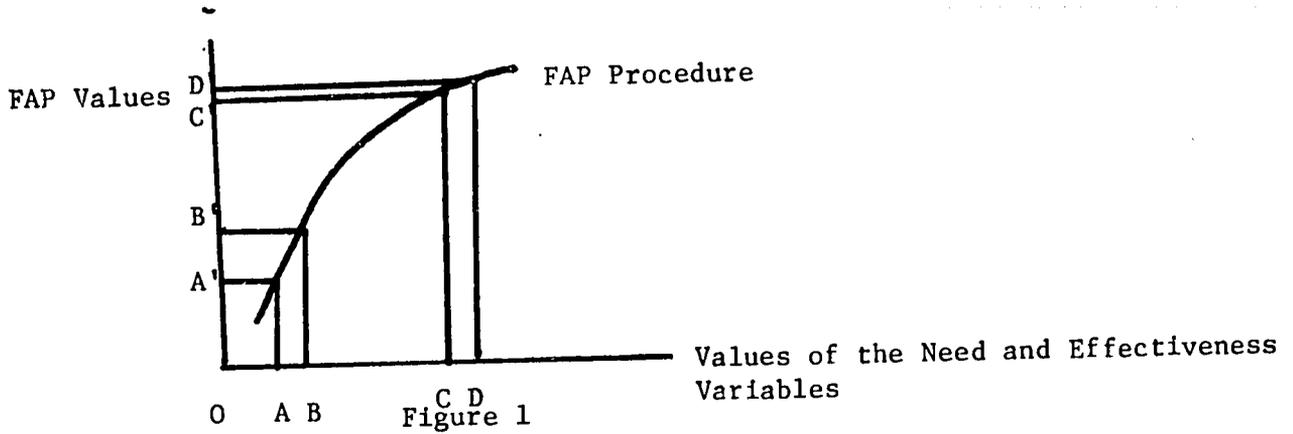
Several different functional forms are possible for this weighted measure of the five independent variables. The simplest function that could be used is an additive linear function such as $FPV = a (FG) + b (PCY) + c (FN) + d (AP) + e (CM)$. This function is generally called a weighted average. However, a multiplicative functional form with the policy weights used as exponents instead of simple coefficients provides a more accurate measure of the actual situation encountered as discussed in Sections 1.4. and 1.5. of this appendix.

1.4. Functional Form Properties

A multiplicative exponential function of the form used here has certain desirable properties for food aid allocation. Since the function is exponential, the resulting surface in six-dimensional space is nonlinear in shape -- a linear function would have the shape of a plane. The size (absolute value) and algebraic sign (positive or negative) of the exponents used as policy weights determine the degree of nonlinearity, regularity and direction of the resulting graph (the values of the first and second derivatives) -- the shape and orientation of this surface.

With a simple linear weighted average, an equal change in the values of all need and effectiveness variables would directly change the value of the FPV by the same proportion. For example, a doubling of the values of all the need and effectiveness variables would double the value of the FPV, assuming that all the coefficients were positive. Thus, the function is linear. However, with a nonlinear function such as the multiplicative exponential function used to obtain the FPV, an equal change in all the need and effectiveness variables would provide a disproportionate change in the FPV. For example, a doubling of the values of the need and effectiveness variables would not generate a doubling in the value of the FPV.

The amount by which the Food Aid Priority Value (FAPV) changes depends upon the initial values of the need and effectiveness variables. The FAP procedure adopted as a nonlinear function increases at a decreasing rate. Technically, there are positive partial first derivatives for all variables but food gap, and negative partial second derivatives for all five dependent variables with respect to FAPV. As a consequence, larger values of the need and effectiveness variables have a smaller proportional effect upon the FAPV's than do smaller values of these independent variables. Although the FAP procedure has a multidimensional surface, a two-dimensional diagram effectively illustrates the essential characteristics.



Diagrammatical Illustration of FAP Procedure

Figure 1 illustrates the FAP procedure characteristic of increases in FAP values at a decreasing rate. For example, the increase in the need and effectiveness variables from A to B equals the increase from C to D. However, the increase in the FPV from A' to B' corresponding to AB is substantially smaller than the FPV increase from C' to D' corresponding to the increase from C to D.

Values of the policy weights determine the rate of change of the FAP values, graphically, the degree of concavity with respect to the independent variable axis. In general, the higher the value of the policy weights, the greater the rate of increase.

181

1.5. Functional Form Implications for Food Aid Resource Allocation .

The properties of an exponential function of the type used in this study (rather than a simple linear weighted average) have certain implications for the allocation of scarce resources such as food aid among various countries. In effect, an FPV function of the type posited in this study incorporates the fact that for different levels between countries of the five variables, the whole is greater than the sum of the parts . For example, consider the case of a comparison of the food need between two countries, one of which is relatively affluent (country A) and the other not (country B). Although the values of country B's need and effectiveness variables may be twice that of country A's, the former's assistance need may be more than twice that of country B's -- comparative need between the two countries is not strictly proportional (linear). A number of factors could account for this. Considering the agricultural sector of both countries, it may be that country B not only requires twice the amount of fertilizer that A does, but also requires improved rural roads and port facilities in order to transport the fertilizers to the farmers in need.

Technically, the specific functional form properties of the FAP procedure allow for greater proportional food aid priority to countries with lower values for the need and effectiveness variables. Figure 1 illustrates this policy implication of the functional form adopted.

1.6. Appendix References

For a more detailed discussion of this concept, the reader is referred to a similar discussion given in Appendix VII. This appendix contrasts linear (straight line) and non-linear properties and their implications upon food aid allocation in a more concrete manner. Appendix VIII presents a sensitivity analysis which analyses the effect of functional form upon the

182

FAP country rankings. Specifically, the FPV's and resulting country rankings associated with an additive non-weighted linear function are compared to those resulting from the multiplicative exponential FAP function adopted for this study. A statistical test of significance is employed to compare the two different country rankings.

1.7. Summary

In summary, a brief and simple theoretical discussion was presented contrasting the properties and food aid allocation implications of the multiplicative exponential FPV functional form adopted by the FAP study with an additive linear function. Appendix VII provides a similar but more detailed discussion, although in a different context. Appendix VIII contains a sensitivity analysis which contrasts the different FAP country rankings obtained from the multiplicative exponential and additive linear FPV functions.

2. Algebraic Review of Exponential Policy Weights

2.1. Positive Whole Number Exponents

To fully understand the procedure and the role of the policy weights, it is necessary to be familiar with a few simple algebraic rules governing the effects of exponents. The most familiar example of exponents is illustrated by the following equations:

$$y^2 = y \times y$$

$$4^2 = 4 \times 4 = 16$$

$$4^3 = 4 \times 4 \times 4 = 64$$

In these equations, the numbers 2 and 3 are exponents, and indicate operations in which a given quantity is multiplied by itself (e.g., squared or cubed).

2.2. Positive Fractions as Exponents

While positive whole numbers are the most familiar examples, exponents can also be fractions.

$$x^{1/2} = x^{.5} = \sqrt{x}$$

$$4^{1/2} = 4^{.5} = \sqrt{4} = 2$$

$$64^{1/3} = 64^{.333} = \sqrt[3]{64} = 4$$

In the first two examples, assigning an exponent of $\frac{1}{2}$ (or .5) to a number is equivalent to taking the square root. Assigning an exponent of $\frac{1}{3}$ (or .333) is equivalent to taking the cube root. Accordingly:

$$\text{if } x^2 = y \quad (\text{e.g., } 10^2 = 100)$$

$$\text{then } x = y^{1/2} \quad (\text{e.g., } 10 = 100^{1/2})$$

¹This review, except for a few minor changes, was written by Mike Crosswell, in (5, Appendix I).

2.3. Negative Whole Number and Fractional Exponent

Further, exponents can be negative, with the following effects:

$$x^{-2} = 1/x^2 = (1/x)^2$$

$$x^{-3} = 1/x^3 = (1/x)^3$$

$$4^{-2} = 1/(4^2) = (1/4)^2 = 1/16$$

$$2^{-3} = 1/(2^3) = (1/2)^3 = 1/8$$

$$4^{-\frac{1}{2}} = 1/\sqrt{4} = \sqrt{1/4} = 1/2$$

2.4. 1, -1, and 0 as Exponents

The effects of exponents valued 1, -1, and 0 are particularly noteworthy:

$$x^1 = x$$

$$2^1 = 2$$

$$x^{-1} = 1/x$$

$$2^{-1} = 1/2$$

$$x^0 = 1$$

$$2^0 = 1$$

An exponent of 1 has no effect on x ; an exponent of -1 inverts x (or divides 1 by x); and an exponent of zero gives a value of 1, whatever the value of x .

Finally, the following rule is important in evaluating the Food Aid Priority (FAP) values.

$$x^2/y^2 = (x/y)^2$$

$$10^2/3^2 = (10/3)^2$$

2.5. Exponential Values of Fractions

These properties of exponents make them very useful for expressing the importance or priority attached by policy makers to a particular indicator.

For instance, suppose that Country A has a commitment rating of 4 (good) and Country B has a commitment rating of 1 (poor) and that food aid priorities are based solely on considerations of commitment as illustrated below.

2.6. Usage of Exponents as Policy Weights

$$\text{i.e.} \quad \frac{A_A}{A_B} = \frac{(\text{Comm}_A)^c}{(\text{Comm}_B)^c} = \frac{4^c}{1^c} = \left(\frac{4}{1}\right)^c$$

Where A_B stands for assistance to Country B, Comm_A represents the commitment rating of Country A, and c gives the policy weight attached to commitment.

- a) If a weight of 1 is used, then Country A gets 4 times as large a priority value as Country B.
- b) If a smaller weight of .5 is used (a lower priority to commitment), then Country A gets twice the priority value of Country B.
- c) An intermediate weight, e.g., .75, would give A more than twice but less than 4 times. (Actually 2.8 times as much as B).
- d) A weight of zero on commitment (zero priority) means that the two countries receive the same amount of priority. In this case commitment has no bearing on the allocations.
- e) A weight of -1 on commitment (a negative priority) means that the country with the lower commitment rating would get higher priority. In this case, Country B would get 4 times as high a priority as Country A.

3. The Food Gap Policy Weight

3.1. Purpose and Organization

The food gap need variable has the only negatively valued policy weight or exponent of the two need and three effectiveness variables. In contrast, per capita Gross National Product and the three effectiveness variables all have positively valued policy weights. This subsection examines in order the rationale for a negatively valued food gap policy weight as well as the implications of this selection upon the allocation of food aid.

3.2. Rationale for Negatively Valued Food Gap Policy Weight

The value of the uniform food gap exponent a was set at - 1. The size of the food gap is an important criteria for food aid assistance. For example, the smaller the food gap (or inversely the larger the food supply of the recommended minimum), the lower the need for food aid. Because some countries currently are characterized by a food surplus, their food gap is not a positive number (e.g. 28%). Instead, their food gap is a negative number (e.g. - 8% for a +8% food surplus). As a consequence of this characteristic, if food gap was used to calculate the Food Aid Priority Values, the resulting values obtained would be negative for food surplus countries. In order to obtain positive Food Aid Priority values for all thirty-eight countries considered, the inverse of food gap, food supply, was used instead.

3.3. Implications upon the Allocation of Food Aid

No real changes in the Food Aid Priority procedure or the values and rankings obtained were introduced by usage of food supply instead of food gap. The same FAP country rankings are obtained with use of both food gap and food supply. Increases in the value of the food supply lead to decreases in the Food Aid Priority Value.

1967

APPENDIX VII

The Straight-Line linear Adjustment of Per Capita Gross National Product ^{1/}

1. FPV without straight-Line Adjustment of Per Capita GNP

If no adjustment would be made to the per capita GNP variable (PCY), then the Food Priority Value (FPV) of a country would be determined by the following equation

$$FPV = (FG)^a (PCY)^b (FN)^c (AP)^d (CM)^e ;$$

where all the definitions are the same as defined earlier.

The impact of this formulation can best be explained by assuming that all the countries are equal with respect to FG, FN, AP, and CM, but different per capita GNP's (PCY). In the equation above, the value of b is negative since the Food Priority Value is considered to be inversely proportional to PCY. Therefore, the higher is a country's per capita income, the lower is that country's Food Priority Value, and vice versa. Thus the equation essentially becomes

$$FPV = \frac{1}{PCY}^b$$

The comparison between two countries, i and j, would be

$$\frac{FPV_i}{FPV_j} = \frac{PCY_i}{PCY_j}$$

Accordingly, any country with one-half the per capita GNP of another would be considered at twice the priority whether the two per capita levels were \$400 and \$200 or \$200 and \$100. Suppose that FPV depended only on per capita GNP (need), with a weighting of -1.0. Then, if per capita GNP doubled, need would be halved, and the priority value would tend to be cut in half.

¹ Much of this discussion, except for some minor changes, was written by Mike Crosswell. See (5, Appendix II).

188

2. Straight-Line Adjustment

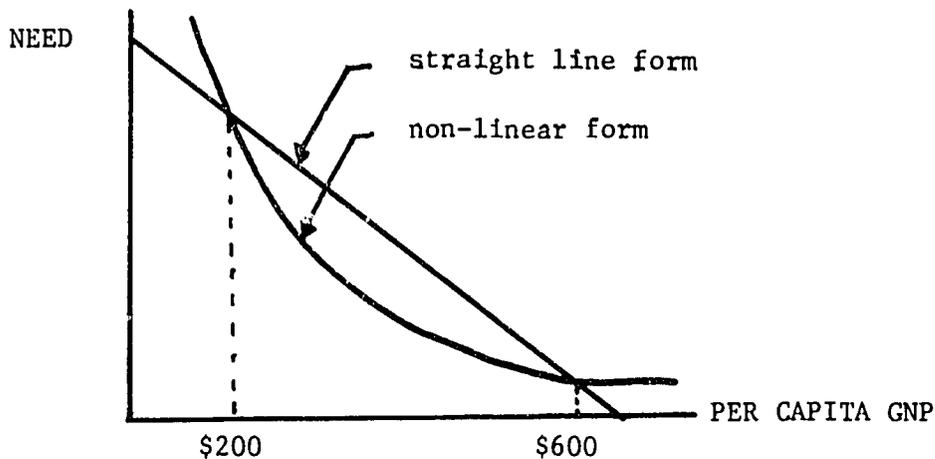
It was judged during the IPA process, however, that a more appropriate form for the per capita GNP would be reflected by a linear relation

$$FPV = (S - T (PCY)),$$

where s and t represent positive numbers.

3. Comparison Between Linear and Nonlinear Per Capita GNP

In both equations, the lower the per capita GNP, the greater the FPV of the recipient country. The distinction between the two can best be explained by using a graph:



The straight line formulation focuses on the absolute differences in per capita GNP. For every difference of \$100, whether comparing levels of \$100 and \$200 or \$700 and \$800, the level of PFV changes by the same absolute amount. The non-linear formulation focuses on percentage differences in per capita GNP. Thus, a difference of \$100 has a much greater effect on relative need comparing per capita levels of \$100 and \$200 than in comparing incomes of \$700 and \$800.

VII-3

The more practical distinction between the two formulations can be seen by focusing on per capita levels where the two lines intersect. In the graph, they intersect at \$200 and \$600 (arbitrarily selected points). Countries between these two incomes are evaluated as more food needy by the straight line formulation than by the non-linear formulation. Countries outside the range are evaluated as less needy using this straight-line (linear) formulation. Accordingly, the straight-line form, on the whole, shifted the FPV's in the direction of the higher percapita GNP countries.

4. Calculation of s and t:

The values for \underline{s} and \underline{t} were calculated using the same rationale as in the IPA procedure. The linear formulation of the per capita GNP was constrained to pass through two points:

- (1) the intersection point of average food assistance with average per capita GNP;
- (2) a specified level of per capita GNP at which food assistance would be zero (the horizontal axis intercept), for which \$600 was chosen.

4.1. Rationale:

The rationale for selection of these two constraints and the use of two data points can most easily be understood through reference to the following two graphs which are discussed in the following two sections (4.1.1. and 4.1.2.).

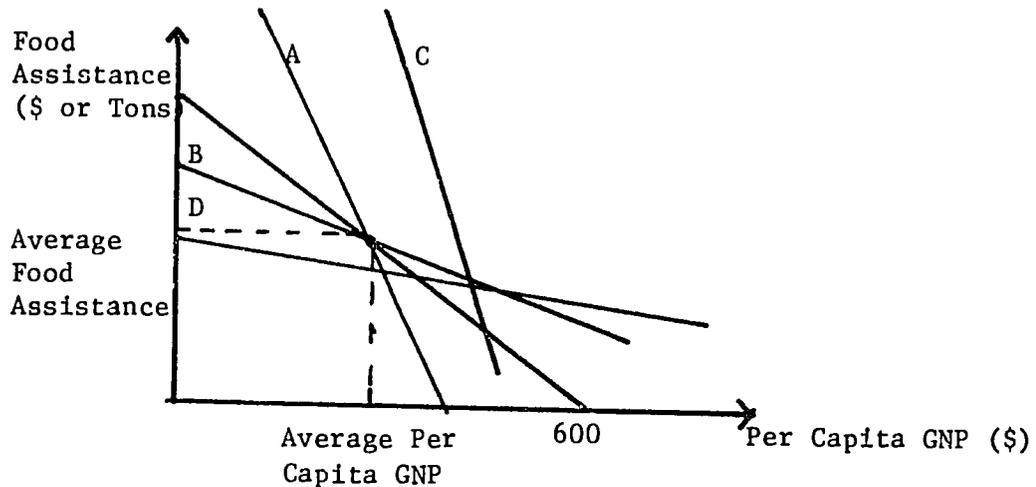


Figure 2
All Data Points

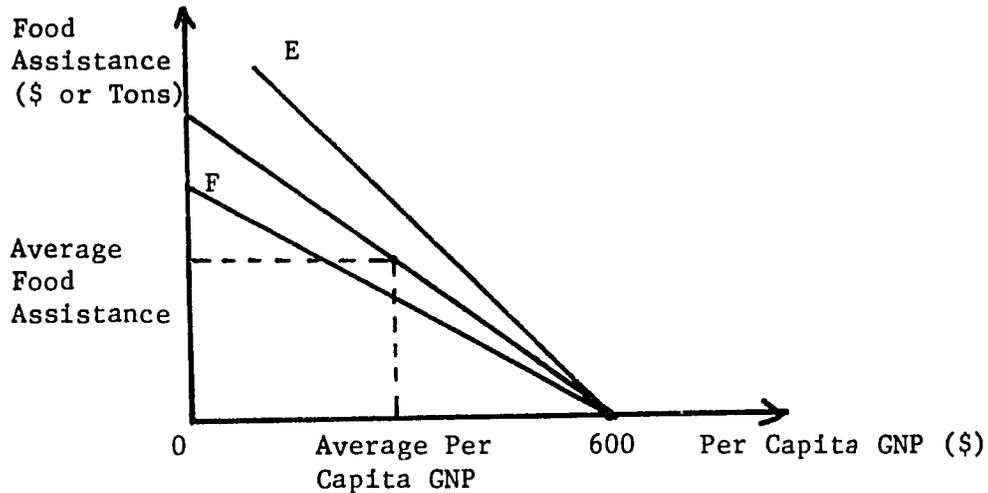


Figure 3
Two Data Points

4.1.1. Food Aid Eligibility

If all the country observations had been used instead of the two observations (average per capita GNP, average food assistance) and \$600.00 in the estimation of the intercept and slope linear per capita GNP coefficients \underline{s} and \underline{t} , a situation such as that of line A or line B depicted in Figure V.2. would have arisen. Thus, although the line would have passed through the point of intersection of the two means, it most probably would not have intersected the per capita GNP axis at \$600.

192

A per capita GNP intercept of \$600 insures that at levels of per capita GNP greater than or equal to \$600, food assistance is not provided to countries. Consequently, only countries considered most in need of food assistance through virtue of per capita GNP's lower than \$600 will receive food aid. A \$600 per capita level of GNP more accurately reflects the reality of Sub-Sahara food assistance requirements than does \$800. This \$800 figure is the world-wide level of per capita GNP established by the IPA as the maximum level by which a country can still maintain eligibility. The \$600 level is in accordance with the \$580 per capita GNP level (world-wide) adopted by the International Development Association of the World Bank as maximum in criteria for food assistance funding. Further, all but one of the Sub-Saharan African countries considered have per capita GNP's below \$580.

4.1.2. Reduced Food Aid Allocation Variation Over Time

The use of the two data points instead of all country observations also provides greater inter-temporal stability in food aid allocation and consequent programming. Figures 2. and 3. clearly illustrate this point. Annual estimation of the linear GNP policy weight would most probably lead to a situation such as that depicted in figure 2., in which lines C and D reflect the large variation which would probably occur each year. In contrast, usage of only the averages and the per capita GNP intercept clearly gives greater stability in annual food assistance illustrated by lines E and F in Figure 3. As a result, recipient and donor countries and dispersing agencies can undertake longer run planning and programming.

VIII. Sensitivity Analysis of the Food Aid Priority Values by Policy Weights, Data, and Functional Form

I. Purpose and Organization of the Sensitivity Analysis

1.1. Purpose

The general purpose of any sensitivity analysis is to examine the effects upon the dependent variable(s) brought about by changes in the values of one or more independent or explanatory variable(s). For the Food Aid Priority study, changes were made in the values of all the policy weights, in the values of the data for per capita income and the food gap and in the FPV functional form. These positive and negative changes cause a corresponding change in the Food Aid Priority Values for the thirty-eight Sub-Saharan African countries analyzed. As a consequence of changes in these Food Aid Priority Values, a corresponding change may occur in the relative ranking of the Sub-Saharan countries for Food Aid Priority. The stability of this ranking procedure can then be analyzed and the implications upon the Food Aid Priority methodology examined.

1.2. Organization

The subsequent section reviews the Food Aid Priority procedure. The following section examines the desirability of stable Food Aid Priority Values. A discussion of the changes in policy weights, data, and FPV functional form follows. The next section analyzes the actual

sensitivity analysis results. The final section presents summaries and conclusions, including implications for the Food Aid Priority procedure developed in this study.

2. Review of the Food Aid Priority Procedure

As discussed in Sections V.1. 1. and V.2.5.1., the country Food Aid Priority procedure was developed to rank all Sub-Saharan countries in terms of food aid priority. Two need and three effectiveness variables were combined into a single measure, the Food Aid Priority Value.

The following relationship is used to calculate the measure on country food aid priority value:

$$FPV = (FG)^a (s-t (PCY)^b (FN)^c (AP)^d (CM)^e,$$

where

FPV = country's food aid priority value;

FG = country's food supply as percent of recommended minimum (need variable);

PCY = country's per capita Gross National Product (need variable);

FN = country's financial policy performance (effectiveness variable);

DP = country's agricultural policy performance (effectiveness variable);

CM = country's commitment toward equitable growth (effectiveness variable);

a, b, c, d, e, s, and t = policy weights. In particular, policy weights a, b, c, d, and e are exponents, discussed in Section V.2.5.2 of the text and Section 2 of Appendix IV. Policy weight s is the vertical intercept and policy weight t is the slope for the linear Gross National Product relationship, discussed in Section V.2.5.2 of the text and in Appendix V.

The Food Aid Priority methodology provides a different value (FPV) for each country. A ranking of the thirty-eight FPV's from highest to lowest can then be undertaken. This ranking indicates the food aid priority of each country in relation to the other thirty-seven. The FPV's and their rankings are in terms of the five explanatory variables and specific policy weights selected.

3. Sensitivity of the Food Aid Priority Values

3.1. Consistency and Responsiveness

A Food Aid Priority procedure which provides relatively consistent rankings of countries is desirable even though incremental changes have occurred in the values of the variables, policy weights, or the data. However, a FAP Procedure should also be responsive to meaningful changes in these variables, policy weights, and data, thereby inducing significant alterations in the relative country priorities or rankings. In this manner, the FAP procedure is stable but still sensitive to meaningful changes.

3.2 Definitions of Terms

Consistent country rankings are defined by the results of Students' t-Tests for differences between means. These means of paired data are not statistically different than those FPV rankings provided by the Food Aid Priority procedure with variable values given in Appendix IX, and the policy weights discussed in Section V.2.5.2 of the text. These are the initial rankings generated. Sets of rankings that meet

this criterion are termed minor reorderings in the ensuing discussions. Major reorderings are correspondingly those rankings for which there are statistically significant differences from the initial FPV ranking.

There are statistical limitations to this approach, however. When a number of Students t -tests are performed, the probability of accepting null hypotheses that are false increases. In short, the power of the test decreases. In addition, the dividing line between significant and non-significant results may be quite small. For example, the difference in one case examined in the sensitivity analysis was approximately 0.01.

3.3 Minor Reorderings

Minor reorderings of country Food Aid Priority rankings occur with incremental positive or negative changes in policy weights. These indicate that the unavoidable degree of subjectivity inherent in the effectiveness variables and policy weights does not produce a statistically significant difference from the initial ranking. In addition, incremental positive or negative changes over time in the underlying country conditions which lead to the values selected for the effectiveness variables are explicitly considered.

Minor reorderings of country rankings with positive and negative increments in the data used for per capital Gross National Product (GNP) and food gap, the two need variables, more efficiently and directly analyzes the changes over time in these two relatively objective variables than does a change in their policy weights alone. In addition to analyzing changes, a sensitivity analysis of data provides allowance for the inaccuracies inherent with gross national aggregates such as GNP. Furthermore,

yearly revisions are not always available. A sensitivity analysis of this type explicitly analyzes the impact of this source of error upon the country priority rankings and determines if the alterations in relative rankings are statistically significant.

In summary, minor reorderings of Food Aid Priority country rankings indicate that differences in opinions concerning the relatively subjective policy weights and effectiveness variables, errors in the data employed, incremental changes (either positive or negative) over time of both the data and variables, all do not have a statistically significant effect upon country rankings in relation to the initial FPV rankings. Finally, minor reorderings of country FAP rankings imply increased inter-temporal stability in food aid allocation and consequent programming. Consequently, both recipients and donors can undertake longer run planning and programming.

3.4. Summary

This section discussed the desired characteristic of sensitivity and stability in the Food Aid Priority procedure. A FAP procedure that allows for major reorderings with meaningful changes in the underlying conditions while simultaneously providing relative stability (minor reorderings) for incremental changes (either positive or negative) in the values of the two need and three effectiveness variables, policy weights, the empirical data, and functional forms, was shown to be optimal. Definitions of major and minor reorderings were also given. The next section discusses the types of changes made for the sensitivity analysis in the policy weights, data, and functional form.

4. Types of Changes Made

This section examines the types of changes made in the values of

199

the policy weights, data, and functional form of the Food Aid Priority procedure. Rationales for these changes are discussed as well.

4.1. Changes in Policy Weights

This subsection first discusses changes in policy weight values from a relatively theoretically perspective. An explanation of the relevant portions of Table 1 follows.

4.1.1. Theoretical Discussion

The effects of changes in policy weights include the effects of these changes for the values of the need and effectiveness variables considered correct. In addition, changes in policy weights can de facto represent changes in the effectiveness variables. Therefore, the results of changes in effectiveness variables are implicitly incorporated in the sensitivity analysis. Four relationships are thus examined by a change in policy weights: (i) changes in policy weights with the initial effectiveness variables values intact; (ii) changes in the values of effectiveness variables with the initial policy weight values intact; (iii) simultaneous changes in the values of both policy weights and effectiveness variables; (iv) changes in the values of policy weights for the two need variables with the values of the need variables unchanged.

A number of different combinations of the policy weight values are possible. All combinations can be classified into two types: positive or negative changes in any single policy weight value with all other policy weights held constant at the initial values selected for the FAP procedure actually employed; or positive and negative simultaneous changes in more than one policy weight. All policy weights other than those for GNP (a special case, more extensively discussed in Appendix VII) were increased and decreased from the initial values. In addition, the policy weights for agricultural policy, financial performance, and commitment (the three effectiveness variables) were increased and decreased by twenty percent.

197

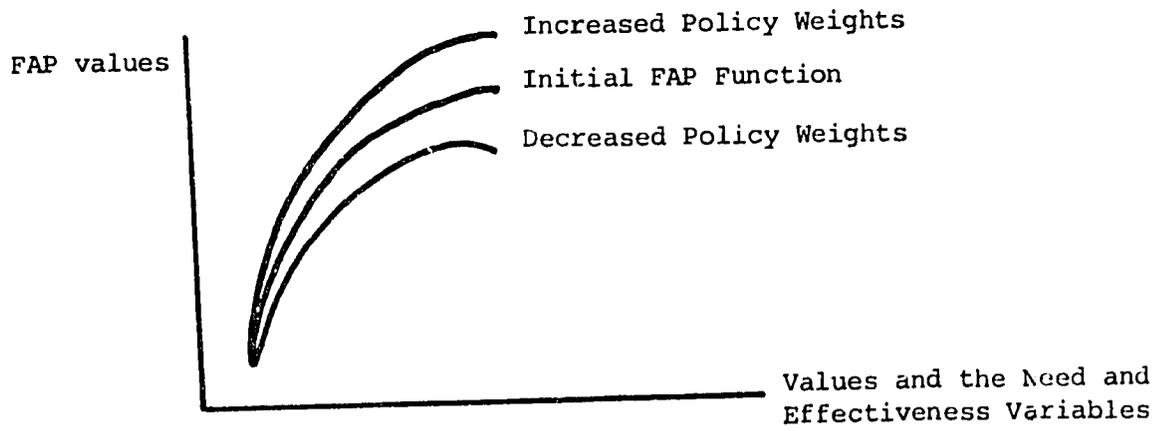
Thus, both relatively substantial and incremental changes were adopted.

Changes in the values of individual policy weight values with the values of all other policy weights held constant at their initial level allows the separate effect of each policy weight to be examined. If more than one policy weight value is changed at a time, then the combined effect of the changes upon the FAP country values and rankings is examined.

Changes in policy weight values, either on an individual or combined basis, change the rate of increase of the FAP procedure function. As one or more of the policy weight values increase, the rate of increase of the FAP function initially adopted is also augmented. Furthermore, as one or more of the policy weight values decrease, the rate of increase of the FAP function initially adopted is also diminished. The following diagram illustrates these effects with reference to the initial FAP procedure. Although the FAP function has a multidimensional surface, a two-dimensional diagram satisfactorily illustrates the essential characteristics.

VIII-7a

Figure 1
Effects of Changes in Policy Weight Values Upon
FAP Values



The FAP function adopted has specific desirable properties for food aid allocation (see Appendix VI, Section 1.5.). Since this nonlinear function increases at a decreasing rate (positive partial first derivatives for all but food gap and negative partial second derivatives for all variables) greater proportional food aid priority is given to countries with lower values for the need and effectiveness variables.¹ Increases in the values of policy weights reduce the greater proportional allocation to lower valued countries, whereas decreases in policy weight values increase their greater proportional priority.

4.1.2. Explanation of Table 1

Table 1 presents the effects of selected changes in the values of policy weights upon FAP country ranking. Changes in the values of the data and functional form initially utilized are not considered. Column 1 provides the rankings resulting from the policy weight values, data, and functional form actually employed in the FAP procedure. This column is subsequently used as the control to which the rankings resulting from changes in policy weight values are compared.

Columns 2-4 of Table 1 provide the FAP country rankings resulting from positive and negative changes in the Food gap policy weight (PWFGPU). All other policy weight values are held constant at their initial level. The policy weight was first decreased by one hundred percent, then increased from the initial value of - 1.0, twice. The first increase of one hundred percent still maintained a negative value. However, the second increase -- two hundred percent above the initial value - brought the value into the positive range.

¹See Section 1 of Appendix VI

202

Columns 5-8 of Table 1 represent positive and negative substantial and incremental changes in the agricultural policy performance policy weight. All other policy weights are held constant at their initial level. The value was increased and decreased by both twenty and one hundred percent. Columns 9-12 give similar changes for the financial policy weight. Columns 13-16 provide the same changes for the commitment policy weight. Column 17 provides the rankings that result if the alternative value of \$800 is adopted for per capita GNP with all other policy weight values held constant. Section 4.1.1. of Appendix VII discusses the rationale for this change.

The remaining columns of Table 1, (columns 18-28), provide the rankings that occur with changes in more than one policy weight value. A large number of combinations are potentially possible. Consequently, only a few representative changes were implemented.

4.2. Changes in Need Variable Data

This subsection first discusses changes in the values of data from a theoretical perspective. An explanation of the relevant portions of Table 2 follows.

4.2.1. Theoretical Discussion

Changes in the values of the data used for the two need variables, per capita GNP and food gap, cause a corresponding change in the FAP country values and their rankings. The importance for an analysis of changes in only the need variables data was presented in Section 3.3. of this appendix. Changes can be made either in the data for each need variable separately or simultaneously. Changes in the values of either per

VIII-10

capita GNP or food gap for all thirty-eight countries with the other variable's thirty-eight values held constant at their initial values allows the separate effect to be considered. If the data was changed for both variables simultaneously, then the combined effect of the changes upon the FAP country values and rankings is examined.

Variable values are first changed by ten percent for both per capita GNP and food gap. A change of this magnitude, either positive or negative, represents a substantial change in the values of data. A ten percent change more than sufficiently incorporates the worst possible cases of faulty and changing data. For example, per capita GNP may only have been available for 1977 instead of 1978 as well as initially underestimated. A ten percent decrease adequately compensates. The country per capita GNP values are also increased and decreased by 3.224%. This percentage change is a weighted average of the most recent available growth (either increase or decrease) in per capita GNP for the thirty-eight countries. The percentage change in per capita GNP for each country was multiplied by its proportion of the total population for these thirty-eight countries. The resulting thirty-eight values were then summed to give 3.224%, a weighted average. Thus, a 3.224% increase provides a simple but reasonable estimate of the 1979 per capita GNP for each of the thirty-eight countries in Sub-Saharan Africa. The resulting changes in FAP country values and rankings were then noted. In this context, the ten percent increase in per capita GNP provide an estimate of country per capita GNP in 1981 based upon a compounded constant growth rate of 3.224% from a base year of 1978. A decrease of 3.224% allows an examination of the effects of negative per capita growth upon FAP country values and rankings. Negative per capita growth includes the effects of decreased total GNP and/or increased total population.

204

4.2.2. Explanation of Table 2

Table 2 presents the effects of selected changes in the values of the two need variables data upon the FAP country rankings. Changes in the values of policy weights and functional form are not considered. Column 1 provides the FAP country rankings resulting from the policy weight values, data, and functional form actually employed in the FAP procedure. Column 1 is used as a control. Changes in the FAP country rankings result from changes in the need variable data. These new FAP rankings are compared with the control column through the use of Students' t-test Statistics.

Columns 2 and 3 present the FAP country rankings that occur with ten percent positive and negative rates of per capita GNP growth respectively. All other data, policy weights, and functional form are held constant at their initial levels (given in Column 1 of Table 1). Columns 4 and 5 present the FAP country rankings resulting from ten percent positive and negative rates of food gap change (uniform distribution of country population), respectively. All other data, policy weights, and functional form are again held constant. Columns 6, 7, 8, and 9 present the FAP country rankings that occur with the four possible combinations of positive and negative ten percent simultaneous changes in both per capita GNP and food gap. Finally, columns 10 and 11 provide the FAP country rankings resulting from the positive and negative 1978 growth rate of 3.224% for per capita GNP. All other data, policy weights, and functional form are again held constant at their initial values.

4.3. Changes in FAP Procedure Functional Form

This subsection first discusses changes in the values of the FAP procedure functional form from a theoretical prospective. An explanation of the relevant portions of Table 3 follows.

4.3.1. Theoretical Discussion

Changes in the FAP procedure functional form cause a corresponding change in the FAP country values and their subsequent food aid priority rankings. The importance and implications of the FAP procedure functional form was discussed in Appendix VI, Section 1. The functions compared were exponential multiplicative (the FAP procedure adopted) and linear additive. The latter function would provide a simple weighted average and allocate food aid on a strictly linear basis. A sensitivity analysis of FAP country rankings was also effected for a non-exponential multiplicative functional form, called linear multiplicative for the purposes of this study. In this case, policy weights are utilized as simple coefficients for each of the five variables rather than as exponents as in the FAP procedure case. However, like the FAP procedure function, all variables and their policy weights are multiplied together.

4.3.2. Explanation of Table 3

Table 3 presents the effects of selected changes in the FAP procedure functional form. Column 1 provides the FAP country rankings given by the FAP procedure initially adopted for the study. This column is used as the control from which the FAP country rankings resulting from changes in functional form are compared by Students' t-test statistics for paired data. Column 2 presents the FAP country rankings that occur with a simple linear additive FAP procedure. Column 3 presents the FAP country rankings that occur with what is termed a linear multiplicative function. In both cases,

206

policy weights and data are held constant at their initial values.

5. Sensitivity Analysis Results

5.1. Organization

This section discusses the results obtained from the sensitivity analyses of the FAP rankings. Comparisons were made between the rankings as a result of the sensitivity analyses and the ranking obtained from the FAP procedure, policy weights, and data adopted for this study. Student's t-tests of paired means between each ranking and the initial FAP ranking provide the method and criterion for evaluating whether a difference exists or not. The bottom of each column in each table provides the computed t-test statistic and the test of significance results. The following discussion first examines the results for changes in policy weights, followed by changes in data and functional form.

5.2. Changes in Policy Weights

Reference to Table 1 indicates that statistically significant results are obtained in only two cases. Both of these instances are extreme cases as well. The results show that the unavoidable subjectivity inherent in the effectiveness variables and policy weights do not produce a statistically significant difference from the initial ranking, except in the most extreme cases. Further, the incremental changes over time expected in the effectiveness variables do not produce statistically significant effects except, again, in the most extreme cases. Given the evolving nature of food aid

in Sub-Saharan Africa, these results are particularly fortunate. Food aid predicated upon a socio-economic rationale requires consistent, relatively stable programming if favorable project design, implementation, and results are to be attained. Erratic food aid financing, like all erratic sources of foreign exchange earnings or development financing, place severe pressures upon the prospects of successful projects. Thus, minor reorderings predominate with all but the most extreme changes in policy weights, data and functional form held constant.

5.3. Changes in Data

Reference to Table 2 indicates that only minor reorderings of FAP country rankings are obtained. Again, these results imply that only extreme changes in the underlying food aid economic conditions will lead to major reorderings. Further, the results indicate that such factors as economic growth, usage of aggregate national statistics such as food gap or per capita GNP, and unavailable yearly revisions in these aggregate indicators do not seriously hamper food aid allocation. The requisite stability for sound food aid allocation and projects exists.

5.4. Changes in FAP Procedure Functional Form

Reference to Table 3 indicates that only minor reorderings of FAP country rankings are obtained with the two changes in functional form analyzed. These results indicate that only more extreme changes than the ones considered will lead to major reorderings of country rankings. As a consequence, the desired theoretical properties of the FAP procedure functional form discussed in Section 1.5. of Appendix VI are empirically proven to be satisfactory.

6. Summary and Conclusions of the Sensitivity Analysis

A sensitivity analysis of the Food Aid Priority country rankings has been made with respect to different values of the policy weights for both need and effectiveness variables, the data for need variables, and the functional form for the FAP procedure. The FAP procedure for ranking the thirty-eight Sub-Saharan African countries for food aid by the two need and three effectiveness variables was found to provide the desired degree of stability in food aid priorities. Statistically significant differences in country rankings were produced only in the more extreme cases of changes in policy weights, data, or functional form.

The FAP procedure is stable, but still sensitive to meaningful changes. The minor reorderings of country Food Aid Priority rankings obtained indicate that the unavoidable degree of subjectivity inherent in the FAP procedure does not produce statistically significant differences from the initial ranking. Incremental positive changes in the need and effectiveness variables do not provide statistically significant differences as well. Further, the inaccuracies expected with gross national aggregates such as Gross National Product and the absence of yearly revisions in information generally produce only minor reorderings in country Food Aid Priority rankings. Finally, the FAP procedure functional form with its desirable allocative properties is empirically shown to be satisfactory.

TABLE 1
SENSITIVITY ANALYSIS OF POLICY WEIGHTS

COLUMN:	1	2	3	4	5	6	7	8	9
POLICY WEIGHT:									
PWFGPU	-1.0	-2.0	0.0	1.0	-1.0	-1.0	-1.0	-1.0	-1.0
PWAP	0.5	0.5	0.5	0.5	1.0	0.6	0.4	0.0	0.5
PWFN	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0
PWCM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PWS = 5361.428									
PWT = 8.9357									
COUNTRY:									
ANGOLA	31	17	33	34	31	31	31	29	32
BENIN	29	17	27	26	29	29	28	25	30
BOTSWANA	16	09	20	22	15	15	15	16	14
BURUNDI	10	09	05	01	08	10	10	11	08
CAMEROON	23	17	21	20	22	22	24	24	21
CAPE VERDE	09	09	13	18	12	09	09	07	13
CEN.AFR.EMP.	17	17	16	15	16	17	18	18	16
CHAD	05	03	05	10	05	05	05	06	06
COMOROS IS.	19	17	17	14	17	19	19	19	18
CONGO	36	34	36	36	30	36	36	36	36
ETHIOPIA	01	01	01	04	01	01	01	01	01
GAMBIA	14	17	12	05	13	13	14	15	12
GHANA	27	17	29	29	26	27	27	30	24
GUIENA	23	17	25	25	27	24	23	21	26
GUIENA BIS.	11	09	09	03	09	11	11	12	15
IVORY COAST	38	38	38	38	38	38	38	38	38
KENYA	12	09	10	06	11	12	12	14	10
LESOTHO	15	09	15	11	14	14	15	16	17
LIBERIA	33	17	32	31	32	33	33	33	29
MADAGASCAR	21	17	18	16	20	21	21	23	20
MALAWI	13	09	13	12	18	15	12	10	11
MALI	08	03	11	17	10	08	08	03	09
MAURITANIA	26	17	26	28	24	26	26	28	28
MOZAMBIQUE	17	09	22	23	21	18	17	13	23
NIGER	04	03	02	02	04	04	04	04	02
NIGERIA	28	17	28	27	28	28	28	31	22
RWANDA	06	03	05	07	06	06	06	08	03
SENEGAL	34	34	33	30	34	34	34	34	34
SIERRA LEO.	25	17	23	21	23	25	25	27	27
SOMALIA	03	03	03	08	03	03	03	04	05
SUDAN	32	17	31	32	33	32	32	32	33
SWAZILAND	37	34	37	37	37	37	37	37	37
TANZANIA	07	03	08	09	07	07	07	08	07
TOGO	20	17	19	19	19	20	20	21	19
UGANDA	29	17	30	33	30	30	28	25	30
UPPER VOLTA	02	02	03	13	02	02	02	02	04
ZAIRE	22	17	24	24	25	23	22	20	25
ZAMBIA	35	34	35	35	35	35	35	35	35
VALUE OF t									
TEST STATISTIC	N/A	6.41	0.323	0.034	0.233	0.961	0.813	0.077	0.143
TEST OF									
SIGNIFICANCE	N/A	***							

* = STATISTICALLY SIGNIFICANT AT 10%

** = STATISTICALLY SIGNIFICANT AT 5%

*** = STATISTICALLY SIGNIFICANT AT 1%

TABLE 1
SENSITIVITY ANALYSIS OF POLICY WEIGHTS

COLUMN:	1	10	11	12	13	14	15	16	17
POLICY WEIGHT:									
PWFGPU	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
PWAP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
PWFN	0.5	0.6	0.4	0.0	0.5	0.5	0.5	0.5	0.5
PWCM	0.5	0.5	0.5	0.5	1.0	0.6	0.4	0.0	0.5
PWS = 5361.428									484258
PWT = 8.9357									6.0532
COUNTRY:									
ANGOLA	31	31	31	28	31	31	31	31	29
BENIN	29	29	27	26	29	29	30	29	32
BOTSWANA	16	15	17	22	10	13	16	20	08
BURUNDI	10	10	11	15	14	11	09	07	13
CAMEROON	23	22	24	29	21	22	23	26	21
CAPE VERDE	09	09	09	09	08	09	08	11	10
CEN.AFR.EMP.	17	17	18	25	19	18	17	13	17
CHAD	05	05	04	04	06	05	05	06	05
COMOROS IS.	19	18	19	17	20	19	19	16	20
CONGO	36	36	36	36	36	36	36	36	37
ETHIOPIA	01	01	01	01	01	01	01	01	01
GAMBIA	14	14	15	21	17	16	14	12	15
GHANA	27	28	27	31	27	27	27	25	24
GUIENA	23	24	23	14	21	22	23	26	25
GUIENA BIS.	11	11	10	11	11	10	11	13	12
IVORY COAST	38	38	38	38	38	38	38	38	38
KENYA	12	12	12	16	12	12	12	15	11
LESOTHO	15	16	13	12	13	14	15	17	14
LIBERIA	33	33	33	34	33	33	33	33	31
MADAGASCAR	21	21	21	24	23	21	21	18	22
MALAWI	13	13	14	20	16	15	12	09	16
MALI	08	08	08	06	07	08	07	08	09
MAURITANIA	26	26	26	19	26	26	26	24	27
MOZAMBIQUE	17	19	15	08	15	17	18	19	19
NIGER	04	03	05	07	05	04	04	04	03
NIGERIA	28	26	30	32	28	28	28	26	23
RWANDA	06	06	07	10	09	07	06	02	07
SENEGAL	34	34	34	33	33	34	34	34	34
SIERRA LEO.	25	25	25	18	25	25	25	23	28
SOMALIA	03	04	03	03	04	03	03	04	04
SUDAN	32	32	32	30	32	32	32	32	33
SWAZILAND	37	37	36	37	37	37	37	37	35
TANZANIA	07	07	06	05	03	06	07	09	06
TOGO	20	20	20	22	18	20	20	22	18
UGANDA	29	29	27	26	30	30	29	29	29
UPPER VOLTA	02	02	02	02	02	02	02	03	02
ZAIRE	22	23	22	13	24	24	22	21	26
ZAMBIA	35	35	35	35	35	35	35	35	36
VALUE OF t		-0.240	0.702	0.073	0.369	-0.381	0.417	-0.772	-0.243
TEST STATISTIC	N/A								
TEST OF SIGNIFICANCE	N/A								

* = STATISTICALLY SIGNIFICANT AT 10%
 ** = STATISTICALLY SIGNIFICANT AT 5%
 *** = STATISTICALLY SIGNIFICANT AT 1%

211

TABLE 1
SENSITIVITY ANALYSIS OF POLICY WEIGHTS

COLUMN:	1	18	19	20	21	22	23	24	25
POLICY WEIGHT:									
PWFGPU	-1.0	-2.0	-1.0	0.0	1.0	-2.0	-1.0	0.0	1.0
PWAP	0.5	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
PWFN	0.5	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
PWCM	0.5	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
PWS = 5361.428									
PWT = 8.9357									
COUNTRY:									
ANGOLA	31	27	32	34	34	01	21	28	30
BENIN	29	27	30	31	31	13	16	15	11
BOTSWANA	16	07	08	11	14	13	29	31	34
BURUNDI	10	12	10	07	03	13	13	05	01
CAMEROON	23	20	20	20	19	13	30	29	28
CAPE VERDE	09	11	13	16	21	01	07	09	15
CEN.AFR.EMP.	17	15	16	14	13	13	25	22	18
CHAD	05	04	06	07	10	01	05	05	14
COMOROS IS.	19	20	19	19	17	13	18	14	04
CONGO	36	36	36	36	36	13	36	36	36
ETHIOPIA	01	01	01	01	02	01	01	01	19
GAMBIA	14	15	14	11	07	13	21	15	06
GHANA	27	24	24	24	24	13	30	30	31
GUIENA	23	24	25	26	27	13	13	20	23
GUIENA BIS.	11	12	11	10	05	13	15	12	02
IVORY COAST	38	38	38	38	38	38	38	38	38
KENYA	12	09	09	04	04	13	26	24	22
LESOTHO	15	12	15	13	11	13	21	20	16
LIBERIA	33	27	29	27	25	13	33	34	32
MADAGASCAR	21	20	21	20	18	13	24	19	05
MALAWI	13	15	17	16	15	13	11	09	03
MALI	08	09	12	15	20	01	03	01	13
MAURITANIA	26	24	27	28	29	13	20	24	27
MOZAMBIQUE	17	18	23	23	26	01	05	11	20
NIGER	04	03	02	02	01	01	10	12	12
NIGERIA	28	20	22	22	22	13	31	32	33
RWANDA	06	08	07	07	08	01	08	05	09
SENEGAL	34	33	33	30	28	13	34	32	29
SIERRA LEO.	25	27	26	25	23	13	18	15	08
SOMALIA	03	04	05	05	09	01	04	01	10
SUDAN	32	33	34	33	32	13	27	26	25
SWAZILAND	37	36	37	37	37	13	37	37	37
TANZANIA	07	04	04	03	06	01	11	15	21
TOGO	20	18	18	18	16	13	28	26	24
UGANDA	29	27	30	32	33	13	16	23	26
UPPER VOLTA	02	02	03	05	12	01	02	01	17
ZAIRE	22	27	28	29	30	01	08	05	07
ZAMBIA	35	33	35	35	35	13	35	35	35
VALUE OF t									
TEST STATISTIC	N/A	1.640	-0.114	0.088	0.030	6.523	0.259	0.589	-0.325
TEST OF SIGNIFICANCE	N/A					***			

* = STATISTICALLY SIGNIFICANT AT 10%
 ** = STATISTICALLY SIGNIFICANT AT 5%
 *** = STATISTICALLY SIGNIFICANT AT 1%

212

TABLE 1
SENSITIVITY ANALYSIS OF POLICY WEIGHTS

COLUMN:	1	26	27	28
POLICY WEIGHT:				
PWFGPU	-1.0	-1.0	-1.0	-1.0
PWAP	0.5	0.6	0.5	1.0
PWFN	0.5	0.6	0.0	0.0
PWCM	0.5	0.6	1.0	0.5
PWS = 5361.428				
PWT = 8.9357				
COUNTRY:				
ANGOLA	31	31	29	29
BENIN	29	29	27	27
BOTSWANA	16	13	13	19
BURUNDI	10	10	18	13
CAMEROON	23	22	24	26
CAPE VERDE	09	09	09	11
CEN.AFR.EMP.	17	17	26	24
CHAD	05	05	05	04
COMOROS IS.	19	18	19	15
CONGO	36	36	36	36
ETHIOPIA	01	01	01	01
GAMBIA	14	14	23	18
GHANA	27	28	31	29
GUIENA	23	23	14	22
GUIENA BIS.	11	11	10	08
IVORY COAST	38	38	38	38
KENYA	12	12	15	14
LESOTHO	15	15	11	12
LIBERIA	33	32	34	34
MADAGASCAR	21	21	25	22
MALAWI	13	16	22	25
MALI	08	08	06	09
MAURITANIA	26	26	21	17
MOZAMBIQUE	17	19	07	10
NIGER	04	03	08	06
NIGERIA	28	27	33	32
RWANDA	06	07	12	07
SENEGAL	34	34	32	33
SIERRA LEO.	25	25	20	16
SOMALIA	03	04	04	03
SUDAN	32	33	30	31
SWAZILAND	37	37	37	37
TANZANIA	07	06	03	05
TOGO	20	20	16	19
UGANDA	29	29	28	28
UPPER VOLTA	02	02	02	02
ZAIRE	22	24	17	21
ZAMBIA	35	35	35	35
VALUE OF t				
TEST STATISTIC	N/A	-0.329	-0.277	0.067
TEST OF				
SIGNIFICANCE	N/A			

* = STATISTICALLY SIGNIFICANT AT 10%
 ** = STATISTICALLY SIGNIFICANT AT 5%
 *** = STATISTICALLY SIGNIFICANT AT 1%

TABLE 2
SENSITIVITY ANALYSIS OF DATA

COLUMN:	1	2	3	4	5	6	7	8
CHANGE IN DATA:								
PCY	0	+10%	-10%	0	0	+10%	-10%	+10%
FGPU (UNIFORM)	0	0	0	+10%	-10%	+10%	-10%	-10%
COUNTRY:								
ANGOLA	31	30	31	31	31	30	31	30
BENIN	29	27	30	29	29	27	30	27
BOTSWANA	16	19	10	15	16	10	11	10
BURUNDI	10	10	11	10	10	10	11	10
CAMEROON	23	25	22	23	23	25	22	25
CAPE VERDE	09	09	09	09	09	09	09	09
CEN. AFR. EMP.	17	17	17	17	17	17	17	17
CHAD	05	05	05	05	05	05	05	05
COMOROS IS.	19	18	19	19	19	18	19	18
CONGO	36	36	37	36	36	36	37	36
ETHIOPIA	01	01	01	01	01	01	01	01
GAMBIA	14	14	14	14	14	14	14	14
GHANA	27	29	27	27	27	29	27	29
GUIENA	23	23	23	23	23	23	24	23
GUIENA BIS.	11	11	11	11	11	11	11	11
IVORY COAST	38	38	38	38	38	38	38	38
KENYA	12	13	11	12	12	13	11	13
LESOTHO	15	15	16	15	15	15	16	15
LIBERIA	33	33	32	33	33	33	32	33
MADAGASCAR	21	21	21	21	21	21	21	21
MALAWI	13	12	14	13	13	12	14	12
MALI	08	08	08	08	08	08	08	08
MAURITANIA	26	26	26	26	26	26	26	26
MOZAMBIQUE	17	16	18	17	17	16	18	16
NIGER	04	04	03	03	04	04	03	04
NIGERIA	28	30	25	28	28	31	25	30
RWANDA	06	06	07	06	06	06	07	06
SENEGAL	34	34	34	34	34	34	34	34
SIERRA LEON.	25	24	27	25	25	24	28	24
SOMALIA	03	03	04	03	03	03	04	03
SUDAN	32	32	33	32	32	32	33	32
SWAZILAND	37	37	36	37	37	37	37	37
TANZANIA	07	07	06	07	07	07	06	07
TOGO	20	20	20	20	20	20	20	20
UGANDA	29	28	29	30	30	28	29	28
UPPER VOLTA	02	02	02	02	02	02	02	02
ZAIRE	22	22	23	22	22	22	23	22
ZAMBIA	35	35	35	35	35	35	35	35
VALUE OF t								
TEST STATISTIC	N/A	-.344	-.620	-.572	-1.00	-.488	-.117	-.172
TEST OF SIGNIFICANCE	N/A							

* = SIGNIFICANT AT 10%
 ** = SIGNIFICANT AT 5%
 *** = SIGNIFICANT AT 1%

214

TABLE 2
SENSITIVITY ANALYSIS OF DATA

COLUMN:	1	9	10	11
CHANGE IN DATA:				
PCY	0	-10%	+3,224%	-3,224%
FGPU (UNIFORM)	0	+10%	0	0
COUNTRY:				
ANGOLA	31	31	31	31
BENIN	29	30	29	29
BOTSWANA	16	10	16	16
BURUNDI	10	11	10	10
CAMEROON	23	22	23	23
CAPE VERDE	09	09	09	09
CEN. AFR. EMP.	17	17	17	17
CHAD	05	05	05	05
COMOROS IS.	19	19	19	19
CONGO	36	37	37	36
ETHIOPIA	01	01	01	01
GAMBIA	14	14	14	14
GHANA	27	27	27	27
GUIENA	23	24	23	23
GUIENA BIS.	11	11	11	11
IVORY COAST	38	38	38	38
KENYA	12	11	12	12
LESOTHO	15	14	15	15
LIBERIA	33	32	33	33
MADAGASCAR	21	21	21	21
MALAWI	13	14	13	13
MALI	08	08	08	08
MAURITANIA	26	26	26	26
MOZAMBIQUE	17	18	17	17
NIGER	04	03	04	04
NIGERIA	28	25	28	28
RWANDA	06	07	06	06
SENEGAL	34	34	34	34
SIERRA LEO.	25	27	25	25
SOMALIA	03	04	03	03
SUDAN	32	33	32	32
SWAZILAND	37	36	37	37
TANZANIA	07	06	07	07
TOGO	20	20	20	20
UGANDA	29	29	29	29
UPPER VOLTA	02	02	02	02
ZAIRE	22	23	22	22
ZAMBIA	22	35	35	35
VALUE OF t		0.486	-1.00	0.0
TEST STATISTIC	N/A			
TEST OF SIGNIFICANCE	N/A			

* = SIGNIFICANT AT 10%
 ** = SIGNIFICANT AT 5%
 *** = SIGNIFICANT AT 1%

215

TABLE 3
SENSITIVITY ANALYSIS OF FUNCTIONAL FORM

COLUMN	1	2	3
FUNCTIONAL FORM	EXPONENTIAL MULTIPLI- CATIVE	LINEAR ADDITIVE	LINEAR MULTIPLI- CATIVE
COUNTRY:			
ANGOLA	31	28	05
BENIN	29	16	08
BOTSWANA	16	31	25
BURUNDI	10	08	36
CAMEROON	23	29	20
CAPE VERDE	09	09	18
CEN.AFR.EMP.	17	22	26
CHAD	05	05	29
COMOROS IS.	19	14	32
CONGO	36	36	03
ETHIOPIA	01	01	37
GAMBIA	14	18	32
GHANA	27	30	15
GUIENA	23	20	12
GUIENA BIS.	11	13	34
IVORY COAST	38	38	01
DENYA	12	25	35
LESOTHO	15	21	28
LIBERIA	33	34	14
MADAGASCAR	21	19	21
MALAWI	13	10	24
MALI	08	03	19
MAURITANIA	26	24	10
MOZAMBIQUE	17	11	12
NIGER	04	12	38
NIGERIA	28	32	17
RWANDA	06	06	30
SENEGAL	34	33	11
SIERRA LEO.	25	17	16
SOMALIA	03	04	30
SUDAN	32	26	07
SWAZILAND	37	37	02
TANZANIA	07	15	33
TOGO	20	26	23
UGANDA	29	23	06
UPPER VOLTA	02	02	27
ZAIRE	22	07	09
ZAMBIA	35	35	04
VALUE OF t			
TEST STATISTIC	N/A	-0.1607	0.210
TEST OF			
SIGNIFICANCE	N/A		

* = SIGNIFICANT AT 10%
 ** = SIGNIFICANT AT 5%
 *** = SIGNIFICANT AT 1%

2/16