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REPORT ASSESSING GLOBAL FOOD PRODUCTION AND NEEDS AS OF APRIL 15, 1979

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U.S. Department of Agriculture

Economics, Statistics, and Cooperatives Service

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REPORT ASSESSING GLOBAL FOOD PRODUCTION AND NEEDS 1/ as of April 15, 1979

ABSTRACT

This study's assessment of global food production and needs suggests that the lowest income countries' unmet food needs are quite large relative to their indigeneous food production and many times greater than the largest food aid transfers on record. The study suggests that accelerated growth in indigeneous food production, increased export earnings to allow larger commercial imports, and more uniform distribution of food supplies across population groups within countries over a number of years is needed if food needs are to be met.

The food needs and financial data and production performance indicators cited in the study also suggest that the most serious unmet food needs are concentrated in the poorest third of the lowest income countries and that the method of distributing food aid to meet unmet needs is as important as the amount of aid distributed.

PREFACE

The following study was prepared in the International Economics Division of the Economics, Statistics, and Cooperatives Service in the spring of 1979 to meet the annual reporting requirements of the 1977 International Development and Food Assistance Act. The report was prepared by the Division's country and functional specialists under the general direction of Patrick O'Brien. The outlook portions of the text incorporate information available through the end of April; the longer term sections of the report incorporate data from 1960 through 1978.

Washington, D.C., 20250

October 1979

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

6 JUN 1979

TO THE CONGRESS OF THE UNITED STATES:

In accordance with the provisions of section 408(b) of Public Law 480, I am pleased to transmit the fiscal year 1979 global assessment report. The report fulfills the requirements of the law and responds to congressional wishes for a report assessing world food production and needs to serve as a reference document for future program planning under title I of the law.

BOB BERGLAND
Secretary of Agriculture

REPORT ASSESSING GLOBAL FOOD PRODUCTION AND NEEDS 1/
As of April 15, 1979

Introduction

This report responds to provisions of Public Law 480 2/ (as amended by the International Development and Food Assistance Act of 1977) stipulating that the President submit an annual global assessment of food production and needs to Congress.

The report pays particular attention to the food production and needs of the lowest income countries in keeping with related provisions of Public Law 480 providing that at least 75 percent of the food aid provided under Title I be allocated to countries that: (1) meet the International Development Association's poverty criterion, currently defined as 1977 per capita gross national products of less than $580, and (2) are also unable to meet their immediate food needs from domestic production or commercial imports. Countries with 1977 per capita gross national products of less than $580 are referred to in this report as lowest income countries or LIC's. 3/ The designation of a country as an LIC does not imply in and of itself that a country is unable to meet its immediate food needs through either domestic production or commercial imports. Neither does the exclusion of a country from the LIC grouping imply no need for aid.

Summary

The materials that follow fall into two broad units. The first unit--made up of Parts I through IV--deals with the general questions of the LIC's food needs, their recent food production performance, their capacity to import food commercially, and U.S. and international policy developments related to food aid. The second unit, Part V, deals with the 1978/79 situation and the 1979/80 outlook in greater country-specific detail. A brief summary of each part follows.

1/ Report prepared by the International Economics Division of the Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture.

2/ See P.L. 480 section 408(b).

3/ See page 2 for a listing of individual LIC's and regional aggregates used in the body of the report.

Part I, Food Needs, evaluates alternative measures of the LIC's unmet 1976-78 food needs. The measures evaluated vary widely and suggest LIC unmet food needs ranging from the equivalent of as low as 39 to as high as 225 million tons of wheat, depending on the method used and the provision made for interannual variations and skewed distribution of food supplies across countries and across population groups within countries.

The ranking of the individual LIC's according to the severity of their unmet food needs does not change noticeably from measure to measure. A full third of the LIC's--including Afghanistan, Cambodia, Ethiopia, Angola, Chad, Upper Volta, Mali, Botswana, Niger, Uganda, the Cape Verde Islands, Mozambique, and Rwanda--report general, debilitating unmet food needs severe enough to warrant classification as malnutrition. The remaining LIC's report varying degrees of generalized undernutrition and localized malnutrition due as much to the skewed distribution of food supplies as to the overall inadequacy of per capita food supplies.

Part I concludes that the size of the LIC's unmet food needs is so great that an all-out effort to increase production in the LIC's themselves--rather than massive transfers of aid from the rest of the world--is necessary. The materials presented in Part I also indicate, however, that relatively small amounts of food--possibly 25 million tons of food grains--distributed directly to the most seriously affected people in the poorest 20 to 30 LIC's could meet the LIC's most serious unmet food needs. Meeting unmet food needs in this case becomes as much a food distribution problem as a food supply problem. If provided as food aid, the cost of such a target distribution food aid program to both donor and recipient countries would have to be balanced against the opportunity cost of alternative development uses of the same resources. Analysis of this scope is beyond the intent of this report.

Part II, Food Production Performance, reports on food production in 1978/79 and the outlook for 1979/80. The materials include indices measuring changes in total food production as well as more detailed situation and outlook statements for grains, oilseeds, and non-fat dry milk--the major products donated as food aid. The section notes that world 1978/79 food production reached an all-time high more than 4 percent above the record levels of a year earlier. Production increases in 1978/79 are particularly notable in that they were unusually well distributed across developed, centrally planned, and developing countries. No major region of the world reported significant production shortfalls. Moreover, 1978's excellent harvests follow good to excellent 1976 and 1977 harvests and large stock build-ups. Hence, food stocks carried over into 1978 were near all-time highs suggesting that the supplies of food available for consumption in 1978 and early 1979 are also record large.

The good to excellent harvests and stock build-ups reported from 1976 to 1978 have been more than adequate to offset tight 1972, 1974, and 1975 supplies and to raise growth in supply over the 1970's to date above the trend for the 1950's and 1960's. However, the trend for the last 25 years provides for little improvement in per capita supplies in the developing

countries, particularly in the LIC's. While 10-25 percent above recent 1972-75 lows, per capita food supplies in the LIC's appear to be only slightly above the levels of the late 1960's and early 1970's--despite continued large food imports more than double the quantities imported as recently as a decade ago. Moreover, build-ups in stocks in many LIC's--while per capita consumption levels continue to lag below recommended minimums--suggest that low incomes, and hence weak effective demand, rather than short supplies has become the major impediment to improving LIC diets.

Part III, Financial Situation and Outlook, assesses recent changes in the financial capacity of the LIC's to import food commercially. A review of the LIC's economic growth, trade balance, reserve, and debt situation suggest small improvements in the LIC's overall financial position. The marginal financial improvements reported in 1977 and 1978 can be misleading--particularly if taken as an indication of any marked increase in the LIC's capacity to finance commercial food imports. Recent improvements in many of the LIC's economic growth rates depended to an even greater extent than in the past on agricultural production windfalls or short-lived booms in a few key export products, rather than on balanced, economy-wide growth. Trade balances have also been improving due, at least in part, to cutbacks in key development imports. Reserve build-ups also reflect many LIC's increased borrowing specifically to improve their short-term credit position as well as their increased use of loans rather than reserve draw downs to finance trade deficits.

Moreover, distribution of the financial gains noted over 1976 to 1978 has been such that only a small group of LIC's--including Nigeria, Indonesia, Chana, India, Liberia, and the Philippines--are in a significantly stronger position to import food commercially. Several LIC's--including Bangladesh, Chad, Mali, Pakistan, Cameroon, and Upper Volta--report significant deterioration in their capacity to finance food imports commercially. The bulk of the LIC's, however, do not appear to be significantly better off or significantly worse off than in the recent past.

Part IV, Policy Developments, reports on U.S. and international food aid related policy developments. Among the national policy developments noted are continuing consideration of the Administration's International Emergency Wheat Reserve proposal and the successful negotiation of the first three P.L. 480 Title III Food for Development Programs. Among the international developments noted is the outcome of efforts to negotiate a Wheat Trade Convention and Food Aid Convention.

Part V, Country Statements, reviews the 1978 situation and 1979 outlook in individual LIC's. Statements are also included on other developing countries facing abnormal food shortages or unfavorable crop conditions. The aid needs noted in Part V are based on estimates of production, stocks, and imports and on estimates of the developing countries' capacity to absorb added food supplies without disrupting their own agricultural economies or overloading their limited physical infrastructures. Consequently, the aid needs described in Part V fall

far short of the supplies necessary to meet the basic human needs noted in Part I.

General Conclusions

This study's assessment of world food production and needs--more particularly the food production and needs of the lowest income countries--points out the following general conclusions. First, while small relative to world food production and trade, the LIC's unmet food needs are large relative to their indigeneous food production and many times larger than the largest food aid transfers on record. Given the LIC's limited foreign exchange, any short-term effort to fill a significant portion of their unmet food needs would depend on improbably large food aid transfers. Even should the donor countries agree to such large aid transfers, there are serious questions regarding the LIC's capacity to absorb large increases in food supplies without totally disrupting their own agricultural economies. Effective market demand for food appears to be substantially weaker than the theoretical nutritional demand norms used to calculate food needs. Accelerated growth in domestic production, increased export earnings to allow larger commercial imports, substantial growth in effective demand, and more uniform distribution of food supplies in the LIC's themselves over a relatively long period of time--as well as larger food aid transfers--are necessary if the food needs calculated in Part I of this study are ever to be met.

Second, a review of the food needs data, the financial data, and the production performance data referred to above suggests that the most serious food aid needs are heavily concentrated in two dozen countries. Meeting the food aid needs of the most seriously affected countries would require record large aid donations of up to 25 million tons as well as an equally impressive restructuring of aid distribution to provide for target distribution of any increase in food supplies directly to the malnourished. Such a program would require substantial investment in both donor and recipient countries quite likely at very high opportunity costs.

In closing, a number of caveats need to be noted. The approach used in several sections of this report are subject to debate. There are also a number of important data limitations. The accuracy of LIC data is suspect, particularly in the case of aggregate performance measures built on a number of production, consumption, trade, and stock estimates. Consequently, many of the calculations presented in this report should be treated as broad directional indicators rather than as precise measurements.

Note: The Lowest Income Countries reported on in the following materials are grouped as follows:

-South Asian LIC's---Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka

-East Asian LIC's---Burma, Indonesia, Philippines, and Thailand
-Communist Asian LIC's---Cambodia, People's Republic of China, Laos, and Vietnam
-North African/Middle Eastern LIC's---Egypt, Morocco, the Yemen Arab Republic, and the People's Democratic Republic of Yemen
-Sudano-Sahelian LIC's---the Central African Empire, Chad, Ethiopia, Mali, Mauritania, Niger, Somalia, Sudan, Upper Volta, and the Cape Verde Islands
-Central and West African LIC's---Angola, Benin, Cameroon, the Congo, Gambia, Ghana, Guinea, Guinea-Bissau, Equitorial Guinea, Ivory Coast, Liberia, Nigeria, Senegal, Sierra Leone, Togo, and Zaire
-East African LIC's---Botswana, Burundi, Comoros, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Rhodesia, Rwanda, Swaziland, Tanzania, Uganda, and Zambia
-Latin American LIC's---Bolivia, El Salvador, Grenada, Haiti, and Honduras

Part I. Food Needs

The following materials evaluate alternative measures of the LIC's unmet 1976-78 food needs. The measures evaluated vary widely and suggest unmet needs ranging from the equivalent of as low as 39 to as high as 225 million tons of wheat depending on the method used and the provision made for secondary problems of inter-annual variability and skewed distribution of food supplies. All of the measures indicate, however, that unmet needs are heavily concentrated in the poorest third of the LIC's. All of the measures also indicate that the LIC's unmet food needs problem is so large as to require an all-out effort to increase production, to stimulate effective demand, and to distribute food supplies more uniformly in the LIC's themselves rather than food aid transfers from the donor countries. The materials that follow conclude, however, that relatively small amounts of food aid distributed directly to the most seriously malnourished segments of the population in the two dozen poorest LIC's could ease the malnutrition problem significantly.

I. Introduction

Growing concern about meeting basic human needs in the developing countries has resulted in the gradual reorientation of a number of national and international aid and development programs. Among the most notable shifts in focus in aid programs to date are 1975 and 1977 revisions in the U.S. food aid program aimed at strengthening the importance of unmet basic human food needs in the allocation of P.L. 480 Title I aid. 1/ However, subsequent efforts to program food aid with greater emphasis on unmet food needs have been complicated by serious data and definitional questions as well as organizational and cost effectivenesss considerations. For although there is general agreement on the importance of strengthening the needs criteria in the allocation of food aid, there is little agreement on the definition and measurement of food needs, on the appropiate modification of existing aid programs to increase the effectiveness of aid transfers in meeting unmet food needs, and on implications for overall development objectives.

The materials that follow concentrate on evaluating alternative measures of unmet LIC food needs and, in so doing, providing input for use in pro-

1/ See Agricultural Trade, Development and Assistance Act of 1954 as amended through October 1, 1977.

gramming 1979 aid transfers. Included are data on recommended food intake minimums and historical data, rates of growth, and measures of interannual variability in per capita caloric food supplies for the LIC's for 1961-1978 period. Alternative measures of the LIC's average 1976-78 unmet food needs are included to provide some notion of their relative severity and the concentration of the problem in the 20-30 poorest countries. The materials also include notes on (1) the impact of skewed distribution of food supplies, and (2) the organizational structures needed in donor and recipient countries to maximize the effectiveness of food aid transfers. Part I closes with a ranking of the LIC's according to the severity of their average 1976-1978 unmet food needs.

II. Measuring Unmet Food Needs

A. Definitions

Much of the current debate over the adequacy of food supplies and the severity of unmet food needs in the developing countries centers on questions of establishing food intake minimums and estimating actual intake levels. Adequate per capita food supplies can be defined in the most general of terms as the minimum food supplies necessary to allow normal activity and good health in adults, and to permit children to reach their potential body weight in the absence of disease. Quantitatively or qualitatively inadequate per capita food supplies generate first undernutrition and, if persistent and severe enough, physically debilitating malnutrition.

More precise estimates of the calorie, protein, and fat make-up of food intake minimums are difficult to calculate and continue to change drastically as knowledge of nutrition and metabolism improve. 2/ The lack of definitive information on the influence of anthropomorphic and physical activity factors on minimum requirements, or on the distribution of individual needs about reference averages leaves estimates of precise minimums open to question.

The problem of establishing minimums has been simplified somewhat by the findings of several recent empirical studies suggesting that diets meeting quantitative calorie minimums are likely to meet qualitative minimums as well--with the possible exception of diets heavily dependent on low protein foods such as starchy roots, tubers, and plantains. Consequently, for the largely reporting purposes of this report, the country-specific minimum caloric requirements established by the United Nations

2/ Note, for example, estimates of the U.S. recommended food energy allowance for a 70 kilogram (154 pounds) man has fallen from 3,200 calories per day in 1953, to 2,900 calories per day in 1964, to 2,800 calories per day in 1968, and to 2,700 calories per day in 1974. The reduction reflects not so much changes in physical activity levels as improved information on nutrition and metabolism.

Food and Agriculture Organization in conjunction with the World Health Organization in 1973 are used as working estimates of food intake minimums. 3/

Calculations of unmet food needs also depend on measures of actual intake. The poor quality of food intake data available for the LIC's generally limits calculation of unmet food needs to a comparison of minimum requirements with broadly representative estimates of national per capita food supply averages. The national per capita food supply averages used in this report are calculated as the quantity of food available for human use, measured in terms of calories per capita per day, at the retail level after provision is made for changes in food stocks, and the supplies of food traded, fed to livestock, used as seed or for industrial purposes, or lost in collection, processing or marketing. 4/

It should be noted that the reliability of even these adjusted national per capita food supply averages is open to question. Estimates of food supplies in many of the developing countries tends to be biased by as much as 10-15 percent due to problems of production understatement and, in selected cases, overstatement. Population reporting in many of the LIC's is also open to question. Consequently, the per capita national food supply averages used in calculating unmet needs that follow are best treated as broadly representative estimates.

B. Gauging Unmet Food Needs

Tables 1 and 2 outline the LIC's historic per capita food supply averages and FAO/WHO's recommended calorie minimums. A review of the data suggests several measures of the severity of unmet food needs. The most obvious is a measure of per capita food supplies as a percent of recommended minimums. Equally important, however, are measures of interannual variability in per capita food supplies and measures of growth in per capita supplies over time.

Table 1's measure of per capita caloric food supplies as a percent of recommended minimums suggest that global food supplies would have

3/ While the FAO/WHO minimum requirements are by no means universally accepted, they are the most widely used, multi-country set of dietary minimums currently available. See Energy and Protein Requirements - Report of a Joint FAO/WHO Ad Hoc Expert Committee, FAO Nutrition Meetings Report Series No. 52, Rome, 1973.

4/ The per capita food supplies used in this report do not necessarily equal per capita consumption even after the adjustments noted above are made due to additional losses in the household during storage, preparation, and cooking and other factors such as plate waste. For further details see FAO Monthly Bulletin of Agricultural Economics and Statistics, May 1977.

been more than adequate over at least the last two decades--if food supplies had been distributed more evenly across and within countries --to meet the basic human needs of the world's population. World per capita food supplies were roughly 104 percent of basic requirements in the early 1960's. Record increases in production pushed world per capita supplies to more than 108 percent of minimum requirements in the early 1970's and to 112 percent of requirements in the 1976-78 period.

However, as illustrated by the country and regional data in Tables 1 and 2, food supplies have not been evenly distributed; distribution of food supplies between countries has been sufficiently uneven to leave the lower income countries with national average per capita supplies well below minimum requirements. Conversely, the data indicate that the higher income countries' national average per capita supplies were as much as 40 percent above recommended minimums. The uneven distribution of food supplies across countries is most pronounced between the affluent developed countries and the developing countries. However, while less pronounced, the uneven distribution of food supplies between the higher income developing countries and the LIC's has far more serious nutritional implications because of the low intake levels involved.

As the data in Table 2 suggest, the distribution of food across individual LIC's is also quite skewed whether measured in strictly caloric terms or, more importantly, in terms of intake relative to minimum requirements. The wealthiest third of the LIC's, accounting for less than 25 percent of the total LIC population, report national average per capita supplies in excess of 95 percent of recommended minimums. An intermediate third, accounting for half of the LIC population, report per capita supplies between 95 and 85 percent of their recommended minumums. The remaining third of the LIC's--including Afghanistan, Bangladesh, Cambodia, Chad, Ethiopia, Mali, Mauritania, Niger, Somalia, Upper Volta, the Cape Verde Islands, Angola, Guinea, Zaire, Botswana, Mozambique, Rwanda, Tanzania, Uganda, Haiti, and Bolivia--report intake levels at or below 85 percent of recommended minimums or the cutoff often used to distinguish between undernutrition and debilitating malnutrition.

Table 3's (Column 1) calculations of the wheat equivalent of the difference between recommended and actual intake levels suggest LIC unmet needs averaged 38-40 million tons over the 1976-78 period (see area ABCD in Figure 1A). Over 30 percent of the total is concentrated in the poorest LIC's accounting for less than a fifth of the LIC's total population. On a per capita basis, the LIC's unmet food needs averaged 155 calories per day while the unmet food needs of the poorest third averaged from 300 to 500 calories per day.

The measures of growth in per capita food supplies over the last 19 years, shown in Tables 1 and 2, suggest the nutrition situation in the LIC's--particularly in the poorest third referred to above--has tended to stagnate, particularly relative to growth in the rest of the world,

despite the record increases in production reported in Asia, Latin America, and much of Africa over the last two decades. World per capita food supplies increased at a rate in excess of 0.5 percent per year--the equivalent of about 13 calories per capita per day per year--from the early 1960's to the mid 1970's. The developed and affluent centrally planned countries report growth at a rate of roughly 0.5 percent per year or the equivalent of 16-17 calories per capita per day per year. The developing countries, however, reported growth at a somewhat lower rate of 0.4 percent per year with annual increments averaging less than 9 calories per capita per day.

Differences in growth rates and annual calorie increments were even more marked between the higher income developing countries and the LIC's. Growth in the LIC's averaged less than 0.2 percent per year or about 3 calories per capita per day over the 1961-78 period. Growth in the higher income countries averaged more than 0.9 percent per year or about 20 calorie per capita per day. Growth in LIC's per capita food supplies has been fast enough to narrow the difference between recommended minimums and actual intake levels from 200 calories per capita per day in the early 1960's to 155 calories in the mid-1970's. Growth in the LIC's has not been fast enough, however, to offset record absolute increases in population. Hence, the wheat equivalent of the LIC's total calorie deficit increased from roughly 30 million tons in 1961-65 to 38-40 million tons in 1976-78.

Moreover, the lowest rates of growth in per capita supply--in some cases negative rates of growth--were reported for virtually the same two dozen countries noted above with food intake levels of less than 85 percent of the recommended minimums.

Measures of year-to-year variability in per capita food supplies suggest the same pattern of uneven performance. While year-to-year variations in per capita food supplies in the developed countries averaged roughly 1.5 percent, the developing countries reported inter-annual variations averaging more than 3.7 per cent. 5/ The LIC's accounted for a disproportionately large share of the developing countries' variability with average variations of 4.2 percent.

The LIC's combination of low intake levels and substantial year-to-year variations in per capita food supplies points to the need for the addition of a security dimension to the adequacy measures of food needs shown in Column 1 of Table 3. Several broad ordinal measures of the added food supplies needed to insure intake minimums in countries reporting wide year-to-year fluctuations are possible. The 52 million ton estimates shown in Column 2 of Table 3 are based on a recalculation of unmet food needs as the difference between

5/ For the purposes of this report, coefficients of variation read from the individual LIC semi-log time trends used to calculate the growth rates in Tables 1 and 2 were used as proxie measures of interannual variability.

actual LIC intake levels and FAO/WHO minimums plus an added 40 to 50 calories depending on the size of each LIC's interannual variations over the 1961-78 period (See Figure 1B). 6/ Virtually the same two dozen countries noted above with low intake levels and low or negative rates of growth report serious variability problems as well.

The growth and variability aspects as well as the inadequacy aspect of the LIC's food problem point to the need for a multi-faceted policy approach to meeting basic human needs. Allocating food aid to compensate for substandard intake levels, low or negative growth in intake over time, and wide interannual variability is clearly--even if donor countries agreed to sufficiently large transfers--a second best solution. Distribution of added food supplies of this magnitude is clearly beyond the physical capacity of both donor and recipient countries. Moreover, transfers of this magnitude would likely result in physical improvements in the LIC's situation because of their probable production, income, and dependency effects. Given the LIC's low price elasticity of demand for food and their stronger price elasticity of food supply, distribution of the added 39 to 52 million tons of food indicated in Columns 1 and 2 of Table 3 through the open market would weaken local producer prices significantly enough to result in a cutback in indigeneous production equal to or greater than the aid transfer. Given the dominant role agricultural production plays in most LIC economies, income growth and income distribution would likely worsen as farm incomes dropped both in absolute terms and relative to non-farm incomes. These production and income effects would also tend to nurture increased dependency on food aid and necessitate increasingly larger transfers in the future. The first-best solution --probably the only viable solution--to the LIC's food security problem is clearly an all-out effort to increase production, to stimulate effective demand, and to accumulate and manage food stocks in the LIC's themselves.

A further comparison of the data in Tables 1 and 2 with household budget survey data and empirical field observations raises serious questions as to whether the 39-52 million ton estimates shown in Columns 1 and 2 of Table 3 measure the full extent of undernutrition given the skewed distribution of food supplies within as well as across LIC's. The notes on the impact of skewed distribution of food supplies within countries that follow indicate the LIC problem could be 3 to 4 times greater than the 39-52 million ton estimates suggest.

III. Notes on the Impact of Skewed Distribution of Food Supplies

While a comparison of recommended minimums and national per capita food supply averages can provide a general indication of the overall

6/ Adjustments in recommended minimums to compensate for interannual variability were set equal to the standard error of the regression from the same semi-log time trends. They are broad, ordinal indicators only and would compensate for variations below minimum recommended intake levels in 5 out of 6 years.

situation in a large number of countries over time, the use of national averages introduces a serious downward bias into more precise estimates of unmet food needs. The validity of national averages in measuring unmet food needs hinges on the uniform rather than skewed distribution of food supplies within the countries analysed. Cross-sectional household budget surveys in several of the largest developing countries, however, suggest per capita food supplies are not uniformly distributed within countries. Per capita levels appear to vary from as low as 65 to 70 percent to as high as 150 percent or more of reported national averages.7/ Less comprehensive evidence from virtually all the LIC's indicates that the skewed distribution problem is common to virtually all the developing countries.

The limited empirical analyses done to date suggest that the pattern of calorie distribution within countries depends largely on income distribution. Analysis of survey data for the countries footnoted above indicates that, given national per capita food supply averages near the recommended minimums, the distribution of food supplies is generally such that there will likely be far greater unmet food needs than those shown in Columns 1 and 2 of Table 3. The surveys also indicate unmet food needs will tend to be concentrated: (1) in those sectors of the population that are too poor to participate in the market exchange of food--i.e. the urban unemployed, casual laborers, landless agricultural workers; (2) among pregnant and lactating women, infants and young children, and other groups with greater and/or more specialized nutritional needs than recommended minimums reflect; (3) in areas with a poor ratio of agricultural resources relative to population; and (4) in areas that are poorly served by transportation and marketing systems.

Despite the large number of field observations of maldistribution, drawing more precise conclusions regarding the impact of skewed distribution of food supplies on the size and severity of the LIC's unmet needs problem is difficult. Clearly, estimates of unmet needs based on national average data understate the problem to the extent that consumption in the more affluent population groups exceeds the national average--suggesting a basis roughly to equal the area of DEF in Figure 1C. The most common approach to estimating the magnitude of this understatement depends on (1) quantifying the relationship between income distribution and calorie distribution, and (2) using relatively abundant income distribution data to estimate calorie distribution parameters for the curve BE in Figure 1C. If a strong income distribution-calorie distribution relationship can be established cross-sectionally for survey countries and over time for countries with only aggregate data, income distribution data can be used to estimate the area DEF or, more importantly, the area ABD of Figure 1C.

Recent World Bank and USDA work estimating world, regional, and selected country income-calorie relationships suggests calorie distribution ranges from between 1,300 and 1,500 calories per capita per day for the lowest income

7/ See 1968-77 household budget surveys for Bangladesh, Brazil, India, Indonesia, Mexico, and Pakistan.

groups to between 3,500 and 4,000 calories for the highest income groups in the LIC's. 8/ In comparison, the LIC recommended minimum is 2,245 calories per day and the 1976-78 average daily intake was reported at approximately 2,090 calories. Income elasticities of demand for calories appear to range from as high as +0.8 to +1.0 at the lowest income levels to as low as +0.2 to +0.3 at high income levels.

Given these approximate measures of the skewedness of LIC calorie distribution, unmet food needs can be calculated more realistically as the difference between the caloric intake of the undernourished population and their recommended minimums adjusted for interannual variations. As a comparison of Figures 1A, 1B and 1C suggests, this expanded measure of unmet food needs--equal to the area ABD in Figure 1C--is inevitably larger than measures of unmet food needs based on national per capita food supply averages. As calorie distribution is estimated directly from income distribution data, this alternative measure of unmet food needs is as much a measure of poverty as a measure of undernutrition. It is as much a measure of the maldistribution of income and the weakness of effective demand in low income groups as an indication of inadequate food supplies.

Re-estimating average 1976-78 unmet food needs to provide for the impact of skewed food distribution suggests a substantially larger food gap but little change in the ranking of individual LIC needs. Income-calorie relationships for Africa, Asia, Latin America, and the Middle East suggest filling this broader measure of food needs would entail raising national per capita food supply averages 13 to 16 percent above the recommended minimums used in the initial calculation. The country-specific estimates shown in Column 3 of Table 3 indicate that average LIC intake was more than 110 million tons short of this expanded notion of food need over the 1976/78 period.

The serious skew noted in the distribution of food within LIC's has even more important implications for policy approaches to the distribution of food supplies to meet unmet basic human needs. Added supplies of food equal to even the larger measure of unmet food needs shown in Column 3 would not necessarily alleviate malnutrition. Added supplies would have to be distributed so that each income group formerly deficient in intake received just enough additional food to bring caloric intake up to but not above recommended minimums.

The added food supplies needed to fill the 112 million tons of unmet food needs shown in Column 3 of Table 3 could well increase to over 160 million tons depending on the effectiveness of the LIC's food aid distribution systems. The distribution of added food supplies through

8/ See, for instance, Nutrition and Food Needs In Developing Countries by Odin Knudsen and Pasquale Scandizzo, 1979; 1978 Global Assessment, USIA, 1978; or Malnutrition and Poverty by Schlomo Reutlinger, 1977.

the open market could maximize the diversion, or leakage, of increased supplies to persons already consuming the recommended minimum and lessen the positive impact on the undernourished. Open market distribution would eliminate the unmet food needs of the lowest income groups only in the unlikely case that enough added food was made available both to satiate the calorie demand of the affluent classes for food and feed, and to meet the 110 million ton needs of the lowest income groups. This would entail, in effect, shifting the intercept of the calorie distribution curve BE in Figure 1D up to a new intercept at F, the recommended minimum. A shift in intercept of this magnitude would entail raising national per capita food supply averages to roughly 123 to 130 percent of the recommended minimums used in the initial calculations in Column 1 of Table 3. The quantities involved in such an open market distribution program are shown in Column 4 of Table 3 to be in excess of 160 million tons.

The quantities of food needed to fill the 161 million ton calorie deficit shown in Column 4 could rise even further if open market distribution of added food supplies lowered prices and, in effect, raised incomes sufficiently to bring strengthened demand for grain-fed livestock products--products produced with 3 to 5 times their final caloric value in grain and oilseed inputs--into play in the middle income as well as the high income groups.

IV. Organizing Food Distribution To Maximize Needs Effectiveness

Depending on the method used and the assumptions made about maldistribution and interannual variations, the LIC's unmet food needs can be calculated well in excess of all the food currently traded internationally. The magnitude of any measure of unmet needs providing for the secondary variability and distribution aspects of the problem reinforces the notion that LIC unmet food needs are too large to be met by food aid transfers alone or even primarily. Accelerated growth in domestic production, substantial growth in effective demand, more uniform distribution of food supplies, and improved stock management in the LIC's themselves over a relatively long period of time appear imperative if the needs shown in Table 3 are to be met.

More importantly, however, the calculations cited above suggest that the needs effectiveness of smaller amounts of added food can be increased markedly by focusing more narrowly on the problem of acute malnutrition and targeting distribution of aid directly to the most seriously affected segments of the population. A narrower unmet needs focus would require, first and foremost, a more restrictive notion of minimum requirements. FAO/WHO anthropomorphic surveys suggest an acute malnutrition measure of minimum requirements keyed to intake of 85 percent of their recommended minimums. 9/ The same methods noted above to estimate maldistribution

9/ See U.N. Food and Agriculture Organization Fourth World Food Survey, Rome, 1977.

parameters can be used to estimate the added quantities of food needed to raise the caloric intake of the acutely malnourished to 85 percent of recommended minimums. Column 5 of Table 3 shows the individual country components of this malnutrition measure of unmet food needs; the all-LIC average over the 1976-78 period appears to have been equivalent to roughly 25 million tons of wheat.

Targeting food aid directly to the malnourished would also require more precise identification of the malnourished and the development of a distribution system designed to minimize leakage of aid to the adequately nourished and those consuming less than 100 percent but more than 85 percen of their recommended minimums. The household budget surveys cited above suggest the acutely malnourished are generally made up of pregnant and lactating women, infants and pre-school children, and the urban and rural under-employed and unemployed. The household budget surveys also suggest that target feeding--the direct distribution of added food supplies to the acutely malnourished--becomes doubly important both to limit leakage and to counter the virtual isolation of the malnourished from the conventional food marketing system. The experience of several developing countries with emergency relief programs and extra-market food distribution programs suggest several approaches to the distribution problem including: (1) mother and child feeding programs aimed at pregnant and lactating women and infants, (2) pre-school feeding programs for young children, (3) food for-work programs for the unemployed, and (4) possibly food ration or food subsidy schemes aimed at the under-employed. Central to all of these programs, however, is the direct transferal of aid to those elements of the population suffering from debilitating malnutrition.

Substantial investment in the recipient countries would be needed to develop an adequate distribution infrastructure to provide food to the neediest. The cost of developing such an system is likely to vary widely depending on the state of individual LIC's physical and administrative infrastructures. The cost of setting up such a distribution system would have to be balanced against alternative development uses for the same resources. Data from a number of countries with functioning target distribution programs show costs ranging from a fraction of to several times the total value of the food supplies being transfered. A full cost-benefit analysis of the trade-off involved in setting up and operating such a malnutrition-oriented target-distribution program would have to be done on a country-by-country basis and goes far beyond the scope of this report.

V. Conclusions

The materials presented above suggest that efforts to allocate food aid with greater emphasis on unmet food needs depend on a number of unanswered questions. Among these are the basic questions of how to measure basic food needs and how to estimate unmet food needs. The question of how to estimate and compensate for the skewed distribution of food supplies within countries is also an issue basic to the entire food aid question. Also unanswered are questions as to the extent existing programs can or

should be modified to increase the needs effectiveness of food aid transfers and at what cost.

The materials above also provide more specific information on the relative severity of unmet food needs in individual LIC's. A review of the individual LIC's 1976-78 food intake data, and 1961-78 growth and variability data suggests three general groupings. 10/ A small group of relatively well fed LIC's including Senegal, Ivory Coast, Morocco, and Gambia among others report consumption levels equal to 95 percent or more of their recommended minimums, interannual variations of less than 2.0 to 3.0 percent, and growth in per capita food supplies of 0.6 percent or more per year. A large intermediate group of LIC's including India, the Philippines and Pakistan among others reports food consumption ranging from 85 to 95 percent of minimum requirements, interannual variations of 3.0 to 4.5 percent, and growth rates of 0.1 to 0.5 percent per year. The third group, including most of the Sahelian countries, Ethiopia, Angola, Cambodia, Uganda, Tanzania, Mozambique, and Rwanda report caloric consumption of 70 to 85 percent of recommended minimums, interannual variations of 4.5 to 10.0 percent or more, and negative growth in per capita food supplies.

Table 3's alternative measures of unmet food needs suggest that LIC needs, while relatively small when narrowly defined and compared to total world food production, are quite large relative to LIC food imports and, if defined expansively, even relative to total world food trade. The size of the unmet needs problem appears so great as to depend on an all-out effort to increase production and to distribute production more uniformly in the LIC's themselves rather than on a transfer of aid from the rest of the world.

Column 5's (Table 3) measure of acute malnutrition needs suggests, however, that relatively small amounts of food aid distributed directly to the most seriously affected segments of the population in the poorest third of the LIC's could ease the unmet needs problem considerably.

10/ Ranking the LIC's by the severity of their unmet food needs as reflected in the inadequacy of their 1976-78 intake levels, and their interannual variations and growth rates over the 1961-78 period suggests the following descending order: Cambodia, Ethiopia, Angola, Chad, Upper Volta, Honduras, Botswana, Mali, Niger, Uganda, the Cape Verde Islands, Mozambique, Rwanda, Ghana, India, Somalia, Mauritania, Yemen Arab Republic, Afghanistan, Zaire, Yemen People's Republic, Sri Lanka, Lesotho, Rhodesia, Tanzania, Malawi, Bangladesh, Laos, Congo, Sierre Leone, Nepal, Grenada, Senegal, Bolivia, Guinea, Bhutan, Philippines, Pakistan, Kenya, Liberia, Burma, Indonesia, Central African Empire, Guinea-Bissau, Comoros, Cameroon, Senegal, the Ivory Coast and Egypt.

FIGURE 1A

Given uniform distribution of per capita food supplies across all population groups along CD, and an LIC minimum food intake requirement equal to AB, unmet food needs would be equal to the area in ABCD. LIC data for the 1976-78 period suggest the area in ABCD was equivalent on average to roughly 39 million tons of wheat (See Column 1 of Table 3).

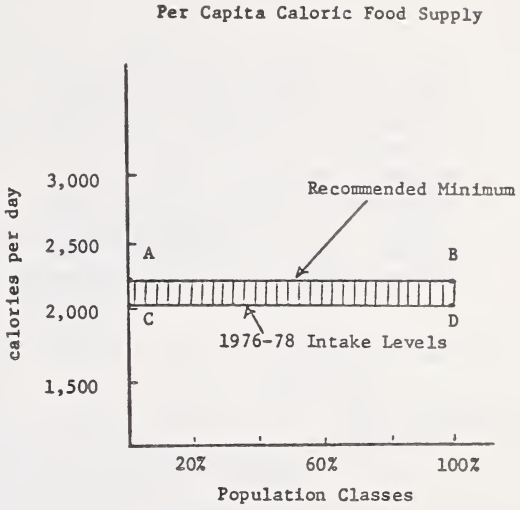
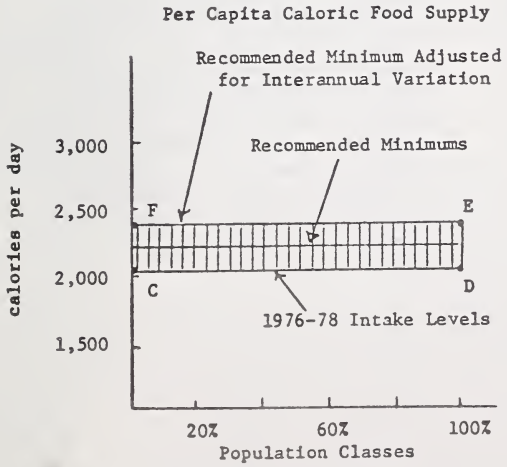


FIGURE 1B



Given the same uniform distribution of food supplies and recommended minimum intake level plus an adjustment to compensate for interannual variations in per capita food supplies, unmet food needs would be equal to the area in CDEF. LIC data for the 1976-78 period indicates the area in CDEF was equal on average to roughly 52 million tons tons of wheat (See Column 2 of Table 3).

FIGURE 1C

Given the skewed distribution of per capita food supplies across LIC population classes along curve BE and an adjusted minimum recommended intake of A, unmet food needs would be equal to the area in ABD. LIC data for the 1976-78 period indicate 112 million tons of wheat (See Column 3 of Table 3).

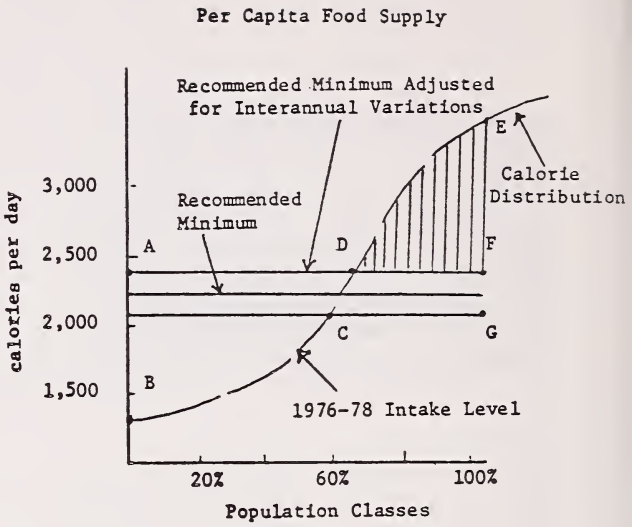
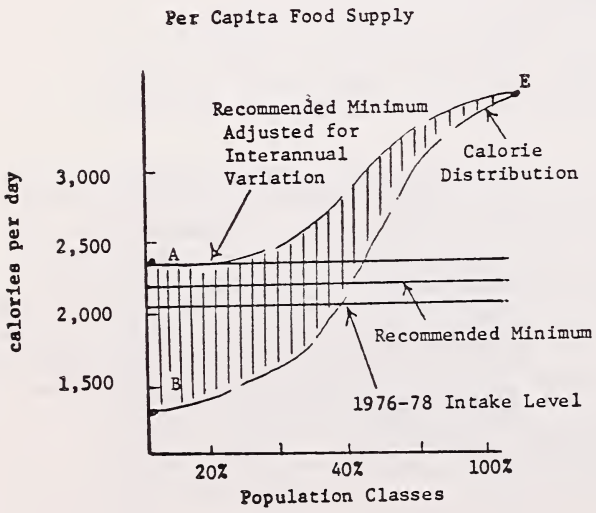


FIGURE 1D



Given the skewed distribution of food supplies across population classes along BE, an adjusted recommended minimum of A and the open market distribution of added food supplies, supplies of food equal to the area in ABE would be needed to meet the LIC's unmet food needs. LIC data for the 1976-78 period indicate the area in ABE averaged in excess of the equivalent of 160 million tons of wheat (See Column 4 of Table 3).

FIGURE 1E

Given the skewed distribution of food supplies across population classes along the curve BE, a more stringent malnutrition measure of minimum intake at I and targeted--rather than open market distribution of added supplies to minimize leakage, supplies equal to BHI would eliminate the most serious of the LIC's unmet food needs. The LIC's 1976-78 data suggest the area in BHI averaged in excess of the equivalent of 25 million tons of wheat (See Column 5 of Table 3).

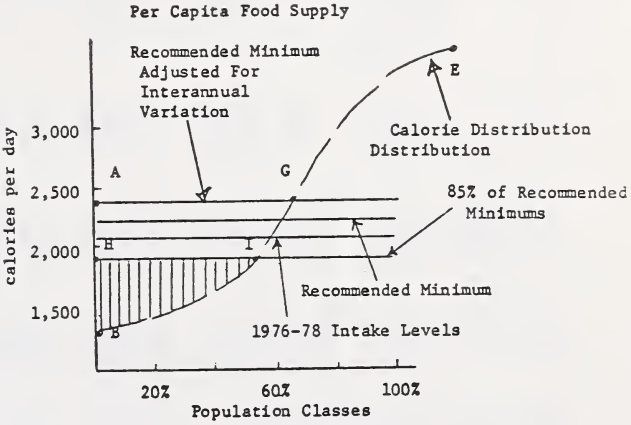


Table I-1--World and Regional Per Capita Caloric Food Supply Data

Country/Region	Recommended Caloric Intake Minimum	Per Capita Caloric Food Supplies 1/			1961-1978		1976/78 Intake as % of Recommended Minimum
		1961-65 Average	1971-75 Average	1976-78 Average	Compound Annual Growth Rate	Inter-Annual Variations	
	Calories per capita per day				Percent		
I. Developed Countries	2,550	3,170	3,340	3,380	+.5	1.4	133
United States	2,640	3,350	3,505	3,530	+.5	1.0	134
Western Europe	2,570	3,250	3,400	3,460	+.4	1.9	135
Japan	2,340	2,550	2,820	2,875	+1.0	.8	123
II. Centrally Planned Countries	2,350	2,430	2,655	2,715	+.8	1.6	116
Soviet Union & Eastern Europe	2,580	3,260	3,455	3,500	+.5	1.1	136
People's Republic of China	2,250	2,005	2,280	2,345	+1.2	2.1	104
III. Developing Countries	2,255	2,130	2,215	2,250	+.4	3.7	100
High Income Countries 2/	2,280	2,330	2,590	2,640	+.9	2.9	116
Low Income Countries 2/	2,245	2,045	2,060	2,090	+.2	4.1	93
IV. LIC Total 3/	2,245	2,030	2,160	2,200	+.6	3.2	98
V. World	2,355	2,450	2,555	2,635	+.5	2.6	112

1/ Per capita Food Supplies are calculated as the quantity of food available for human use, measured in terms of calories per day, at the retail level after provision is made for changes in food stocks, quantities traded or fed to livestock, and quantities used as seed, for industrial purposes or lost in collection processing or marketing. No provision is made for waste beyond the retail level.
2/ Developing countries with 1977 per capita gross national products above and below $580, respectively.
3/ Low income countries plus Asian Centrally planned countries with 1977 per capita gross national products below $580.

Source: FAO Monthly Bulletin of Agricultural Economics and Statistics, various 1977 issues and USDA unpublished materials.

Table I-2--Lowest Income Countries' Per Capita Caloric Food Supply Data

Country/Region	Recommended Caloric Intake Minimum	Per Capita Caloric Food Supplies			1961-1978		1976/79 Intake as % of Recommended Minimum
		1961-65 Average	1971-75 Average	1976/78 Average	Compound Annual Growth Rate	Inter-Annual Variations	
	Calories per capita per day				Percent		
I. Asia							
South Asia	2,235	2,025	1,995	2,000	0	4.4	89
Afghanistan	2,440	2,110	1,970	2,035	-.4	3.8	83
Bangladesh	2,310	1,975	1,965	1,955	0	3.1	85
Bhutan	2,300	2,010	2,080	2,075	+3.1	1.0	90
India	2,210	2,050	1,980	1,990	-.1	4.6	90
Nepal	2,200	2,040	2,030	2,015	-.1	2.8	92
Pakistan	2,310	1,840	2,130	2,095	+1.1	4.0	91
Sri Lanka	2,220	2,180	2,090	2,205	-.2	6.4	99
East Asia	2,190	1,965	2,095	2,165	+.7	3.0	99
Burma	2,160	1,940	2,130	2,125	+.7	3.6	98
Indonesia	2,160	1,930	2,040	2,125	+.8	3.6	98
Philippines	2,260	1,895	1,935	2,040	+.4	2.3	90
Thailand	2,220	2,120	2,300	2,360	+.7	2.0	(106)
Communist Asia	2,245	2,010	2,275	2,330	+1.1	2.2	(104)
Cambodia	2,220	2,165	1,970	1,560	-2.2	10.6	70
China, Peoples' Rep.	2,250	2,005	2,280	2,345	+1.2	2.1	(104)
Laos	2,220	1,890	2,040	2,065	+.5	4.2	93
Vietnam	2,160	2,100	2,280	2,235	+.6	2.2	(104)
II. Africa							
North Africa/Middle East	2,475	2,440	2,570	2,745	+.7	4.4	(111)
Egypt	2,510	2,605	2,695	2,960	+.7	3.5	(118)
Morocco	2,420	2,250	2,535	2,550	+1.0	5.7	(105)
Yemen Arab Rep.	2,420	2,045	2,020	2,080	+.1	5.5	86
Yemen People's Rep.	2,410	2,035	2,050	2,180	+.2	5.3	90
Sudano-Sahelian Africa	2,345	2,025	1,985	1,850	-.7	5.7	79
Central African Empire	2,260	2,085	2,290	2,220	+.7	4.2	98
Chad	2,380	2,350	1,820	1,820	-2.1	5.3	76
Ethiopia	2,340	2,090	2,015	1,610	-1.6	7.9	69
Mali	2,350	2,025	1,810	1,780	-1.1	5.0	76
Mauritania	2,310	2,000	1,840	1,860	-.7	4.0	81
Niger	2,350	2,140	1,830	2,005	-1.0	7.0	85
Somalia	2,310	1,895	1,880	1,780	-.4	4.0	77
Sudan	2,350	1,875	2,125	2,180	+1.1	3.3	93
Upper Volta	2,370	1,940	1,760	1,680	-1.0	5.5	71
Cape Verde Islands	2,310	1,730	2,080	1,770	+.6	17.2	77

Table I-2--Lowest Income Countries' Per Capita Calorie Food Supply Data--continued

Country/Region	Recommended Caloric Intake Minimum	Per Capita Caloric Food Supplies			1961-1978		1976/79 Intake as % of Recommended Minimum
		1961-65 Average	1971-75 Average	1976-78 Average	Compound Annual Growth Rate	Inter-Annual Variations	
	Calories per capita per day				Percent		
Central & West Africa	2,320	2,105	2,130	2,095	0	2.9	90
Angola	2,250	1,855	1,925	1,550	-1.0	10.0	69
Benin	2,300	2,110	2,070	2,150	0	3.6	94
Cameroon	2,320	2,140	2,385	2,335	+.7	2.7	(101)
Congo, Peoples' Rep.	2,220	2,030	2,235	2,100	+.4	4.4	95
Gambia	2,380	2,205	2,320	2,400	+.6	1.6	(101)
Ghana	2,300	2,025	2,240	1,930	+.1	6.7	84
Guinea	2,310	1,910	2,010	1,920	+.2	2.8	83
Guinea-Bisseau	2,310	2,115	2,315	N.A.	+1.0 1/	1.5 1/	100
Guina, Equitorial	2,310	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	2,310	2,300	2,630	2,680	+1.0	2.9	(116)
Liberia	2,310	1,945	2,010	2,230	+.8	4.2	97
Nigeria	2,360	2,155	2,075	2,040	-.4	1.6	86
Senegal	2,330	2,150	2,280	2,505	+1.0	7.0	(108)
Sierra Leone	2,300	2,020	2,245	2,220	+.6	4.8	97
Togo	2,300	1,920	2,165	2,195	+.4	3.0	95
Zaire	2,220	1,925	1,870	1,845	-.3	3.7	83
East Africa	2,320	2,100	2,160	2,085	0	3.9	90
Botswana	2,320	2,055	2,025	1,705	-1.0	5.4	73
Burundi 2/	2,340	2,115	2,365	2,475	+1.1	3.0	(106)
Comoros	2,270	2,095	2,285	---	+.9	2.4 1/	(101)
Kenya	2,320	2,280	2,190	2,220	-.2	2.8	96
Lesotho	2,280	2,130	2,125	2,175	-.1	5.3	95
Madagascar	2,270	2,380	2,380	2,425	+.1	2.3	(107)
Malawi	2,320	1,990	2,375	2,165	+1.0	6.7	93
Mozambique	2,340	2,005	1,960	1,710	-.9	4.5	73
Rhodesia	2,320	2,510	2,500	2,415	-.2	4.0	(104)
Rwanda	2,320	1,880	2,105	1,905	+.3	6.5	82
Swaziland	2,320	1,975	2,120	2,170	+.7	2.5	94
Tanzania	2,320	1,865	1,945	1,870	+.1	3.4	81
Uganda	2,330	2,070	2,110	1,870	-.5	5.8	80
Zambia	2,320	1,845	2,045	2,215	+1.2	2.6	95
III. Latin America							
Central America	2,270	1,910	1,965	1,970	+.2	3.9	87
El Salvador	2,290	1,815	1,890	2,100	+.8	3.3	92
Grenada	2,260	1,930	2,175	---	+1.0 1/	4.9 1/	96
Haiti	2.260	1,975	2,015	1,970	+.1	2.3	87
Honduras	2,260	1,935	1,995	1,780	-.5	7.3	79

See footnotes at end of table.

Table I-2--Lowest Income Countries' Per Capita Calorie Food Supply Data--continued

Country/Region	Recommended Caloric Intake Minimum	Per Capita Caloric Food Supplies			1961-1978		1976/79 Intake as % of Recommended Minimum
		1961-65 Average	1971-75 Average	1976-68 Average	Compound Annual Growth Rate	Inter-Annual Variations	
	Calories per capita per day				Percent		
South America	2,390	1,635	1,875	1,885	+1.1	2.9	79
Bolivia	2,390	1,635	1,875	1,885	+1.1	2.9	79
IV. LIC Total	2,245	2,030	2,160	2,205	+.6	3.2	98
Total Excluding Communist Asia	2,245	2,045	2,060	2,090	+.2	4.1	93

1/ Based on 1961-74 data.
2/ Based on 1971-74 data.

Source: FAO Bulletin of Agricultural Economics and Statistics, various 1977-78 issues and USDA unpublished materials.

Table I-3--Alternative Measures of Unmet Average 1976-78 LIC Food Needs in Wheat Equivalent

Country/Region	Unmet Food Needs Calculated as . . .									
	Recommend Minimum Minus Per Capita Supply		Adjusted For Inter-Annual Variability		Adjusted For Skewed Food Supply Distribution		Adjusted For Maximum Open Market Leakage		85% Recommended Minimum minus per Capita Food Supply	
	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT
I. Asia										
South Asia	27	22,938	37	31,490	77	65,559	113	94,378	10	8,727
Afghanistan	47	932	56	1,109	99	1,972	137	2,737	27	530
Bangladesh	41	3,231	49	3,782	89	6,971	126	9,796	21	1,642
Bhutan	26	32	28	34	68	82	103	125	1	1
India	25	16,574	36	23,354	76	49,171	111	72,043	9	6,027
Nepal	22	280	28	366	67	870	102	1,316	2	27
Pakistan	25	1,864	34	2,563	76	5,637	112	8,361	7	500
Sri Lanka	2	25	18	262	59	856	95	1,382	(9)	(137)
East Asia	7	1,886	13	3,085	51	13,479	85	23,686	1	184
Burma	4	133	13	411	51	1,646	86	2,739	(13)	(417)
Indonesia	4	547	12	1,725	51	7,239	85	12,124	14)	(1,976)
Philippines	25	1,206	31	1,454	70	3,345	106	5,020	4	184
Thailand	(16)	(719)	(11)	(505)	28	1,249	62	2,803	(37)	(1,682)
Communist Asia	1	716	1	958	34	31,242	69	62,895	1	4,414
Cambodia	76	654	101	862	143	1,221	180	1,540	72	621
China, Peoples' Rep.	(12)	(9,796)	(6)	(5,290)	33	28,224	68	57,914	(33)	(27,783)
Laos	18	62	28	95	68	230	103	351	1	3,793
Vietnam	(9)	(402)	(3)	(151)	35	1,567	69	3,090	(29)	(1,305)
II. Africa										
North Africa/Middle East	5	319	7	447	31	2,044	71	4,656	4	285
Egypt	(52)	(2,038)	(41)	(1,605)	8	298	48	1,850	(58)	(3,275)
Morocco	(15)	(279)	1	17	49	907	88	1,633	(16)	(296)
Yemen, Arab Rep.	40	274	52	362	100	690	139	957	36	246
Yemen, People's Rep.	26	45	40	68	87	149	126	216	23	39
Sudano-Sahelian Africa	59	4,585	72	5,623	117	9,062	139	10,743	53	5,535
Central African Empire	5	9	15	28	58	106	78	144	(4)	(7)
Chad	65	270	78	322	123	509	145	600	58	239
Ethiopia	85	2,499	103	3,036	149	4,361	171	5,006	83	2,441
Mali	66	387	77	452	121	711	143	837	57	336
Mauritania	52	69	61	81	104	138	125	166	42	55
Niger	40	194	56	272	101	490	123	596	36	175
Somalia	61	258	70	295	113	473	134	565	51	213
Sudan	20	389	28	542	72	1,390	93	1,804	8	1,611
Upper Volta	80	490	92	563	137	837	158	9,701	72	440
Cape Verde Islands	63	20	103	32	151	47	175	55	82	25

Table 1-3--Alternative Measures of Unmet Average 1976-78 LIC Food Needs in Wheat Equivalent

Country/Region	Unmet Food Needs Calculated as . . .									
	Recommend Minimum Minus Per Capita Supply		Adjusted For Inter-Annual Variability		Adjusted For Skewed Food Supply Distribution		Adjusted For Maximum Open Market Leakage		85% Recommended Minimum Minus Per Capita Food Supply	
	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT
Central & West Africa	35	5,498	41	6,511	83	13,027	103	16,202	24	3,791
Angola	98	634	120	778	164	1,065	185	1,205	100	650
Benin	17	55	26	83	69	220	90	286	7	22
Cameroon	(2)	(10)	6	38	49	321	70	458	(14)	(89)
Congo, Peoples' Rep.	14	19	25	34	69	92	87	120	6	8
Gambia	(2)	(1)	2	1	46	24	67	35	(18)	(9)
Ghana	43	447	59	618	103	1,079	125	1,303	40	412
Guinea	45	208	51	236	94	434	114	530	32	147
Guinea-Bisseau	1) 1/	(0) 1/	3 1/	2 1/	45 1/	25 1/	66 1/	36 1/	16) 1/	9) 1/
Guinea, Equitorial	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	(79)	(397)	(70)	(355)	(27)	(138)	(6)	(32)	(90)	(452)
Liberia	9	16	19	33	62	109	83	146	0	(1)
Nigeria	37	2,953	41	3,257	84	6,701	105	8,379	21	1,711
Senegal	20)	(106)	(2)	(9)	43	228	65	343	(22)	(115)
Sierra Leone	10	30	22	69	65	205	87	272	(1)	(3)
Togo	12	28	19	46	62	146	83	194	0	1
Zaire	43	1,108	51	1,316	93	2,378	113	2,895	33	840
East Africa	32	2,803	40	3,508	82	7,194	103	9,057	24	2,160
Botswana	71	51	83	59	127	91	148	106	64	45
Burundi	(21)	(79)	(13)	(50)	30	113	51	192	(33)	(123)
Comoros	(2) 1/	(1) 1/	5 1/	1 1/	47 1/	15 1/	67 1/	21 1/	(14) 1/	(4) 1/
Kenya	12	165	19	265	62	874	83	1,170	(1)	(8)
Lesotho	12	15	26	30	69	81	90	106	6	7
Madagascar	(18)	(148)	(12)	(96)	30	252	51	421	(30)	(252)
Malawi	18	92	35	181	80	411	101	523	15	77
Mozambique	73	698	83	794	127	1,213	148	1,417	64	606
Rhodesia	(11)	(72)	0	2	44	290	65	430	(19)	(127)
Rwanda	48	210	63	276	107	470	129	564	43	189
Swaziland	17	8	23	11	66	32	87	42	4	2
Tanzania	52	857	60	981	103	1,688	124	2,032	40	663
Uganda	53	642	67	811	112	1,344	133	1,604	47	571
Zambia	12	65	19	97	61	320	82	429	(1)	(4)
III.Latin America										
Central America	35	438	45	550	80	986	127	1,580	21	261
El Salvador	22	97	30	129	65	282	113	492	6	27
Grenada	10 1/	1 1/	22 1/	2 1/	57 1/	6 1/	105 1/	10 1/	(2) 1/	0 1/
Haiti	34	158	39	182	73	343	120	563	16	75
Honduras	56	182	73	237	109	355	158	515	49	159

See footnote at end of table.

Table I-3--Alternative Measures of Unmet Average 1976-78 LIC Food Needs in Wheat Equivalent

Country/Region	Unmet Food Needs Calculated as . . .									
	Recommend Minimum Minus Per Capita Supply		Adjusted For Inter-Annual Variability		Adjusted For Skewed Food Supply Distribution		Adjusted For Maximum Open Market Leakage		85% Recommended Minimum Minus Per Capita Food Supply	
	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT	Kg/per capita	1,000 MT
South America										
Bolivia	59	332	65	367	101	574	151	857	40	229
IV LIC Total	16	39,515	22	52,519	59	143,167	92	224,054	8	25,586
LIC Total Minus Communist Asia	25	38,799	34	51,561	74	111,925	106	161,159	13	21,172

Note: Parentheses denote values in excess of minimum needed under a particular measure of unmet food needs. Country intake in excess of minimum is not substracted from the regional and LIC aggregates.

1/ Based on 1971-74 data.

Part II. Production Performance

The following materials report on world food production in 1978/1979 and the outlook for 1979/1980. General indicies of food production measuring changes in output in 1978 are reviewed in the initial section; more detailed 1978/79 situation and 1979/80 outlook statements on grains, oilseeds, and nonfat dry milk--the major products moving as food aid--are included in the second section. Both sections indicate that food supplies in the major aid donor and recipient countries, with the exception of large areas of sub-Saharan Africa, are at or near all-time highs. Hence while the supplies of food available for aid appear to be quite large, aid needs---particularly if measured in terms of production shortfalls rather than the unmet nutritional needs decribed in Part I--are relatively low.

I. Food Production Performance 1/

World food production increased roughly 4 percent in 1978 to an all time high well above the trend of the last two decades (Table 1). Production gains in the developed countries were particularly large. A strong advance in Western European output and sharp recovery from 1977 drought in the USSR and Oceania accounted for the largest part of the 5-percent increase reported for the developed countries as a whole. These major gains combined with smaller increases in the other developed countries pushed their per capita production up to an all time high more than 27 percent above the levels of a decade and a half ago.

Food production in the developing countries increased almost 3 percent in 1978. The 1978 increase was sufficient to edge production for the 1970's to date marginally above the trend of the last two and a half decades. While somewhat short of expectations earlier in the season, the developing countries' 1978 increase follows 2, and in many cases 3, years of good harvests and was sufficiently large to edge the developing countries' per capita production roughly 10 percent above the levels reported during the worst of the 1972-1975 shortages.

Gains in the developing countries, however, were not as evenly distributed as in the developed countries. The bulk of the developing countries reported appreciably stronger production gains. Small increases, and in many cases decreases, in production in central, west, and southern Africa kept the developing countries' total output from increasing nearly 6 percent

1/ The Food Production Performance section is based on producer price weighted production indices for the 1950-78 period.

and per capita output from increasing nearly 3 percent. Particularly strong gains were registered in South and East Asia where per capita production rose to more than 120 percent and 112 percent, respectively, of the benchmark levels of the early 1960's. Per capita output in Latin America edged up 12-13 percent higher than the levels of the early 1960's. Production in Africa, however, continued to decline and currently stands at less than 80 percent of the early 1960's level.

Food production indices for the LIC's indicate 1978 output was roughly 4 percent above the level reported in 1977 and marginally above the trend of the last two and a half decades. The increases registered in 1978 were sufficient to raise per capita output more than 40 percent above the levels registered in the early 1960's and more than 10 percent above the low reported during the worst of the 1972-75 shortages (Table 2).

The distribution of production changes across the individual LIC's followed much the same pattern noted above. While Asian LIC gains were quite pronounced and Latin American LIC gains somewhat smaller, the African LIC's reported few gains and in many cases decreases in output. Consequently, per capita levels consequently increased significantly in the Asian LIC's, increased marginally in most of the Latin American LIC's, and stagnated or decreased in most of the African LIC's (Table 3).

II. Commodity Statements

A. Grain Situation and Outlook

Developments in the grain sector play a crucial role in determining aid needs in recipient countries and aid availabilities in donor countries. A disproportionately large share of the fluctuations in donor and recipient country food production reflected in the indices cited above and the fluctuations in aid transfers noted elsewhere in this report relate to developments in the grain sector. Grains account for roughly half of the caloric value of food production but more than two-thirds of the growth in output reported in the traditional aid recipient countries over the 1970's. While grains are less important in the agricultural economies of the major donor countries, they still account for as much as 40 percent of their agricultural product and two-thirds of their interannual variation in food production. The proportion of food aid moving as grain is also quite high--often in excess of 95 percent and seldom less than 85 percent of the total.

Global Perspective

The supplies of grain--wheat, coarse grains, and milled rice--available worldwide for use in 1978/79 are reported at an all-time high in excess of 1,620 million tons (Table 4). Grain supplies of this magni-

tude are a full 6.5 percent greater than any previous supply and roughly 20 percent greater than the levels available during the worst of the 1972-75 shortages.

This year's ample supplies are the result of both large carry-in stocks and bumper harvests. The stocks of grain carried over into 1978/79 totaled nearly 190 million tons, or roughly 14 percent of annual consumption as compared with a 1973-75 average of 11 percent. Weather in 1978/79 also favored grain production in virtually every major producing country/region of the world. As a result, record yields combined with near-record harvested area pushed world output up to 1,425 million tons, or 8 percent above the levels reported a year earlier and well above the trend of the last two decades. The 1978 increase combined with 1976 and 1977 gains was strong enough to push production for the 1970's to date back up to the trend of the 1950's and 1960's. However, world per capita rain production still lags somewhat below the all-time highs reported at the end of the 1960's and beginnings of the 1970's.

Increases in world grain utilization in 1978/79 appear likely to be less than half the increase in production. Usage in 1978/79 is expected to be up substantially from dampened 1974/75-1976/77 levels but to lag slightly below the longer term trend of the last two decades. Demand for feed in the developed countries--the most dynamic component of world demand--has recovered to pre-1974/75 highs but still lags below the trend of the last two decades and well below the trend of the higher growth 1965-74 period. However, food use of grains continue to expand at a rate slightly above growth in population and the trend rates of the post-war period. Consequently, the increases in total usage likely in 1978/79 will be large enough to raise world per capita levels for a third year in succession to a 1970's high.

The wide margin between growth in production and growth in usage points to even larger carry-over stocks at the end of the 1978/79 season. World carryover stocks of grain could increase as much as 25 to 30 percent to nearly 235 million tons. A stock of this magnitude would be the highest on record and equivalent to a near record 17 percent of current consumption (Table 5).

Grain trade and prices reflect the ample supplies currently available on the world market. Trade in grains is expected to increase only marginally in 1978/79 due both to the relative abundance of supplies and their more uniform distribution than in past years. World wheat prices presently average $140 per metric ton or about 85 percent of the nominal high reported over the 1972-75 period and roughly half the real level reported at the beginning of the decade. Changes in corn prices have been comparable; current prices of about $110 per ton are roughly 80 percent of the nominal high of the 1972-75 period and less than half the real price level reported at the beginning of the decade. Rice prices currently average $375 per ton or somewhat above

their 1972-75 nominal highs but still below real prices at any point in the decade to date (Table 6).

The outlook for the upcoming 1979/80 year suggests a closer balance between world grain supply and demand. While the stocks likely to be carried over into 1979/80 will be record large, several producers--particularly the United States--are taking action to cut back production through acreage reduction. Hence, while information available to date suggests 1979/1980 yields at or slightly above trend, total 1979/80 output is likely to be far enough below 1978/79 levels to keep next year's supplies below this year's level. Should supplies be marginally lower, growth in demand in 1979/80 at the 2.5-3.0 trend rate of the last two decades would force a small draw down in stocks toward the beginning of 1980/81. However, forecasts of production and usage made this early in the year are highly speculative. Weather over the next 6-8 months will be the major determinant of production and uncertain developments in the feed-livestock economies of the developed countries will be the major determinant of growth in demand. But even in the case of poor weather and resilient growth in demand in 1979/80, supplies are highly unlikely to tighten to the extent noted in 1974/75 and 1975/76.

Donors' Perspective

Grain supplies in the major donor countries--the United States, Canada, Australia, and Western Europe--are currently reported at a record 629 million tons compared with a previous all-time high of 579 million tons (Table 7). Carry-in stocks were reported at or near record highs reflecting the cumulative impact of generally good harvests and slowed growth in domestic and export demand in late 1976/77 and 1977/78. Production in 1978/79 in the donor countries as a whole rose to an all-time high despite efforts in the United States to lower production 10-15 percent.

Production of wheat, the largest component of the donors' mounting surpluses, increased 10 percent. Good weather raised yields and reduced the impact of a 15-percent cutback in U.S. area significantly. Good weather also pushed Australian production to nearly double the drought-reduced levels of a year ago. Canadian and Western European production are reported up 6 and 21 percent, respectively. Changes in wheat stocks reflect the same pattern of small decreases in the United States more than offset by weather-related build-ups in the other donor countries.

Coarse grain and rice supplies in the donor countries are also reported record high due to a combination of large carry-in stocks and bumper harvests. Efforts to reduce acreage so as to draw down excess stocks in the United States were more than offset by weather-related

gains in yields. The other donors report similar combinations of high stocks and record or near-record harvests.

Domestic and foreign demand for the donors' grain supplies appear to be increasing at a substantially slower rate than production in 1978/79 for a third consecutive year. Slowed recovery in feeding has kept domestic demand for grains below trend; bumper harvests in many of the largest importing countries have also slowed growth in exports. Hence, stocks at the end of 1978/79 are likely to be up as much as 25 million tons from carry-in levels. Accumulation of stocks of this magnitude in the donor countries suggests continued downward pressure on prices for at least the remainder of the current season and well into 1980/81 if the 1979/80 world crop is near or above trend.

Recipients' Perspective

With a few marked exceptions, the LIC's report favorable harvests and unusually large supplies of grain available for use in 1978/79. The majority of LIC's carried large stocks over into 1978/79 as a result of good crops and/or large imports in 1977/78. Harvests and imports in the majority of the LIC's have been record large 2 of the last 3 years and in many cases 3 of the last 4 years (Tables 8 and 9).

Improvements have been most noticeable in the Asian LIC's. South Asian production increased sufficiently over the 1976-78 period to push per capita consumption 8 percent above the levels reported at the beginning of the decade and 6 percent above the recent low reported in 1974. This year's improvement is a direct result of a fourth successive bumper Indian harvest, good Bengali wheat and rice crops, and Sri Lanka's general recovery from 1973-77 drought. Strong East Asian production gains were sufficient, particularly in combination with continued large imports, to push per capita consumption 20 percent above the levels of the late 1960's. Several Southeast Asian LIC's, however, stand out in sharp contrast to the bulk of the Asian LIC's. Serious drought and flooding problems in Vietnam and Laos, combined with a succession of poor harvests and civil unrest, have reduced per capita consumption more than 15 percent since 1975.

Increases in supplies have been more moderate in North Africa and the Middle East; supply increases have been due primarily to increased imports and only secondarily to increases in production. Current consumption levels are 15 percent higher than levels at the beginning of the decade.

The African LIC's benefited from little if any of the good weather reported over the 1976-78 period. East African production and consumption rose slightly in 1978/79 but from levels well below those of the late 1960's and early 1970's. Central and West Africa

exhibit much the same pattern of marginal 1978/79 improvements over low 1972-76 levels. Central, West, and East African imports continue to be fairly limited; hence, variations in production tend to be reflected directly in variations in consumptions.

The Sudano-Sahelian LIC's appear to be lacking even the marginal, short-term increases in production reported in other areas of sub-Saharan Africa. The region continues to suffer both from the after-effects of the 1973-76 drought and from year-to-year variations in rainfall closer to the normal fluctuations of the 1950's and 1960's. As a result, per capita production levels have declined in 7 of the last 8 years for a total decrease of over 20 percent. Per capita consumption decreased roughly by a third over the same period.

The African LIC's share of total LIC production is too small, however, to affect the LIC total significantly. Hence the overall grain supply situation in the LIC's--particularly the heavily populated Asian LIC's--appears to be unusually favorable. Aggregate LIC import requirements are likely to level off and possibly decline in late 1979 and early 1980. Despite this overall picture of reduced LIC need for donor country aid, individual LIC's in selected areas of Latin America, Asia, and Africa highlighted in Part V report production shortfalls and/or supply shortages as severe as any noted during the 1972-75 period. Hence their food aid needs are up substantially.

B. Vegetable Oil Situation and Outlook

The importance of vegetable oils in food aid transfers relate traditionally both to the abundant, generally low-priced supplies available in the donor countries and a preference for vegetable oils calories as compared with grain calories in most of the LIC's. Shifts over the 1976-78 period in the supplies of vegetable oil and in relative oil and grain prices, however, have raised the opportunity cost of oil donations significantly. During the first half of the 1970's, the cost of calories donated in the form of vegetable oils was roughly equal to the cost of grain calories. However, world oil shortages in 1977 and continued high oilseed prices in 1978 raised the cost of vegetable oil calories to 1 1/2 to 2 times the cost of grain calories. The relatively greater cost of vegetable oil calories declined only marginally in 1978.

Situation in 1978

World production of edible vegetable oils 2/ has trended upward steadily from 1965 through 1978 at an annual growth rate over 4 percent. 3/ Production

2/ Edible vegetable oils here include palm and olive and the oils derived from soybeans, peanuts, rapeseed, cottonseed, sunflowerseed and copra.

3/ The production of oils for consumption in the calendar year corresponds to crops harvested in the year indicated in the Southern Hemisphere, but in the previous year in the Northern Hemisphere. Palm is produced throughout the year and is included in the calendar year for production and consumption.

in 1977, however, was adversely affected by poor weather and fell 8 percent below trend. Mid-year 1977 price rose by almost 50 percent; world stocks were drawndown and consumption was curtailed principally in the developed countries. World production of edible vegetable oils rebounded sharply in 1978 due to increases in the U.S. soybean and cottonseed crops, the Canadian rapeseed crop, the Argentine soybean crop, and the Malaysian palm oil crop. Full recovery in production was delayed, however, by unexpected reductions in the Senegalese peanut crop, the Indian peanut crop, the Brazilian soybean crop, and the Soviet sunflowerseed crop. Total 1978 production was only slightly more than 1 percent above trend.

World consumption of vegetable fats and oils in 1978 actually rose slightly more than production forcing in a further reduction in world stocks. High 1977 vegetable oil prices declined marginally after the fall harvests but rose steadily during 1978 to exceed year earlier levels and continued to rise after the fall 1978 harvests. Devaluation of the U.S. dollar vis-a-vis the currencies of many developed countries, however, resulted in greatly reduced domestic prices for fats and oils in many of the largest importing countries and consequently stimulated consumption.

The largest changes in the LIC vegetable oil situation over the 1976-78 period were concentrated in South Asia. The explosion of vegetable oil imports into South Asia which began in 1977 continued in 1978. Imports of vegetable oil were up almost 30 percent in 1978. The foreign exchange position of the South Asian countries continued to improve greatly due to a combination of remittances from workers in the Middle East, increased exports, and at least temporary relief from heavy grain import bills. Strong growth in South Asian vegetable oil imports have been accompanied by moderate increases in domestic production and have resulted in a 50-percent increase in per capita vegetable oil consumption from 1976 to 1978. Current per capita consumption levels are not unprecedented, however. Somewhat higher levels of consumption were reported in the early 1960's when South Asia reported its domestic vegetable oil production records.

Among the African LIC's vegetable oil is an important source of calories, and per capita consumption continues to increase slowly. In Morocco, increasing consumption results primarily from increasing domestic production whereas in Egypt ever increasing imports allow consumption increases. In the rest of Africa, the large majority of LIC's export vegetable oil despite relatively low per capita consumption in order to boost their foreign exchange earnings. Levels of production, trade, and per capita consumption of edible vegetable oils have been stagnant in recent years. All of the Latin American LIC's are vegetable oil importers and all have very low levels of per capita vegetable oil consumption. However, production and consumption levels have increased significantly in percentage terms in recent years.

Situation in 1979

Most of the oilseeds available for processing into oil in 1979 have already been harvested. World production of edible vegetable oils in 1979 is expected to increase 6 percent to 37.6 million metric tons--a little more than 3 percent above trend. The U.S. soybean crop increased by 5 percent and the U.S. sunflower crop increased almost 40 percent roughly offsetting a 600,000 ton decline in the USSR sunflower crop. The Brazilian soybean crop has been reduced by drought for a second year, but nonetheless, is expected to exceed last year's crop by at least a million tons. Argentine soybean production continued its spectacular increase with a 1979 crop estimated to be one-third larger than last year's. Even more spectacular was the 75 percent increase in the Canadian rapeseed crop to 3.5 million tons. Malaysian palm oil production is expected to exceed 2.1 million metric tons in 1979, a 20-percent percent increase. The important Indian peanut crop was up slightly to 6.2 million tons.

However, despite the prospect of ample supplies of vegetable oils, in 1979, only small increases in stocks are anticiptated and prices will likely remain high. Vegetable oil prices did not decline after the fall harvests of 1978, but rather continued to rise rapidly. By the end of February 1979, soyoil prices reached $625 per metric ton, 16 percent above the 1978 average. Prices are not likely to decline significantly before late fall of 1979 and then only if the 1979 U.S. soybean crop is larger than currently anticipated. The devaluation of the U.S. dollar vis-a-vis the currencies of many developed countries and the improved foreign exchange positions of the South Asian countries appear to have shifted the demand curve for vegetable oils upward. Consequently, future production must remain above trend if vegetable oil prices are to return to their pre 1977 levels.

Some improvement in per capita consumption of edible vegetable oils is expected in the LIC's during 1979 due to expanded production in some cases, but due more often to expanded imports. However, the cost of the increased calories derived from vegetable oils will likely continue in 1979 at 1-1/2 to 2 times the cost of grain calories.

C. Nonfat Dry Milk Situation

The supplies of non-fat dry milk (NFDM) available for use as food aid continue to depend directly on the size of the surpluses generated by dairy support programs in several of the developed countries. Support programs generally depend on government intervention in the dairy products market to acquire the excess production generated by high farm prices. Dairy surpluses are usually converted into more storable manufactured products such as butter, NFDM,

and cheese. The European Community (EC) has for some time been the principal holder of such stocks--accounting for between 60 and 90 percent of world stocks in recent years. Stocks in the United States have accounted for 10 to 20 percent of the world total in recent years.

The information available to date on the 1978 and 1979 dairy situation in the developed countries in question suggest that overall supplies of NFDM are at or near record high but that pressure to reduce stocks--either by subsidized feeding or by food aid donations--are not as great as in 1976 or 1977. In the EC, production of NFDM increased 8 percent to a record 2.1 million tons in 1978. The EC has had some success in reducing government held stocks through subsidized livestock feeding programs, but their level is still considered extremely burdensome. Stocks were 670,000 tons at the beginning of 1979, or about 300,000 lower than a year earlier. However, build-up of NFDM stocks later in 1979 seems likely given prospects for continued dairy production increases and slowed growth in consumption. Although cow numbers are expected to remain nearly stable, the EC projects a 2-percent annual increase in milk yield per cow that would, combined with lower on-farm consumption, lead to a 3-percent increase in deliveries of milk to dairies.

EC exports of NFDM to countries outside the EC totaled about 500,000 tons--of which 130,000 tons were donated as food aid--in 1978 compared with 369,000 tons--of which 98,000 tons were food aid--in 1977. The EC Commission approved a food aid program in March that provides for 150,000 tons of NFDM in 1979. India (31,000 tons), Vietnam (15,000), and Egypt (5,000) were announced as major recipients of NFDM aid.

Milk production in the United States fell slightly in 1978 to about 55 million tons, but was expected to rise about 1 percent in 1979. Commercial use of milk in 1979 will likely expand about 1 percent. Because stocks of dairy products were low at the start of 1979, a slight rise in commercial use will probably be sufficient to hold U.S. price support purchases to moderate levels. The Commodity Credit Corporation (CCC) bought 38 percent less NFDM in 1978 than in 1979. Uncommitted CCC inventories of NFDM on March 1, 1979 were 216,000 tons, 78,000 smaller than a year earlier. This represented an amount equal to 1-1/2 year's donation usage at current rates.

Table II-1--World and Regional Indices of Food Production (1961-65 = 100)

Region/Country	1961-65	1970	1971	1972	1973	1974	1975	1976	1977	1978
					Total Production					
Developed Countries	100	120	126	125	133	131	130	137	139	146
United States	100	115	126	126	128	122	134	137	142	144
Canada	100	110	131	123	124	112	128	142	143	146
Western Europe	100	114	121	120	123	128	125	123	129	135
Eastern Europe	100	116	123	132	135	141	138	145	145	147
U.S.S.R.	100	136	135	128	155	144	128	153	148	162
Japan	100	110	103	110	110	111	115	109	118	117
Oceania	100	121	128	123	127	127	137	139	131	150
Developing Countries	100	126	127	126	132	135	145	149	154	158
Latin America	100	129	131	130	139	145	152	159	162	168
Developing Africa	100	116	120	121	119	125	128	131	128	130
West Asia	100	122	127	137	127	141	154	168	165	171
South Asia	100	128	126	119	130	124	140	137	150	156
East Asia	100	129	132	130	141	147	154	164	166	171
China, People's Republic 1/	100	121	126	124	130	135	139	143	144	143
World 1/	100	122	126	125	132	134	136	142	144	150
					Per Capita Production					
Developed Countries	100	111	116	114	121	118	116	121	122	127
United States	100	106	116	114	115	109	119	120	124	125
Canada	100	98	115	106	106	95	106	116	116	116
Western Europe	100	109	114	113	115	119	115	113	118	123
Eastern Europe	100	111	116	124	127	131	127	133	132	133
U.S.S.R.	100	126	124	117	140	129	113	134	128	140
Japan	100	102	94	100	98	97	100	94	101	98
Oceania	100	106	110	104	107	104	111	112	104	118
Developing Countries	100	106	104	100	103	103	108	108	109	109
Latin America	100	107	105	102	106	108	110	112	111	112
Developing Africa	100	98	99	97	92	95	95	94	90	89
West Asia	100	100	102	107	96	104	110	117	112	113
South Asia	100	109	106	98	104	97	108	103	110	112
East Asia	100	108	108	104	110	112	115	120	118	120
China, People's Republic 1/	100	107	109	106	109	110	113	114	113	112
World 1/	100	109	112	109	114	112	113	116	117	119

1/ USDA data used for all regions except PRC. PRC data taken from FAO Indices of Food Production. World calculated as weighted sum of USDA and FAO Indicies shown above.

Table II-2--LIC Indices of Food Production (1961-65 = 1000)

	1961-65	1970	1971	1972	1973	1974	1975	1976	1977	1978
					Total					
I. Asian Lowest Income Countries										
South Asia	1,000	1,276	1,257	1,197	1,304	1,249	1,398	1,375	1,500	1,545
Afghanistan	1,000	980	910	1,030	1,110	1,140	1,160	1,220	1,190	1,170
Bangladesh	1,000	1,135	1,005	1,019	1,194	1,148	1,296	1,195	1,305	1,340
Bhutan	1,000	1,000	1,020	1,050	1,070	1,100	1,120	1,140	1,150	1,170
India	1,000	1,266	1,272	1,188	1,296	1,217	1,402	1,365	1,490	1,555
Nepal	1,000	1,020	1,000	970	1,070	1,080	1,110	1,100	1,040	1,010
Pakistan	1,000	1,602	1,520	1,523	1,591	1,639	1,614	1,770	1,930	1,870
Sri Lanka	1,000	1,398	1,275	1,220	1,194	1,446	1,212	1,270	1,545	1,690
East Asia	1,000	1,237	1,275	1,204	1,357	1,416	1,471	1,520	1,530	1,625
Burma	1,000	1,073	1,061	1,006	1,112	1,117	1,149	1,165	1,190	1,265
Indonesia	1,000	1,217	1,243	1,192	1,304	1,400	1,414	1,445	1,450	1,575
Philippines	1,000	1,308	1,384	1,343	1,450	1,474	1,627	1,735	1,745	1,760
Thailand	1,000	1,321	1,388	1,249	1,539	1,573	1,666	1,735	1,735	1,830
Communist Asia	1,000	1,002	1,038	1,029	1,077	1,115	1,146	1,174	1,185	1,229
Cambodia 1/	1,000	1,150	940	780	610	520	670	710	710	660
China, People's Republic	1,000	1,000	1,040	1,030	1,080	1,120	1,150	1,180	1,190	1,240
Laos	1,000	1,020	980	1,000	1,050	1,090	1,110	1,110	1,050	1,090
Vietnam	1,000	1,020	1,020	1,050	1,070	1,080	1,120	1,120	1,160	1,080
II. Africa										
North Africa/Middle East	1,000	1,145	1,257	1,284	1,209	1,286	1,277	1,385	1,255	1,365
Egypt	1,000	1,130	1,191	1,216	1,237	1,247	1,314	1,320	1,290	1,350
Morocco	1,000	1,292	1,446	1,482	1,170	1,450	1,210	1,605	1,215	1,475
Yemen, Arab Republic	1,000	840	1,140	1,170	1,160	1,050	1,250	1,160	1,150	1,150
Yemen, People's Republic	1,000	920	1,090	1,050	1,160	1,210	1,270	1,280	1,270	1.270
Sudana-Sahelian Africa	1,000	1,143	1,162	1,521	1,057	1,155	1,153	1,205	1,170	1,115
Central African Empire	1,000	1,000	1,040	1,080	1,130	1,150	1,140	1,160	1,200	1,200
Chad	1,000	980	1,010	830	790	890	900	910	930	930
Ethiopia	1,000	1,168	1,191	1,126	1,107	1,118	1,008	1,025	980	875
Mali	1,000	1,021	972	820	816	813	916	1,120	1,105	1,135
Mauritania	1,000	1,010	970	920	760	740	730	820	830	830
Niger	1,000	1,169	1,111	944	871	1,230	869	1,475	1,285	955
Somalia	1,000	1,000	1,010	1,110	1,040	940	990	1,080	1,110	1.110
Sudan	1,000	1,286	1,372	1,303	1,259	1,451	1,635	1,581	1,565	1,580
Upper Volta	1,000	924	836	817	793	976	1,013	945	930	920
Cape Verde Islands	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Central & West Africa	1,000	1,263	1,275	1,275	1,284	1,350	1,396	1,349	1,346	1,372
Angola	1,000	1,667	1,077	1,018	1,115	1,096	874	815	745	645
Benin	1,000	1,115	1,100	1,134	1,223	1,232	1,219	1,240	1,205	1,260
Cameroon	1,000	1,104	1,183	1,146	1,120	1,187	1,188	1,195	1,215	1,255
Congo, People's Republic	1,000	980	1,010	970	980	980	1,040	1,130	1,140	1,025
Gambia	1,000	980	1,020	1,080	970	1,120	1,140	1,140	1,000	970
Ghana	1,000	1,081	1,163	1,090	1,178	1,207	1,103	1,060	1,110	1,170
Guinea	1,000	1,225	1,284	1,296	1,319	1,307	1,329	1,320	1,249	1,341
Guinea-Bissaeau	1,000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Guinea Equitorial	1,000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	1,000	1,364	1,490	1,444	1,555	1,767	2,176	2,072	2,070	2,179
Liberia	1,000	1,000	1,061	1,094	1,223	1,396	1,351	1,427	1,482	1,548
Nigeria	1,000	1,135	1,141	1,193	1,127	1,194	1,215	1,236	1,259	1,269
Senegal	1,000	764	1,097	758	910	1,254	1,411	1,253	879	1,224
Sierra Leone	1,000	1,085	1,180	1,180	1,186	1,180	1,263	1,279	1,359	1,375
Togo	1,000	1,283	1,253	1,267	1,229	1,281	1,342	1,369	1,405	1,389
Zaire	1,000	1,418	1,321	1,321	1,425	1,392	1,429	1,470	1,455	1,401

See footnote at end of table.

--Continued--

Table II-2--LIC Indices of Food Production (1961-65 = 1000)--continued

Country/Region	1961-65	1970	1971	1972	1973	1974	1975	1976	1977	1978
					Total					
East Africa	1,000	1,190	1,250	1,322	1,292	1,335	1,353	1,400	1,430	1,400
Botswana	1,000	920	1,110	1,020	1,120	1,210	1,180	1,330	1,300	1,290
Burundi	1,000	1,265	1,294	1,301	1,291	1,075	1,312	1,301	1,317	1,264
Comoros	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Kenya	1,000	1,198	1,173	1,316	1,334	1,359	1,450	1,409	1,510	1,539
Lesotho	1,000	970	1,030	870	1,200	1,050	930	1,240	1,110	1,100
Madagascar	1,000	1,267	1,289	1,305	1,231	1,331	1,398	1,396	1,485	1,294
Malawi	1,000	1,144	1,320	1,475	1,400	1,448	1,314	1,408	1,296	1,437
Mozambique	1,000	1,000	1,010	1,050	1,100	1,060	930	1,000	1,000	900
Rhodesia	1,000	997	1,217	1,390	1,098	1,482	1,385	1,385	1,360	1,345
Rwanda	1,000	1,474	1,492	1,447	1,526	1,369	1,503	1,448	1,520	1,535
Swaziland	1,000	1,020	1,030	1,170	1,120	1,210	1,100	1,250	1,290	1,260
Tanzania	1,000	1,268	1,321	1,365	1,417	1,384	1,413	1,475	1,540	1,540
Uganda	1,000	1,181	1,180	1,156	1,120	1,119	1,078	1,130	1,160	1,180
Zambia	1,000	1,168	1,478	1,719	1,478	1,872	1,982	2,250	2,185	2,170
III. Latin America	1,000	1,196	1,222	1,251	1,306	1,289	1,330	1,265	1,345	1,465
Bolivia	1,000	1,183	1,153	1,177	1,250	1,303	1,423	1,360	1,370	1,495
El Salvador	1,000	1,357	1,440	1,322	1,559	1,522	1,718	1,650	1,705	1,970
Grenada	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Haiti	1,000	1,022	1,074	1,221	1,106	925	915	805	1,010	990
Honduras	1,000	1,270	1,458	1,330	1,374	1,291	1,085	1,315	1,325	1,485
IV. LIC Total	1,002	1,251	1,160	1,125	1,205	1,212	1,289	1,302	1,350	1,405
LIC Total Minus Communist Asia	1,000	1,263	1,266	1,209	1,316	1,297	1,413	1,413	1,495	1,560

1/ Assumes 1975-79 population of 8,000,000.

Table II-3--LIC Indices of Food Production (1961-65 = 1000)

	1961-65	1970	1971	1972	1973	1974	1975	1976	1977	1978
					Per Capita					
I. Asian Lowest Income Countries										
South Asia	1,000	1,092	1,053	980	1,045	979	1,072	1,031	1,102	1,111
Afghanistan	1,000	980	880	980	1,030	1,020	1,020	1,040	990	965
Bangladesh	1,000	955	825	820	937	878	966	867	922	924
Bhutan	1,000	1,000	1,000	1,000	1,000	1,000	1,000	990	970	965
India	1,000	1,092	1,074	981	1,048	964	1,088	1,039	1,112	1,138
Nepal	1,000	1,020	970	920	1,000	990	990	960	890	910
Pakistan	1,000	1,314	1,210	1,178	1,195	1,195	1,142	1,216	1,288	1,211
Sri Lanka	1,000	1,197	1,068	999	1,159	1,337	978	959	1,144	1,226
East Asia	1,000	1,037	1,045	970	1,060	1,080	1,096	1,107	1,089	1,130
Burma	1,000	919	899	842	905	888	892	883	883	918
Indonesia	1,000	1,032	1,031	966	1,034	1,086	1,071	1,070	1,050	1,115
Philippines	1,000	1,064	1,095	1,036	1,088	1,078	1,160	1,207	1,185	1,166
Thailand	1,000	1,081	1,100	961	1,152	1,147	1,186	1,209	1,183	1,221
Communist Asia	1,000	882	898	875	900	915	925	932	924	942
Camoboda 1/	1,000	1,150	920	740	570	470	605	640	640	595
China, People's Republic	1,000	1,010	1,030	1,000	1,030	1,040	1,060	1,070	1,060	1,080
Laos	1,000	1,020	960	960	980	1,000	1,000	970	900	960
Vietnam	1,000	1,020	1,000	1,010	1,010	990	1,010	990	1,000	910
II. Africa										
North Africa/Middle East	1,000	957	1,025	1,021	937	971	942	996	880	933
Egypt	1,000	948	978	976	971	958	987	970	927	949
Morocco	1,000	1,074	1,168	1,160	890	1,065	867	1,117	820	967
Yemen, Arab Republic	1,000	850	1,110	1,100	1,060	940	1,080	980	940	918
Yemen, People's Republic	1,000	920	1,060	990	1,060	1,080	1,100	1,080	1,040	1,015
Sudana-Sahelian Africa	1,000	978	971	1,243	844	900	877	900	850	791
Central African Empire	1,000	1,000	1,020	1,030	1,060	1,060	1,030	1,030	1,030	1,005
Chad	1,000	970	990	820	780	880	900	870	880	855
Ethiopia	1,000	999	993	916	879	864	760	753	702	611
Mali	1,000	879	822	678	660	643	710	850	820	824
Mauritania	1,000	1,010	960	880	720	690	660	720	720	705
Niger	1,000	959	889	735	668	908	624	1,031	876	634
Somalia	1,000	1,000	990	1,050	970	850	870	920	920	
Sudan	1,000	1,107	1,156	1,074	1,016	1,146	1,264	1,196	1,159	1,146
Upper Volta	1,000	784	695	664	631	757	772	706	666	643
Cape Verde Islands	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Central & West Africa	1,000	1,066	1,051	1,024	1,005	1,029	1,037	975	948	941
Angola	1,000	1,534	982	920	993	955	744	664	597	509
Benin	1,000	931	894	896	941	921	886	846	830	846
Cameroon	1,000	975	1,026	977	937	974	957	944	942	954
Congo, People's Republic	1,000	980	990	920	920	890	920	980	960	845
Gambia	1,000	980	1,000	1,040	910	1,030	1,040	1,020	870	
Ghana	1,000	901	944	861	906	904	805	753	768	788
Guinea	1,000	1,079	1,108	1,095	1,090	1,055	1,049	1,042	964	1,012
Guinea-Bisseau	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Guinea Equitorial	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	1,000	1,072	1,130	1,058	1,100	1,206	1,434	1,318	1,276	1,292
Liberia	1,000	817	840	840	910	1,008	944	968	975	989
Nigeria	1,000	956	936	953	876	903	893	884	874	856
Senegal	1,000	627	875	589	687	920	1,007	870	594	804
Sierra Leone	1,000	931	989	965	946	918	959	950	985	972
Togo	1,000	1,088	1,037	1,022	967	981	1,002	996	996	961
Zaire	1,000	1,197	1,090	1,065	1,122	1,071	1,074	1,078	1,042	980

See footnote at end of table.

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Table II-3--LIC Indices of Food Production (1961-65 = 1000)--continued

	1961-65	1970	1971	1972	1973	1974	1975	1976	1977	1978
					Per Capita					
East Africa	1,000	992	1,014	1,045	992	997	984	988	982	954
Botswana	1,000	930	1,090	970	1,050	1,100	1,050	1,160	1,100	1,070
Burundi	1,000	1,164	1,180	1,177	1,149	936	1,118	1,085	1,074	1,009
Comoros	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Kenya	1,000	964	914	993	974	961	992	934	969	955
Lesotho	1,000	970	1,010	840	1,140	980	850	1,100	970	940
Madagascar	1,000	1,093	1,089	1,080	996	1,053	1,084	1,058	1,102	940
Malawi	1,000	963	1,085	1,182	1,093	1,102	974	1,017	961	1,043
Mozambique	1,000	1,000	990	1,000	1,030	970	830	870	850	750
Rhodesia	1,000	794	935	1,031	787	1,027	928	897	852	816
Rwanda	1,000	1,230	1,210	1,140	1,169	1,020	1,089	1,020	1,026	1,008
Swaziland	1,000	1,020	1,000	1,110	1,030	1,090	960	1,060	1,060	
Tanzania	1,000	1,062	1,077	1,087	1,096	1,043	1,036	1,054	1,071	1,043
Uganda	1,000	959	927	879	824	797	743	753	748	737
Zambia	1,000	954	1,172	1,323	1,104	1,356	1,391	1,512	1,425	1,394
III. Latin America	1,000	993	987	983	998	958	962	889	920	976
Bolivia	1,000	977	927	923	955	971	1,029	956	938	997
El Salvador	1,000	1,073	1,097	975	1,111	1,050	1,150	1,071	1,074	1,206
Grenada	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Haiti	1,000	906	936	1,045	926	879	842	634	779	748
Honduras	1,000	1,004	1,116	982	981	888	722	845	825	895
IV. LIC Total	1,000	985	980	933	978	963	1,004	995	1,012	1,031
LIC Total Minus Communist Asia	1,000	1,074	1,053	984	1,046	1,006	1,073	1,049	1,088	1,108

1/ Assumes 1975-79 population of 8,000,000.

Table II-4 World Total Grain Production, and Net Exports 1/ 2/

	1960/61-62/63			1969/70-71/72			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Exports	Prod.	Cons.	Net Exports	Prod.	Cons.	Net Exports	Prod.	Cons.	Net Exports	Prod.	Cons.	Net Exports
Developed Countries	313.4	297.7	20.2	399.3	372.9	31.4	467.2	377.7	56.2	480.3	387.5	77.4	513.7	403.3	81.9
United States	168.3	139.8	32.7	208.7	169.0	39.3	256.0	153.6	78.2	262.4	161.3	85.2	271.4	171.4	87.2
Canada	22.9	14.2	9.7	32.4	20.1	14.9	44.7	21.9	16.7	42.2	21.2	19.2	41.3	21.9	17.9
EC-9	68.9	89.4	-21.5	91.9	109.2	-16.6	91.3	113.5	-22.7	104.1	115.5	-10.7	115.7	117.1	-5.6
Other West Europe	20.1	24.3	-4.3	28.5	33.3	-4.9	33.4	41.9	-8.3	31.9	42.6	-9.8	36.4	44.0	-9.4
South Africa	7.0	4.7	2.2	10.1	7.1	2.5	12.5	8.8	1.5	12.6	8.6	2.9	10.2	9.0	3.4
Japan	15.6	21.0	-5.3	12.7	27.9	-14.4	11.2	32.0	-21.4	12.4	32.5	-22.7	12.2	33.8	-22.9
Oceania	10.8	4.4	6.7	15.0	6.3	10.8	18.1	6.0	12.2	14.7	5.8	13.3	26.5	6.1	11.3
Central Planned Countries	293.8	297.3	-3.3	401.3	416.5	-5.9	507.5	516.2	-21.7	474.8	523.3	-34.4	521.2	538.5	-34.3
Eastern Europe	56.6	63.5	-6.6	73.8	81.6	-6.8	94.3	104.3	-12.0	93.8	103.8	-10.0	94.7	106.4	-10.6
U.S.S.R.	126.3	119.0	7.3	167.4	171.8	4.0	213.2	209.8	-7.6	186.1	217.0	-16.8	225.3	218.9	-11.7
People Republic of China	110.9	114.8	-3.9	160.0	163.1	-3.1	200.0	202.1	-2.1	194.9	202.4	-7.6	201.2	213.2	-12.0
Developing Countries 2/	233.5	244.2	-13.4	307.2	324.5	-18.4	379.1	396.9	-27.7	371.0	414.7	-37.8	390.8	428.6	-41.5
Middle America	9.7	10.4	-.9	15.8	17.0	-1.0	20.2	23.8	-2.5	19.0	24.4	-4.7	20.1	25.3	-5.2
Venezuela	.5	.9	-.4	.8	1.8	-1.0	.8	2.7	-1.8	1.5	3.1	-1.7	1.5	3.3	-1.7
Brazil	13.8	15.7	-1.8	20.4	22.0	-.8	27.8	28.5	-1.2	21.5	28.1	-2.0	27.9	30.5	-5.4
Argentina	13.2	8.3	5.2	19.4	11.3	8.1	28.1	11.3	15.3	23.3	11.1	13.7	24.7	11.5	13.2
Other South America	5.6	6.7	-1.0	6.8	8.9	-2.1	8.2	10.5	-2.7	7.5	10.9	-3.1	7.6	11.1	-3.6
North Africa/Middle East	31.3	36.5	-5.5	39.6	47.6	-9.1	54.7	66.0	-16.2	48.6	67.9	-19.6	52.7	71.1	-19.5
Central Africa	18.9	19.7	-2.4	22.4	24.1	-1.8	23.6	26.5	-3.4	22.8	26.7	-3.9	23.4	27.2	-3.7
East Africa	7.4	7.3	-.1	9.6	9.8	-.3	10.4	10.3	-.1	10.6	10.9	-.3	10.6	11.3	-.6
South Asia	92.1	97.4	-6.2	119.1	123.4	-5.5	133.6	137.4	-5.5	146.6	148.5	-2.3	149.1	152.9	-2.9
Southeast Asia	17.3	13.4	4.0	22.9	19.8	3.3	21.7	16.7	5.6	20.3	17.1	2.8	22.3	18.0	4.2
East Asia	23.7	27.9	-4.3	30.4	38.0	-8.2	36.3	47.2	-12.9	36.4	49.8	-13.6	38.5	51.3	-13.3
Rest of World	6.5	7.4	-.9	6.9	9.7	-2.2	13.7	16.1	-2.4	13.1	16.0	-2.9	12.3	15.3	-3.0
Total Above	847.2	846.7	---	1114.7	1123.7	---	1367.5	1306.9	---	1339.2	1341.5	---	1438.0	1385.7	---
World Total	847.9	845.6	---	1119.8	1131.5	---	1353.7	1300.2	---	1325.8	1329.5	---	1425.2	1373.2	---

1/ World Totals 1976, 1977, and 1978 taken from January 26, 1979 Foreign Agricultural Circular on Grains.
2/ Totals may not add due to rounding.
3/ Preliminary.
4/ Forecasts.

Table II-5 Ending Stocks of Total Grains

Year	Total	U.S.	Other Developed	Centrally Planned	LDC
	Million tons				
1969/71 average	178.0	67.4	59.5	19.3	31.7
1974/75	131.6	27.5	50.3	24.6	29.5
1975/76	136.9	36.6	46.5	9.8	43.9
1976/77	190.4	61.5	52.6	22.7	53.6
1977/78 1/	189.3	74.4	54.3	8.8	51.8
1978/79 2/	232.5	85.9	67.2	25.8	53.7

1/ Preliminary.
2/ Forecast.

Table II-6 Export Prices for Selected Cereals

July-June year	Wheat 1/	Corn 2/	Sorghum 3/	Rice 4/
	Dollars/Metric ton			
1971/72	61	52	52	133
1972/73	92	71	69	174
1973/74	177	116	107	584
1974/75	162	133	125	439
1975/76	151	199	114	294
1976/77	112	110	101	257
1977/78	116	100	92	337
1978				
Jan.	119	101	93	338
July	129	100	93	384
Aug	129	96	91	366
Sept.	134	96	90	369
Oct.	137	98	96	375
Nov.	141	102	99	315
Dec.	139	102	99	292
1979				
Jan.	140	109	100	300
Feb.	144	109	100	N.Q.
Mar.	137	111	99	

1/ U.S. #1 HWW ordinary protein f.o.b. Gulf Ports-Buyers Price.
2/ U.S. #2 corn export price f.o.b. Gulf Ports basis prompt to 30 days delivery.
3/ U.S. #2 yellow grain sorghum for vessel Gulf Ports.
4/ Thailand long grain white rice 5-7% broken f.o.b. Bangkok.
NQ= No quote.

Table II-7 Grain Situation in Major Food Donor Countries

	Beginning stocks	Production	Consumption	Net exports	Grain donation
			Million metric tons		
			United States		
1970/71	73.4	185.7	164.5	39.9	9.105
71/72	55.1	236.4	175.9	42.3	9.259
72/73	73.8	226.9	182.2	70.9	7.025
73/74	48.1	236.4	178.3	75.1	3.198
74/75	31.3	203.1	142.2	65.2	4.712
75/76	27.5	247.0	155.2	83.2	4.284
76/77	36.6	256.0	153.6	77.9	6.147
77/78	61.5	262.4	161.2	88.6	5.700
78/79	74.4	271.4	171.4	88.8	6.400
			Total less the United States		
1970/71	69.1	171.5	199.9	-13.8	3.701
71/72	54.7	199.1	210.1	-4.6	3.060
72/73	48.4	191.5	212.9	-9.7	2.762
73/74	39.1	201.9	216.1	-18.1	2.339
74/75	43.3	202.3	213.7	-12.0	2.862
75/76	47.7	199.7	212.0	-8.3	1.765
76/77	44.9	198.9	215.6	-20.7	2.783
77/78	50.1	205.3	217.5	-12.7	3.025
78/79	51.1	332.1	222.9	-87.5	28.371
			Total 1/		
1970/71	142.5	357.3	364.4	26.1	12.806
71/72	107.8	435.5	385.9	37.7	12.319
72/73	122.2	418.4	395.1	61.2	9.787
73/74	87.2	438.3	394.4	57.0	5.537
74/75	74.5	405.4	355.9	53.2	7.574
75/76	75.2	446.7	367.2	74.9	6.409
76/77	81.5	454.9	369.2	57.2	8.930
77/78	111.6	467.7	378.7	75.9	8.725
78/79	125.5	503.5	394.3	83.9	9.237

1/ Totals may not always add because of rounding.

Table II-8 LIC Total Grain Production, Consumption, and Net Imports 1/ 2/

	1969/70-1972/73			1975/76			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.
	Thousand metric tons														
Latin America	1,619	1,968	348	1,821	2,286	527	1,798	2,362	539	2,044	2,639	686	2,170	2,745	596
Bolivia	451	652	203	523	734	230	593	723	160	477	727	260	515	775	260
El Salvador	486	544	53	652	687	74	521	707	149	553	755	213	734	827	110
Grenada 5/	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Haiti	299	346	49	240	386	146	316	486	177	555	645	148	463	635	158
Honduras	383	426	43	406	479	77	368	446	53	459	512	65	458	508	68
No. Africa/Middle East	11,439	15,156	3,627	12,524	18,547	6,232	14,117	19,930	6,510	11,273	19,431	7,538	14,508	21,164	7,745
Egypt	6,588	9,339	2,762	7,330	11,522	4,300	7,291	11,919	4,583	6,702	11,718	4,946	7,107	12,432	5,350
Jordan	222	389	191	63	407	292	82	429	342	76	472	399	68	496	435
Morocco	3,969	4,511	418	3,651	4,745	1,246	5,607	5,897	1,036	2,845	5,115	1,716	5,683	6,110	1,483
Yemen, Arab Rep.	648	792	144	1,393	1,719	327	1,063	1,473	411	1,565	1,944	380	1,565	1,944	380
Yemen, People's Rep.	12	125	112	87	154	67	74	212	138	85	182	97	85	182	97
Sudano-Sahelian Africa	10,781	11,166	357	11,514	11,707	173	11,555	12,073	516	10,914	11,481	557	6,103	6,053	-50
Chad	---	---	---	800	801	1	560	560	---	527	527	---	527	527	---
Central African Empire	108	120	12	91	101	10	94	104	10	94	103	9	---	---	---
Ethiopia	5,919	5,966	37	5,182	5,180	-2	4,994	5,011	17	4,602	4,755	153	---	---	---
Mali	907	919	12	845	873	18	872	882	10	866	876	10	871	881	10
Mauritana	85	153	68	38	136	98	69	194	125	54	194	140	---	---	---
Nigeria	869	876	6	907	943	36	1,522	1,551	29	1,120	1,170	50	854	904	50
Somalia	---	54	54	---	101	101	---	68	68	---	95	95	---	120	120
Sudan	1,992	2,136	127	2,725	2,611	-124	2,563	2,787	227	2,720	2,800	70	2,920	2,660	-260
Upper Volta	901	942	41	926	961	35	881	916	30	931	961	30	931	961	30
West & Central Africa	12,367	13,825	1,496	13,047	14,649	1,655	13,053	15,249	2,287	13,008	15,516	2,600	13,823	16,373	2,655
Benin	248	260	12	289	306	17	286	334	48	205	245	40	265	305	40
Cameroon	655	717	62	749	829	80	748	829	81	703	783	80	758	838	80
Congo, People's Rep.	8	39	31	20	61	41	22	54	32	23	47	24	---	---	---
Equitorial Guinea	23	42	18	23	34	11	23	38	15	23	38	15	23	38	15

See footnotes at end of table.

Table II-8 LIC Total Grain Production, Consumption, and Net Imports 1/ 2/--continued

	1969/70-1972/73			1975/76			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.
	Thousand metric tons														
Gambia	28	39	11	39	52	39	32	71	35	36	71	35	39	74	40
Ghana	630	769	141	647	748	109	660	768	126	691	831	163	822	1,027	205
Guinea	312	359	49	340	407	49	340	411	72	340	379	40	340	405	55
Ivory Coast	490	686	195	668	787	87	599	773	245	548	806	245	640	893	230
Liberia	100	143	43	160	207	37	170	215	55	173	218	55	195	235	35
Nigeria	8,305	8,686	380	8,264	8,765	521	8,400	9,280	840	8,650	9,662	1,095	8,902	10,004	1,230
Senegal	640	916	302	747	999	306	676	1,075	440	490	1,030	450	698	1,143	450
Sierra Leone	290	341	54	335	364	40	355	398	35	367	400	35	361	410	55
Togo	147	147	---	145	145	---	145	145	---	144	144	---	145	145	---
Zaire	491	681	198	621	945	318	597	858	263	615	862	323	635	856	220
East Africa	9,595	9,749	180	9,970	10,470	115	9,995	10,272	296	10,141	10,765	568	9,827	10,455	665
Botswana	64	125	61	61	111	50	123	158	35	83	121	38	---	---	---
Burundi	325	325	---	317	317	---	316	316	---	317	317	---	317	317	---
Comoros	16	33	17	16	28	12	19	33	14	20	32	12	---	---	---
Kenya	2,023	1,912	-95	2,417	2,278	-180	2,236	2,151	-13	2,388	2,376	20	37	2,383	54
Lesotho	169	212	43	120	161	41	257	321	64	186	250	64	---	---	---
Madagascar	1,304	1,340	36	1,359	1,468	102	1,240	1,395	103	1,195	1,436	171	1,220	1,476	256
Malawi	1,041	1,077	36	1,022	1,023	1	1,130	1,130	---	1,229	1,233	4	1,329	1,310	10
Mozambique	800	832	32	485	638	23	638	612	-26	554	659	75	529	649	120
Rwanda	285	285	---	286	286	---	286	286	---	786	286	---	286	286	---
Swaziland	97	105	8	101	114	13	118	131	13	94	107	13	---	---	---
Tanzania	2,191	2,239	58	2,602	2,874	65	2,452	2,572	120	2,609	2,780	171	2,609	2,834	225
Uganda	1,296	1,297	1	1,200	1,200	---	1,200	1,200	---	1,200	1,200	---	1,200	1,200	---
South Asia	118,551	123,814	3,729	136,570	140,239	11,066	138,861	134,954	6,447	145,866	145,406	3,001	150,496	148,637	2,389
Afghanistan	3,518	3,636	117	4,257	4,267	10	8,694	4,436	9	4,274	4,474	200	4,274	4,324	50
Bangladesh	10,912	12,022	610	13,049	14,690	2,046	12,073	13,429	906	13,472	14,713	1,800	13,508	14,808	1,350
Bhutan	---	---	---	406	390	-16	410	394	-16	412	396	-16	---	---	---
India	89,892	92,450	1,785	103,196	103,495	7,378	101,022	98,843	5,092	110,278	107,281	-240	115,950	110,620	-1,250
Nepal	2,712	2,450	-260	3,037	2,891	-146	2,897	2,778	-119	2,826	2,773	-53	2,971	2,888	-83
Pakistan	10,528	11,338	535	11,820	12,619	706	12,893	13,151	-376	13,423	13,330	-58	12,573	13,835	1,350
Sri Lanka	989	1,918	942	805	1,887	1,088	872	1,923	951	1,181	2,439	1,368	1,220	2,162	972

See footnotes at end of table.

Table II-8 LIC Total Grain Production, Consumption, and Net Imports 1/ 2/--continued

	1969/70-1972/73			1975/76			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.
	Thousand metric tons														
Southeast Asia	24,360	22,965	-2,278	29,240	25,238	-4,093	29,403	25,227	-4,793	27,760	25,967	-2,610	29,742	26,429	-3,255
Exporters	16,084	12,773	-3,534	19,687	14,817	-4,961	19,837	14,684	-5,770	18,698	15,325	-3,040	20,680	16,187	-4,435
Burma	5,427	4,864	-518	6,305	5,660	-630	6,409	5,729	-690	6,548	5,871	-332	6,890	6,580	-485
Thailand	10,657	7,909	-3,016	13,382	9,157	-4,331	13,428	8,955	-5,080	12,150	9,454	-2,708	13,790	9,607	-3,950
Importers	8,276	10,192	1,256	9,553	10,421	868	9,566	10,543	977	9,062	10,642	430	9,062	10,242	1,180
Viet Nam	6,113	7,706	1,194	7,835	8,581	746	7,693	8,518	825	7,351	8,751	250	7,351	8,351	1,000
Laos	585	647	62	623	743	120	583	703	120	551	701	150	551	701	150
Cambodia	1,578	1,839	0	1,095	1,097	2	1,290	1,322	32	1,160	1,190	30	1,160	1,190	30
East Asia	20,735	22,045	1,254	24,612	26,993	2,194	25,198	28,644	3,541	25,590	30,199	4,252	27,300	31,662	4,120
Philippines	5,226	6,205	917	6,524	6,770	686	6,781	7,515	964	7,060	7,835	848	7,600	8,150	660
Indonesia	15,509	15,796	293	18,088	10,168	1,453	18,417	21,070	2,518	18,530	22,304	3,344	19,700	23,447	3,395
West Samoa	---	7	7	---	7	7	---	7	7	---	7	7	---	---	---
Papua New Guinea	0	44	44	0	55	55	0	59	59	0	60	60	0	65	65

1/ Includes wheat, coarse grains and milled rice.
2/ Source FAS, ESCS, FAO.
3/ Preliminary.
4/ Forecast.
5/ Not available.

Table II-9 Per Capita LIC Total Grain Production, Consumption, and Net Imports 1/ 2/

	1969/70-1972/73			1975/76			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.
	Kilograms per Capita														
Latin America	98.9	120.2	21.2	98.3	123.4	28.4	94.4	124.1	28.3	104.6	135.0	35.1	108.1	136.7	29.7
Bolivia	88.0	127.2	39.6	90.3	126.8	39.7	99.7	121.5	26.9	78.1	119.0	42.6	82.1	123.5	41.4
El Salvador	131.7	147.4	14.4	153.1	161.3	17.4	118.7	161.0	33.9	122.3	167.0	47.1	157.7	177.7	23.6
Grenada 5/															
Haiti	65.3	73.5	10.4	46.5	74.8	28.3	60.0	92.2	33.6	103.2	119.9	27.5	84.3	115.6	28.8
Honduras	134.7	149.9	15.1	122.3	144.3	23.2	107.3	130.0	15.5	129.7	144.6	18.4	125.3	139.0	18.6
No. Africa/Middle East	190.6	252.5	60.4	186.2	275.7	92.6	204.6	288.8	94.4	159.3	274.6	106.5	199.5	291.6	106.7
Egypt	191.1	271.0	80.1	192.6	302.7	113.0	187.3	306.2	117.8	168.4	294.5	124.3	174.7	305.6	131.5
Jordan	91.8	160.8	79.0	22.6	146.0	104.7	28.5	149.2	118.9	25.6	159.1	134.5	22.2	162.1	142.2
Morocco	254.3	289.0	26.8	204.8	266.1	69.9	305.2	321.0	56.4	150.4	270.3	90.7	291.6	313.6	76.1
Yeman, Arab Rep.	108.2	132.2	24.0	203.7	251.4	47.8	151.0	209.2	58.4	215.8	268.1	52.4	209.6	260.3	50.9
Yeman, People's Rep.	7.8	81.7	73.2	50.0	88.4	38.5	41.3	118.4	77.1	46.2	98.9	52.7	44.9	96.2	51.3
Sudano-Sahelian Africa	177.2	183.6	5.9	160.5	163.2	2.4	157.3	164.3	7.0	145.1	152.7	7.4	142.9	141.7	-1.2
Chad				194.4	194.6	.2	133.3	133.3		123.0	123.0		120.5	120.5	
Central African Empire	64.9	72.2	7.2	49.8	55.2	5.5	50.3	55.7	5.4	49.3	54.0	4.7			
Ethiopia	231.4	233.3	1.4	180.7	180.7		169.7	170.3	.1	152.4	157.5	5.1			
Mali	174.2	176.5	2.3	147.4	152.3	3.1	152.1	153.9	1.7	144.6	146.2	1.7	142.2	143.9	1.6
Mauritania	73.6	132.5	58.9	30.0	107.4	77.4	53.4	150.0	96.7	40.9	146.9	106.0			
Nigeria	208.2	209.9	1.4	192.0	199.6	7.6	313.8	319.8	6.0	225.0	235.0	10.0	167.2	176.9	9.8
Somalia		18.6	18.6		31.2	31.2		20.5	20.5		28.0	28.0		34.6	34.6
Sudan	137.4	147.3	8.8	170.7	163.5	-7.8	157.1	170.9	13.9	163.3	168.1	4.2	171.6	156.3	-15.3
Upper Volta	159.6	166.9	7.3	148.9	154.6	5.6	138.7	144.2	4.7	143.6	148.2	4.6	140.6	145.1	4.5
West & Central Africa	105.2	117.6	12.7	98.5	110.6	12.5	96.0	112.1	16.8	93.1	111.0	18.6	97.3	115.3	18.7
Benin	87.8	92.0	4.2	90.4	95.7	5.3	87.1	101.7	14.6	60.8	72.6	11.9	76.5	88.0	11.5
Cameroon	109.2	119.6	10.3	114.8	127.1	12.3	112.5	124.7	12.2	103.7	115.5	5.9	109.7	121.3	11.6
Congo, People's Rep.	6.5	31.6	25.1	14.5	44.2	29.7	15.5	38.2	22.6	15.9	32.4	16.6			
Equitorial Guinea	46.0	84.0	36.0	43.6	64.4	20.8	43.1	71.2	28.1	42.5	70.2	27.7	42.0	69.3	27.4
Gambia	58.2	81.1	22.9	74.4	99.2	74.4	59.9	133.0	65.5	66.2	130.5	64.3	70.4	133.6	72.2
Ghana	70.0	85.5	15.7	63.8	73.8	10.8	63.4	73.8	12.1	64.6	77.7	15.2	74.9	93.6	18.7

See footnote at end of table

Table II-9 Per Capita LIC Total Grain Production, Consumption, and Net Imports 1/ 2/--continued

	1969/70-1972/73			1975/76			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.
	Kilograms per Capita														
Guinea	77.0	88.6	12.1	75.9	90.8	10.9	74.2	89.7	15.7	72.6	81.0	8.5	71.1	84.7	11.5
Ivory Coast	82.6	115.6	32.9	96.2	113.3	12.5	83.3	107.5	34.1	73.7	108.3	32.9	83.1	116.0	29.9
Liberia	71.1	101.7	30.6	99.0	128.1	22.9	102.0	129.1	33.0	100.8	127.0	32.1	110.4	133.0	19.8
Nigeria	144.9	151.6	6.6	127.4	135.2	8.0	125.9	139.1	12.6	126.0	140.7	15.9	126.0	141.6	17.4
Senegal	141.8	202.9	66.9	146.0	195.3	59.8	128.5	214.4	83.6	90.6	190.4	83.2	125.4	205.4	80.9
Sierre Leone	103.8	122.1	19.3	107.6	116.9	12.8	111.3	124.8	11.0	112.3	122.4	10.7	107.9	122.5	16.4
Togo	72.1	72.1		63.4	63.4		61.8	61.8		59.8	59.8		58.7	58.7	
Zaire	25.1	34.9	10.1	28.6	43.5	14.6	26.8	38.6	11.8	27.0	37.9	14.2	27.2	36.7	9.4
East Africa	146.7	149.0	2.8	134.9	141.7	1.6	131.6	135.3	3.9	130.0	138.0	7.3	126.4	134.5	8.6
Botswana	102.1	199.4	97.3	85.7	155.9	70.2	168.0	215.8	47.8	110.4	160.9	50.5			
Burundi	95.3	95.3		85.6	85.6		83.4	83.4		81.9	81.9		80.2	80.2	
Comoros 5/															
Kenya	168.5	159.2	-7.9	174.0	164.0	-13.0	155.8	149.9	-.9	161.1	160.3	1.3	152.7	155.7	3.5
Lesotho	175.5	220.1	44.7	113.2	151.9	38.7	237.5	296.8	59.1	168.5	226.4	58.0			
Madagascar	187.0	192.2	5.2	176.9	191.1	13.3	158.0	177.7	13.1	149.0	179.1	21.3	148.9	180.1	31.2
Malawi	225.7	233.5	7.7	197.5	197.7	.2	212.8	212.8		225.6	226.3	.1	237.7	234.3	1.8
Mozambique	94.9	98.7	3.8	52.1	68.6	2.5	67.1	64.4	-2.7	57.0	67.8	7.7	53.2	65.3	12.1
Rwanda	74.1	74.1		65.6	65.6		63.8	63.8		62.1	62.1		60.4	60.4	
Swaziland	219.2	237.3	18.1	198.0	223.5	25.5	224.3	249.0	24.7	173.4	197.4	24.0			
Tanzania	158.6	162.1	4.2	167.2	184.7	4.2	153.4	160.9	7.5	159.0	169.4	10.4	154.8	168.2	13.3
Uganda	125.8	125.9	.1	100.6	100.6		97.3	97.3		94.2	94.2		91.1	91.1	
South Asia	159.3	166.3	5.0	166.0	170.5	13.5	165.2	160.6	7.7	169.9	169.4	3.5	171.9	169.7	2.7
Afghanistan	198.9	205.6	6.6	217.4	217.9	.5	433.9	221.4	.4	208.5	218.3	9.8	203.8	206.2	2.4
Bangladesh	150.7	166.1	8.4	160.9	181.1	25.2	145.0	161.2	10.9	157.9	172.5	21.1	154.6	169.5	15.5
Bhutan				337.8	324.5	-13.3	333.3	320.3	-13.0	327.5	314.8	-12.7			
India	158.7	163.2	3.2	166.1	166.6	11.9	159.4	155.9	8.0	170.6	165.9	-.4	175.8	167.7	-1.9
Nepal	231.9	209.5	-22.2	235.0	223.7	-11.3	219.2	210.2	-9.0	209.0	205.1	-3.9	214.8	208.8	-6.0

See footnotes at end of table.

Table II-9 Per Capita LIC Total Grain Production, Consumption, and Net Imports 1/ 2/--continued

	1969/70-1972/73			1975/76			1976/77			1977/78 3/			1978/79 4/		
	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons	Net Imp.	Prod.	Cons.	Net Imp.	Prod.	Cons.	Net. Imp.
	Kilograms per Capita														
Pakistan	166.1	178.9	8.4	163.3	174.4	9.8	173.0	176.4	-5.0	174.8	173.6	-.8	159.0	175.0	17.1
Sri Lanka	77.4	150.1	73.7	57.5	134.7	77.7	61.0	134.6	66.6	81.0	167.3	93.8	82.0	145.4	65.4
South Asia	209.1	197.1	-19.6	226.0	195.0	-31.6	222.3	190.7	-36.2	205.3	192.1	-19.3	215.2	191.3	-23.6
Exporters	242.0	192.2	-53.2	265.8	200.1	-67.0	262.1	194.0	-76.2	241.7	198.1	-39.3	261.6	204.7	-56.1
Burma	192.4	172.4	-18.4	202.1	181.4	-20.2	201.0	179.6	-21.6	200.9	180.1	-10.2	206.9	197.6	-14.6
Thailand	278.6	206.8	-78.8	312.2	213.6	-101.0	306.5	204.4	-116.0	271.4	211.2	-60.5	301.4	210.0	-86.3
Importers	165.4	203.6	25.1	172.6	188.3	15.7	169.1	186.4	17.3	156.7	184.0	7.4	153.3	173.2	20.0
Viet Nam	154.6	194.9	30.2	180.3	197.5	17.2	173.3	191.9	18.6	162.1	193.0	5.5	158.7	180.3	21.6
Laos	189.8	209.9	20.1	180.6	215.4	34.8	164.8	198.8	33.9	151.9	193.3	41.4	148.2	188.6	40.4
Cambodia	212.2	247.3	0	129.8	130.0	,2	149.2	152.9	3.7	130.9	134.3	3.4	127.7	131.0	3.3
East Asia	121.6	129.3	7.4	130.0	142.5	11.6	130.0	147.8	18.3	129.0	152.2	21.4	134.4	155.9	20.3
Philippines	133.7	158.7	23.4	148.7	154.3	15.6	150.8	167.1	21.4	153.2	170.0	18.4	160.9	172.5	14.0
Indonesia	120.4	122.6	2.3	126.8	141.1	10.2	126.2	144.4	17.2	124.1	149.4	22.4	129.0	153.5	22.2
W. Samoa 5/															
Papua/N. Guinea	0	17.4	17.4	0	19.4	19.4	0	20.3	20.3	0	20.1	20.1	0	21.2	21.2

1/ Includes wheat, coarse grains, and milled rice
2/ Source: FAS, ESCS, FAO
3/ Preliminary
4/ Forecast
5/ Not Available

Table II-10

Monthly prices of selected oils 1/ 2/

Commodity	Year	Port	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
			Dollars per metric ton												
Soybean oil	1977	Decatur	455	493	584	653	687	630	522	464	421	410	461	500	498
	1978	Decatur	460	477	587	600	631	592	569	575	607	593	547	570	567
	1979	Decatur	566	610											
Coconut oil	1977	Rotterdam	546	576	735	793	718	620	513	451	463	479	505	539	578
	1978	Rotterdam	541	561	650	600	596	646	644	657	778	805	835	886	683
	1979	Rotterdam	966	981											
Peanut oil	1977	Rotterdam	849	856	871	881	897	848	804	807	773	794	852	917	846
	1978	Rotterdam	956	910	1,020	1,127	1,128	1,106	1,042	1,044	1,210	1,194	1,191	1,022	1,079
	1979	Rotterdam	976	969											
Palm oil	1977	N.W. Europe	462	507	598	647	659	619	520	493	460	450	445	501	530
	1978	N.W. Europe	514	558	598	603	624	654	622	585	615	623	604	604	600
	1979	N.W. Europe	636	694											

1/ All prices c.i.f. European ports except soybean oil which is f.o.b. Decatur.
2/ Source: Oil World; various issues.

Part III. Financial Situation

The following materials assess recent changes in the LIC's capacity to import food commercially as reflected in their economic growth rates and changes in their trade balances, reserves, and debt position. The general improvement noted in the LIC's financial position over the last 2 to 3 years appears to have been strong enough to reverse the deterioration reported over the 1973-75 period but too weak to suggest any significant improvement in their capacity to import food commercially. The LIC's gains have been unevenly distributed, however, and several individual countries report strong enough gains to finance substantially expanded commercial food imports.

I. Introduction

The following section reports on recent changes in economic growth and the trade, reserve, and debt situation in the LIC's as they affect their overall capacity to finance commercial imports. A more precise measure of changes in the LIC's capacity to import food commerically is difficult to formulate. The LIC's commercial food imports depend as much on government policy decisions and trade priorities as on conventional growth, trade balance, reserve and debt considerations. In a very real sense, virtually all of the LIC's are in a strong enough financial position to purchase commercially all the food they currently import concessionally. Many could also purchase the added food supplies needed to meet the minimum nutritional needs noted in Part I.

However, appreciably larger commercial food imports would require a drastic reordering of LIC trade and foreign exchange priorities and development policies. The relatively low priority generally afforded commercial food imports reflects the LIC's commitment to maximize imports of development goods and to meet debt servicing obligations even at the cost of minimizing food imports. Marked shortfalls in food production over the 1973-75 period forced the LIC's to reorder their priorities temporarily. However, import and foreign exchange priorities have tended to revert to development goods and debt servicing in relatively short periods of time.

Consequently, while the materials that follow provide a reasonably good measure of changes in the LIC's overall capacity to import commercially they provide only the most general of indications of changes in the LIC's capacity to import food commercially.

II. Economic Growth

The growth in economic activity reported in the developing countries over the 1976-78 period suggests marginal, unevenly distributed increases in the supply of indigeneously produced goods and services available to exchange for commercial imports. Real economic activity in the non-OPEC developing countries increased roughly 5 percent per year from 1976 to 1978 due to a combination of short-lived commodity export booms and several years of record increases in agricultural output. However, economic growth lagged below the high 7-7.5 percent rates reported during the late 1960's, and below the recent 1973 high of 7.6 percent reported at the peak of the last major commodity boom.

Economic growth in the LIC's lagged well behind growth in the developing countries as a whole. The more affluent third of the developing countries reported 1975-77 growth in excess of 6 percent per year and 1978 growth of about 6.5 percent. The LIC's, on the other hand, reported 1975-77 growth averaging less than 4 percent per year and 1978 growth of less than 4.5 percent (Table 1). Per capita statistics paint a somewhat clearer picture of the welfare implictions of these different growth rates. Per capita increases in economic activity averaged 3.5 to 4 percent per year in the more affluent developing countries or at a rate high enough to suggest real increases in welfare regardless of the income distribution problem common to virtually all the developing countries. The LIC's per capita increases averaged 1-1.5 percent per year or at a rate hardly adequate to suggest any real improvement in welfare levels even if the problem of income distribution is ignored. The LIC's experience of the late 1960's and early 1970's suggests sustained, hopefully uniformly distributed, increases in per capita income in excess of 3-4 percent per year--or more than double their 1976-78 rate--are necessary before any noticeable increase in commercial food import demand is likely.

While aggregate LIC growth rates have not been strong enough to suggest any significant improvement or deterioration in their capacity to import, country-specific statistics suggest significant changes in several individual LIC's. Fourteen LIC's--Angola, Benin, Chad, the Comoros, Gambia, Ghana, Mauritania, Mozambique, Rhodesia, Senegal, Sierra Leone, Somalia, Uganda, and Zaire--reported absolute decreases in economic activity in at least 1 and generally 2 of the last 3 years. Almost two dozen other LIC's reported rates of growth in economic activity less than their population growth rates. Consequently, more than a third of the LIC's reported declining per capita incomes and, in effect, a decrease in the per capita supplies of goods and services available to exchange for imports--be they imports of development goods, food products, or services. Another third of the LIC's reported economic growth rates so close to population growth rates as to rule out any measurable change in their per capita supply of goods and services available for export. Less than 15 of the LIC's including Pakistan, Indonesia, Egypt, Bangladesh, Honduras, and Bolivia reported strong enough sustained economic growth to suggest any increase in their capacity to increase development imimports and food imports while meeting expanding debt service payments.

III. Trade Balance

The external trade position of the non-OPEC developing countries improved markedly in 1976 and 1977 following the unusually large deficits reported in late 1974 and 1975. Preliminary data suggest that the non-OPEC developing countries' import austerity and export promotion programs successfully limited their 1977 trade deficit to $14 billion compared to a 1976 deficit of $30 billion and a record high $44 billion deficit in 1975.

However, the trade position of the LIC's appears to have deteriorated faster in late 1974 and 1975 and to have recovered more slowly in 1976 and 1977 than the trade position of the higher income developing countries. The LIC's as a group--minus oil exporting Indonesia and Nigeria and the Asian Centrally Planned LIC's--reported trade deficits of $7 billion in 1974, $14 billion in 1975, and $8 billion in 1976. Preliminary data indicates the LIC's 1977 trade deficit increased to $9 billion. Hence, even the very modest increases in the developing countries' capacity to import food suggested in their 1976 and 1977 trade balances are lacking in the LIC's.

The LIC's trade position appears to be even weaker and improvement less pronounced than indicated in Table 2 if analyzed in terms of trade deficits relative to export earnings. While the higher income oil importing developing countries succeeded in limiting their 1976 and 1977 trade deficits to roughly 15 percent of their total export earnings compared with 20 percent at the start of the decade, the LIC's accumulated 1976 and 1977 deficits are equal to more than 30 percent of their export earnings compared with 20 to 25 percent at the start of the decade.

The trade performance of the individual LIC's varied so widely in 1976 and 1977 that the LIC total has only limited value (Table 2). Less than a quarter of the LIC's including the Congo, Zaire, Madagascar, Zambia, El Salvador, Honduras, Sri Lanka, and the Central African Empire reported significant improvements in their trade balances. The improvements were due in part to increases in the prices of key export products of 10-15 percent in 1976 and 20-25 percent in 1977 but in larger part to a general slow down in import growth. Products registering the strongest gains included cacao, coffee, oilseeds, and oilseed products. Increases in the quantities exported and/or export unit values of these products were more than enough to offset decreases in the quantities exported and/or lower prices of products such as bananas, bauxite, jute, sisal, and phosphate rock. While the average unit value of all the goods exported by these selected LIC's increased 6 percent or more over 1976 and 1977, their import unit values stayed roughtly constant.

A full third of the LIC's--including Ghana, Sierra Leone, Togo, Tanzania, Afghanistan, Bangladesh, India, Pakistan, Burma, Thailand,

Egypt, Morocco, Mauritania, and Upper Volta and accounting for the bulk of the LIC population--reported significant deterioration in their 1976 and 1977 trade balances. Their deterioration appears to be due to slowed demand and/or lower prices for their exports complicated by growth in the quantity and price of their principal development imports. The remaining LIC's reported little change in their trade balances. Of all the LIC's, only a handful--including oil exporting Nigeria and Indonesia and several smaller states such as Yemen, the Central African Empire, Ghana, Guinea, Ivory Coast, Zaire, Burundi, Zambia, and El Salvador--reported positive 1976 and 1977 trade balances.

Considerably less information is available on the LIC's 1978 trade performance due to lags in reporting. Preliminary balance of payments estimates for 1978 indicate that the developing countries' trade deficit increased by about $4 billion. Increases in the LIC's trade deficit appear to have accounted for a disproportionately large share of the increase. Deterioration in the LIC's 1978 trade balance is largely attributable to the pronounced leveling off and decline in 1978 and early 1979 of many of the commodity prices showing the strongest gains in 1976 and 1977. However, the shift in commodity prices in 1978 was not as severe as in 1974 and 1975; sharp decreases in the prices of a relatively small number of products seem to have been partially offset by continued, albeit small, increases in a range of oilseed, groundnut, rubber, and plywood prices. As a result, 1978 export earnings grew less rapidly than expenditures on imports but not to the extent noted in late 1974 and 1975. Changes in 1978 trade deficits in individual LIC's mirrored changes in international commodity prices.

More important than changes in individual country trade balances or variations in aggregate LIC trade balances over the 1976-1978 period, however, is the LIC pattern of virtually chronic trade deficits and wide year to year fluctuations in the magnitude of their deficits. Trade developments over the 1976-1978 period point to the basic weakness underlying virtually all of the LIC's export sectors. Given their unusually pronounced concentration of exports in a few commodities shipped to a limited number of trading partners, LIC trade balances tend to reflect price and/or quantity developments in a single commodity or in a single trading partner rather than more stable economy-wide developments or world market forces. As a result, short term improvements in LIC trade balances are indicative of little more than a temporary respite in LIC pressure to juggle development import, food import, and debt service priorities.

IV. Reserves and Debt

While the LIC's long-term capacity to import commercially depends largely on their production of goods and services for export and their ability to exchange them for products produced abroad, their capacity to import in the short run also depends of their reserve and credit positions.

As Table 3 suggests, the LIC's reserve position appears to have improved significantly since 1975--particularly if oil exporting Indonesia and Nigeria are subtracted from the LIC total. Contrary to the tendency noted in a comparison of economic growth rates and trade balances, the LIC's reserve position appears to have improved to a greater extent than the higher income countries' positions. A third of the LIC's reported significant increases in their reserves in 1977 and 1978. Only 5 LIC's --including Ethiopia, Chad, Tanzania, Kenya, and Nigeria--report significant declines in reserves. The remaining LIC's reported negligible changes.

The improvements in the LIC's reserve position over the 1976-1978 period, however, is considerably less impressive if measured in terms of import coverage to adjust for the effect of world inflation on LIC import bills and if note is taken of the sources of many of the LIC's build-up in reserves. The LIC's currently hold sufficient reserves to finance roughly 20 weeks of imports as compared to 11 weeks at their all-time 1975 low. 1/ While 20 weeks of import coverage would have been more than adequate to cover LIC liquidity needs in the late 1960's and early 1970's, the wide fluctuations in LIC export earnings and import bills noted over the 1970's suggest a target reserve level of possibly 25 weeks. Moreover, much of the LIC's 1976-1978 reserve build-up appears to be due to increased use of international borrowing rather than reserve draw down to finance current account deficits. A significant proportion of the increase in reserves in several large LIC's also seems to be due to increased borrowing for the expressed purpose of building-up reserves.

With these added factors in mind, the overall improvement in the LIC's reserve position appears appreciably smaller than implied in Table 3. Reserve build-ups appear large enough to suggest increases in short term liquidity and the capacity to import food commercially in no more than a half dozen LIC's including Ghana, Bangladesh, India, Sri Lanka, and the Philippines.

The debt situation--an indication of both the LIC's ability to finance trade deficits and their debt service obligations--appears to have improved over the 1976-1978 period despite their continued borrowing to cover trade deficits and to meet ever-increasing development capital needs (Table 4). Earlier expectations that the LIC's and many of higher income developing countries would continue to borrow to finance persistently high current account deficits until they were unable to meet debt service obligations have proven unfounded. LIC dependence on external financing has fallen off to well below the 1975 high.

Moreover, while growth in external borrowing has continued well above the pre-1974 trend, much of it has been used to increase foreign exchange reserves and to invest in the expansion of export capacity. The relatively modest increase in debt service and debt/gross national product ratios

1/ Import coverage relates the LIC's reserves to their annual import bills. Weeks of import coverage are calculated as reserves/annual import bill x 52.

reported over the last 2-3 years indicates that the value of exports and economic growth have kept up with servicing obligations. A number of countries, particularly the heavier borrowers, have also taken advantage of increasingly favorable conditions in the international capital market to restructure their medium- and long-term debt portfolios by replacing maturing debt with lower cost, longer term debt. However, even in the LIC's reporting the most significant improvements in debt positions, 1976-1978 gains have been strong enough to improve their capacity to import food commercially to any significant extent.

V. Summary

The 1976-78 economic growth, trade balance, reserve, and debt information available for the LIC's suggest general, albeit marginal, improvements in their overall financial positions and their capacity to import commercially. The general improvements have not been significant enough, however, to suggest any notable change in their capacity to import food commercially. A review of individual country statistics indicate the LIC's fall into three broad categories. 1/ The first group--including most of the Sudano-Sahelian countries, Zaire, Benin, and Bangladesh among others--report low or negative rates of economic growth, weak and/or deteriorating trade balances, relatively weak reserve positions, and mounting debt obligations. The second group --including Ethiopia, Kenya, Uganda, Senegal, Ghana, Zambia, Togo, the Congo, India, Sri Lanka, and the Yemens among others and accounting for the bulk of the LIC population--report marginal improvements in one or more of the growth, trade balance, reserve and debt measures noted above.

The remaining LIC's--including Nigeria, Madagascar, the Ivory Coast, Gambia, Rwanda, the Philippines, Thailand, Vietnam, Indonesia, and El Salvador among others--report significantly improved economic growth, trade balances, reserve and/or debt positions. Only these few countries have registered strong enough financial gains to suggest, for at least the short-term, any increased capacity to import food commercially.

1/ A ranking of individual LIC's according to improvements in their financial situation as reflected in 1976-78 economic growth rates, trade balances, reserves, and debt position suggests the following ascending order: Mali, Chad, Benin, Somalia, Zaire, Bangladesh, Yemen Democratic Republic, Egypt, Cambodia, Guinea, Pakistan, Upper Volta, Cameroon, Sierra Leone, Sudan , Swaziland, Mauritania, Tanzania, Mozambique, Senegal, Zambia, Congo, Togo, Morocco, Yemen Arab Republic, India, Burma, Ghana, Malawi, Liberia, Niger, Afghanistan, Sri Lanka, Nepal, Burundi, Ethiopia, Bolivia, Central African Empire, Gambia, Uganda, Kenya, Honduras, Madagascar, Rwanda, El Salvador, Philippines, Indonesia, Ivory Coast, Haiti, Thailand, and Nigeria.

Table III-1 LIC Economic Growth Data, 1975-78

Country/Region	Gross National Product	Per Capita Gross National Product	Compound Annual Real Rates of Growth in Gross National Product			
			1975	1976	1977	1978
	Mil. U.S. dols.	U.S. dols.	Percent			
I. Asia						
South Asia						
Afghanistan	2,760	190	2.4	2.7	2.5	3.0
Bangladesh	7,550	90	2.0	13.3	1.7	8.0
Bhutan	100	80	N.A.	N.A.	N.A.	N.A.
India	97,370	150	8.5	1.6	6.0	4.5
Nepal	1,450	110	2.5	3.0	1.7	1.9
Pakistan	14,220	190	2.0	4.9	2.8	7.0
Sri Lanka	2,840	200	3.6	3.0	4.4	3.0
East Asia						
Burma	4,300	140	1.1	4.5	2.5	6.0
Indonesia	40,610	300	5.6	8.6	7.5	7.0
Philippines	20,150	450	5.8	6.7	6.1	6.5
Thailand	18,250	410	5.0	5.7	6.0	6.0
Communist Asia						
Cambodia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
People's Republic of China	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Laos	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Vietnam	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
II. Africa						
North Africa/Middle East						
Egypt	12,230	310	9.8	11.3	8.3	7.0
Morocco	10,100	570	2.9	1.2	2.0	2.0
Yemen, Arab Republic 1/	2,130	390	N.A.	4.0	5.0	5.0
Yeman, People's Republic	580	320	N.A.	6.0	6.0	6.0

See footnote at end of table.

--Continued--

Table III-1 LIC Economic Growth Data, 1975-78--Continued

Country/Region	Gross National Product	Per Capita Gross National Product	Compound Annual Real Rates of Growth in Gross National Product			
			1975	1976	1977	1978
	Mil. U.S. dols.	U.S. dols.	Percent			
Sudano-Sahelian						
Central African Empire	470	250	5.0	3.0	3.0	2.0
Chad	540	130	N.A.	-22.0	-.7	.9
Ethiopia	3,220	110	1.0	2.0	1.0	1.0
Mali	680	110	14.1	9.0	7.4	.7
Mauritania	410	270	-7.1	8.9	-.7	.0
Niger	770	160	1.1	18.7	4.0	7.0
Somalia 1/	410	110	-2.0	.0	-2.3	N.A.
Sudan 1/	4,910	300	3.9	5.5	5.5	4.0
Upper Volta	720	110	7.3	5.8	2.2	5.8
Cape Verde Islands	40	140	N.A.	N.A.	N.A.	N.A.
Central & West Africa						
Angola 1/	1,970	330	N.A.	N.A.	N.A.	N.A.
Benin	660	200	-2.0	-3.0	8.0	4.0
Cameroon	2,650	340	3.0	3.0	4.0	5.0
Congo, People's Republic	700	500	.0	1.0	-1.0	-3.0
Gambia	110	200	4.0	.0	.0	-1.0
Ghana	4,080	380	.0	-3.0	-1.0	.0
Guinea	1,080	230	9.1	11.0	5.0	N.A.
Guinea-Bisseau 1/	150	160	N.A.	N.A.	N.A.	N.A.
Guinea, Equitorial 1/	110	340	N.A.	N.A.	N.A.	N.A.
Ivory Coast	5,180	710	8.0	12.5	7.8	2.9
Liberia	710	430	-1.1	3.1	3.0	N.A.
Nigeria	33,340	420	1.7	12.5	6.6	7.0
Senegal	2,240	420	1.5	-2.3	4.5	-5.0
Sierra Leone	610	200	2.0	-1.0	1.0	3.3
Togo	700	300	N.A.	N.A.	N.A.	N.A.
Zaire	3,270	130	-6.1	-1.4	1.5	1.5

See footnote at end of table.

--Continued--

Table III-1 LIC Economic Growth Data, 1975-78--Continued

Country/Region	Gross National Product	Per Capita Gross National Product	Compound Annual Real Rates of Growth in Gross National Product			
			1975	1976	1977	1978
	Mil. U.S. dols.	U.S. dols.	Percent			
East Africa						
Botswana 1/	300	440	11.0	10.0	10.0	5.0
Burundi	520	130	2.0	7.8	5.8	4.5
Comoros	70	180	N.A.	N.A.	N.A.	N.A.
Kenya	3,910	270	0.7	5.0	4.5	4.5
Lesotho 1/	300	230	N.A.	N.A.	6.0	7.0
Madagascar	1,960	210	1.0	.5	N.A.	N.A.
Malawi	800	140	5.8	7.0	5.7	5.7
Mozambique	1,470	150	N.A.	-25.0	-5.0	-5.0
Rhodesia 1/	3,360	500	N.A.	-2.4	-6.9	-6.5
Rwanda	580	130	9.3	7.0	7.0	6.5
Swaziland	310	580	12.3	N.A.	N.A.	N.A.
Tanzania	3,100	200	4.6	5.0	3.9	3.5
Uganda	3,220	260	-2.0	-.4	4.0	1.2
Zambia	2,330	450	N.A.	.9	2.5	1.0
III. Latin America						
Central America						
El Salvador	2,410	570	4.3	4.7	5.0	5.0
Grenada	50	450	10.6	12.9	7.7	5.0
Haiti	1,100	230	2.2	4.7	2.3	2.0
Honduras	1,360	450	-1.4	6.5	8.6	8.0
South America						
Bolivia	3,230	540	6.8	7.0	7.3	6.5

1/ Estimates are tentative.

Source: World Bank 1978 Atlas and Central Intelligence Agency Estimates.

Table III 2--LIC Trade Balance Data, 1975-1977

	Exports			Imports			Trade Balance		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
I. Asia	Million U.S. Dollars								
South Asia									
Afghanistan	217	291	306	293	363	478	-76	-72	-172
Bangladesh	249	411	508	1,161	965	1,272	-912	-554	-764
Bhutan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
India	4,355	5,549	6,360	6,376	5,665	6,386	-2,021	-116	-26
Nepal	88	98	81	151	163	168	-63	-65	-87
Pakistan	1,049	1,163	1,171	2,151	2,128	2,447	-1,102	-965	-1,276
Sri Lanka	566	570	754	753	579	696	-187	-9	+58
East Asia									
Burma	149	188	212	186	181	217	-37	+7	-5
Indonesia	7,102	8,547	10,853	4,770	5,673	6,230	+2,332	+2,874	4,623
Philippines	2,263	2,513	3,094	3,742	3,938	4,267	-1,479	-1,425	-1,173
Thailand	2,208	2,980	3,490	3,280	3,572	4,616	-1,072	-592	-1,126
Communist Asia									
Cambodia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
People's Republic of China	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Laos	10	10	N.A.	153	70	N.A.	-143	-60	N.A.
Vietnam	53	30	N.A.	700	500	N.A.	-647	-470	N.A.
II. Africa									
North Africa/Middle East									
Egypt	1,402	1,522	1,708	3,934	3,807	4,808	-2,532	-2,285	-3,100
Morocco	1,543	1,261	1,302	2,567	2,618	3,199	-1,024	-1,357	-1,897
Arab Republic of Yemen	294	413	1,040	11	8	11	+283	+405	+1,029
People's Republic of Yemen	20	21	30 3/	37	40	102 3/	-17	-19	-36 3/

See Footnotes at end of table.

Table III 2--LIC Trade Balance Data, 1975-1977--continued

	Exports			Imports			Trade Balance		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
	Million U.S. Dollars								
Sudano-Sahelian Africa									
Central African Empire	45	56	85	65	53	66	-20	+3	+19
Chad	45	56	107	126	113	142	-81	-57	-35
Ethiopia	240	780	333	313	352	352	-73	-72	-19
Mali	51	82	130	168	144	165	-117	-62	-35
Mauritania	167	184	155	154	185	205	+13	-1	-50
Niger	87	129	N.A.	97	122	N.A.	-10	+7	N.A.
Somalia	88	85	103 1/	154	106	103 1/	-66	-21	--- 1/
Sudan	438	554	661	956	980	1,059	-518	-426	-398
Upper Volta	42	51	58	144	139	218	-102	-88	-160
Cape Verde Islands	13	10	N.A.	31	40	N.A.	-18	-30	N.A.
Central & West Africa									
Angola	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Benin	30	22	33	188	210	256	-158	-188	-223
Cameroon	474	511	704	599	609	783	-125	-98	-79
People's Republic of Congo	171	174	193	151	166	216	+20	+8	-23
Gambia	42	32	52	54	70	85	-12	-38	-33
Ghana	807	804	N.A.	791	845	N.A.	+16	+41	N.A.
Guinea	165	200	N.A.	140	110	N.A.	+25	+90	N.A.
Guinea-Bisseau	12	10	13	38	30	36	-26	-20	-23
Guina, Equitorial	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	1,181	1,631	2,157	1,127	1,296	1,756	+54	+335	+401
Liberia	394	457	448	331	399	464	+63	+58	-16
Nigeria	7,776	10,085	11,518	6,041	8,213	11,095	+1,735	+1,872	+423
Senegal	441	467	N.A.	555	619	N.A.	-114	-152	N.A.
Sierra Leone	115	105	141	165	146	206	-50	-41	-65
Togo	120	100	166	166	179	296	-46	-79	-130
Zaire	865	904	988	905	668	609	-40	+236	+379
East Africa									
Botswana	121	180	N.A.	181	200	N.A.	-60	-20	N.A.
Burundi	32	60	90	61	56	74	-29	+4	+16
Comoros	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

See Footnotes at end of table.

Table III 2--LIC Trade Balance Data, 1975-1977--continued

	Exports			Imports			Trade Balance		
	1975	1976	1977	1975	1976	1977	1975	1976	1977
	Million U.S. Dollars								
Kenya	606	744	1,137	944	969	1,289	-338	-225	-152
Lesotho	13	18	N.A.	126	140	N.A.	-113	-122	N.A.
Madagascar	294	266	N.A.	366	285	N.A.	-72	-19	N.A.
Malawi	109	137	160	197	171	184	-88	-34	-24
Mozambique	202	190	N.A.	417	350	N.A.	-215	-170	N.A.
Rhodesia	500	450	N.A.	500	500	N.A.	0	-50	N.A.
Rwanda	42	81	92	96	103	114	-54	-22	-22
Swaziland	152	140	N.A.	137	150	N.A.	+15	+10	N.A.
Tanzania	370	490	504	776	639	723	-406	-149	-219
Uganda	230	362	765	184	171	N.A.	+46	+191	N.A.
Zambia	810	1,040	893	1,138	798	819	-328	+242	+74
III. Latin America									
Central America									
El Salvador	515	720	967	598	718	947	-83	+2	+20
Grenada	11	13	14	22	25	31	-11	-12	-17
Haiti	80	125	149	149	209 2/	N.A.	-69	-84 2/	N.A.
Honduras	293	395	504	400	459	581	-107	-64	-77
South America									
Bolivia	22	28	30	28	29	33	-6	-1	-3
IV. LIC Total	36,829	44,966	54,005	46,619	47,866	57,871	-9,790	-2,900	-3,866
Total Excluding Communist Asia	7,776	10,085	11,513	6,041	9,213	11,095	1,735	872	418
LIC Total Excluding Communist Asia & Oil Exporters	21,951	26,334	31,634	35,808	33,980	40,546	-13,857	-7,646	-8,912

1/ Based on 2 quarter estimate.
2/ Based on 3 quarter estimate.

Table III-3 LIC International Reserve Position, 1975-1978

	International Reserves				Import Coverage			
	1975	1976	1977	1978	1975	1976	1977	1978
	-- Millions of U.S. Dollars --				-- Weeks of Import Coverage --			
I. Asia								
South Asia								
Afghanistan	125	169	316	434	22.2	24.2	45.3	47.2
Bangladesh	148	289	235	316	6.6	15.6	9.6	12.5
Bhutan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
India	1373	3074	5184	6700	11.2	28.2	42.2	53.0
Nepal	101	135	148	154	34.8	43.1	45.8	46.3
Pakistan	406	532	518	486	9.8	13.0	11.0	10.0
Sri Lanka	58	92	292	398	4.0	8.3	21.8	28.9
East Asia								
Burma	141	126	113	107	39.4	36.2	27.1	24.8
Indonesia	586	1449	2516	2636	6.4	13.3	21.0	21.4
Philippines	1358	1640	1524	1832	18.9	21.7	18.6	21.7
Thailand	1775	1893	1915	2120	28.1	27.6	21.6	23.2
Communist Asia								
Cambodia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
China, Peoples' Rep.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Laos	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Vietnam	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
II. Africa								
North Africa/Middle East								
Egypt	294	339	534	522	3.9	4.6	5.8	5.5
Morocco	377	491	532	649	7.6	9.8	8.6	10.2
Yemen, Arab Rep.	338	720	1240	1460	59.8	90.7	62.0	70.9
Yemen, Peoples' Rep.	55	82	101	152	77.3	106.6	51.5	75.2

Table III-3 LIC International Reserve Position, 1975-1978--Continued

	International Reserves				Import Coverage			
	1975	1976	1977	1978	1975	1976	1977	1978
	-- Millions of U.S. Dollars --				-- Weeks of Import Coverage --			
Sudano-Sahelian Africa								
Central African Empire	4	19	26	31	3.2	18.6	20.5	23.7
Chad	3	23	19	6	1.2	10.6	7.0	2.1
Ethiopia	288	306	225	166	47.8	45.2	33.2	23.8
Mali	4	7	6	10	1.2	2.5	1.9	3.1
Mauritania	48	82	50	79	16.2	23.0	12.7	19.5
Niger	50	83	101	90	26.8	35.4	N.A.	N.A.
Somalia	69	85	121	156	23.3	41.7	30.6	38.3
Sudan	36	24	23	28	2.0	1.3	1.1	1.3
Upper Volta	77	72	57	42	27.8	26.9	13.6	9.7
Cape Verde Islands	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Central & West Africa								
Angola	N.A	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Benin	15	19	21	12	4.1	4.7	4.3	2.4
Cameroon	29	44	43	53	2.5	3.8	2.9	3.4
Congo, P.R.	14	12	14	7	4.8	3.8	3.4	1.6
Gambia	29	21	24	26	27.9	15.6	14.7	15.4
Ghana	150	104	162	271	9.9	6.4	N.A.	N.A.
Guinea	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Guinea-Bisseau	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Guinea, Equitorial	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	103	77	186	207	4.8	3.1	5.5	5.9
Liberia	14	17	27	18	2.2	2.2	3.0	2.0
Nigeria	5603	5203	4259	1917	48.2	32.9	20.0	8.7
Senegal	31	25	34	13	2.9	2.1	N.A.	N.A.
Sierre Leone	28	25	33	35	8.8	8.9	8.3	8.6
Togo	41	67	46	80	12.8	19.5	8.1	13.6
Zaire	59	61	145	183	3.4	4.7	12.4	15.2

Table III-3 LIC International Reserve Position, 1975-1978--continued

	International Reserves				Import Coverage			
	1975	1976	1977	1978	1975	1976	1977	1978
	- - Millions of U.S. Dollars - -				- - Weeks of Import Coverage - -			
East Africa								
Botswana	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Burundi	31	49	95	82	26.4	45.5	66.8	56.1
Comoros	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Kenya	173	276	523	356	9.5	14.8	21.1	13.9
Lesotho	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Madagascar	36	42	69	59	5.1	7.7	N.A.	N.A.
Malawi	61	26	88	78	16.1	7.9	24.9	21.3
Mozambique	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Rhodesia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Rwanda	26	64	83	88	14.1	32.3	37.9	39.0
Swaziland	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Tanzania	65	112	282	117	4.4	9.1	20.3	8.2
Uganda	4	1	5	11	1.1	.3	1.0	2.2
Zambia	149	100	74	56	6.8	6.5	4.7	3.6
II. Latin America								
Central America								
El Salvador	127	205	233	291	11.0	14.8	12.8	15.5
Grenada	5	5	6	6	11.8	10.4	10.1	9.8
Haiti	13	28	34	45	4.5	7.0	N.A.	N.A.
Honduras	97	131	180	182	12.6	14.8	16.1	15.8
South America								
Bolivia	156	168	237	198	289.7	301.2	373.5	302.8

Table III-3 LIC International Reserve Position, 1975-1978--Continued

	International Reserves				Import Coverage			
	1975	1976	1977	1978	1975	1976	1977	1978
	- - Millions of U.S. Dollars - -				- - Weeks of Import Coverage - -			
IV. LIC Total	14337	18164	18228	22766	16	20	16.6	20
Total Excluding Communist Asia	14337	18164	18228	22766	16	20	16.6	20
Total Excluding Communist Asia & Oil Exporting Indonesia & Nigeria	8148	11512	11453	18213	11.8	17.6	14.7	22.7

Table III-4 LIC DEBT DATA, 1974-76

	Total Debt			Total Debt/G.N.P.			Debt Service Rate		
	1974	1975	1976	1974	1975	1976	1974	1975	1976
	Millions of U.S. Dollars			Percent			Percent		
I. Asia									
South Asia									
Afghanistan	1621	1590	1749	90	77	76	16	10	7
Bangladesh	1820	2508	2858	28	35	34	6	18	13
Bhutan	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
India	14656	15973	16468	20	19	17	17	13	12
Nepal	108	120	237	9	9	16	2	4	2
Pakistan	6225	6323	7381	65	56	61	15	18	18
Sri Lanka	867	997	1103	39	39	40	12	20	20
East Asia									
Burma	484	519	677	17	16	18	13	18	16
Indonesia	9169	11821	14482	36	41	45	4	8	11
Philippines	2050	2556	4269	15	16	24	3	7	7
Thailand	1122	1273	1619	9	9	10	2	2	2
Communist Asia									
Cambodia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
China, Peoples' Rep.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Laos	N.a.	N.a.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Vietnam	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
II. Africa									
North Africa/Middle East									
Egypt	3800	6532	7866	45	69	75	21	22	18
Morocco	1879	2443	3153	27	32	36	5	7	8
Yemen, Arab Rep.	375	437	503	41	36	34	N.A.	N.A.	N.A.
Yemen, People's Rep.	248	307	424	45	75	88	N.A.	N.A.	N.A.

Table III-4 LIC DEBT DATA, 1974-76--Continued

	Total Debt			Total Debt/G.N.P.			Debt Service Rate		
	1974	1975	1976	1974	1975	1976	1974	1975	1976
	Millions of U.S. Dollars			Percent			Percent		
Sudano-Sahelian Africa									
Central African Empire	86	111	102	73	29	24	8	10	7
Chad	133	149	250	34	32	50	3	6	4
Ethiopia	566	674	698	23	25	23	6	7	6
Mali	450	481	560	102	91	95	3	3	3
Mauritania	373	413	619	98	98	135	6	20	37
Niger	146	158	178	28	27	24	3	5	3
Somalia	368	439	596	119	129	161	4	3	3
Sudan	1264	1535	2062	34	37	45	13	18	17
Upper Volta	147	190	248	27	30	35	3	6	4
Cape Verde Islands	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Central & West Africa									
Angola	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Benin	138	153	205	42	39	98	5	5	2
Cameroon	579	705	899	31	34	40	4	5	6
Congo, Peoples' Rep.	521	520	669	84	78	96	7	12	7
Gambia	22	22	49	28	24	49	1	1	1
Ghana	897	794	835	13	14	14	2	3	5
Guinea	890	915	952	139	122	108	20	11	21
Guinea-Biseau	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Guinea,Equitoral	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ivory Coast	1196	1527	2221	40	42	52	8	9	9
Liberia	211	276	348	39	43	48	5	5	4
Nigeria	1695	1598	1420	8	6	5	2	3	2
Senegal	421	519	598	27	29	30	5	5	6
Sierra Leone	158	186	183	29	31	30	8	9	21
Togo	141	163	158	26	29	26	3	10	8
Zaire	2671	3004	3307	84	87	94	13	16	12

Table III-4 LIC DEBT DATA, 1974-76-- Continued

	Total Debt			Total Debt/G.N.P.			Debt Service Rate		
	1974	1975	1976	1974	1975	1976	1974	1975	1976
	Millions of U.S. Dollars			Percent			Percent		
East Africa									
Botswana	179	184	213	72	80	76	3	3	8
Burundi	48	67	75	13	16	16	3	6	5
Comoros	N.A.	5	32	N.A.	7	53	N.A.	N.A.	6
Kenya	776	1,090	1,249	29	37	38	4	4	5
Lesotho	18	23	29	111	16	14	2	3	4
Madagascar	240	293	326	15	17	17	3	4	5
Malawi	322	332	343	56	50	54	8	7	6
Mozambique	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Rhodesia	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Rwanda	63	82	100	18	19	21	1	1	1
Swaziland	60	67	67	35	31	28	2	1	1
Tanzania	1,121	1,210	1,414	52	50	52	7	7	8
Uganda	251	237	241	10	9	9	5	4	3
Zambia	1,192	1,502	1,605	63	72	73	5	9	9
III. Latin America									
Central America									
El Salvador	308	395	462	19	22	23	5	9	4
Grenada	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Haiti	85	106	168	11	13	18	7	7	7
Honduras	275	451	581	29	43	50	4	5	6
South America									
Bolivia	889	1,207	1,576	51	59	69	11	15	16
IV. LIC Total	85,779	105,220	126,733	27	28	29	12	13	12
Total Excluding Communist Asia	85,779	105,220	126,733	27	28	29	12	13	12
Total Excluding Communist Asia & Oil Exporters Nigeria & Indonesia	74,915	91,801	110,831	23	29	30	13	14	13

Part IV. Policy Developments

The following materials report on 1978 and early 1979 national and international food-aid related policy developments. Among the national policy developments noted are delays in the establishment of a U.S. emergency wheat reserve and the signing of the first four P.L. 480 Title III Agricultural and Rural Development Program agreements. Among the international policy developments reviewed are on-going efforts to establish an international food security system based on new Wheat Trade and Food Aid Conventions.

I. National Food Aid Related Policy Developments

The Carter Administration's proposal for the establishment of a U.S International Emergency Wheat Reserve (IEWR) was not enacted by Congress during its fall 1978 session. The Administration's proposal called for the United States to create a special wheat stock of up to 6 million tons in addition to its 33 million ton farmer-held grain reserves. The IEWR was designed specifically to guarantee that the United States would be able to honor its food aid commitments and deal with foreign emergencies even in periods of tight grain supplies and high prices. The Administration has announced its intention to reintroduce similar legislation in 1979.

Negotiation of agreements with Bolivia and Bangladesh in late 1978 and Honduras and Egypt in 1979 marked the successful initiation of the P.L. 480 Title III Program. The International Development and Food Assistance Act of 1977 provided for the establishment of a Title III Food For Development Program to encourage agricultural and rural development in aid recipient countries. Under the new program, indebtedness incurred in the purchase of Title I products is waived if the funds generated from their resale in recipient countries are invested in qualifying agricultural and rural development projects. The amount of aid devoted to the Title III program is to be no less than 10 percent for fiscal 1979 and 15 percent for fiscal 1980 and succeeding years of the Title I budget unless a sufficient number of qualified projects cannot be developed. Title III also authorizes multi-year agreements of up to 5 years.

II. International Food Aid Related Policy Developments

Efforts in 1978 and early 1979 to negotiate a new International Grains Arrangement to replace the 1971 Wheat Trade Convention (WTC) and Food Aid

Convention (FAC) met with only partial success. Negotiators representing 67 countries met under the auspices of the United Nations Conference on Trade and Development in Geneva in November 1978 and again in January-February 1979; agreement was reached in principle on the basic structure of a new WTC. Negotiators agreed on the need for the coordinated management of an international system of nationally held wheat stocks and the need for additional measures to reduce excessive fluctuations in world wheat prices. In principle, member countries agreed to accumulate national stocks to meet their international wheat reserve commitments when prices fall to a certain point and to release stocks when international prices rise to a specified point.

Agreement could not be reached, however, on the details of a new WTC. Several of the major countries involved in the negotiations could not agree on the size of the reserve, each member's share of the reserve, the price ranges to be specified in the agreement, or on the question of special provisions for developing countries. Negotiators proposed wheat reserves ranging from 18 million tons up to 30 million tons. They also could not agree on a stabilization range. Some countries proposed an indicator accumulation price of $120 per metric ton and a release price of $160 per metric ton. Other countries, including the United States, favored an accumulation price of $140 per ton and a release price of $210 per ton.

Negotiators also disagreed on the special assistance to be afforded developing countries in meeting their obligations to hold a share of world wheat reserves. Developing countries proposed either the establishment of a stock financing fund or provisions permitting developing countries to accumulate stocks at a lower price level than the developed countries.

Negotiations on a new WTC adjourned on February 22, 1979 with the participating countries unable to resolve the questions noted above. The conference did recommend, however, that the International Wheat Council extend the 1971 International Wheat Trade Convention 1 to 2 years or until a new Convention can be negotiated. The Council subsequently agreed to a 2-year extension that was approved by a Conference of Governments on March 22, 1979.

The Conference also discussed a new Food Aid Convention. By February 14 when the Conference adjourned indefinitely, agreement had been reached on all substantive provisions except one--whether the minimum 10-million-ton annual grain food aid goal should be underwritten by the members of the Convention or by the international community as a whole. However, completion of the text of the new FAC was delayed due to a general consensus that the Food Aid Convention should be linked to the new Wheat Trade Convention.

During the negotiations the United States offered to provide 4.47 million metric tons of grain food aid annually--more than twice its commitment under the current 1971 agreement--and succeeded in gaining

commitments from the other donors to provide increased food assistance in the event of emergency developments. The contributions offered provisionally by all donors totaled 7.6 million tons--substantially more than the 4.2 million tons provided for in the 1971 Convention but only three-fourths of the 10-million-ton target of the World Food Conference.

On March 19, the Food Aid Committee extended the 1971 Food Aid Convention for 2 years, or until such time within that period as the negotiations for a new Convention are completed. The United States called on other donors to agree to complete the text of the convention in June and, in effect, table the question of linkage with a new Wheat Trade Convention. The United States also announced that it would honor its pledge to increase grain aid to 4.47 million tons beginning July 1, 1979 regardless of progress on a new Food Aid Convention; the United States called on other donors to do likewise.

Part V. Country Statements

The following materials report on the 1978 food situation and 1979 outlook in the major aid recipient countries. While the situation and outlook in the LIC's is given particular attention, information on other developing countries experiencing abnormal food shortages or unfavorable crop conditions is also included. Brief comments on the aid programs of the major donor countries and their likely 1979 donations are also included.

The estimates of 1979 food import requirements and aid needs that follow are based on an appraisal of each country's food supply-demand balance at the end of 1978, on estimates of their 1979 carry-in stocks, and on indications to date of their 1979 production prospects. Food aid needs were calculated as the added food supplies --over and above indigenous production and normal commercial imports--needed to maintain per capita food intake near 1976-78 levels. Provision was made in the estimates, however, for other factors such as the LIC's capacity to absorb added food supplies without disrupting their agricultural economies or overloading their transportation and marketing infrastructure. Hence, the aid needs noted below fall far short of the supplies needed to meet the unmet basic food needs noted in Part I.

Since weather over the next 6 to 8 months will be a major determinant of supplies in all the countries reviewed, estimates of 1979 import requirements and aid needs made this early in the year are highly tentative. They should be treated as general indications of which countries will be particularly susceptible to food problems in the months ahead rather than precise estimates of actual needs.

I. Food Situation and Outlook in the Major Aid Recipient Countries

The 1979 food import requirements and aid needs of most of the LIC's appear to be well below 1972 and 1974 highs but above 1976 and 1977 lows. Harvests in 1978 and food stocks carried over into 1979 were both at record or near record highs. Supplies in many of the largest developing countries have grown large enough to push real farm prices down to a 7-10 year low. Moreover, improvements in 1977 and 1978 trade balances have put several LIC's in a strong position to purchase more, if not all, of their normal food import requirements commercially.

A number of significant exceptions to this general prognosis of continued improvement in the LIC's food situation are highlighted in the individual country statements that follow.

A. Latin America

Unlike developing Asia or Africa, Latin America generally has sufficient supplies of food to meet basic nutritional requirements. FAO and USDA estimates suggest that during 1976-78, Latin America's food supplies were large enough, if distributed uniformly, to provide 110-120 percent of the minimum requirements noted in Part I for the 350 million people of the region. Per capita caloric consumption in the majority of the countries ranged between 2,400 and 2,600 calories per day compared with a minimum requirement of 2,300 to 2,400 calories per day. Harvests in 1978 and food stocks carried over into 1979 appear large enough to insure that minimum needs will continue to be met even should production in 1979 fall somewhat below the trend of the last two decades. However, the deteriorating food situation in Haiti, Jamaica, other areas of the Eastern Caribbean, Bolivia, and Peru stands out in marked contrast to the generally favorable situation reported for Latin America as a whole.

In Haiti, nearer normal rainfall in 1978 reversed much of the drought-related drop in production registered over the 1974-77 period. Production of corn and several other basic food crops increased more than 40 percent to roughly pre-drought levels, but production of several other crops--including rice--lagged near drought lows. In per capita terms, however, 1978 production was only slightly above the all-time low of the last 25 years. Moreover, over the last decade and a half, Haiti has grown increasingly dependent on food imports even in years of record harvests. Consequently, this year's combination of depressed foreign exchange earnings and continued disappointing harvests will likely push Haiti's 1979 aid needs above record high 1978 levels.

The imports needed to keep per capita consumption up to even drought-reduced 1974-77 levels of 1,950 to 1,975 calories per day are in excess of 120,000 tons of wheat, 30,000 tons of rice and corn, and 12,000 tons of vegetable oils. No more than one-third of this amount can be purchased commercially.

Jamaica currently faces both a drought-related reduction in food production and a serious foreign exchange crunch. Record high 1979 imports in excess of 475,000 tons of wheat, coarse grains and rice will be needed to meet normal import needs and to compensate for drought losses. Lagging sugar and bauxite export earnings and a drop-off in tourism revenues, however, have reduced the country's exchange reserves markedly. As much as 20,000-30,000 tons of wheat and 80,000-100,000 tons of corn will have to be imported concessionally if per capita consumption levels are to be maintained near normal levels of 2,400-2,500 calories per day.

Unfavorable weather, marginal agricultural resources, and deteriorating economic and social conditions continue to tighten the food situation

in the Eastern Caribbean--Grenada, St. Vincent, Antigua, Dominica, St. Lucia, St. Kitts, and the Dominican Republic. Even in years of good rainfall and economic and social stability, these countries and territories are dependent on imports for as much as a third of their total food supply. A marked decline in export earnings due to decreased sales and falling prices for their banana, citrus, and coconut oil exports will likely limit the Eastern Caribbean's commercial imports to less than 400,000 tons of grain--primarily wheat and corn--leaving 200,000-250,000 tons of the region's total 1979 600,000-650,000-ton import requirements to be met through aid donations or foregone.

P.L. 480 Title I programs were entered into in 1978 and 1979 with the Dominican Republic and Jamaica. The biggest problem in providing food assistance to most of the Caribbean countries continues to be shortcomings in administrative organization and aid distribution infrastructure rather than food aid supplies.

In Bolivia, fluctuations in weather resulted in a mediocre 1978 harvest and a sizeable stock draw down. Hence, the crop and livestock losses in the sugar, rice, and cattle producing regions of Oruru and Santa Cruz reported as a result of torrential rains in early 1979 will tend to worsen an already tight food supply situation.

In addition to serious production problems, Bolivia also faces a serious foreign exchange crunch. The foreign exchange needed to finance even normal imports, let alone the added supplies needed to offset mediocre 1978 and poor 1979 harvests, is not available. Roughly 325,000 tons of grains and vegetable oils will have to be imported if 1979 per capita consumption is to be maintained near recent levels of 1875 to 1900 calories per day. As much as 125,000 to 150,000 tons of this 325,000 ton import total will have to be imported concessionally. A recently signed 5-year U.S. Title III program provides for continued U.S. grain aid at about the 1978 level of 85,000 tons. Roughly 40,000 tons of the food aid needed to maintain Bolivian per capita food consumption near normal levels is currently outstanding.

The scheduling of Bolivian aid will be crucial due to limited storage facilities in Bolivia and limited rail facilities between Arica, the major port located in Chile, and La Paz, the major food deficit area.

In Ecuador, a disappointing 1978 harvest following a mediocre 1977 harvest forced a sharp reduction in per capita consumption levels. Carry-in 1979 food stocks were reported near pipeline levels and prospects for the drought-damaged 1979 crop are mixed at best. Grain imports in 1979 will have to be 10 to 15 percent above 1978 levels of 360,000 tons if per capita food consumption levels are to be maintained near normal levels of 2,100 to 2,200 calories per day. However, nearly all the imports needed in 1979 can be purchased commercially from Ecuador's current exchange reserves.

Peru's long-standing economic crisis continued through 1978 and into 1979. A succession of trade deficits over the last 5 years has left Peru

over $1 billion in debt and unable to finance commercial food imports at the high levels reported prior to 1978. Further aggravating the food problem is a 1978 drought-related 10-percent drop in food production which forced the Government to reduce stocks available for carry over into 1979 to a minimum. Prospects for the 1979 crop are also reported to be poor.

Food consumption has already dropped somewhat as a result of Government austerity programs and reductions in urban food price subsidies. To maintain consumption at even reduced 1976-78 levels of 2,250 to 2,300 calories per capita, Peru will need imports of 950,000-1,000,000 tons of wheat and coarse grains and 75,000-100,000 tons of rice and vegetable oils. Imports of this magnitude would be roughly 20 percent greater than record 1978 imports. Peru can afford to purchase less than a third of this total commercially. As much as 270,000 tons of grain and 30,000 tons of vegetable oils will be provided under an expanded line of CCC credit; a Title I agreement has also been signed for 1977 providing for transfer of an additional 73,000 tons of rice.

B. North Africa and the Middle East

Disappointing 1978 harvests, low 1979 carry-in stocks, poor 1979 production prospects, and/or deteriorating trade balances appear likely to keep 1979 food import requirements and aid needs at or above 1978 levels in Tunisia, Jordan, Lebanon, Egypt, Morocco, and possibly the Yemens.

A second year of poor harvests in Tunisia reduced 1978 per capita food production to a 5-year low. If per capita consumption levels are to be maintained near normal levels of 2,350 to 2,400 calories per capita per day, imports of grain will have to continue near the unusually large 1,070,000 ton level reported in 1978. Tunisia's chronically negative trade balance has worsened over the last several years to the point that a fifth of her 1979 imports will have to be purchased concessionally or foregone. Concessional purchases of 60,000 tons of wheat and 30,000 tons of corn have been negotiated for delivery in 1979 under a U.S. Title I agreement; no commitments have yet been made for the remaining 50,000 tons of unmet aid needs.

Jordan's fourth consecutive year of poor food harvests is likely to push 1979 grain import requirements to an all-time high in excess of 400,000 tons. With foreign exchange reserves limited, less than two-thirds of the country's food import needs can be purchased commercially. In recent years Jordan has depended on the U.S. P.L. 480 program and other national and international assistance programs to keep the food intake of the native population and the Palestinian refugees at roughly 2,100 to 2,200 calories per capita per day. Aid needs in 1979 are likely to be far larger than the supplies available from these traditional donors. Roughly 40,000 tons of U.S. grain aid is planned for delivery to Jordan in 1979 under a Title I agreement.

The effects of prolonged civil war on both food production and the balance of payments will likely keep Lebanon's food imports and aid needs high in 1979 and 1980. Per capita production in 1979 reached a 7-year low and stocks were reported at minimum pipeline levels. Wheat imports in 1978 exceeded 200,000 tons of which 95,000 tons was shipped, half commercially and half concessionally, from the United States. The Lebanese Cereals Office has estimated 1979 grain import needs at over 550,000 tons; less than 15,000 tons is currently covered by concessional agreements. Not much more than two-thirds of the 550,000 ton total could be purchased commercially without bankrupting the country's balance of payments position.

Egypt's food import requirements and aid needs are likely to continue at record levels through 1979 despite good 1978 harvests and prospects for a good 1979 harvest due to limited production capacity, rapidly growing demand for food, and foreign exchange shortages. Egypt's food production fluctuates very little since nearly all crops are grown under controlled irrigation conditions. But the country's limited cropland --less than one-seventh of a hectare per capita--restricts output and makes concessional imports necessary to meet growing consumption requirements.

The Egyptian Government is expected to import in excess of 6 million tons of grain in 1979 or slightly more than the quantities needed to keep per capita food consumption near recent 2,600-2,650 calorie per day highs. At least a third to a half of food imports of this magnitude will have to be purchased concessionally or foregone. Agreements negotiated so far in 1979 call for delivery of nearly 2 million tons of concessional wheat, coarse grain, and rice imports--as well as other products including vegetable oil, cotton, tobacco, tallow, and soybeans--from a wide range of donors including the United States, Australia, Argentina, the European Community, and Canada.

Morocco's import requirements and aid needs are likely to continue well above normal in 1979; disappointing harvests in 1978 did not provide the increases needed to rebuild supplies following 1977's disasterous harvest. Imports are likely to continue at a record 1.5-1.8 million tons in 1979 as the Government moves to rebuild stocks and to meet rapidly growing demand for bread in urban areas. Morocco's chronic trade deficit, worsened by the cost of the Saharan war, will make it difficult to purchase more than three-fourths of the country's 1979 import requirements commercially.

The 1978 harvests in both the Yemen Arab Republic and the People's Democratic Republic of Yemen were reported average. However, field observers report a serious threat of locust infestation. Should the size and number of locust swarms increase, crops could be seriously damaged later in 1979. Normally tight food supplies--possibly reduced by locust losses--combined with rapidly growing consumer food demand could push food import requirements and emergency aid needs to a record high later this year.

C. Sudano-Sahelian Africa

Attention has been focused on the Sahelian countries since the severe and protracted drought of the early 1970's generated serious food shortages. Nearer-normal rainfall in 1976 and 1977 resulted in some recovery in food production. Rainfall in 1978 was generally normal, although moderately deficient in localized areas of the region. But even with total production for the 8 countries as a group back up to pre-drought levels, per capita food output lagged 20 to 30 percent below the benchmark levels reported at at the end of the 1960's and the beginning of the 1970's.

The four smallest countries of the group--the Cape Verde Islands, the Gambia, Mauritania, and Upper Volta--were seriously affected by localized drought and flooding in 1978. In the Cape Verde Islands, inadequate rainfall and an unusually short rainy season reduced 1978 output to roughly 50 percent of the levels expected earlier in the year. A disastrous 1977 crop had forced the Government to draw down stocks heavily in anticipation of a good 1978 crop. Hence, the supplies of food available for use before late summer and early fall 1979 harvests are critically inadequate.

Harvests in Upper Volta also fell well below the levels expected early in the season and well below the levels of a year ago. While weather related losses in production were not as severe as in past years, per capita production fell to a 4-year low. Similarly, Gambia's per capita food supplies were reported near record lows as heavy year-end rains caused widespread damage to grain and groundnut supplies harvested at the end of 1978 and stored in the open.

In Mauritania, erratic rainfall, insufficient seed reserves, and damage caused by birds and grasshoppers reduced 1978 output significantly. As in the case of Upper Volta and the Gambia, stocks are being drawn down sharply and increased imports will be crucial if consumption levels are to be maintained at even drought-reduced levels of 2,000-2,100 calories per capita per day until the harvest of the main food crops in the fall of 1979.

In the larger countries of the region--Chad, Mali, Niger, and Senegal--1978 crops were reported average to good and 1978 carry-in stocks were reported at a 4 to 5 year high. Nevertheless, domestic production is not adequate to keep per capita consumption at the normal 2,000-2,200 calorie per day level without continued large imports and food aid donations. Improvements in these larger countries, however, have been large enough to more than offset the deterioration reported in the smaller countries and to keep keep the region's total import requirements and food aid needs below the levels of the last 3-4 years.

FAO field observers estimate the eight countries' 1978 grain imports and 1979 grain import requirements at roughly 1,032,000 tons and 770,000

tons, respectively. The individual country components break down as follows:

Sahelian Grain Imports, 1978 Actual and 1979 Estimated

Country/Region	1978	1979
	1,000 metric tons	
Cape Verde Islands	59,500	51,500
Chad	45,500	35,000
The Gambia	46,600	50,000
Mali	105,700	35,000
Mauritania	144,600	120,000
Niger	91,200	60,000
Senegal	459,000	300,000
Upper Volta	87,100	120,000
Sahel Total	1,032,000	770,000

At their December 1978 meeting, the Ministers of the 8 Sahelian countries appealed for 1979 food aid donations of at least 350,000 tons of grain. Individual country requests, total 1978 aid donations, and 1979 aid commitments as of March 31 were reported as follows:

Sahelian Grain Aid Commitments, 1978 Actual and 1979 To Date

Country/Region	1979 Aid Request	Aid Commitments 1978 Total	Aid Commitments 1979 To Date
	1,000 tons		
Cape Verde	60,000	49,400	11,000
Chad	45,000	45,400	7,000
The Gambia	20,000	21,200	4,000
Mali	None	82,000	5,000
Mauritania	110,000	73,000	24,000
Niger	30,000	32,000	4,000
Senegal	40,000	191,000	22,000
Upper Volta	45,000	54,400	3,000
Sahel Total	350,000	549,100	80,000

FAO and USDA analyses suggest that food donations of roughly 200,000 tons, directed primarily to the most seriously affected countries, are a more realistic estimate of 1979 aid needs. With less than 100,000 tons of aid committed at the end of March, donations are unlikely to exceed 200,000 tons in 1979.

Food aid needs elsewhere in Sudano-Sahelian Africa are reported up significantly from a year ago.

In Ethiopia, the disruption of food production and distribution caused by civil unrest worsened in late 1978 and early 1979 as drought spread to a larger part of the country. Country-wide shortages eased somewhat with the arrival of food aid shipments late in 1978 and with the fall harvest. The situation continues to be critical, however, particularly in the southern portion of the country where drought and civil unrest have been most severe. The Government announced recently that severe drought extended across 4 provinces including Wollo, Tigre, Bali, and Sidamo and that an estimated 250,000 people would have to be resettled to avoid further loss of life estimated at 200,000 in the Wollo region alone. Through June 1979, an estimated 200,000 tons of grains emergency relief will be needed in the drought-affected areas of the country alone. Should the 1979 harvest fall below normal due to continued drought or civil unrest, aid needs will be even greater after June.

Prospects for the 1979 crop are poor. The Government announced in December 1978 that the country's 1979 grain import requirements would exceed 400,000 tons, or 40 percent more than in 1978. Ethiopia will be unable to import more than a quarter of this total commercially. A recently signed Title II agreement provides for roughly 50,000 tons of wheat and other commodities for transfer in 1979. Perhaps 20,000 tons will come from FAO/WFP emergency food assistance.

Distribution of imports and aid is still a cause for concern. Although by late 1978 port efficiency and internal transport facilities had improved, they are still inadequate for proper handling of large quantities of food assistance.

The Sudan's food situation deteriorated sharply over 1978 and early 1979 as a result of the influx of almost 2 million refugees driven over its border by famine in Ethiopia and war in Eritrea. Although production is usually sufficient to allow Sudan to export small quantities of coarse grains, recent harvests have been barely adequate to meet indigenous needs. Floods in July and August 1978 damaged crops and ruined much of the food stored in affected areas.

Sudan will likely need more than 275,000 tons of imported grains in 1979 to meet its own expanding demand for wheat, to feed the refugee population, and to assist its own people suffering from drought and floods. Even if provision is made for past record commercial purchases, 125,000 tons of Sudan's 1979 import requirements will either have to be imported concessionally or foregone. In the fall of 1978, FAO/WFP provided 10,000 tons of emergency food assistance to the most seriously affected flood victims to meet their immediate needs until the 1979 millet and sorghum crops can be harvested. A recently signed Title I agreement provides for transfer of 140,000 tons of U.S. wheat and flour.

Food aid needs in the remaining countries of the region--the Central African Empire, Somalia, and Djibouti--appear to be below levels of a year ago. Millet and cassava production in the Central African Empire is reported average or above average. Although locusts have damaged crops and rangeland and war in the Ogaden has kept Somalia's food supplies tight through most of 1978, good fall and winter harvests in 1978 have improved the short-term outlook significantly. As of early March, there appeared to be no need to increase the quantities of food assistance above the 90,000 tons allocated in 1978. Possible locust infestation in the south, a worsening of the drought in the north central areas, or a flare up in the Ogaden border dispute could make aid at or above 1978 levels necessary.

While the food supplies on hand and aid committed for delivery in 1979 appears adequate to meet the food needs of Djibouti's population of 300,000, the overall economic situation remains uncertain. Disruptions of the Djibouti-Addis Ababa railroad, a worsening of the drought now affecting the country's limited grasslands, or increased political instability in the Horn of Africa could make the country dependent on emergency aid of 20,000-30,000 tons of grain before the end of the year.

The West African countries bordering the Sahelian countries report average-to-good harvests in 1978. With the exception of Sierra Leone, per capita food production levels are slightly above 1976 and 1977 levels. In Sierra Leone, however, a prolonged wet season and plant disease reduced upland rice production to 75 percent of normal. With food stocks low, localized shortages are likely in 1979 unless 110,000 tons or more of wheat and rice is imported for distribution to the most seriously affected areas of the country. As much as 60,000 tons of the imports needed to maintain per capita consumption near normal levels of 2,200 to 2,250 calories per capita per day will have to be purchased concessionally or foregone.

D. Southern and Eastern Africa

Drought, cyclones, floods, deteriorating trade balances, and/or civil unrest continue to keep the import requirements and food aid needs of many Eastern and Southern African countries high.

In Angola, drought in the country's major agricultural areas during 1977 and much of 1978, combined with continued guerrilla activity and the exodus of the large commercial farmers, reduced total food production to two-thirds of the levels reported in the early 1970's. Per capita food production appears to have dropped to about half the levels reported at the start of the decade. Stocks are negligible and continued large imports of up to 250,000 tons of wheat, rice, and coarse grains will be needed to keep per capita consumption at normal levels of 2,000 to 2,050 calories per day. Most food imported in 1978 was financed by the more than

$1 billion earned from sale of low sulfur oil. As little as 10 percent of Angola's 1970 import requirements need to be concessional. Less than 6,000 tons of concessional imports are scheduled so far for delivery in 1979 from the United States and the European Community.

Guerrilla warfare in Zimbabwe and Namibia are likely to increase food import requirements and aid needs in neighboring Botswana in 1979. While the refugee population continues to grow, domestic food production--largely livestock based--has suffered from foot and mouth disease and below normal rainfall in key grazing areas. As of early 1979, drought was reported spreading to the southern and southeastern parts of the country. As a result, the 1979 crop is expected to be late and below average. The Botswana Government has announced its intention to import as much as 110,000 tons of wheat, coarse grains, and flour to meet refugee needs and to provide assistance to its own most seriously affected farmers. Corn from South Africa is available through customs union arrangements, but at prices higher than the world market price. No matter what the source, however, Botswana can afford to purchase commercially no more than two-thirds of the 110,000 tons needed to keep per capita consumption at the 2,000 to 2,050 calorie-per-day minimum.

The tight food supplies reported in the Comoros appear to be the result of a deteriorating economic situation and a disrupted transportation system rather than the poor 1978 crops. The Government recently announced 1979 food import requirements of 23,000 tons of wheat, rice and coarse grain-20 percent above 1978 levels. This amount would be barely sufficient to maintain per capita consumption at about 2,250 calories per day. While While two-fifths of Comoros' imports were concessional in 1978, a full half to two-thirds of 1979 imports will have to be concessional because export earnings from copra, vanilla, and cloves are sorely inadequate.

Owing to prolonged drought and insect infestation, food production in the People's Republic of the Congo fell sharply in 1977 and 1978. The food situation is reported critical in the Mouyoundzi district where the cassava crop has been seriously affected by drought and food stocks reduced by insect damage. Import requirements for 1979 are estimated at 30,000 tons; less than 20,000 tons can be imported commerically because of the country's very limited foreign exchange.

In Lesotho 1978 food production was reported improved over 1977 levels but still suffered from the aftereffects of drought in key corn areas. Per capita production is reported well below the levels at the beginning of the 1960's. The country's food import requirements in 1979 are estimated at 160,000 tons of wheat and rice, an increase of about 15 percent over 1978 levels. Commercial purchases are not likely to exceed 125-130,000 tons leaving a 30-35,000 ton aid margin. To date roughly 9,000 tons of aid have been committed by the EC, United States, and Canada.

In Madagascar, serious food shortages are reported due to the 10 to 15 percent reduction in 1978 food production generated by severe, widespread drought. Per capita food supplies are reported at their lowest level in over a decade. While food staples have been rationed, food stocks drawn down, and large commercial purchases and limited concessional sales negotiated, the supplies available for consumption are insufficient to maintain consumption near recent levels of 2,250 calories per capita. Moreover, cyclones in late 1978 and early 1979 in the southwestern portion of the country damaged early rice, groundnut, and cotton crops that had just been planted. The main 1979 rice crop was also planted late and could be 5 to 10 percent below reduced 1978 levels.

The Government announced 1979 food import requirements of 390,000 tons of wheat and rice, compared with 270,000 tons in 1978. If commerical imports are kept at 1978's record high of 260,000 tons, aid in excess of 120,000 tons will be needed.

In Mozambique, adverse weather, worsening refugee problems, and the overall disruptions of the agricultural sector caused by the flight of most of the large commercial farmers have kept food in nearly continuous short supply since 1975. Tropical storms in late 1978 compounded the problem cutting crops and adding 80,000 refugees to the large number already arrived from Zimbabwe. The Government estimated 1979 food import requirements at 340,000 tons of wheat, rice, and coarse grains compared with 300,000 tons in 1978. While roughly 140,000 tons of total 1978 imports were purchased commercially, less than 120,000 tons can be purchased commercially in 1979 because smaller exports of cashews, cotton, and sugar and reduced remittances from Mozambiqueans working in South Africa have seriously weakened the country's foreign exchange position. Less than 70,000 tons of aid have been scheduled so far for delivery in 1979. U.S. aid plans call for 17,000 tons of wheat and 10,000 tons of rice. Another 25,000-30,000 tons of wheat have been promised by Canada and Sweden.

Information on the food situation in Tanzania and Uganda is limited. Tanzanian supplies were reported adequate toward the end of 1978 although still well below the levels of the early 1970's. Reduced agricultural export receipts have weakened Tanzania's foreign exchange position and their dependence on food aid may increase. Ugandan production has stagnated and per capita levels are at a 15-year low. Imports have been neglible and, without aid, are likely to continue to be neglible. Warfare between the two countries seriously worsened the food situation because of military demands on food supplies and on already scarce transportation facilities needed for food production and distribution. Prior to the outbreak of the latest round of fighting, Tanzania's 1979 food import needs were estimated at 135,000-140,000 tons, or at about last year's level; aid is now reported at about 60,000 tons, compared with 112,000 for 1978. Uganda's 1979 import requirements were estimated at 22,000 tons, compared with neglible imports in 1978. No aid was delivered to Uganda in 1978 or has been committed to date for 1979; at least half of 1979's imports will have to be purchased

concessionally or foregone. Both country's import requirements and aid needs can be expected to increase sharply through 1979 and 1980 if fighting continues.

Drought in southwest Zaire, combined with a the influx of a large number of refugees from civil war in Shaba province and guerrilla fighting in Angola, have resulted in critical food shortages. The problem is particularly severe in and around Kinshasa due to a deteriorating road system that slows delivery of food from the countryside. A shortage of foreign exchange also restricts the importation of food. Extremely severe inflation has also made it difficult for the urban population to purchase enough food to maintain the 1,900 calorie per capita intake levels common to the area. The 1979 crop outlook is also unfavorable because the problems of drought and the chronic agricultural disorganization appear likely to worsen rather than improve in 1979. Import requirements are estimated at 160,000 tons of wheat, 140,000 tons of rice, and 180,000 tons of corn of which less than half can be purchased commericially.

While Zambia's 1978 food harvests were average, planting of the main corn crop for harvest in mid-1979 was seriously affected by drought and input shortages. Should the drought continue, losses in food production would have severe consequences in view of the large number of refugees entering Zambia from Zimbabwe, Namibia, and Zaire. Food import requirements for 1979 are now estimated at 220,000 tons of wheat, corn, and rice, compared with 89,000 tons in 1978. Food aid contributions in 1978 totaled roughly 22,000 tons; aid pledged so far in 1979 is in excess of 79,000 tons. Zambia will need to import roughly 150,000 tons of its 1979 import requirement concessionally.

E. South Asia

The food situation in South Asia continued to improve in 1978 due to a third successive year of record or near-record harvests. The region's net food imports fell sharply as purchases abroad were cut to one-third of their 1975-77 level and as exports of a range of products, including wheat, reached a decade high. While South Asia received roughly two-thirds of world and U.S. food aid donations in the early 1970's, its share fell to less than 50 percent in 1978.

The improvement in South Asia's food situation, however, is somewhat deceptive. While market prices and stock levels suggest food supplies are relatively abundant, per capita consumption levels are not markedly higher than the 1,900 calorie-per-day levels reported during 1972-1975 shortage years. Large population increases have partially offset production gains, but equally important is the inability of a large number of people to purchase more food given their low income levels.

South Asia's food import requirements and aid needs in 1979 are likely to continue to be small relative to past levels. Carry-in stocks were quite high and prospects for the 1979 crop to date are encouraging. Moreover, a marked improvement in the region's foreign exchange reserves put the largest countries in a stronger position to import commercially. Nevertheless, meteorological extremes--including cyclones, flooding, and drought--have crippled food production in all the countries of the region frequently enough in the past to suggest the distinct possibility of drought in 1979. Yet greater use of irrigation, fertilizer, improved seed varieties, and storage facilities may provide partial protection from unfavorable weather.

Food production in India increased 5 percent in 1978 to bring the total increase in production since 1974 to more than 25 percent. Much of the 1978 increase was used to reduce imports, expand exports, and build stocks, as well as to increase food consumption. Food aid dwindled to less than 60,000 tons of vegetable oils and 265,000 tons of wheat under a U.S. Title II program, and 4,000 tons of nonfat dry milk and 2,000 tons of edible oil from the World Food Program. Food import requirements and aid needs are likely to continue to be small in 1979 due to the large carry-over stocks reported in January of 1979 and to early indications of good rabi crop conditions and a possible record 1979 wheat crop. The Government recently announced plans to import large quantities of edible vegetable oil while keeping grain imports negligible except for quantities involved in ongoing WFP and Volunteer Agency activities.

India's 1979 food import requirements and aid needs will ultimately depend on crucial July-October monsoon rains. However, should the need for food imports arise, India's record high foreign exchange holdings of $6.7 billion puts the country in an unusually strong position to import commercially.

Bangladesh's 1978 food production was reported subtantially above the levels reported during 1972-75 shortage but slightly below the all-time high reported in 1977. Per capita food consumption continued at or slightly above the 1977 level and grain stocks were built up due to unusually large grain imports in excess of 1.7 million tons. Below-average rainfall in early 1979 1979 is expected to affect the winter wheat and the boro rice crops, and necessitate some 1979 stock draw downs and continued imports of grain of 1.5 to 2.0 million tons.

With only limited foreign exchange available to purchase food, Bangladesh will have to continue to rely on concessional imports for up to two-thirds to three-fourths of its purchases. FAO and the Government of Bangladesh estimate imports of 1.6 million tons of wheat and rice will be needed in 1979 to maintain consumption at the 1978 level of 2,000 calories per capita per day. At least three-fourths of this total will have to be imported concessionally or foregone.

Sri Lanka's 1978 food production is reported a full 40 percent above the levels recorded at the worst of the 1973-76 drought and more than 8 percent above the 1977 record. Even with imports off markedly, per capita food consumption hit a decade high in excess of 2,250 calories per day. U.S. aid in 1978 was reported at 180,000 tons of wheat and wheat flour or three-fourths of the total. Owing to the bumper rice crop and delivery of imports purchased earlier in the year, the Government reported serious storage problems. Aid needs in 1979 will likely continue to be low because of large carry-in stocks and the country's improved foreign exchange position; however, early indications of deficient rains in much of Sri Lanka's rice area suggest that import requirements and aid needs will be somewhat above 1978 levels.

Food production in Nepal in 1978 was reported off 3 percent from record high 1977 levels due to floods in key rice and corn producing areas. The bulk of this decrease will probably be absorbed through decreases in food exported to India rather than through cutbacks in consumption. Maintaining per capita food consumption at about the normal 2,000 to 2,050 calorie level could possibly require small imports from neighboring India in early 1979. Nepal is in a strong position to purchase imports commercially from foreign exchange earned by jute exports and and tourist trade. Because stock data are non-existent and the 1979 harvest is 6 months off, no indication of Nepal's likely 1979/1980 food import or aid needs is available.

Political events in Afghanistan have resulted in sharp changes in the pattern of farm ownership and Government procurement of grain for delivery to the cities. The 1978 wheat crop and ending stocks were slightly below the levels of a year earlier; urban areas experienced food shortages resulting as much from political disturbances, disruption of marketing and transportation systems, and hoarding as from changes in supply. Exports of food products to neighboring India declined sharply in 1978 and exports to the Soviet Union were reported smaller than a year earlier. Imports of grain were about 175,000 tons all of which was donated by the EC, Canada, and Australia. Indications of reduced wheat plantings, seriously deficient precipitation, and continued guerrilla activity suggest that the 1979 harvest is unlikley to be significantly better than in 1978. Grain import requirements can be expected to increase to 200,000 tons virtually all of which will have to be concessional.

Contrary to the rest of South Asia, the 1978 harvest in Pakistan fell well short of both the 1976 and the 1977 harvests because of adverse growing conditions and severe rust infestation. However, imports of 2.2 million tons of wheat--roughly one-fourth from the United States of which 250-400,000 tons were provided for in a P.L. 480 Title I agreement--allowed small gains in per capita consumption. FAO and the Government of Pakistan estimates for 1979 suggest the country's food

aid needs are likely to be somewhat smaller. Prospects for wheat are good owing to sufficient residual soil moisture and irrigation water supplies to compensate for below average percipitation and the Government's increased efforts to distribute rust resistant seeds and fertilizer supplies. Given the rapid growth in population and the need to rebuild stocks, however, maintenance of recent consumption levels will require continued above average imports of wheat. Given Pakistan's current financial problems, the Government will most likely be forced to hold total wheat imports to 1.5 million tons or less. Possibly a third of this total will have to be acquired concessionally or foregone.

G. East Asia

The food situation also improved significantly in East Asia in 1978/79 although to a somewhat lesser extent than in South Asia. Food production increases were in excess of 7 percent, or more than enough to push output to a new all-time high. However, virtually all of the major countries of the region reported poor to mediocre harvests in at least 2 of the previous 3 years; consequently, East Asia's production gains lacked the cumulative impact of South Asia's three successive good harvests. Imports of food have continued high, largely as a result of purchases negotiated prior to indications of a bumper fall 1978 harvest. Stock levels rose in most of the region to such an extent that importers were forced to reschedule deliveries and cancel contracts to keep rice stocks at manageable levels. Exporters are reported to be allocating part of the increase in production to the rebuilding of stocks, but most appears to be moving into sales abroad.

Most of the countries of the region suffer from the same uneven food distribution and ineffective demand noted in South Asia. Consequently, while the supplies of food available for consumption are significantly higher than in the recent past, increased supplies have not resulted in significant gains for the majority of the population--particularly those in the lower income quadrant--above customary consumption levels.

Indonesia's increase in supply has been large enough to cause widespread storage and stock management problems. Supplies of food available for use in 1978/79 are at a record high but still only a little above the per capita high reported prior to 1974-77's succession of poor harvests. The Government estimates 1979 rice import requirements at two-thirds the 1978 level of 1.9 million tons, or somewhat more than needed to maintain per capita consumption at recent levels of 2,000-2,100 calories per day. Traditionally, 20 to 30 percent of Indonesia's food imports have been concessional. A 1979 Title I agreement has been signed providing for 272,000 tons of wheat/bulgar and 195,000 tons of rice.

In the Philippines, food production in 1978 increased 1 percent above bumper 1978 levels despite severe typhoon losses. The Government

estimates the total supply of rice currently on hand is well in excess of 1979 requirements. In addition, the Government's improved financial situation suggests that it can afford to buy commercially a large part of the million tons or more of wheat that it now plans to import in 1979. In either case, prospects are good for a marked increase in per capita consumption levels above recent highs of 2,300-2,400 calories per day.

Burmese and Thai production increases in 1978/79 were large enough to generate a 10 to 20 percent expansion in the two countries' rice and corn exports. Procurement of domestic grain by both countries was well in excess of targets early in the year. Per capita food consumption in both countries is likely to be near their respective highs of 2,200-2,300 calories per day. However, some aid needs are reported in areas of Thailand affected by recent flood damage and the influx of Indo-Chinese refugees. FAO/WFP is providing emergency food assistance in these areas.

I. Centrally Planned Asian Countries

Information on the 1978 food situation and 1979 import requirements and food aid needs of the centrally planned Asian countries is quite limited. February and early March field reports for the four countries of the region suggest that food supplies are adequate to insure continued--albeit small--improvement in the Chinese food situation but are short of the levels needed to meet basic food needs in Vietnam, Laos, and possibly Cambodia.

The preliminary information available on 1978 Chinese food production indicates last year's harvest was 3.5 percent above 1977 levels or more than adequate to continue the small increases in per capita production reported since 1960. Imports in 1978 were a record high 9 million tons all of which were purchased commercially. Per capita food supplies averaged 2,300 calories per day or somewhat above the 2,250-calorie minimum recommended by the World Health Organization. In addition, the the pattern of income, prices, and food distribution in China does not make uneven food distribution a serious problem.

The limited information now available on 1979 crop prospects and demand growth suggests that China's 1979 grain import requirements are likely to increase to over 10 million tons, but that China will likely continue its established policy of donating rather than receiving small quantities of food aid.

In contrast, the food situation in Vietnam, Laos, and Cambodia appears to have deteriorated markedly during 1978 and in early 1979. Food import requirements and aid needs in 1979 are likely to equal to or be greater than the levels imported in 1978.

The food shortages reported in 1977 and 1978 in Vietnam are likely to increase in 1979 due to damage from pests and floods to the 1978 rice crop

and to mediocre secondary harvests of manioc, potatoes, sorghum, corn, and beans. Production of rice is reported down 20 percent or more from the last normal crop reported in 1976. Tight food rationing was imposed during 1978 and more stringent rationing and Government procurement and distribution controls are likely in 1979. The Vietnamese Government estimates 1979 food import requirements at 3,000,000 tons of wheat, rice, and coarse grain compared with 1978 imports of 1,500,000 tons. Imports of this magnitude would be sufficient to maintain Vietnamese per capita consumption at pre-1977 levels of 2,200 calories per day. While about 60 percent of Vietnam's 1978 imports were concessional, at least three-fourths of 1979 imports will have to be concessional. Food aid donations so far in 1979 are reported at less than 750,000 tons out of total reported purchases of about 1.5 million tons.

Heavy flooding in southern Laos, the country's major producing area, reduced production of rice from earlier expected levels. Total output, however, is still likely to be above the disastrous 1977 harvest. The World Food Program has estimated regular and emergency aid needs in the flood-affected areas at 65,000 to 70,000 tons of grain, primarily rice. Distribution bottlenecks make early delivery of aid to the four most seriously affected provinces crucial. Laotian aid requests have been channeled so far through the United Nations. As in 1978, most of the aid forthcoming is expected to be supplied by other centrally planned states in the course of their annual bilateral trade negotiations. The remainder is likely to come from international organizations such as the World Food Program.

The food situation in Cambodia appears to have deteriorated in 1978 due to flooding and disruption of normal transportation and marketing routines by civil war. The country has not yet requested any aid. FAO estimates 1979 food import requirements at about 30,000 tons, nearly all of which will have to be aid. It is not known if the recently installed greement will continue the previous Government's policy of directing aid aid requests--except those to centrally planned countries--to international organizations.

II. Situation and Outlook in Food Aid Donor Countries

While U.S. food aid donations generally account for over two-thirds of the world total, significant contributions are made by other governments including the European Community, Canada, Australia, Japan, and Sweden. The information that follows describes their food aid activities and estimates the aid transfers likely in 1979. Particular attention is given to grain aid, the single largest component of the total.

A. European Community

Food made up about 80 percent of the European Community's international development and cooperation budget for 1978 and is likely to account for

about the same proportion of the EC's somewhat larger 1979 budget. Food aid is provided entirely on a grant basis and generally falls into three categories--emergency relief, nutritional development (provided mostly through international organizations such as the World Food Program), and economic/social development (provided directly to the developing countries). The latter type is the most frequent form of food aid; contributions of this this third type are for free distribution or sale on the local market in recipient countries. When distribution is through sale, the funds generated are used to finance Community-approved development projects.

EC food aid is programmed in connection with the Community's overall commitment under the 1971 Food Aid Conventions (FAC) to donate 1.3 million tons of grain aid annually. This overall FAC commitment is composed of a direct Community commitment of 720,000 tons financed entirely by EC budget expenditures and of bilateral member country commitments of about 570,000 tons which are also partially financed with Community funds. In recent years the EC's performance in meeting its obligations under the FAC and in delivering aid actually allocated has been a continuing source of concern; in past years the EC has usually met about three-fourths of its FAC commitment. Nevertheless, considerable progress has been made in this area and the EC's commitment/delivery rate for grains is expected to improve.

Outside of the FAC cereals commitments, the Community's food aid donations depend on "ad hoc" decisions taken by the EC Council, often involving questions of disposal of surplus dairy products and, in some years, sugar. In 1978, the EC allocated 45,000 tons of butter oil, and 150,000 tons of powdered skim milk food aid in addition to the 720,000 tons of grain committed under the Community's FAC obligation.

The Commission originally recommended to the EC Council that the EC increase its cereals food aid commitment for 1979 from the 1978 level of 1.29 million tons to 1.35 million tons, and to increase its butter oil donations from 45,000 tons to 55,000 tons. However, in an effort to avoid a long delay over Council approval of the increase in food aid and to fulfill some emergency food aid requests allowed for under the proposed 1979 program, the Commission finally requested food aid commitments at the same level as in 1978. Such a request does not require prior council approval.

Any future increases in the Community's food aid will depend in large part on progress in the negotiation of a new food aid convention. The Community announced its intentions to increase its committment under a new FAC to 1.65 million tons, but has not yet agreed to implement this higher level in the absence of an agreed agreement on for a new FAC. Moreover, the EC has not agreed to resume discussion of a new FAC apart from resumption of negotiation for a new Wheat Trade Convention. Thus, EC food aid commitments for 1979 are the same as last year, but increased quantities are still possible.

B. Other Western Europe

Bilateral and multilateral food aid donations are also made by Sweden, Switzerland, Norway, and Finland. Grain donations, the bulk of the aid,

totaled roughly 130,000 tons in 1978 and are likely to continue to range from 130,000 to 175,000 tons until the details of a new FAC are worked out. Austria has announced its intention of joining the FAC with a contribution of 20,000 tons, and Norway has announced its intention to rejoin the FAC.

C. Canada

Canada has had a food aid program since 1951. It was not until the mid-1960's, however, that Canadian aid reached a substantial volume. Canadian food aid initially consisted only of wheat but has since expanded to include sizeable contributions of non-fat dry milk, egg, powder, and rapeseed oil, as well as smaller contributions of canned fish, beans, and potatoes.

Canadian food aid during the 1975/76 to 1977/78 period were allocated on the basis of commitments made at the 1974 World Food Conference to supply a minimum of 1 million tons of grains annually for the period and to channel it increasingly through multilateral institutions, particularly the World Food Program. Total Canadian food aid in 1977/78 exceeded $185 million of which over three-fourths was wheat. Half of the total aid was multilateral, compared with a third in 1976. For 1978/79, an amount approaching 1 million tons will likely be disbursed. Canada has not, however, been willing to formalize the 1 million-ton figure in the negotiation for a new FAC and, in fact, reduced its provisional pledge of 750,000 tons to 600,000 tons as part of a Government budgetary program.

D. Australia

The Australian food aid program is geared directly toward meeting the country's commitments under the 1971 FAC. Under the Convention, Australia is pledged to both bilateral and multilateral contributions. The far greater part has been donated as bilateral aid. Small amounts of aid above the 225,000 tons have also been given, mostly as emergency food aid, rather than as program aid. Some other commodities, including meat, have occassionally been given in the case of food emergencies.

Australia announced recently, in connection with negotiations of a new FAC, its intention to raise its FAC aid commitment to as high as 1.125 million tons over a 3-year period. During the FAC negotiations Australia provisionally pledged to provide 400,000 tons annually, but remains the only donor not to make a final commitment on the level of its pledge in the draft text.

E. Japan

Japanese total official economic aid to developing countries has grown steadily from $244 million in 1965 to over $1.4 billion in 1978. The food aid component of the total, however, has not shown the same steady growth. Rising from neglible contributions in the early 1960's, Japanese food aid contributions hit $134 million, or roughly 730,000 tons in 1971, at the peak of the surplus rice disposal program. Food aid has dropped sharply since then. Allocations in 1977/78 were $17.8 million; the quantities transferred were less than 135,000 tons.

Recent food aid disbursements have taken the form of loans or grants, including transfers of rice purchased in third countries such as Pakistan, Thailand, and Burma, to aid recipients such as Bangladesh and Indonesia. Donations in 1978 included $2.5 million in rice procured from Egypt and wheat flour from Europe shipped for use by Palestinian refugees. Procurement of aid from third countries continues to be favored, as it reduces the cost of aid transfers as well as benefits developing exporters.

On the basis of Japan's recent commitment to dispose of domestic rice surpluses and its commitment to double economic assistance to the developing countries, it is likely Japanese food aid in 1979 will be well above the $20 million, or roughly 225,000 tons, in 1978. Japan continues to suffer from a large carryover of rice and announced plans in December 1978 to dispose of its surpluses (4.6 to 4.8 million tons) over a 5-year period at a cost of about $5 billion budgeted over 7 years. While the Government would like to channel as much of the surplus as possible into industrial use and commercial exports, some of the rice will be provided as food aid or sold on concessional terms.

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