

the state
of food
and
agriculture
1978

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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 - 1978** Problems and strategies in developing regions
-

THE STATE OF FOOD AND AGRICULTURE 1978

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WORLD REVIEW
PROBLEMS AND STRATEGIES IN DEVELOPING REGIONS

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ROME 1979

The statistical material in this publication has been prepared from the information available to FAO up to December 1978.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. In some tables, the designation "developed" and "developing" economies is intended for statistical convenience and does not necessarily express a judgement about the stage reached by a particular country or area in the development process.

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FOREWORD

In the broadest global terms, 1978 was a comparatively good year for food and agriculture. FAO's first estimates point to an increase of almost 3 % in world food and agricultural production. There was a very large rise in cereal production and a further expansion of the carry-over stocks of cereals that are an essential element of world food security.

Such global data for a single year, however, tell us little about the true state of food and agriculture. In 1978, for the first time for some years, the biggest production increases were in the developed countries. The year also brought a particularly large number of emergency situations in the food and agricultural sector in which, as I shall describe later, FAO has been involved even more closely than in the past. Once again, there has been disappointingly little progress toward the many agreed international goals, designed to combat the long-standing problems of poverty and hunger in the developing countries.

One of the most basic of these goals is to accelerate the rate of increase in the agricultural production of the developing countries to 4 % a year. It is now all too clear that this will not be achieved during the 1970s. It is even unlikely that there will be much, if any, acceleration above the rate of about 3 % a year attained in the 1960s. Moreover, the increase in production remains slowest in Africa and in the poorest countries in general. It is also most disturbing to have to record that the latest food supply data indicate virtually no improvement in the deplorable nutritional situation in 1972-74 revealed by FAO's Fourth World Food Survey.

There has been no progress toward the internationally coordinated system of national reserve stocks called for by FAO's International Undertaking on World Food Security. When this was first mooted, its implementation had to await the rebuilding of carry-over stocks of cereals. These stocks have steadily increased since 1975/76 and, in global terms, they are certainly now sufficient in quantity for a minimum level of food security. However, instead of being used for an effective system of world food security, the stocks are already beginning in some quarters to be regarded as burdensome. Thus the present situation is really no better than in 1972/73, when stocks were also large but subject to no international coordination, and were quickly run down following exceptionally widespread crop failures. This could even occur again today, in spite of the apparently comfortable level of stocks.

The formal establishment of the necessary system of world reserves, as well as the guarantee of an adequate level of food aid, have depended for a long time on the lengthy negotiations for a new international grains agreement. I have to express the deepest disappointment that (subsequent to the completion of this annual report) these crucial negotiations have broken down. It is now necessary for governments to assess very carefully the far-reaching implications of this setback. Every effort must be made to reconcile the outstanding differences so as to reconvene the negotiations as soon as possible. In the meantime, however, it is essential for world food security that the major producing and consuming countries should be prepared without further delay to implement the stock provisions of the International Undertaking on a voluntary basis, through the consultative machinery provided by FAO's Committee on World Food Security. In the absence of a new and enlarged Food Aid Convention, the negotiating donor countries who offered to raise their food aid commitments should still do so, with the object of reaching the minimum target of 10 million tons of cereals. While this would greatly contribute to relieving suffering in needy countries, it will also be necessary to consider a substantial increase in the minimum target for food aid in the near future.

Progress in the many international trade negotiations also remains very slow. Although there has been a slight recovery in the share of the developing countries in world exports of agricultural products, this appears to be only a temporary reversal of the longer-term downward trend. Official commitments of external assistance for the agriculture of the developing countries grew substantially in 1977 and 1978, but they remain little more than half of estimated requirements.

These are some of the main themes discussed in Chapter 1 of this report. The chapter also contains a number of new features, to which I should like to draw attention. With the improved timeliness of FAO's statistical reporting, it has been possible to include more up-to-date information than before on food supplies and nutrition. In addition to the usual coverage of the flow of external resources for agricultural development, there is some preliminary analysis of total expenditure (domestic as well as external) on agriculture in the developing countries. This is an important area that we hope to be able to explore much more fully in the future, particularly on the basis of a new questionnaire to Member Governments. Following the publication in last year's issue of this report of a first benchmark survey of the state of natural resources and the human environment for food and agriculture, Chapter 1 this year contains some further information on this important subject.

Chapter 2 deals with problems and strategies in developing regions. It begins with a summary of the Regional Food Plan for Africa, called for by the African Ministers of Agriculture in the face of the deteriorating food situation in that region, which indicates the main requirements for raising the region's food self-sufficiency from 90 % in 1972-74 to 94 % by 1985. It then examines some of the problems of rice production in South and Southeast Asia, where rice provides 40 % of the total dietary energy supply. There follows a fuller analysis of agricultural development in China than has been attempted in this report in the past, including a summary of the principal elements of the country's future agricultural strategy as embodied in the Fifth Five-Year Plan for 1976-80, and in the longer-term perspective of the master plan for 1976-85. A discussion of agricultural modernization in Latin America indicates that, although this process has gone further than in the other developing regions, it has had particularly adverse effects on the traditional sector. The chapter ends with a discussion of some aspects of food security in the Near East, where food and agricultural production has risen fastest so far during the 1970s, but the increase has been a very unstable one.

Such aspects of the world food and agricultural situation provide essential background for the determination of priorities in the work of FAO itself. This work is increasingly action oriented, and FAO's role is more and more that of a development agency that is capable of providing funds, mobilizing additional resources, and implementing and coordinating programmes. FAO in action was in fact the main theme of my opening address to the Seventy-fourth Session of the FAO Council in November 1978.

I have always emphasized the overriding importance of the promotion of agricultural investment, in order to achieve the necessary acceleration of the production increase in the developing countries. During the last 14 years FAO's Investment Centre has prepared projects in 85 developing countries. The financing of 332 projects has been approved, representing a total investment of more than \$13 000 million, of which about a third has come from financing institutions, and the rest from the developing countries themselves. Almost half of these investment funds have been mobilized in the last two years. Since the International Fund for Agricultural Development began operations at the beginning of 1978, FAO has been responsible for a large part of the work on the identification and preparation of projects for its financing. We are also developing close relations with other new sources of finance for agricultural development.

We continue to assist the developing countries to enhance their capacity to make more effective use of increased investment resources. and to formulate plans and policies for food and agricultural development. FAO's technical assistance activities at country level involve resources about twice as great as those provided under its Regular Programme.


Other important FAO activities concerned with increasing production include the International Fertilizer Supply Scheme, and the Seed Improvement and Development Programme. For cereals alone, our projects provide seeds for increasing yields on about 1.5 million hectares in the developing countries. I am also exploring ways to strengthen our activities on the production of rice, which has been increasing more slowly than that of wheat. Closely related is our recent initiative to reduce the enormous avoidable losses of food that occur both before and after the harvest, through the Action Programme for Prevention of Food Losses.

As regards the reserve stocks required to meet year-to-year fluctuations in food production, a major need is for assistance to developing countries to establish their own food reserves. Such assistance is provided by FAO's Food Security Assistance Scheme. In cooperation with donors, we are trying to use this scheme as a framework for the coordination of bilateral programmes with those of FAO, so as to enhance the effect of the total effort.

I have already referred to the large number of emergency situations which FAO has been involved in combating during 1978. By the end of the year, 293 000 tons had been used out of the 348 000 tons of cereals contributed to the International Emergency Food Reserve. The United Nations/FAO World Food Programme's modest allocation of \$45 million for emergency purposes was also quickly exhausted, and had to be raised by \$10 million toward the end of the year. The experience of 1978 emphasizes the urgent need to reach the target of 500 000 tons of cereals for the International Emergency Food Reserve on a guaranteed annual basis. It is also essential to meet the World Food Programme's pledging target of \$950 million for 1979-80.

A major emergency during 1978 was the renewed desert locust invasion in wide areas of Africa and Asia. I am thankful to be able to record that, in addition to the sums that were speedily provided by FAO's Technical Cooperation Programme and Working Capital Fund, there was a very quick response by a number of donors to my appeals for voluntary contributions for emergency assistance in control operations. A similar threat came from the dangerous outbreaks of African swine fever in the Mediterranean and Latin America. Here the Technical Cooperation Programme proved particularly effective in speedily mounting prevention or control projects in 12 countries. To follow up these projects I am proposing to establish an African Swine Fever Control Fund. On a wider plane, it is planned to discuss measures to improve the international system of animal disease control to meet emergency situations created by known or unknown diseases.

In these and other ways too numerous to mention here, FAO is striving to become more effective, not only in combating emergency situations such as were so numerous in 1978, but also in assisting in the struggle against the chronic, longer-term problems that are the subject of most of this report.



EDOUARD SAOUMA
DIRECTOR-GENERAL

EXPLANATORY NOTE

The following symbols are used in statistical tables:

→ none or negligible

... not available.

1977/78 signifies a crop, marketing or fiscal year running from one calendar year to the next; 1977-78 signifies the average for two calendar years.

Figures in statistical tables may not add up because of rounding. Percent changes from one year to another have been calculated from unrounded figures. Unless otherwise indicated, the metric system is used throughout.

Production index numbers 1/

The FAO index numbers have been substantially revised, and are therefore not completely comparable with those published in earlier reports. With very few exceptions the production data now refer to primary commodities (for example sugarcane and sugar-beet instead of sugar). The base period has been updated from 1961-65 to 1969-71. National average producer prices (1969-71) are used as weights instead of regional wheat-based price relatives (1961-65). The indices for food products exclude tobacco, coffee, tea, inedible oilseeds, animal and vegetable fibres, and rubber. They are based on production data presented on a calendar year basis.

For fishery production, quantities are weighted by the average unit values of fishermen's landings in 1969-71. For forest production, roundwood production is weighted by 1969-71 prices.

Trade index numbers 2/

The indices of trade in agricultural products are also updated to a new base period (1969-71). They include all the commodities and countries shown in the 1977 issue of the FAO trade yearbook. Indices of total food products include those edible products generally classified as "food".

All indices are calculated independently for the value, volume and unit value of exports and of imports.

Value indices represent the changes in the current values of exports (f.o.b.) and imports (c.i.f.), all expressed in U.S. dollars. If some countries report imports valued at f.o.b., these are adjusted to approximate c.i.f. values. This method of estimation shows a discrepancy whenever the trend of insurance and freight diverges from that of the commodity unit values.

Volume and unit value indices represent the changes in the price-weighted sum of quantities and of the quantity-weighted values of products traded between countries. The weights are respectively the price and quantity averages of 1969-71, which is the new base reference period used for all the index number series currently computed by FAO. The Laspeyres formula is used in the construction of the index numbers.

1/ For full details, see FAO production yearbook 1977, Rome, 1978.

2/ For full details, see FAO trade yearbook 1977, Rome, 1978.

Regional coverage

The regional grouping used in this publication follows the "FAO country classification for statistical purposes". The coverage of the groupings is in most cases self-explanatory. The term "developed countries" is used to cover both the developed market economies and the centrally-planned economies of eastern Europe and the U.S.S.R., and "developing countries" to cover both the developing market economies and the Asian centrally-planned economies. Israel, Japan and South Africa are included in the totals for "developed market economies". Western Europe includes Yugoslavia, and the Near East is defined as extending from Cyprus and Turkey in the northwest to Afghanistan in the east, and including from the African continent Egypt, Libya and Sudan.

The trade index numbers of a country group are based on the total trade of each country included in the group irrespective of destination, and in consequence generally do not represent the net trade of the group.

1. WORLD REVIEW

INTRODUCTION

FAO's preliminary estimates indicate that world food and agricultural production (crops and livestock) rose by almost 3% in 1978. It confirmed by later data, the increases at the world level would be somewhat above the trend for the 1970s so far. World cereal production rose by about 5% to a new record level, and carryover stocks of these basic commodities have increased still further.

As so often in the past, however, this apparently encouraging picture at the global level for a single year conceals many unsatisfactory features. One of these is that 1978 was the first year since 1973 when the production increase in the developing countries was not considerably greater than in the developed countries. The largest expansions in 1978 were in Oceania (mainly recovery from the low production of the previous year), Europe and the U.S.S.R..

Another feature of 1978 was a particularly large number of emergency situations. These included serious flood damage in several Asian countries, severe drought in China, desert locust invasion in parts of Africa and Asia, and outbreaks of African swine fever in the Mediterranean and Latin America.

Apart from these special features of 1978, there remains the continued failure to make much progress towards such basic long-term goals as the acceleration of the production increase in the developing countries, the eradication of hunger and malnutrition, the establishment of food reserves, the improvement of world trade conditions, and the achievement of internationally agreed targets for food aid.

It now seems highly unlikely that the average annual growth of agricultural production in the developing countries during the Second United Nations Development Decade (DD2) can be raised much, if at all, above the rate of about 3% achieved in the 1960s. This would represent a substantial shortfall from the basic target of 4% in the International Development Strategy (IDS). The increase in production continues to be slowest in the poorest developing countries, especially in Africa, where it has failed to match population growth.

There appears to have been little, if any, improvement in the disquieting nutritional situation revealed by FAO's Fourth World Food Survey. The survey estimated that per caput dietary energy supplies in the developing market economies declined slightly between 1969-71 and 1972-74, and that the number of undernourished people in these countries rose from about 400 million in the first period to about 450 million in the second. Partial data for more recent years indicate that per caput dietary energy supplies in these countries fell back in 1975 to below the 1973 level, but recovered in 1976 to the peak reached in 1971. Since their per caput food production failed to rise in 1977 for the second year in succession, there is unlikely to have been much further improvement.

Carryover stocks of cereals (outside China and the U.S.S.R., for which there are no data) have been building up rapidly since 1975/76. They are forecast to reach a record of about 200 million tons by the close of the 1978/79 crop seasons. This would represent about 21% of annual consumption in the countries concerned, which may be considered statistically adequate for world food security. The stocks are, however, highly concentrated geographically. Stocks in most developing countries are very small, and the concentration in a narrow belt of North America could cause serious logistic problems if a major food emergency required the rapid movement of large additional supplies.

For several years now, the high global level of cereal stocks has provided the opportunity to establish the internationally coordinated system of reserves envisaged in FAO's International Undertaking on World Food Security. However, progress in setting up such a system continues to be held up by the protracted negotiations on a new international grains agreement.

There was a slight recovery in 1977, for the second year in succession, in the share of the developing countries in world exports of agricultural products. This appears, however, to represent only a temporary reversal of the long-term downward trend. The recovery in the agricultural terms of trade of these countries in 1977 was already sharply reversed in the first half of 1978. Progress has continued to be slow in the many international negotiations at present under way with the object of improving world trade conditions.

In many developing countries, rising food import requirements, especially of cereals, have progressively reduced their ability to import capital goods, fertilizers and other production requisites. The net cereal imports of the developing countries rose from an average of 32 million tons in 1962-64 to 52 million tons in 1972-74, and reached the record level of 66 million tons in 1977/78. If the past trends continued, they would exceed 90 million tons by 1985.

The role of food aid in meeting these rising food import requirements has declined substantially since the mid-1960s. The minimum target of 10 million tons of food aid in cereals has still not been met, either by the actual shipments in 1977/78 or by the preliminary allocations for 1978/79. The establishment of a new Food Aid Convention (FAC) continues to be delayed by the slow progress in the international grains negotiations. Contributions to the International Emergency Food Reserve of 500,000 tons of cereals reached only 315,000 tons in 1978. Fertilizer assistance to the developing countries has declined in recent years.

Official commitments of external assistance for the agriculture of the developing countries recovered sharply in 1977, and exceeded the 1975 peak by 12% in real terms. During the first ten months of 1978, loans and credits from the World Bank Group (the largest single source of external funds for agriculture) were 50% greater than in the same period of 1977. Despite these substantial improvements, the total official commitments of external assistance for agriculture remain little more than half of the estimated requirements noted by the World Food Council (WFC) and FAO Conference.

FOOD AND AGRICULTURAL PRODUCTION

Total world production of agricultural, fishery and forest products rose by about 2% in 1977 (Table 1-1). The main increase was in agricultural (crop and livestock) production. For fishery products, while the price-weighted index numbers in Table 1-1 show a negligible increase in 1977, it will be seen later in this chapter that the world catch actually declined in terms of tonnage. Details of forestry production are also to be found later, and the rest of the present section is confined to crop and livestock production.

Revised estimates for 1977 indicate that world agricultural production in this narrower sense increased by about 2.5% (Table 1-2). Mainly because of larger crops of coffee and cotton, the increase in agricultural production was slightly greater than that in food production alone (about 2.3%).

In the developing countries food production rose by 2.6% in 1977, and total agricultural production by 2.9%. Following a year of no growth in 1976, both food and agricultural production increased by about 6% in the developing market economies of the Far East. The monsoons were generally favourable, but Indonesia, Malaysia and Thailand suffered from poor weather. In the Asian centrally planned economies, the increase in production in 1977 was the smallest since 1972.

Table 1-1. Indices of world production of agricultural, fishery and forest products

	1970	1971	1972	1973	1974	1975	1976	1977 ^{1/}	Change 1976 to 1977 ^{2/}
	..... 1969-71 average								%
TOTAL PRODUCTION	104	107	107	112	114	116	119	122	+ 2
Agriculture	100	103	103	108	110	113	115	118	+ 3
Fisheries	101	106	111	115	117	118	123	124	+ 1
Forestry	99	100	102	106	105	102	108	110	+ 2
POPULATION	100	102	104	106	108	110	112	114	+ 2
PER CAPUT PRODUCTION	104	105	103	106	106	105	106	107	+ 1
Agriculture	100	101	99	102	102	103	103	103	+ 1
Fisheries	101	104	107	108	115	107	109	109	-
Forestry	99	98	98	100	97	93	96	96	-

Note: For details of methodology and coverage of these indices, and those in subsequent tables, see the explanatory note preceding this chapter.

^{1/} Preliminary. - ^{2/} Calculated from unrounded figures.

Table 1-2. FAO index numbers of world and regional food and agricultural production ^{1/}

	1971	1972	1973	1974	1975	1976	1977	Change 1976 to 1977	Annual rate ^{2/} of change 1961-70	1970-77
	..... 1969-71 = 100 .....							.....%	.....
<u>Food production</u>										
Developing market economies ^{3/}	102	102	106	108	115	118	121	3.0	3.0	2.8
Africa	102	102	99	106	106	110	108	-1.6	2.6	1.3
Far East	102	99	109	106	116	116	123	6.2	2.7	2.9
Latin America	102	103	106	112	117	122	125	2.6	3.5	3.4
Near East	102	110	104	113	120	126	123	-1.9	3.2	3.5
Asian centrally planned economies	105	105	110	113	118	121	123	1.6	2.9	3.0
TOTAL DEVELOPING COUNTRIES	103	103	107	110	116	119	122	2.6	2.9	2.9
Developed market economies ^{3/}	103	102	105	109	112	113	115	2.2	2.4	2.2
North America	105	104	105	106	114	118	122	3.1	3.4	3.0
Oceania	103	104	116	110	120	128	123	-3.4	2.3	3.6
Western Europe	103	101	106	111	110	110	110	0.9	2.3	1.5
Eastern Europe and the U.S.S.R.	104	103	115	113	112	115	117	2.0	3.1	2.2
TOTAL DEVELOPED COUNTRIES	103	103	109	110	112	113	116	2.1	2.6	2.2
<u>WORLD</u>	103	103	108	110	113	116	118	2.3	2.8	2.5
<u>Agricultural Production</u>										
Developing market economies ^{3/}	102	102	106	109	114	116	120	3.6	2.8	2.7
Africa	102	102	100	106	106	110	109	-1.3	2.7	1.3
Far East	102	100	109	106	115	115	122	6.3	2.7	2.8
Latin America	102	104	105	113	115	118	123	4.3	2.9	3.0
Near East	103	109	104	113	118	123	122	-1.0	3.3	3.2
Asian centrally planned economies	105	105	111	114	118	121	123	1.6	3.0	3.0
TOTAL DEVELOPING COUNTRIES	103	103	107	110	115	117	121	2.9	3.0	2.8
Developed market economies ^{3/}	103	103	105	108	111	112	115	2.4	2.1	2.1
North America	105	104	106	106	113	117	121	3.6	1.7	2.9
Oceania	103	103	109	104	113	119	114	-3.6	3.1	2.3
Western Europe	103	101	106	111	110	110	110	0.8	2.2	1.5
Eastern Europe and the U.S.S.R.	104	103	115	113	112	115	117	1.9	3.1	2.2
TOTAL DEVELOPED COUNTRIES	103	103	108	110	112	113	116	2.2	2.4	2.1
<u>WORLD</u>	103	103	108	110	113	115	118	2.5	2.6	2.4

^{1/} Crops and livestock only. - ^{2/} Exponential trend. - ^{3/} Including countries in other regions not specified.

Food production in Latin America rose by almost 3% in 1977, and agricultural production (reflecting the strong recovery of coffee production) by about 4%. However, results were again disappointing in Africa, where production declined in 1977. There was drought in northern Africa, and the rains in the Sahel were late and very irregular. After three very good years, food and agricultural production also fell in the Near East in 1977, with smaller crops in most countries except Iran.

Among the developed regions, the only large increase in production in 1977 was in North America. There were only small gains in both eastern and western Europe and the U.S.S.R.. Drought brought a sharp fall in Oceania.

PRODUCTION IN 1978

The preliminary estimates for 1978 indicate that world food and agricultural production rose by almost 3% (Table 1-3). In contrast to 1977, food production increased slightly faster than total agricultural production, mainly because of a drop in cotton production. Thus the increase in world food production was considerably greater than in 1977.

Also in strong contrast to 1977, and indeed to every year since 1973, the increase in agricultural production in 1978 was greater in the developed than in the developing countries. Food production rose at about the same rate in both groups of countries.

The biggest regional increase in both food and agricultural production in 1978 was in Oceania, but much of this represented recovery from the drought-affected levels of 1977. There were also large gains in eastern Europe and the U.S.S.R., reflecting a record U.S.S.R. cereal harvest and increased meat production in the region as a whole. In western Europe, mainly because of a record wheat crop, there was the first large expansion of production since 1974. In North America, production was at about the same level as in 1977, with little increase in cereal production (reflecting the United States set-aside programme), an increase in oilseed production, and a fall of about 25% in United States cotton production.

Among the developing regions, for the first time for many years the largest increase in production in 1978 was in Africa. Agricultural production is estimated to have grown by about 3% and food production by almost 4%, following the declines in 1977. There were good crops of wheat, coarse grains, pulses and groundnuts. Production recovered in north and west Africa, but low rainfall again affected crops in parts of the Sahel.

Following the large expansion in 1977, food and agricultural production rose by only about 2% in the developing market economies of the Far East in 1978. There were good cereal crops in most countries except Lao, Pakistan and Malaysia. In Lao floods damaged 40% of the crop in the four principal rice-growing provinces. Heavy monsoon rains also caused considerable flood damage to maize, groundnuts and cotton in parts of India, although they raised the yields of these crops in areas not affected by flooding. There was a large increase in sugar production, mainly reflecting a rise of one third in India.

In the Asian centrally planned economies, production rose by about 3% in 1978. China had a record wheat crop and a good early rice crop, but the autumn rice and coarse grain crops were affected by severe drought. Insect infestation was widespread in Vietnam, and there was extensive flood damage in the Mekong delta.

Both food and agricultural production increased by about 3% in Latin America. There was a limited recovery in wheat production in Argentina, Brazil and Mexico. The coarse grain crop was also large in Argentina, but the production of both rice and maize declined in Brazil. There was a further gain in the region's meat output. The production of oilseeds, especially of soybeans, declined. Sugar production increased in Colombia, Cuba and Mexico, but fell in Argentina, Brazil and the Dominican Republic. There was a further recovery in coffee production.

Table 1-3. Annual changes in world and regional food and agricultural production^{1/}

	Annual rate of change 1970-77 ^{2/}	1971 to 1972	1972 to 1973	1973 to 1974	1974 to 1975	1975 to 1976	1976 to 1977	1977 to 1978 ^{3/}
..... %								
<u>Food production</u>								
Developing market economies ^{4/}	2.8	0.1	3.7	2.4	6.0	2.2	3.0	2.7
Africa	1.3	0.2	-2.5	6.4	0.2	3.9	-1.6	3.7
Far East	2.9	-2.0	9.2	-2.4	9.3	-	6.2	2.4
Latin America	3.4	0.9	3.0	5.9	4.0	4.4	2.6	2.7
Near East	3.5	7.0	-5.0	8.8	5.6	4.9	-1.9	2.4
Asian centrally planned economies	3.0	-0.1	5.0	3.2	3.9	2.6	1.6	2.9
TOTAL DEVELOPING COUNTRIES	2.9	-	4.1	2.7	5.3	2.3	2.6	2.7
Developed market economies ^{4/}	2.2	-	2.9	3.1	2.8	0.8	2.2	2.2
North America	3.0	-1.7	1.7	0.8	7.1	3.5	3.1	0.7
Oceania	3.6	-0.4	11.7	-5.5	9.2	6.6	-3.4	6.2
Western Europe	1.5	-1.7	4.4	5.0	-1.1	-0.3	0.9	3.8
Eastern Europe and the U.S.S.R.	2.2	-0.9	11.8	-1.4	-1.0	2.5	2.0	4.5
TOTAL DEVELOPED COUNTRIES	2.2	-0.7	5.9	1.5	1.5	1.4	2.1	3.0
<u>WORLD</u>	2.5	-0.4	5.1	2.0	3.1	1.8	2.3	2.9
<u>Agricultural production</u>								
Developing market economies ^{4/}	2.7	0.4	3.2	2.7	4.9	1.6	3.6	2.6
Africa	1.3	0.7	-2.2	5.6	0.3	3.8	-1.3	3.2
Far East	2.8	-2.0	8.6	-2.1	8.2	-0.1	6.3	2.4
Latin America	3.0	1.2	1.7	7.1	2.4	1.9	4.3	3.1
Near East	3.2	6.6	-5.0	8.9	3.9	4.6	-1.0	1.8
Asian centrally planned economies	3.0	0.2	5.5	3.1	3.5	3.5	1.6	2.9
TOTAL DEVELOPING COUNTRIES	2.8	+ 0.3	3.9	2.8	4.4	1.9	2.9	2.7
Developed market economies ^{4/}	2.1	-	2.6	2.9	2.6	0.9	2.4	1.8
North America	2.9	-0.7	1.5	0.8	6.1	3.8	3.6	-
Oceania	2.3	-0.2	6.5	-5.3	9.2	4.9	-3.6	4.9
Western Europe	1.5	-1.6	4.4	5.0	-1.0	0.3	0.8	3.7
Eastern Europe and the U.S.S.R.	2.2	-0.8	11.1	-1.3	-0.5	2.2	1.9	4.4
TOTAL DEVELOPED COUNTRIES	2.1	-0.3	5.5	1.4	1.5	1.3	2.2	2.7
<u>WORLD</u>	2.4	-	4.8	2.0	2.8	1.6	2.5	2.7

^{1/} Crops and livestock only. - ^{2/} Exponential trend. - ^{3/} Preliminary. - ^{4/} Including countries in other regions not specified.

In the Near East, following the decline in 1977, food production rose by somewhat less than 2% and total agricultural production by somewhat more than 2% in 1978. Cereal production was larger than in 1977 but smaller than in 1976. Turkey had another large wheat crop, although smaller than in the two previous years. The region's sugar output increased. Cotton production declined, especially in Egypt, Iran, Sudan and Turkey.

Pests and diseases

A major feature of 1978 was the renewed threat of desert locust invasion, after many years of relative freedom from this pest, in a number of countries of Africa and Asia. There were also serious outbreaks of African swine fever in the Mediterranean and Latin America. Both of these developments are likely to have serious effects on production in 1979, which cannot yet be fully assessed.

In spite of intensive control operations, locust infestation spread to many countries in Africa and Asia in 1978. Swarms that were concentrated in the breeding areas of north and central Ethiopia and northeast Somalia migrated to the southeast Arabian peninsula for winter and spring breeding. Intensive control operations were undertaken in India and Pakistan, but a large number of swarms escaped and migrated to Iran. Swarms were also found in the Nile Province of Sudan. While substantial efforts are being made to control the situation, the ecological conditions for breeding continue to be highly favourable in most of the areas concerned, some of which are inaccessible to control teams.

Outbreaks of African swine fever were confirmed in Malta and in Sardinia, Italy, in March 1978. The presence of the disease in Brazil was confirmed in June 1978. Initial attempts to contain it were unsuccessful, and by August it had spread to 11 states of Brazil and threatened the pig populations of Argentina, Bolivia, Paraguay, Peru, Uruguay and Venezuela. In July the disease was also confirmed in the Dominican Republic, where it spread rapidly.

LONGER-TERM TRENDS

Revised data for China have raised the rate of growth of food production in the developing countries as a whole during 1970-77 to 2.9% a year, which is the same as that achieved in the 1960s (Table 1-2). However, for total agricultural production in these countries and for both food and agricultural production in the developing market economies, the rate in 1970-77 remains less than in the previous decade.

This is almost entirely due to the poor performance in Africa, where the increase in production in the 1970s so far is only about half that of the 1960s. It is also much less than half of that achieved in each of the other developing regions in the 1970s. Even the good results in Africa in 1978 would hardly change the longer-term trends for the 1970s as a whole. Concern at these trends led the African Ministers of Agriculture to request the preparation of an African Regional Food Plan, the main aspects of which are summarized in Chapter 2.

Similarly, the continued lag in production in the most seriously affected (MSA) countries, many of which are in Africa, is a major cause for concern. In these countries the average annual increase in food production fell from 2.6% in the 1960s to 2.2% in 1970-77. In the other developing countries, in contrast, the rate rose slightly from 3.1 to 3.2% between these two periods. Even here, however, it remains well below the basic target of 4% contained in the IDS for DD2 and confirmed by the World Food Conference.

There is a very wide range in the production performance of individual developing countries, as is indicated by Table 1-4. Of the 103 countries covered in the table, 13 had negative rates of growth during 1970-77, and a further 32 had rates below 2% a year. More than half of the 42 MSA countries shown in the table had growth rates of less than 2%. In 58 countries (representing 47% of the population of the countries covered), production failed to keep up with population growth. At the other extreme, only 19 countries had rates of growth of 4% or more.

Table 1-4. Developing countries by region according to annual rate of change of agricultural production in 1970-77

Annual rate of change (%)	Number of countries	Africa (1.3%)	Far East (2.7%)	Latin America (3.0%)	Near East (3.3%)	Asian centrally planned economies (3.0%)	Other developing market economies (2.5%)
-3 and below	4	<u>Anqola</u> , <u>Mauritania</u> , Togo				Kampuchea	
-2.9 to -2.0	3	Morocco			Iraq, Jordan		
-1.9 to -0.1	6	<u>Ghana</u> , <u>Mozambique</u>		Barbados, Cuba, Trinidad and Tobago			Fiji
+0.0 to 0.9	14	<u>Guinea</u> , <u>Chad</u> , <u>Niger</u> , <u>Algeria</u> , <u>Namibia</u> , <u>Ethiopia</u> , <u>Somalia</u> , <u>Uganda</u>		<u>Uruguay</u> , <u>Peru</u> , <u>Haiti</u>	<u>Cyprus</u> , <u>Egypt</u> , <u>Lebanon</u>		
+1.0 to 1.9	18	<u>Gabon</u> , <u>Gambia</u> , <u>Upper Volta</u> , <u>Tanzania</u> , <u>Benin</u> , <u>Nigeria</u> , <u>Cameroon</u> , Zaire,	<u>Nepal</u> , <u>Bangladesh</u> , <u>Burma</u>	Jamaica, Honduras, <u>Guyana</u> , Dominican Republic, Chile		Vietnam	<u>Samoa</u>
+2.0 to 2.7	17	<u>Liberia</u> , <u>Burundi</u> , <u>Lesotho</u> , <u>Mauritius</u> , <u>Central African Empire</u> , <u>Reunion</u> , <u>Mali</u> , <u>Sierra Leone</u>	<u>India</u> , <u>Bhutan</u> , <u>Sri Lanka</u> , <u>Pakistan</u>	Mexico, Venezuela	<u>Sudan</u>	<u>Mongolia</u> , <u>Lao</u>	
+2.8 (Average of developing countries)	3	<u>Congo</u> , <u>Madagascar</u>			Saudi Arabia		
+2.9 to 3.9	19	<u>Swaziland</u> , <u>Rwanda</u> , Malawi, Rhodesia, <u>Kenya</u>	Indonesia	<u>El Salvador</u> , <u>Colombia</u> , <u>Ecuador</u> , <u>Argentina</u> , <u>Panama</u> , <u>Costa Rica</u> , <u>Bahamas</u> , <u>Guatemala</u>	<u>Yemen Arab Republic</u> , <u>Turkey</u> , <u>Yemen Democratic Republic</u>	China	Papua New Guinea
+4.0 to 4.9	12	Botswana, Zambia, <u>Ivory Coast</u> , <u>Senegal</u>	Thailand, Malaysia (Peninsular)	Bolivia, Brazil, Paraguay	<u>Afghanistan</u> , Iran		New Hebrides
+5.0 and above	7	Tunisia	Korea (Republic of), Philippines	Nicaragua	Syria, Libya	Korea (Democratic Republic)	

Note: Countries in each group are listed in ascending order of the annual rate of change in their agricultural production; MSA countries are underlined.

The reasons behind these wide differences in performance are many. They include the general level of economic development, political and economic stability, the growth of domestic and export demand, the organization and management of agriculture, rural education and extension services, government investment, credit, support prices, irrigation, the introduction of HYVs, fertilizer use and area expansion, as well as uncontrollable events like the weather.

A very preliminary analysis of the countries with the highest and lowest (negative) rates of growth has proved inconclusive. There were, however, some significant differences between the two groups. In Brazil, for example, where agricultural production increased by 4.4% annually during 1970-77, there has been heavy government involvement in the agricultural sector, including aggressive policies with regard to farm price supports, credit and technical assistance. In Iran, the Republic of Korea and Syria, agriculture has received a relatively high share of public funds. In fact, Iran has found some difficulty in spending all its allocations for agriculture under the Fourth and Fifth Plans. This situation contrasts sharply with that in Togo, for example, where production fell by 5.3% annually, and where public investment in agriculture was not only relatively low but actually declined between the First and Second Plans, which covered the period from 1970 to 1977.

The Sahelian drought led to particularly poor results in countries of that area, and production was not encouraged by stable or falling producer prices for the major cash crops in 1969-74. In contrast, producer prices for cocoa, coffee and rice have been high in Ivory Coast in relation to world prices, and contributed to an annual rate of increase of almost 5% during 1970-77. In Paraguay (4.6% annual increase) a key positive factor has been the strong demand for export crops (cotton and soybeans).

More thorough study is clearly needed of the reasons why there are such large differences in growth rates. Even this preliminary enquiry has underlined the fact that the problem is complex and involves many factors.

MAIN COMMODITIES

World cereal production in 1978 is estimated to have reached a record 1,415 million tons (including rice in milled equivalent), about 5% above the 1977 level. Output was higher in both developing and developed countries, and particularly in the Far East, western Europe and the U.S.S.R.. Wheat, coarse grains and rice each reached record levels.

Wheat production is estimated at about 430 million tons, about 10% above the depressed 1977 level. In the United States, farmers' response to the 20% set-aside programme was smaller than expected, and the harvest reached 48 million tons, only 12% less than in 1977. The Canadian harvest exceeded the 1977 level. Western Europe is estimated to have had a record crop of 63 million tons, almost 20% more than in 1977. The crop in eastern Europe, although damaged by excessive rain and storms, was close to the 1977 level. Output in the U.S.S.R. reached a new record. Australia had a good wheat harvest, following the low 1977 crop. In the developing regions, there were record crops in China and India, but Pakistan had a considerable shortfall. North Africa and Turkey had good crops, and a fair crop was harvested in Argentina.

Coarse grain production in 1978 is estimated at 735 million tons, almost 5% above last year. This new record output reflects in particular a record harvest of 212 million tons in the United States and a good crop in the U.S.S.R.. As with wheat, participation in the United States set-aside programme was smaller than anticipated, and excellent weather brought record maize yields. The developing countries did not do quite as well as the developed ones. Heavy rain and floods in India caused the loss of 2 to 3 million tons of standing grain, although increased yields in unaffected areas made up for these losses. There were good harvests in Africa and Argentina, and an average crop in China, but output in Brazil was very low.

Rice production is estimated to have reached about 250 million tons (milled) in 1978, slightly more than the 1977 record. In India, despite severe flooding, a good crop was harvested for the fourth consecutive year. Burma also had a good crop. Indonesia, where pest incidence was very low and rainfall high, harvested a record crop. Production in Thailand recovered to a new peak. China's early rice crop was much better than in 1977, but prolonged drought affected the autumn crop in east-central China. The Japanese crop, although significantly lower than in 1977, should exceed domestic requirements. Heavy monsoon rains followed by typhoons caused extensive flood damage to rice crops in Lao and Vietnam. Bangladesh also suffered from unfavourable weather and pest damage. The United States had a record crop, but the harvest in Brazil declined.

It is estimated that cassava production reached 109 million tons, or about 2% above the 1977 level. The planted area increased slightly in Brazil, the largest producer, and in several other countries in Latin America. Larger areas were also planted in Angola, Nigeria and Zaire. Output increased by 3 to 5% in Kampuchea, Malaysia and Vietnam. The practice of interplanting cassava and groundnuts is spreading in India. Production in east Africa, Ghana and Indonesia was about the same as in the previous year. In Thailand, the largest exporter of processed cassava for livestock feed, the harvest was almost 20% larger than in 1977.

The production of pulses recovered from 48 million tons in 1977 to more than 50 million tons in 1978. Main factors in the developing countries have been the increased government support prices and favourable weather in India, and large-scale land reclamation in north China, where pulses fit well in the cropping pattern. The bean crop, however, declined in Argentina and Brazil, where there was a shift to soybeans. In the developed countries, output recovered in the United States and the U.S.S.R., and the declining trend in western Europe has been checked by increased price support.

Production of oilseeds and vegetable oils (measured in oil equivalent) is estimated to have increased by 3% to over 47 million tons in 1978, following the recovery of 12% in 1977. World production of soybeans increased, as the record crops in Argentina and the United States more than offset the decline in Brazil. A good crop of sunflowerseed was harvested in all main producing countries and world rapeseed output benefited from a record crop in Canada and large crops in other major producing areas. Groundnut production increased somewhat, mainly because of better crops in west Africa. There was a decline in cottonseed output, primarily as a result of the very low production in the United States.

Sugar production in 1978 was approximately equal to the record level attained last year, in spite of a marked drop in European beet crops. In many cane-producing countries, crushings were reduced to bring output in line with low market demand and prices, and high carryover stocks. However, cane sugar production was a record in India, and a good crop was harvested in Cuba. Output fell in Brazil.

Coffee production increased by 7% in 1978, following the 18% upswing of the previous year, but remained below the level attained before the sharp fall in output that occurred in 1976. The Brazilian crop recovered well, and Colombia achieved a significant increase. Production of cocoa in 1978 was slightly below the 1977 level. Output increased significantly in Brazil, but this was more than offset by low harvests in Ghana and Nigeria. It is unlikely that tea production increased in 1978.

There was a decline of 4 to 5% in world production of cotton (lint), following the 15% rise in 1977. Faced with large world supplies and lower prices, cotton growers in the United States reduced plantings by 8%; drought and insect damage cut yields to the lowest since 1957, and production was down by almost 25%. In the U.S.S.R., a larger area than usual had to be replanted because of adverse weather, but the crop was close to the 1977 record. Output recovered somewhat in China. Production fell in Brazil, Egypt, Mexico and Turkey, and increased in India and Pakistan. Output of raw jute continued to expand, but there was no increase in world rubber production.

Milk production rose by only about 1.5% in 1978, compared with 3% in the previous year. This decline in the growth of production coincided with some improvement in demand, but supplies nevertheless continued to be substantially in excess of commercial demand. In the U.S.S.R., output fell slightly in the first half of 1978, but recovered subsequently as feed supplies improved. Although production in the EEC grew by about 3% in the first half of 1978, intensified measures to discourage output reduced the rate of growth in the second half of the year. In the United States, a reduction of dairy cow numbers, in response to a sharp increase in slaughter cattle prices, was primarily responsible for the levelling off of milk production. Output in Australia was affected by severe early drought and by declining cow numbers.

Meat production increased by only 2% in 1978, compared with an average annual increase of 3% in the last 15 years. Reduced beef production and ample feed supplies stimulated the production of pig and poultry meat. Sheepmeat production declined slightly. Cattle slaughter declined in Australia and the United States, levelled off in western Europe, and increased in eastern Europe and the U.S.S.R.. The relatively rapid expansion of meat production continued in eastern Europe and the U.S.S.R.. Pigmeat production increased in most countries. The production of poultry meat rose even faster, except in the EEC, where supply has been exceeding demand, access to export markets is more difficult owing to shifts in currency rates, and there is no support purchasing.

FOOD SUPPLIES AND NUTRITION IN DEVELOPING COUNTRIES

FAO's Fourth World Food Survey, published at the beginning of 1978, estimated that the available supplies of dietary energy per caput in the developing market economies fell slightly between 1969-71 and 1972-74. It also estimated that the number of undernourished people in these countries rose from about 400 million to about 450 million, or a quarter of their total population. It is now possible, on the basis of preliminary food balance sheets for 56 developing countries, to make a tentative assessment of developments in food supplies and nutrition in 1975 and 1976.

Table 1-5 indicates that in the developing market economies dietary energy supplies per caput fell back in 1975 to below the low level of 1973. The fall was particularly marked in the MSA countries and in the Far East. There was a substantial recovery in 1976, particularly in these countries, and in the developing market economies the peak level of 1971 was finally regained. Changes in the developing countries as a whole have been smaller, since in the Asian centrally planned economies there has been fairly steady progress since 1973.

Except in the Asian centrally planned economies and in the Near East, however, there has been no real progress but only recovery to earlier levels. It should also be recalled that these earlier levels represented considerable nutritional deprivation. In 1972-74 Latin America had 7% more than its dietary energy requirements, but this was far from sufficient to make up for the maldistribution of supplies in relation to nutritional requirements. Supplies approximately equalled requirements in the Near East and in the non-MSA countries. In Africa, the Far East and the MSA countries they were around 10% below these requirements.

As regards the pattern of food consumption, the main change appears to be that the earlier declining trend in the per caput consumption of pulses was arrested in 1975 and 1976 in all of the developing regions except Latin America. In Latin America the supply of protein from livestock products increased by 8% between 1973 and 1976. Sugar consumption has continued to increase substantially in Latin America and the Near East, and that of vegetable oils and fats in each of the developing regions except Latin America.

Table 1-5. Indices of dietary energy supplies per caput, developing regions

	Average 1969-71	Average 1972-74	1971	1972	1973	1974	1975	1976
	..... 1961-65 = 100							
Developing market economies ^{1/}	102	101	103	102	100	102	99	103
Africa	103	102	104	103	102	102	103	105
Far East	102	101	103	102	98	102	97	102
Latin America	103	102	103	102	102	103	104	104
Near East	104	108	104	106	107	110	115	117
Asian centrally planned economies	113	119	118	114	120	122	124	124
TOTAL DEVELOPING COUNTRIES	106	107	108	106	106	109	107	110
MSA countries	101	99	102	101	96	99	95	101

Source: FAO food balance sheets for 56 countries; those for 1975 and 1976 are preliminary.

^{1/} Including countries in other regions not specified.

What has happened subsequently to per caput food supplies in the developing countries in 1977 and 1978 will have depended mainly on their own per caput food production in 1976 and 1977. Table 1-6 indicates that this stagnated in the developing market economies in both of these years, and that in Africa and the Near East there was a sharp drop in 1977. Per caput food production in Africa in 1977 was 10% less than in 1969-71. Except in the Far East (and especially India) in 1977, little further improvement therefore appears likely to have taken place.

Table 1-6 also indicates the declining trend in per caput food production in the MSA countries in 1970-77.

Table 1-6. FAO index numbers of food production per caput ^{1/}, developing regions, and MSAs.

	1971	1972	1973	1974	1975	1976	1977 ^{2/}	Change 1976 to 1977	Annual rate of change ^{3/} 1961-70	1970-77
	..... 1969-71 = 100 %		
Developing market economies ^{4/}	99	97	98	98	101	101	101	-	0.4	0.2
Africa	99	97	92	95	93	94	90	-4	-	-1.3
Far East	99	95	101	96	102	100	103	+4	0.2	0.4
Latin America	99	98	98	101	102	104	104	-	0.7	0.6
Near East	100	104	96	102	104	106	101	-5	0.5	0.7
Asian centrally planned economies	103	101	104	106	108	109	109	-	1.1	1.3
TOTAL DEVELOPING COUNTRIES	101	98	100	100	103	103	104	-	0.6	0.5
MSA in Africa	99	95	93	95	92	93	90	-3	0.4	-1.4
MSA in Far East	99	93	99	92	100	96	100	+5	-0.1	-0.1
MSA in Latin America	101	102	102	98	96	100	101	+1	1.0	0.2
MSA in Near East	98	100	101	101	102	100	98	-3	0.2	0.2
TOTAL MSA COUNTRIES	99	94	98	94	99	96	99	+3	0.1	0.3

^{1/} Crops and livestock only. - ^{2/} Preliminary. - ^{3/} Exponential trend. - ^{4/} Including countries in other regions not specified.

CONSUMER FOOD PRICES

Although in general the rise in consumer food prices in 1977 was about the same as in 1976, 56 of the 88 countries for which data are available reported an acceleration in price rises (Table 1-7). There was also a slight increase in the number of countries with rises of more than 15%. Furthermore, the rate of increase of average food prices remained higher than in the period before 1973, and food prices continued to be the leading factor in general inflation in about three quarters of the countries reviewed. Preliminary information indicates some slowing down in food price increases during 1978, particularly in most European countries.

In North America, most of the increases in 1977 concerned a relatively small number of items, especially coffee, other import items, and fish. There was an acceleration in the increase in United States food prices during the first months of 1978, reflecting severe winter conditions and higher farm prices, and for the whole of 1978 prices were expected to be 6 to 8% higher than in 1977. In Canada food prices rose at an unprecedented 16% during the year ending July 1978. In Europe a relatively strong price increase in the spring of 1977 was followed by a slowdown in the rest of the year and the first half of 1978. Lower rates of price increase were recorded in all northern European countries, except Iceland. On the other hand, Portugal had an increase above 30% and Italy, Spain and Yugoslavia about 20%, although some improvement was noticeable in these countries during 1978. Unfavourable supply conditions and currency depreciation affecting food imports were major factors behind high prices in southern European countries.

Table 1-7. Changes in consumer food prices in 88 countries

Price increase (%)	1973-74	1974-75	1975-76	1976-77 ^{1/}
	..... number of countries			
DEVELOPING COUNTRIES (63)				
less than 5	2	5	17	7
5.1 - 10	4	14	17	18
10.1 - 15	8	9	8	18
15.1 - 30	35	23	12	12
30.1 and above	14	12	9	8
DEVELOPED COUNTRIES (25)				
less than 5	-	-	3	2
5.1 - 10	6	6	5	7
10.1 - 15	6	7	8	6
15.1 - 30	12	9	8	7
30.1 and above	1	3	1	3

Source: Annex Table 12.

^{1/} Preliminary.

All developing regions, except Latin America, had higher average food price increases in 1977 than the previous year. The improvement in Latin America came basically from a dramatic deceleration in price increases in Argentina and Chile from the extremes of previous years. Argentina's increase in consumer food prices, which had been nearly 460% during 1976, slowed to 47% in 1977, a much lower figure than that of general inflation. The slowing was the result of exceptionally good supply conditions, together with a number of government measures, including free import of dairy products, export restrictions on items in short supply, and anti-speculation regulations. Preliminary information suggests, however, a resurgence in food price increases in 1978. Although the 175% increase in food prices in Chile was the highest in the world, it was the lowest in that country since 1972. The current trend suggests a further improvement to a relatively manageable figure of 40% during the year ending July 1978. In Brazil, the rate of increase in retail food prices rose for the sixth successive year to about 40%. Unfavourable weather and market bottlenecks resulted in temporary shortages of some food items. In Colombia and Mexico the rate of increase more than doubled, and in Peru there was a further acceleration in the already high rate.

Of 21 African countries for which information is available, 18 had larger increases than in 1976. Tunisia maintained moderate food price increases, much slower than those of general inflation, although a certain deterioration was noticeable during 1978. In contrast, increases in retail food prices in Algeria and Morocco were about 14%. Partly as a result of the vigorous anti-speculation campaign launched in September 1977 in Morocco, price increases appeared to stabilize at an 8% yearly rate during 1978. In Ethiopia and Somalia, the relatively stable price situation has been upset by the military activities, which disrupted food supplies. In Nigeria high prices of fats and oils, vegetables, fruits and nuts severely affected urban dwellers, particularly in the Lagos area.

Consumer food prices in the Near East increased about 20%, which is more than double the 1976 rate. A particularly sharp increase was recorded in Jordan (44%, as against 22% in 1976), and consumer subsidies were introduced for wheat and bread. There appeared to be, however, a dramatic improvement in food supply and prices in Jordan during 1978. In Iran, the impact of high prices on consumers was attenuated through consumer subsidies and price controls, enforced mainly in Teheran. In Egypt, food price increases during 1977 and the first half of 1978 were about the same (14 to 15%) as in 1976, with prices for basic commodities controlled at low levels.

In the Far East, Burma and Sri Lanka had negligible increases in consumer food prices in 1977. In India and Bangladesh, where remarkable results had been achieved in the checking of retail food costs in 1976, there was a resurgence in prices, which rose by about 10% in 1977. Prices of some essential food items were selectively raised in India, but exports of fresh fish and vegetables were banned to release larger supplies in the domestic market. By May 1978, yearly price increases in India appeared to have been checked again at about 2%. Good harvests resulted in a decline in food price increases in the Republic of Korea to about 12%, the lowest in the past four years. Poor crops in Thailand caused pressure on retail prices.

The extent to which consumer food prices were affected by farm costs varied widely according to country and commodity. In most developed countries available information suggests a relatively stable farmers' share of about 40% of the aggregate retail value of food. In the United States, higher producer prices were estimated to have contributed about half of the 8% increase in food prices in the year ending March 1978. For the whole of 1978, the farm value of food was expected to average about 9% above the reduced 1977 level, and to account for about three fifths of the total food price increase. In Japan, the increase in producer prices of paddy between 1971 and 1976 averaged 15% per year and the increase in retail prices of milled rice averaged over 17%.

For developing countries, very few data are available on the recent evolution of producer prices, marketing costs and margins. In Latin America, where consumer-oriented price controls are common in most countries, producer prices of milk in Colombia, Ecuador and Peru appear to have lagged behind general inflation. The farmers' share in retail prices in the region can range from 30% for bananas in Colombia to 75% for Guatemalan maize. In the Far East, the farmers' share of rice prices in recent years was as low as 53 to 67% in India and Pakistan, and as high as 76 to 80% in Bangladesh, Nepal and Thailand. In the Philippines, producer prices increased by about 9% annually during 1971-77, compared with 10% for milled rice at the retail level. Farm to consumer price spreads for rice also tended to widen in recent years in Thailand, but in Sri Lanka and to a smaller extent in the Republic of Korea the farmers' share tended to rise somewhat.

CEREAL STOCKS AND WORLD FOOD SECURITY

Carryover stocks of cereals (excluding those held in China and the U.S.S.R., for which there are no data) at the end of the 1977/78 crop seasons amounted to 177 million tons, continuing the build-up that has occurred since 1975/76 (Table 1-8). They thus represented 19% of annual consumption, a proportion not attained since 1972. There was a large increase in coarse grain stocks in the exporting countries. In the importing countries wheat stocks declined and rice stocks rose somewhat. Because of their disappointing cereal crops in 1977, it is probable that some withdrawals from stocks were made in China and the U.S.S.R. during 1977/78.

The increase in stocks constitutes a positive feature in the context of world food security. However, the stocks are located very largely in developed exporting countries, with the United States and Canada alone accounting for 52% in 1977/78. The concentration of cereal stocks in North America could cause serious logistic problems if a major food emergency required the quick movement of large additional supplies. Transport bottlenecks already developed in 1977/78 in Canada and the United States, and temporarily delayed some of their grain exports.

By the end of December 1978, 11 million tons of wheat and 21 million tons of coarse grains had been placed in the United States farmer-owned grain reserve. Thus, a large proportion of the United States wheat and coarse grain stocks are temporarily withdrawn from the market, to be released only if prices rise to predetermined levels (at least 140% of the loan rate in the case of wheat).

Table 1-8. Estimated total carry over stocks of cereals^{1/}

	Closing stocks							
	1971/ 72	1972/ 73	1973/ 74	1974/ 75	1975/ 76	1976/ 77	1977/ 78 ^{2/}	1978/ 79 ^{3/}
..... Million metric tons								
WHEAT	70	47	44	48	59	85	81	83
Main exporting countries	52	33	30	33	38	55	54	57
Main importing countries	10	7	7	8	14	22	19)	26
Others	8	7	7	7	7	8	8)	
RICE ^{4/}	21	13	14	13	20	20	22	24
Selected exporting countries	6	4	4	4	7	7	8	...
Selected importing countries	8	5	6	6	10	9	11	...
Others	7	4	4	3	3	4	3	...
COARSE GRAINS	77	59	50	47	45	61	74	93
Main exporting countries	56	40	29	24	24	37	50	68
Main importing countries	11	11	13	14	13	13	13)	25
Others	10	8	8	9	8	11	11)	
<u>Total cereal stocks</u>	168	119	108	108	124	166	177	200
..... %								
Share of total consumption	19	14	13	12	14	18	19	21

Note: Stock data are based on an aggregate of national carryover levels at the end of national crop years and should not be construed as representing world stock levels at a fixed point of time.

^{1/} Excluding China and the U.S.S.R. ^{2/} Preliminary. ^{3/} Forecast. ^{4/} Milled.

In most developing countries cereal stocks remain low, with the main exception of India and Turkey. India's wheat stocks declined only moderately in 1977/78 from the record levels of the previous season, despite larger public distribution and exports to the U.S.S.R. as repayment for a wheat loan.

Forecasts for 1978/79 point to a further increase of 13% in carryover stocks of cereals. Coarse grains, at a record 93 million tons, account for most of the increase. These stocks will be even more highly concentrated than in 1977/78, with North America accounting for about 60% of the total. With the record cereal crop harvested in 1978, there should be some rebuilding of stocks in the U.S.S.R..

The high level of global stocks during the last few years has provided an ideal opportunity for the implementation of the food reserve provisions of FAO's International Undertaking on World Food Security. If the opportunity is allowed to pass, a renewed period of instability and uncertainty may ensue. However, progress in establishing an internationally coordinated system of national food reserves continues to be held up by the protracted negotiations on a new international grains agreement. Following preparatory discussions for two years under the auspices of the International Wheat Council, UNCTAD convened a negotiating conference in February 1978 to replace the International Wheat Agreement of 1971, but this was inconclusive and the former agreement was extended by protocol for a further year to 30 June 1979. The main areas of disagreement include the nature and function of the price provisions, the size and distribution of the reserve stocks, whether coarse grains should be included, and the assistance to be given to developing countries in establishing reserve stocks. The negotiating conference was reconvened in November 1978, without reaching agreement, although considerable progress was made as regards a new Food Aid Convention and a coarse grains consultative arrangement. It is to meet again in February 1979.

PREVENTION OF FOOD LOSSES

Programmes for the reduction of avoidable food losses are closely associated with the achievement of food security. Preharvest losses due to pests are estimated to average 20 to 40% of global production. Postharvest losses of cereals from mechanical causes range from 5 to 10%, and those from biological causes are of the order of 10%. The reduction of such losses could make a considerable contribution to world food security.

The Seventh Special Session of the United Nations General Assembly called for the reduction of postharvest losses in developing countries by at least half by 1985. The Nineteenth Session of the FAO Conference in 1977 established an Action Programme for Prevention of Food Losses, to be financed by a Special Account, based on voluntary contributions, with a target of \$ 20 million. By mid-November 1978, the Special Account had reached almost \$ 15 million, and about \$ 4 million had been earmarked for some 20 projects approved by the Director-General. The programme focuses particularly on the prevention of losses at the farm and village level, and seeks to help countries obtain the very substantial external financial assistance required. While cereals and other staple food crops have been selected for initial action, it is hoped later to include animal products and other perishable foods in the programme. Priority is being given to the least developed countries, MSA countries and food priority countries, and within these countries to actions that benefit the rural poor. To maintain the current momentum of the programme, a sustained level of funding of at least \$ 10 million per annum will be needed.

FOOD AID

Food aid in cereals recovered further in 1977/78 (Table 1-9), but still fell short of the World Food Conference minimum target of 10 million tons. This target is modest in relation both to earlier levels of food aid and to actual requirements. In 1976 the non-oil-exporting developing countries spent over \$ 10,000 million, or a third of their current account deficit, on commercial food imports, mainly of cereals. An interim report presented to the Committee on Food Aid Policies and Programmes (CFA) has suggested that 15 to 16 million tons a year would be a reasonable estimate of food aid requirements for cereals by 1985.

Table 1-9. Shipments of food aid in cereals

	million tons
1970/71	12.8
1971/72	12.6
1972/73	10.1
1973/74	5.7
1974/75	8.4
1975/76	6.9
1976/77	9.1
1977/78	9.4 ^{1/}
1978/79	9.6 ^{1/}

^{1/} Allocations.

The 1977/78 shipments were somewhat lower than anticipated because of reduced United States allocations. The United States budgetary authorization represented a smaller volume of food aid than expected, because of increased prices. FAO estimates place 1978/79 allocations at 9.6 million tons, or again below the target level of 10 million tons.

Contributions to the International Emergency Food Reserve in 1978 fell far short of the 500,000 tons of cereals recommended by the Seventh Special Session of the United Nations General Assembly. At year-end, they stood at about 348,000 tons, of which 293,000 tons had already been utilized. The Fourth Session of the WFC in June 1978 recommended that this reserve should be put on a continuing basis and replenished annually.

Food aid shipments of skim milk powder increased by almost 20% in 1977/78 to 195,000 tons, but those of vegetable oils declined by about 10% to 220,000 tons.

Progress has been slow in the establishment of guidelines for improved food aid policies by the CFA. Improvements are still required in such aspects as forward planning in volume terms, the expansion of multilateral channelling, and the terms of food aid. In October 1978, the Sixth Session of the CFA noted that pledges to the United Nations/FAO World Food Programme (WFP) had reached \$ 716 million for the biennium 1977-78, compared with the pledging target of \$ 750 million. For the biennium 1979-80, pledges amounted to \$ 693 million, or less than three quarters of the target of \$ 950 million. The WFP had \$ 870 million worth of requests already in the pipeline. Insufficient resources for the WFP (including a shortage of dairy products in its "food basket") are in striking contrast to the mounting surpluses of livestock products in Europe and the ample cereal stocks in North America.

PRODUCTION REQUISITES

FERTILIZERS

Between 1966/67 and 1976/77, world fertilizer production increased from 54 million tons ^{1/} to 98 million tons, with the centrally planned economies accounting for more than half of the increment (Table 1-10). In 1976/77, despite some slackening in the high rate of growth achieved in the centrally planned economies, the world rate resumed the long-term trend value of about 7%. In the developed market economies, fertilizer output recovered in 1976/77, but remained below the level of 1973/74 and 1974/75. The rate of growth in the developing market economies increased in 1976/77, but still did not equal the high rate that prevailed during 1973/74. Although production in the developing market economies increased more than fourfold in the past decade, these countries still account for less than 10% of world output.

Forecasts prepared by the FAO/UNIDO/World Bank Working Group on Fertilizers, based on planned fertilizer production capacity and expected growth in demand, indicate adequate supply capability for all three nutrients at least until 1982/83. A large share of the expansion in nitrogen and phosphate fertilizer capacity will be in the developing market economies, raising their share of world capacity for each of these nutrients from about 12% in 1976/77 to some 20% by 1982/83. Thus, it appears that fertilizer production is one of the industrial sectors where the share of the developing countries will reach the target of 25% of world production by the year 2000 specified in the UNIDO Lima Declaration.

Table 1-10. Fertilizer production and growth rates

	Consumption					Annual growth			
	1966/ 67	1973/ 74	1974/ 75	1975/ 76	1976/ 77	1966/67 to 1973/74	1973/74 to 1974/75	1974/75 to 1975/76	1975/76 to 1976/77
	..... million tons %			
Developed market economies	37.46	51.74	51.99	47.87	50.91	4.7	0.5	-7.9	6.4
Developing market economies	2.13	6.30	7.15	7.84	8.95	16.8	13.5	9.7	14.2
Centrally planned economies	14.52	29.50	32.69	36.34	38.58	10.7	10.8	11.2	6.2
World	54.11	87.55	91.84	92.05	98.45	7.1	4.9	0.2	7.0

^{1/} Unless stated otherwise, tonnage figures are in terms of nutrients (N,P,K).

International fertilizer prices rose after their sharp drop in 1975, but crop fertilizer price relationships remained favourable in most countries and consumption continued to grow in 1976/77 (Table 1-11). The world rate of growth was below the pre-1973/74 level of 7% because of very low growth in the centrally planned economies. However, the growth of consumption in the developing market economies was faster in 1976/77 than the average rate in 1966/67 to 1973/74. In the MSA countries, fertilizer consumption recovered from a decline of about 4% in 1974/75 to increases of 14% in 1975/76 and 16% in 1976/77.

This recovery in fertilizer consumption should not be regarded as ending the difficulties of MSA countries in obtaining adequate fertilizer supplies. An analysis of consumption in MSA countries receiving fertilizer assistance through the FAO International Fertilizer Supply Scheme (IFS) indicates that IFS assistance constituted a major share of the fertilizer supply in a number of countries for many others the high rates of growth of fertilizer consumption could not have been attained without IFS assistance. Unfortunately, however, fertilizer assistance under the IFS has been viewed as an emergency measure, and contributions to the scheme by donor governments have declined, as has total fertilizer aid to developing countries (Table 1-12). Preliminary figures indicate that fertilizer aid declined further in 1977/78. The quantities of fertilizer available to the IFS since its inception have not been adequate to meet the minimum needs of the MSA countries.

Table 1-11. Fertilizer consumption and growth rates.

	Consumption					Annual growth			
	1966/ 67	1973/ 74	1974/ 75	1975/ 76	1976/ 77	1966/67 to 1973/74	1973/74 to 1974/75	1974/75 to 1975/76	1975/76 to 1976/77
..... million tons%			
Developed market economies	31.57	43.38	38.96	41.95	44.90	4.6	-10.2	7.7	7.0
Developing market economies	5.05	12.04	12.16	13.23	15.39	13.2	1.0	8.8	16.3
Centrally planned economies	14.37	28.17	29.97	33.72	34.35	10.1	6.4	12.5	1.9
World	50.99	83.59	81.09	88.91	94.64	7.3	- 3.0	9.6	6.4

Table 1-12. Bilateral and multilateral aid in fertilizers

	Total.....Thousand tons	IFS 1/.....
1974/75	1,416	103
1975/76	1,345	245
1976/77	1,075	88

1/ In terms of fertilizer materials.

In 1976/77, nitrogen accounted for 48%, phosphate 28% and potash 24% of world consumption. The growth rate for nitrogen fell in 1976/77 because of a decrease in consumption in the centrally planned economies and a decline in the growth rate in the developed market economies. Slower growth in potash consumption was entirely due to the reduced offtake in the centrally planned economies. The growth rate of phosphate consumption increased in 1976/77. In the developing market economies, the growth rates of all three nutrients registered gains over the previous year, those for phosphate and potash being particularly large.

World consumption nearly doubled between 1966/67 and 1976/77, and so did international trade, with imports accounting for about 27% of consumption in each year. In the developing market economies, however, the share of imports in consumption declined from 71% to 50% during the decade as production (particularly of nitrogen and phosphate fertilizers) increased. Imports of potash fertilizers, however, increased in proportion to the growth in their consumption, because of the limited known deposits of potash in developing countries.

Although the nitrogen fertilizer import requirements of the developing market economies are expected to decline steadily as their production capacity doubles by 1982/83, these requirements will still be substantial. The Near East is the only developing region that is expected to have an exportable surplus. For phosphate fertilizers, supply and demand in the developing market economies are expected to be in balance by 1982/83, because of increased capacity in Africa and the Near East. The Far East and Latin America are expected to increase their phosphate capacity, but they will still require imports to meet the projected growth in demand. For potash fertilizers, the developing market economies will become more dependent on imports.

PESTICIDES

Changes in the pesticides supply situation since 1977 have been minor. There were slight increases in the prices of certain materials, but in general prices of pesticides were stable. In 1977, inventories of some items were running at higher levels than usual, but this does not appear to have been the case in 1978. The demand for herbicides continued to increase more rapidly than that for insecticides or fungicides.

Many developing countries still have difficulty in obtaining their pesticides requirements. This is not only because of their shortage of foreign exchange, but also because certain products have been banned for environmental reasons in the developed countries that produce them, and adequate substitutes at comparable prices are not yet available. In this regard, many developing countries are studying the feasibility of domestic production or formulation, but the main constraint has been the lack of trained personnel to conduct trials and supervise the introduction of substitute materials.

IMPROVED SEEDS

A new analysis of the spread of the high yielding varieties (HYVs) of wheat and rice covers the period 1965/66 to 1976/77 ^{2/}. Although a comprehensive time series is available only for the developing market economies of Asia, this region accounts for over 80% of the HYV area (two thirds of the HYVs of wheat and 95% of HYVs of rice) in the developing market economies.

During the 12-year period, the area of HYVs of wheat and rice in the developing market economies of Asia rose approximately on a straight-line trend, although there was a slight slowing down in 1973/74 and 1974/75, partly as a result of the shortage of fertilizer. The area under HYVs of wheat increased from 9.8 million ha in 1970/71 to 19.7 million ha (72% of the total wheat area in the region) in 1976/77. For rice, the increase was from 9.4 million ha in 1970/71 to 24.2 million (30% of the area) in 1976/77. Within the region, 75% of the area under HYVs of wheat and over 55% of the area under HYVs of rice are in India.

It is estimated that in China roughly 25% of the wheat area and 20% of the rice area are planted to HYVs.

In other regions, the proportions of HYVs to total wheat area in 1976/77 were 22% in Africa, 41% in Latin America, and 17% in the Near East. The comparable figures for rice were 3% in Africa, 13% in Latin America, and 4% in the Near East.

For the developing countries to take full advantage of the HYVs and other improved seeds entails a big expansion in their facilities for their production, processing, quality control, storage and distribution. The Nineteenth Session of the FAO Conference in November 1977 called for \$ 20 million for the FAO Seed Improvement and Development Programme, but the resources provided have amounted to only about \$ 6 million so far.

^{2/} Dana G. Dalrymple, Development and spread of high-yielding varieties of wheat and rice in the less developed nations, Foreign Agricultural Economic Report No. 95, United States Department of Agriculture in cooperation with U.S. Agency for International Development, Washington D.C., Sixth Edition, September 1978.

FISHERIES

PRODUCTION AND TRADE

The world catch of fish, crustaceans and molluscs fell in 1977 by a million tons to about 71 million tons (Table 1-13). The principal cause of this decline was a fall in the production of shoaling pelagic fish which are largely used for reduction to meal and oil. Landings of anchoveta from the southeast Pacific were down by 2 million tons, and catches of pilchard from the southeast Atlantic were the lowest for over a decade. Fluctuations in the catch of these species have had a major effect on total production throughout the 1970s, but in 1977 the initial effect of a regime of 200 mile Exclusive Economic Zones (EEZs) was also a significant factor. Thus catches by eastern Europe and the U.S.S.R. declined in 1977 for the first time in many years, primarily because of exclusion from, or catch limitations in, coastal waters now falling within the jurisdiction of other countries. Extended jurisdiction has also been largely responsible for the levelling off of catches by Japan and the Republic of Korea. Increases were recorded by some countries having substantial resources within their EEZs (Argentina and Canada, for example), but these were insufficient to compensate for the declines elsewhere.

Table 1.13. Estimated world catch of fish, crustaceans and molluscs ^{1/}

	1972	1973	1974	1975	1976	1977	Change 1976 to 1977	Annual rate of change 1961-70	1970-77
	..... Thousand tons %	
Developing market economies	21,270	19,940	22,780	22,140	24,260	23,730	- 2	7.7	-1.5
Africa	3,290	3,320	3,190	2,950	2,970	3,310	+ 5	7.3	1.1
Far East	9,310	10,170	10,810	11,180	11,770	12,390	+ 5	7.6	5.9
Latin America	7,640	5,400	7,650	6,860	8,460	7,030	-17	7.9	-9.1
Near East	760	750	880	850	810	820	+ 1	4.7	2.2
Other	270	300	260	310	250	380	+49	5.9	2.9
Asian centrally planned economies	9,830	10,040	10,070	10,260	10,390	10,440	-	3.3	2.1
DEVELOPING COUNTRIES	31,100	29,980	32,850	32,400	34,650	34,170	- 1	6.4	-0.5
Developed market economies	26,940	27,880	27,910	27,140	28,550	28,760	+ 1	3.5	1.2
Western Europe	11,260	11,480	11,420	11,100	12,160	12,380	+ 2	4.1	1.5
North America	4,010	4,010	3,970	3,920	4,300	4,380	+ 2	-	0.2
Oceania	180	190	200	170	190	240	+26	4.8	4.0
Other	11,490	12,200	12,320	11,950	11,900	11,760	- 1	4.5	1.2
Eastern Europe and the U.S.S.R.	8,880	9,820	10,570	11,460	11,510	10,570	- 8	9.3	5.1
DEVELOPED COUNTRIES	35,820	37,700	38,480	38,600	40,060	39,330	- 2	4.6	23.8
WORLD	66,900	67,700	71,300	71,000	74,700	73,500	- 2	5.5	0.9

^{1/} Including all aquatic organisms except whales.

Table 1-14. Catches of food and non-food fish, world and developing and developed countries

	1972	1973	1974	1975	1976	1977	Change 1976 to 1977	Annual rate of change 1961-70	1970-77
	..... Million metric tons .....						.....	..... % .....	.....
FOOD	47.0	49.5	50.2	50.1	51.9	52.9	+ 2	3.5	2.4
Developing countries	20.7	25.0	25.8	26.3	26.9	28.2	+ 5	5.5	3.7
Developed countries	23.3	24.5	24.4	23.8	25.0	24.7	- 1	1.9	1.1
NON-FOOD	19.9	18.2	21.1	20.9	22.8	20.6	-10	10.2	- 2.2
Developing countries	7.4	5.0	7.0	6.1	7.7	6.0	-22	8.7	-10.4
Developed countries	12.5	13.2	14.1	14.8	15.1	14.6	- 3	12.2	4.2
TOTAL	66.9	67.7	71.3	71.0	74.7	73.5	- 2	5.6	0.9
Developing countries	31.1	30.0	32.8	32.4	34.6	34.2	- 2	6.6	- 0.5
Developed countries	35.8	37.7	38.5	38.6	40.1	39.3	- 2	4.6	2.2

While fluctuations in yield from shoaling pelagic stocks and the effect of EEZs in large measure explain the decline in 1977, the continued stagnation of world fisheries production is due to more fundamental causes. The inability of fish stocks to continue to sustain increases in catch proportional to increases in effort has long been recognized. It was already clear during the 1960s, as one major stock after another became fully exploited, that the rate of growth of production would soon decline. With few stocks of major commercial importance now offering the possibility of large sustained increases in catch, world fisheries production seems likely to remain on a plateau until economic incentives make it worthwhile to exploit less conventional species or to realize the technical potential from aquaculture.

The stocks that do remain unexploited for the most part lie off the coasts of developing countries and, in spite of fluctuations in the total world catch, landings of fish for direct human consumption in these countries have continued to grow (Table 1-14). For example, in 1977, increases in excess of 5% were recorded by India, Indonesia and Malaysia, and almost all of the additional fish produced was used for direct human consumption. Increased landings in these countries have helped to maintain a satisfactory rate of growth in the Far East region, where fish is generally an important item in the diet. In Latin America, the production of fish for direct human consumption has also increased. Much of the increase in this region has been for export, and in the past five years foreign exchange earnings from fish products other than meal have increased by over \$ 125 million. Growth in fish production has been less satisfactory in Africa and the Near East.

The fall in fish production in the developed countries in 1977 was the first for nearly a decade. The effect of the EEZs on catches by Canada, eastern Europe and the U.S.S.R., and Japan has already been mentioned. Elsewhere, production increased by 2% in western Europe and 6% in Oceania. In South Africa, the industry experienced its worst season for shoaling pelagic species, and consequently for fish meal production, for over a decade.

The price weighted index of world trade showed little change in 1977, but there were significant divergent movements in the commodity composition of trade and the export performance of different economic groups (Table 1-15). Shortages of important commercial species such as cod were reflected in the poor export showing of developed countries in 1977. Of the major groups of fishery commodities, only exports of meal from this group of countries showed an increase. Exports of canned fish, although down from 1976 because of lower exports from Japan and South Africa, were higher than in any other previous year. Preliminary data indicate that performance in the other commodity groupings was unremarkable. Price rises, however, particularly from frozen white fish and fish meal, ensured that the value of trade showed a significant increase (Table 1-16). Abundant supplies of most major shellfish products, on the other hand, caused the first price declines in this sector since 1974. In Japan, the high price of many fishery products in early 1977 led to strong consumer resistance. Although prices have subsequently fallen somewhat, demand has not shown a commensurate recovery and the industry, already affected by jurisdictional

Table 1-15. Index numbers of value and volume of exports of fishery products, world and developing and developed countries 1/

	1972	1973	1974	1975	1976	1977	Change 1976 to 1977	Annual rate of change 1961-70	1970-77
	..... 1969-71 average = 100 %		
VALUE	141	190	206	216	267	317	+19	8	18
Developing countries	145	183	206	241	296	368	+24	12	20
Developed countries	139	193	206	205	254	294	+16	7	17
VOLUME									
Developing countries	106	111	111	117	128	129	+ 1	5	3
Developed countries	115	104	108	120	130	146	+12	8	4

1/ Excluding China.Table 1-16. FAO index numbers of volume, unit value and value of world trade in fishery products

	1973	1974	1975	1976	1977	Change 1976 to 1977
	..... 1969-71 average = 100 % ..
Volume	111	111	117	128	129	+ 1
Average unit value	180	195	187	214	254	+19
Value	190	206	216	267	317	+19

1/ Excluding China.

changes, is also under financial pressure. As a consequence, government appropriations to the Japanese Fisheries Agency, which were raised from \$ 480 million in 1976 to more than \$ 600 million in 1977, were further increased to \$ 1,000 million in 1978.

Exporters in developing countries took advantage of the market opportunities provided by the inability of developed countries to maintain supplies. In particular, exports of frozen fish grew sharply because of increased sales by the Republic of Korea (100,000 tons more than in the previous best year) and several Latin American countries. Exports of canned fish also increased, as lower sales by Morocco were more than compensated for by increased exports by Ecuador, the Republic of Korea and Peru.

POLICIES AND ISSUES

Among issues of international interest, the difficulties of adjustment to EEZs have continued to feature prominently. The main problems are those associated with the management of stocks which occur in contiguous economic zones or which occur both inside and outside the EEZs. These problems, similar to those faced by the former international commissions involve the gathering of objective data, negotiation and agreement on the interpretation of such data, and ultimately the enforcement of regulations which often adversely affect the short-run earnings of fishermen. Although a regime of 200 miles may have reduced the number of participants in any particular negotiation by excluding countries not having a property right in the fishery, recent experience does not suggest that it has made agreement significantly easier to reach.

In some respects the extension of jurisdiction to 200 miles and the consequent attenuation of the powers of the international commissions, has made inspection and enforcement of agreements more difficult. Previous arrangements allowed for international inspection (although not enforcement) in international waters within the commissions' areas of competence. Countries exploiting common stocks of fish must reach agreement concerning the rights of one country to enter the EEZ of the other countries for the purpose of inspection. Such a right is clearly necessary, since the fisheries of all other countries in whose EEZs the same stock occurs will be directly affected by the degree to which fishermen in the first country abide by the regulations. In such circumstances, agreement will frequently be necessary concerning inspection at sea to control the mesh size of nets and to monitor closed areas. The monitoring of catch quotas would require the stationing of inspectors of Country A in the ports of Country B, a procedure for which there is a precedent under the International Whaling Commission (IWC), but which may not commend itself to all neighbouring countries sharing common stocks.

General extension of jurisdiction to 200 miles has also aggravated the problems of managing oceanic resources such as tuna and whales, which migrate not only from one EEZ to another but also to and from the high seas beyond the 200 mile limit. In such circumstances a regime based solely on coastal state jurisdiction will not ensure effective management. While it seems likely that the existing bodies concerned with the management of tuna will, in some form or other, continue to provide the scientific data, the development of a supra-national management body may prove difficult.

In general, the need to continue research on a regional basis seems to be well understood. In the northeast Atlantic, the International Council for the Exploration of the Sea will continue to provide advice on fishery management, marine pollution and related matters, in spite of the cessation of the North East Atlantic Fisheries Convention. In the northwest Atlantic, proposals for a body to succeed the International Commission for North Atlantic Fisheries provide for the separation of the regulatory functions (to be exercised only outside the 200 mile limit) and the scientific function which will permit the organization to look after statistical and scientific matters throughout the area without regard to jurisdictional boundaries. Although there is no provision in the present draft proposals for reconciling the management measures adopted by a coastal state and those adopted by the new commission in the case of stocks that are distributed both within and outside the EEZ, the general framework of this convention may offer some guidelines for the management of both tunas and whales. In fact, a specific proposal is under consideration by whaling countries which recognizes that large whales can only be conserved and whaling effectively regulated under a regime which applies uniformly inside and outside zones of national jurisdiction.

Successive revisions of scientific assessments of whale stocks have been leading each year to the complete protection of one stock and species after another, while quotas of catches from the remaining "open" stocks, based on estimates of sustainable yields, have been reduced. Thus, in the Antarctic, members of the IWC may now hunt only the small minke whale and the sperm whale, and even some stocks of the latter species are protected. Furthermore, in several countries, questions are being raised concerning the fundamental legitimacy of regarding whales as harvestable resources. During 1978, the Government of Australia, a key country in this regard, conducted a public enquiry into whether whaling should continue and, if so, on what basis. The results of the enquiry, which embraces evidence from other countries, will be closely examined by members of the IWC.

Other problems concerning marine mammals continue to excite worldwide public and governmental interest. One of these is the controversy concerning the management of the harp and hood seal hunt in the northwest Atlantic. Another is the large "incidental take" of dolphins in the purse-seine tuna fishery in the eastern central Pacific, although progress has been made in reducing this by technical means. In several countries, fishermen have become concerned about the large amounts of fish said to be consumed by seals and dolphins and, on occasion, have expressed this concern through moves to reduce or exterminate these marine mammals. Most of these areas of conflict of interest have been local, but they are increasing in frequency and have had international repercussions.

OUTLOOK

The short and medium term outlook is for little growth in the world fish catch and for continuing adjustment to the realities of a regime of 200 mile exclusive fisheries jurisdiction. Preliminary information for 1978 does not suggest any increase in the catch above the record level of 74.7 million tons attained in 1976. A recent review of future prospects concludes that by 1985 the world catch will probably be only some 6 million tons higher than at present.

Although significant increases in the total catch are not in prospect, recent changes in the regime of the seas will almost certainly bring about some redistribution. For the most part this will affect the developed countries, with Canada, Oceania and the United States the major beneficiaries, and Japan, Portugal, Spain and the U.S.S.R. among the disadvantaged. The process of adjustment is unlikely to be symmetrical, with losses balancing gains, in any short period. The caution with which coastal states can be expected to dispose of their newly acquired resources seems certain to lead initially to losses exceeding gains.

The slow growth of production will not keep pace with demand, and prices will continue to rise. In the past, rising prices have mainly affected the preferred species consumed in the developed countries, but there is evidence that this effect is becoming more widespread. While higher prices benefit the fishermen and encourage the better utilization of fish, especially the less conventional species, they pose a threat to the nutritional standards of those poor communities that are dependent on fish for a significant proportion of their protein supplies. Higher prices should also encourage production from aquaculture, especially in Asia, where fish culture is increasingly being combined with other agricultural activities as a means of supplementing farm incomes.

Finally, it should be noted that rising prices will make it more difficult to implement effective management. When prices are constant, excessive fishing reduces the catch and financial returns per vessel, and this in turn forces a reduction in activity until a better equilibrium between fish stocks and catch is reached. Rising prices, however, compensate for declining catches per vessel, and continued profitability promotes overexploitation.

FORESTRY

PRODUCTION AND TRADE

The lower rate of economic growth in the developed market economies in 1977 slowed the recovery in the production and trade of forest products (Table 1-17 and 1-18). Most of the increase in production was absorbed by domestic consumption, and trade in wood products changed very little. The major exception to this general situation was in the production and trade of sawnwood in North America, where a substantial increase in housing construction in the United States stimulated both domestic production and the production and exports of Canada.

During 1975-77, housing starts in the developed countries were 30 to 50% below the levels of 1972-73. In the United States, however, housing construction in 1977 rose to 90% of the volume in the early 1970s. Because of the rapid formation of new households and the favourable financial environment for dwelling construction, encouraged by government-sponsored mortgage pools, it is anticipated that this level will be maintained for at least several years. In Japan, a substantial increase in public housing loans was expected to result in a 10% increase in housing starts in 1978. Canada and several European countries also expected an increase in activity in the housing sector in 1978, and rapid growth of the urban sector in the developing countries should continue to require increased supplies of construction materials, including sawnwood and wood-based panels.

In 1977, the production of fuelwood continued to trend upward in the developing countries, and downward in the developed countries. Wood and agricultural waste remain vital sources of energy to the rural population of developing countries, and fuel continues to be the major use to which wood is put in these countries.

Roundwood

World production of industrial roundwood increased only slightly in 1977 and was about equal to the previous peak in 1973. Pulpwood production declined somewhat in western Europe, and stocks of pulpwood chips increased in Japan and North America. Japan's imports of coniferous roundwood increased by about 1 million m³, while those of the United States decreased by a like amount. Exports of tropical logs from southeast Asia increased by 1.3 million m³, with an increase in sales to east Asian developing countries more than compensating for a decline in exports to Japan. African exports of tropical logs were down by 0.4 million m³, because of smaller deliveries to western Europe. The reduction in western Europe's imports of African logs was offset by larger domestic production and imports of temperate-zone and non-coniferous saw and veneer logs.

The modest growth in log exports from tropical producers may largely be attributed to slower growth in economic activity, but may also reflect the increasing degree to which tropical log exporting countries are enforcing restrictions on the export of unprocessed wood. Nigeria and Thailand have banned exports of logs, and Ghana is contemplating a similar move. Indonesia, Liberia, Malaysia and the Philippines have also imposed limitations on the export of tropical roundwood.

While domestic and international prices of coniferous logs increased during 1976 and 1977, prices of tropical logs peaked towards the end of 1976. In the Far East, log prices fell sharply at the beginning of 1977 but had largely recovered by the end of the year. The price of African logs tended to be stable during 1977, but increased sharply at the end of the year and into 1978. The effect of these shifts was probably a small increase in the earnings of African countries, and an appreciable decrease in those of Asian log exports in 1977.

Table 1-17. Production of main forest products, world and developing and developed countries

	1972	1973	1974	1975	1976	1977 ^{1/}	Change 1975 to 1977	Annual rate of change ^{2/} 1961-70	Annual rate of change ^{2/} 1970-77
.....	Million m ³ .....						.....	%	.....
<u>TOTAL ROUNDWOOD</u>	2,434	2,496	2,510	2,453	2,526	2,538	0.5	1.8	0.7
Developing countries	1,210	1,228	1,251	1,267	1,285	1,295	0.8	2.7	1.7
Developed countries	1,224	1,268	1,259	1,185	1,241	1,243	0.2	1.0	-0.1
<u>Fuelwood</u>	1,145	1,148	1,164	1,180	1,183	1,185	0.2	1.0	0.9
Developing countries	988	997	1,014	1,035	1,040	1,048	0.8	2.3	1.5
Developed countries	158	151	150	145	143	137	-4.2	-4.2	-2.9
<u>Industrial roundwood</u>	1,288	1,358	1,347	1,272	1,342	1,353	0.8	2.6	0.7
Developing countries	222	240	238	232	244	247	1.2	5.0	2.6
Developed countries	1,066	1,117	1,110	1,040	1,098	1,106	0.7	2.1	0.3
<u>PROCESSED WOOD PRODUCTS</u>									
<u>Sawnwood</u>	436	446	424	404	429	431	0.5	2.0	0.1
Developing countries	55	56	56	59	57	58	1.8	4.2	1.7
Developed countries	381	390	368	345	372	373	0.3	1.8	-0.2
<u>Wood-based panels</u>	87	95	88	82	95	98	3.2	9.2	3.7
Developing countries	8	9	8	9	10	11	10.0	16.2	7.7
Developed countries	79	86	89	73	85	87	2.4	8.8	3.4
..... Million tons									
<u>Woodpulp</u>	108	115	118	103	114	116	1.8	6.0	1.6
Developing countries	4	5	5	5	6	6	0.0	8.9	9.4
Developed countries	104	110	112	97	108	110	1.9	5.9	1.2
<u>Paper and paperboard</u>	139	148	151	135	148	152	2.7	5.9	2.1
Developing countries	12	13	14	14	15	16	6.7	7.1	6.6
Developed countries	128	135	137	120	133	136	2.3	5.9	1.6

^{1/} Preliminary. - ^{2/} Exponential trend.

Table 1-18. Volume of exports of main forest products, world and developing and developed countries

	1972	1973	1974	1975	1976	1977 ^{1/}	Change 1976 to 1977	Annual rate of change ^{2/} 1961-70	1970-77
	..... Million m ³ .....						.....	%	.....
<u>INDUSTRIAL ROUNDWOOD</u>									
Developing countries	41,935	50,983	43,709	37,706	46,281	47,513	2.7	12.4	2.2
Developed countries	52,909	63,111	63,953	60,003	65,983	65,822	- 0.2	0.9	3.5
World	94,845	114,093	107,662	97,709	112,264	113,335	1.0	10.8	3.0
<u>PROCESSED WOOD PRODUCTS</u>									
<u>Sawnwood</u>									
Developing countries	7,061	8,521	7,460	6,627	9,000	9,000	0.0	7.6	5.6
Developed countries	59,212	63,800	54,446	45,794	59,200	64,300	8.6	2.8	1.3
World	66,273	72,320	61,905	52,422	68,200	73,300	7.5	3.2	1.8
<u>Wood-based panels</u>									
Developing countries	4,106	4,596	3,581	3,679	4,428	4,632	4.6	23.0	5.8
Developed countries	8,288	9,813	9,116	8,484	9,631	9,392	- 2.5	8.8	4.5
World	12,394	14,409	12,696	12,164	14,059	14,024	- 0.2	11.4	4.9
	..... Thousand tons								
<u>Pulp</u>									
Developing countries	505	526	565	515	755	701	- 7.2	21.1	11.1
Developed countries	15,952	17,969	18,491	14,432	16,211	16,291	0.5	6.0	0.2
World	16,456	18,494	19,056	14,946	16,966	16,991	0.1	6.2	0.5
<u>Paper and board</u>									
Developing countries	356	539	500	429	547	551	0.7	10.9	8.5
Developed countries	24,953	27,086	29,411	22,431	26,547	26,924	1.4	7.4	1.8
World	25,309	27,626	29,911	22,860	27,094	27,475	1.4	7.4	1.9

^{1/} Preliminary. - ^{2/} Exponential trend.

Sawnwood and wood-based panels.

Production of sawnwood increased slightly in the developing countries but stagnated in the developed countries in 1977. World exports of sawnwood increased by about 8%, following a 29% increase in 1976. A 6 million m³ expansion in Canada's exports to the United States accounted for all of the increase in 1977. Canada maintained the 1976 level of exports to Europe, Sweden's exports declined and Finland's increased. With small changes in distribution, the level of developing country exports of sawnwood remained as in 1976. In Europe, a diminished level of imports of tropical sawnwood was offset by increased domestic production and trade within the region in temperate-zone non-coniferous timber.

World output of panels was at a record level with a substantial increase in the developing countries. A combination of increased production costs and lower prices of competing products caused a series of bankruptcies in the important Japanese industry, and action was taken to retire excess capacity with the aid of government financing. On a world basis, however, the capacity of the panels industry continues to expand, although expansion in the fastest growing sectors of the industry has been at a much slower pace in the last year or two.

There was a recession in the price of tropical sawnwood in the Far East during 1977 but prices had recovered by the beginning of 1978. Fluctuations in the price of plywood in Japan reflected increased domestic costs, poor market conditions and the changing parity of the yen. Prices paid by major European importers of Canadian and Scandinavian sawnwood declined in 1977. In response, the prices of U.S.S.R. sawnwood to the European market were lowered in 1978.

Pulp and paper

There was a small increase in world production of pulp during 1977, but output remained below the 1974 record. Production of woodpulp increased slightly in North America and the EEC, but declined in the Nordic exporting countries and was static in Japan. Japan expected increased competition from imports resulting from the reduction in import duty, and is taking action to eliminate excess capacity. Utilization of capacity in North America remained at about the same level in 1977 as in 1976. In western Europe 1977 was another year of low demand, low production and high stock levels especially in the Nordic countries, where utilization of capacity was already low in 1976. By the end of the year, excess stocks had been drawn down, however, and production in 1978 moved more in line with economic growth. North American exports of pulp increased 5%, while those of Europe declined by the same proportion. An important feature of woodpulp trade was the 30% reduction in the international price during 1977, followed by a further 10% fall in the early months of 1978. Certain developing countries are experiencing difficulty in placing their production, because of the large supplies of low-priced pulp on the international market and the reduction of tariff barriers protecting their domestic production.

Production of paper and board increased appreciably in North America in 1977. In the EEC, the Nordic countries and Japan, the increase was slight. North American exports rose 15%, and European exports 5%. Developing countries reported significant increases in production as new capacity came on line. Paper prices remained fairly stable during 1977.

LONGER-TERM TRENDS

Per caput consumption of sawnwood in the developing countries was maintained over the past decade, while per caput consumption of panels and paper doubled (Table 1-19). The average levels of per caput consumption of industrial forest products in developing countries are, however, still extremely low. Developed country consumption of sawnwood is 15 times greater per caput, of panels 45 times and of paper 25 times.

Timber is a major source of export income for a number of developing countries, and some 10% of the developed countries' imports of manufactured goods from developing countries is accounted for by processed wood products. As shown in Table 1-20, the

Table 1-19. Consumption of industrial forest products in the developing market economies

	Industrial roundwood		Sawnwood		Wood-based panels		Paper	
	1966	1976	1966	1976	1966	1976	1966	1976
Consumption (m ³ per 1,000 persons)	67	77	19	20	1.5	3	3	6
Production as % of consumption	117	123	100	108	90	143	60	67

developing countries' exports of forest products have increased faster than those of the developed countries in the past decade.

The main regions of the developing world are self-sufficient in sawnwood and panels, with the exception of the Near East which imports 35% of the sawnwood and 45% of the panels consumed in that region. Consumption of sawnwood in the Near East doubled over the past decade, while consumption of panels increased fivefold. The Far East is a major exporter of industrial wood products, with net exports equivalent to 28% of its sawnwood production and two thirds of its production of wood-based panels. During the past decade, these exports have increased greatly both in magnitude and as a proportion of production. In Africa the production of wood-based panels tripled in the past 10 years, but the percentage of net exports as a share of production fell from 67% to 4%.

Table 1-20. FAO index numbers of value and volume of exports of forest products, world and developing and developed regions

	1972	1973	1974	1975	1976	1977	^{1/} Change 1976 to 1977	Annual rate ^{2/} of change 1970-77
	..... 1969-71 average = 100 .....						.....	..... % .....
<u>VALUE</u>	125	182	237	210	254	256	0.7	16.2
Developing countries	133	238	243	189	275	291	6.8	17.1
Developed countries	124	174	236	213	251	251	-	16.0
<u>VOLUME</u>	112	125	122	101	121	122	0.8	2.1
Developing countries	122	146	124	113	143	145	1.3	4.3
Developed countries	110	122	122	99	118	118	-	1.8

^{1/} Preliminary. - ^{2/} Exponential trend.

The wood product exports of developing countries to developed countries were equivalent to 30 to 40 million m³ of roundwood during the 1970s, with a peak of 50 million m³ in 1973. The value of developing country exports rose from \$ 1,500 million in 1970 to \$ 4,200 million in 1977. Processed industrial products, measured in roundwood equivalent, ranged from 8 to 16 million m³, the peak again being in 1973. At the beginning of the period, industrial products contributed 23% of the total volume, rising in the peak year to 32% and settling at 28% in the most recent years. However, the proportion of total forest product export earnings from unprocessed roundwood only changed from 54% in 1970 to 50% in 1976. The continued high proportion of roundwood in export value reflects the smaller increase in the price of plywood (50%), an important and high-value component of processed products, compared with that of tropical logs (100%) over the period. A further feature in trade in forest products has been the appreciable increase in trade among the developing countries.

In general the shifts in the terms of trade for exports of wood and wood products from developing countries have been favourable over this period. A significant exception is Asian plywood, for which the terms of trade have declined significantly since 1970.

Over the past decade, consumption of paper in the developing countries has doubled, but production has more than doubled and their dependence on imports has diminished from 40% to 33%. Production of pulp in developing countries has more than tripled during the decade, and dependence on imports has declined from 35% to 10% of the volume used in domestic paper manufacture.

FOREST POLICIES

Developed countries

In recent years a number of countries in Europe have updated or are in the process of updating their forest laws to give formal recognition to the changing patterns of demand from society for the goods and services of the forest. More emphasis is being put on conservation, public access, use of the forest for recreation, and other changes designed to place forestry within a broader land-use planning context. Similar changes in emphasis were reflected in a recent amendment to forest legislation in New Zealand.

Increasing government involvement in the structure and development of forest industries is also evident in many countries, with particular attention being paid to the relationship between the raw material requirements of industry and the supply potential of the forest over the long term. In Finland and Sweden, the emphasis is on ensuring an orderly development of industrial capacity, within the limited supply potential of the forest, through measures to control further expansion of industry and at the same time to stimulate the productivity of the forest.

In France, Norway and Switzerland, government attention has been focused on bringing underexploited parts of the forest resource into fuller use, and (in the case of France) to reduce the trade deficit in forest products. A detailed study of the French pulp and paper industry led to proposals for some major restructuring and modernization of the sector with government financial support.

In North America, increased public concern has brought pressure for greater government involvement in forest management. In Canada efforts have continued to increase the proportion of lands under government ownership, and to modify the terms under which Crown forest lands can be utilized by the private sector. In the United States major emphasis is being placed on improving the productivity of private forest land holdings, through educational programmes, technical assistance and services, assistance in State forestry planning, and financial incentives.

The move towards greater government participation has been associated with recognition of the need for more adequate planning and for a better reconciliation of conflicting demands for land through multiple use systems. In the United States the

planning systems established by the Resource Planning Act of 1974 have continued to be strengthened, and experience has been gained in developing new land management planning techniques. The United States Forest Service, in conjunction with the Cooperative State Research Council and the Association of State College and University Forestry Research Organizations, has held workshops and seminars aimed at designing a research programme to meet long-term natural resource management goals. Canada is developing a comprehensive programme of national forestry statistics, to be used as a basis for establishing priorities for action and developing policy strategies.

Another areas of concern in several countries has been the damage caused by diseases, notably the decimation of the elm population in northwestern Europe by Dutch elm disease. Efforts to prevent the spread of this disease have largely been unsuccessful. In northern Europe, there have been outbreaks of insect damage by the pine-short borer and bark beetle, and in Sweden control has been seriously hampered by the banning of the use of DDT. More recently, concern has been expressed over the appearance of oak wilt in northwestern Europe.

Developing countries

The problems associated with the massive use of wood fuels in developing countries continue to give rise to growing concern. Though rural populations account for the bulk of fuelwood consumption, urban consumption is also very large. Because urban use is much more concentrated, it often produces large deforested zones surrounding cities and towns. A number of countries have therefore embarked on programmes to reduce urban use. In some countries, for example the Republic of Korea, the use of wood as a fuel in towns has actually been banned. In China, India and a number of countries in west Africa, the use of alternative fuels has been encouraged through subsidies, the introduction of cheaper and better stoves and improved fuel distribution systems. In other countries, notably in Africa programmes are under way to grow more fuelwood in the vicinity of urban markets. However, banning or restricting fuelwood use in urban areas has created problems in finding alternative sources of income for the large numbers of rural poor who earn their living through supplying these markets.

Though less concentrated, in many countries the fuelwood problem is even more intractable in rural areas, where there is usually no alternative fuel. Thus increasing attention is being given to much more extensive tree planting and to encouraging more efficient use of wood fuel. In India, Indonesia and Guatemala, for example, programmes are under way to introduce more efficient low-cost wood-burning stoves.

Particular urgency is being expressed about conserving or extending tree cover in areas where fuelwood cutting, and land clearing for agriculture, endanger the environmental framework necessary for continued crop and livestock production. Attention is being paid to upland areas such as the Himalayas, where trees can help prevent erosion and control water runoff. A major programme of tree planting is to be initiated in the hill areas of Nepal, the need for which was again made evident by the massive floods in northern India during 1978. Another critical land condition is in very arid areas, such as the Sahel, where trees are an essential component of the vegetative land cover which prevents desertification. New initiatives in this area during the year included an Arid Zone Afforestation Programme launched in northern Nigeria.

The fuelwood problem was one of the principal issues discussed at the Eighth World Forestry Congress in Jakarta, Indonesia, in October 1978. The Congress stressed the gravity of the problems arising from the continued destruction and degradation of forests in developing countries. It also emphasized the need for multiple use systems which permit both forest product and food production on lands which should be kept under tree cover, to ensure more stable land use and increase the benefits from such lands to the people living in or adjacent to the forest. In this connection, the importance of finding alternatives to slash-and-burn agriculture was highlighted.

The Congress also emphasized the continuing importance of forests as a base for a wide range of industrial processed products. The need for realizing the employment potential of forest industry development was stressed. The Congress also drew attention to the danger of a serious gap between the world's needs for industrial wood and the capacity of the world's forests to supply them, unless a more effective effort could be made to sustain and manage the forests.

The past year witnessed further action at the international level in connection with the tropical timber trade. Although the shock of the sharp decline in the volume of forest products exports and prices that severely affected developing countries for several years from mid-1974 has largely subsided and export earnings are rising again, the fundamental weaknesses in the structure of the tropical timber trade that had been exposed by that collapse still remain. At the insistence of the developing countries, tropical timber had been included in the list of 18 commodities covered by the Integrated Programme for Commodities initiated at UNCTAD IV in 1976. Under that programme, a series of preparatory meetings began in May 1977 with the purpose of identifying the elements on which an integrated commodity agreement for tropical timber could be formulated. Although the question of market stabilization is still a decisive one, a consensus is emerging for strengthened international action to correct some critical structural defects in the trade. In particular, the excessively high proportion of logs in the trade and the insufficient level and uncoordinated nature of research relating to market development for secondary species have been singled out for urgent attention.

INTERNATIONAL TRADE IN AGRICULTURAL PRODUCTS^{1/}FOOD IMPORTS OF DEVELOPING COUNTRIES

A major consequence of the slow rate of increase in the food production of the developing countries in recent years has been a rapid rise in their dependence on imports of food, mainly from developed countries. The total value of their gross imports of food ^{2/} rose from \$ 7,000 million in 1970 to \$ 32,000 million in 1976. Of this total, about half consisted of cereals in 1976.

The net cereal imports of the developing countries rose from an average of 32 million tons in 1962-64 to 52 million tons in 1973-74, and reached the record level of 66 million tons in 1977/78. FAO's latest Commodity Projections indicate that, if present trends continued, they would exceed 90 million tons by 1985.

In the developing countries cereal production per caput has increased only slightly from 220 kg in 1963-67 to 232 kg in 1972-76. In the developed countries it rose from 545 to 651 kg between these two periods. During the latter period almost three quarters of world cereal exports came from four developed countries: the United States, Canada, France and Australia. By far the biggest exporter is the United States, which increased its share of world cereal exports from 41% in 1963-67 to 46% in 1972-76. The United States is not only the world's major exporter of wheat and coarse grains, but also of rice.

There is little doubt that the United States and other major exporters could produce enough to meet increasing import demand for cereals from the developing countries and elsewhere for many years to come. For many developing countries, however, matching the rise in effective demand by expanding imports has already become highly burdensome. The role of food aid in meeting this demand has declined substantially since the mid-1960s, because the total import requirements of food aid recipients have greatly increased and the quantity of food aid has fallen.

These difficulties are exemplified by the MSA countries. Their cereal imports in 1977/78 were 17 million tons, 5% more than in 1976/77, in spite of a reduction in India's requirements from 4 million tons in 1976/77, to only 0.6 million tons in 1977/78. Many of the MSA countries, particularly Afghanistan, Bangladesh, Egypt, Ethiopia, Pakistan and Vietnam, substantially increased their imports in 1977/78.

AGRICULTURAL EXPORT EARNINGS

The total value of world exports of crop and livestock products rose by about \$ 17,000 million to reach \$ 140,000 million in 1977 (Table 1-21). The increase of 13% was double that in the previous year.

For the second year in succession, the largest increase, in both absolute and relative terms, was in the agricultural export earnings of the developing market economies. There was a smaller rise in the developed countries, and a levelling off in the Asian centrally planned economies. Thus the share of the developing market economies in world agricultural export earnings has recovered slightly, from 29% in 1975 to 31% in 1976 and 33% in 1977. However, the large increase in their earnings in 1977 came mainly from commodities temporarily in short supply, such as beverages and (to a smaller extent) oilseeds, and appears unlikely to have been maintained in 1978. Moreover, the longer-term trend has been for a gradual decline in the share of these countries in the rising world total, which stood as high as 46% in the mid-1950s and 37% in the early 1960s.

^{1/} For a more detailed analysis, see FAO Commodity Review and Outlook 1977-79, Rome, 1979.

^{2/} Excluding fish.

Table 1-21. Value of exports of agricultural products ^{1/}

	1961-65 average	1975	1976	1977 ^{2/}	Change 1976 to 1977	Annual rate of change ^{2/} 1966-67	
	.....	\$ 000 million	.....	.....	...%...	.....	\$ 000 million
Developing market economies	13.8	36.0	40.8	49.4	21	12	3.1
Asian centrally planned economies	0.8	2.8	2.6	2.6	-2	10	0.1
TOTAL DEVELOPING COUNTRIES	14.6	38.9	43.4	51.9	20	12	3.2
Developed market economies	19.3	38.9	43.4	51.9	10	16	5.9
Eastern Europe and the U.S.S.R.	2.7	7.0	7.0	7.9	12	9	0.4
TOTAL DEVELOPED COUNTRIES	21.9	83.5	86.9	95.7	10	15	6.3
WORLD	36.5	122.4	130.4	147.7	13	14	9.5

^{1/} Crop and livestock products only. - ^{2/} Preliminary.

Trends for the main groups of crop and livestock products are shown in Table 1-22. There was a recovery in 1977 in the value of exports of food products, which had declined in the previous year, but the increase was well below the long-term trend. Within this group, the value of cereal exports declined for the third year in succession. Export earnings from beverages rose by as much as 37%. Those from feed and raw materials also increased faster than the long-term trend.

Table 1-22. Value of world exports of agricultural products ^{1/} by major commodity groups

	1961-65 average	1975	1976	1977 ^{2/}	Change 1976 to 1977	Annual rate of change 1966-77	
	.....	\$ 000 million	.....	.....	...%...	.....	\$ 000 million
Food	21.7	88.0	86.5	93.4	8	15	6.1
Cereals	(6.2)	(26.2)	(24.8)	(22.6)	(-9)	(15)	(1.3)
Feed	0.8	3.7	5.1	6.2	22	18	0.5
Raw materials	9.9	20.0	23.6	27.1	15	10	1.5
Beverages ^{3/}	4.1	10.8	15.3	21.0	37	14	1.5
TOTAL	36.5	122.4	130.4	147.7	13	14	9.5

^{1/} Crop and livestock products only. - ^{2/} Preliminary. - ^{3/} Excluding cocoa, which is included under food.

The rise in agricultural export earnings in 1977 came mainly from substantial increases in unit values, especially for beverages (Table 1-23). Unit values also rose sharply for food and raw materials, but those for cereals fell for the second year in succession. The volume of world agricultural trade in fact increased by only 2.4% in 1977, in comparison with the average rate of 3.6% since 1966. The volume of the agricultural exports of the developing countries has risen only half as fast as the world volume since the mid-1960s, and was close to the long-term trend in 1977. On the other hand, export unit values in 1977 rose by 26% in these countries, in comparison with 14% at the world level.

Table 1-23. FAO index numbers of volume, value and unit value of world exports of agricultural products 1/ by major commodity group

	1970	1971	1972	1973	1974	1975	1976	1977 ^{2/}
..... 1969-71 = 100								
<u>VOLUME</u>	101	104	112	121	115	116	126	129
Food	102	105	114	124	119	121	132	138
Cereals	103	108	119	143	130	138	146	147
Feed	103	108	115	131	135	133	172	180
Raw materials	100	101	106	112	100	97	104	105
Beverages ^{3/}	101	101	110	117	108	114	118	103
<u>VALUE</u>	101	108	127	189	237	244	256	288
Food	100	111	131	195	257	277	269	288
Cereals	100	110	125	227	316	338	321	289
Feed	102	113	131	281	265	227	324	402
Raw materials	100	99	114	169	199	165	193	224
Beverages ^{3/}	107	104	125	164	165	176	269	366
<u>UNIT VALUE</u>	100	104	114	156	208	210	205	231
Food	99	105	116	157	217	231	205	211
Cereals	97	102	105	159	246	247	221	198
Feed	100	105	114	211	196	171	186	220
Raw materials	100	98	107	155	211	172	188	216
Beverages ^{3/}	107	103	113	139	152	153	232	380

Note: For details of methodology and coverage of these indices and those in subsequent tables, see the explanatory note preceding this chapter.

1/ Crop and livestock products only.- 2/ Preliminary.- 3/ Excluding cocoa, which is included under food.

Agricultural export earnings of MSA countries

The share of MSA countries in the agricultural exports of the developing countries declined during the first half of the 1970s, but has recovered somewhat since 1974. However, the annual rate of growth of MSA agricultural exports during the 1960s and 1970-77 remained below that of the developing countries as a whole, in both current and constant prices (Table 1-24).

MSA countries in all regions except the Far East achieved significant gains in 1977 in current prices. This improvement resulted from higher prices of commodities temporarily in short supply, in particular beverages and some raw materials. In constant prices, exports fell in 1977 in the MSA in all regions except the Near East. During the 1970s, the rate of growth of MSA export earnings in real terms significantly exceeded the rate for all developing countries only in Latin America (where there are only five MSAs). In the Near East, there was a substantial decline in MSA export earnings at constant prices.

Table 1-24. Agricultural exports of MSA and all developing countries

		1972	1973	1974	1975	1976	1977	Annual rate of change		
	US\$ thousand million						1961-65	1970-77	
								to 1970	%
MSA countries in:										
Africa	current prices	2.1	2.7	3.5	3.4	4.5	6.1	5.3	18.0	
	constant prices	2.1	2.0	1.9	1.9	2.1	1.8	2.2	- 0.4	
Far East	current prices	1.5	1.7	2.1	2.6	2.7	2.6	- 2.2	12.3	
	constant prices	1.4	1.5	1.3	1.5	1.8	1.3	- 2.6	1.2	
Latin America	current prices	0.6	0.7	1.0	1.2	1.4	1.9	3.6	20.9	
	constant prices	0.6	0.6	0.6	0.6	0.7	0.6	2.7	3.3	
Near East	current prices	0.9	1.1	1.4	1.2	1.3	1.5	4.5	9.4	
	constant prices	0.8	0.8	0.5	0.5	0.7	0.7	2.3	- 5.2	
TOTAL MSAs	current prices	5.1	6.2	8.1	8.3	9.9	12.1	2.2	15.6	
	constant prices	4.9	4.9	4.3	4.6	5.3	4.4	0.6	- 0.1	
All developing countries										
	current prices	19.5	27.1	35.4	35.3	39.2	47.4	4.2	17.2	
	constant prices	17.9	18.6	17.1	17.4	19.1	18.0	2.0	1.1	
	 %								
MSA exports as % of all developing countries		26.1	23.0	22.7	23.6	25.3	25.5			

Note: Constant price series were calculated by using the United Nations export index of agricultural commodities as a deflator.

TERMS OF TRADE

There was a small improvement in 1977 in the commodity terms of trade for agricultural products (Table 1-25). This concept of the terms of trade is calculated by dividing the price index for agricultural exports by that for exports of manufactured goods. In 1977 the prices of all agricultural products (including fishery and forest products) rose by 11%, as compared with 9% for the export unit values of manufactured goods.

The commodity terms of trade of agricultural products for manufactured goods deteriorated in the developed market economies in 1977 to the lowest level since 1972. In the developing market economies, on the other hand, there was a substantial improvement for the second year in succession, although the level was still well below that of 1974.

The improvement in 1977 came mainly from very large increases in export prices for beverage crops (81% for cocoa, 76% for tea, and 58% for coffee). The prices of oilseeds and vegetable oils, as well as sheepmeat, also rose sharply. Lower cereal prices were largely responsible for the deterioration in the agricultural terms of trade of the developed market economies in 1977.

Table 1-25. Commodity terms of trade of agricultural exports^{1/} for manufactured goods

Market economies	1971	1972	1973	1974	1975	1976	1977	1978	
								(first quarter)	(second quarter)
..... 1970 = 100									
Developing	97	104	130	151	114	123	139	121	120
Developed	102	111	142	136	116	115	109	106	100

Source: Derived from data in United Nations Monthly Bulletin of Statistics, June 1978.

^{1/} Including fishery and forest products.

In the first two quarters of 1978 there was a substantial reversal of the improvement in the terms of trade of agricultural products for manufactured goods in the developing market economies, and in the developed market economies there was a further slight deterioration. Export unit values for manufactured goods increased twice as fast as the export prices of agricultural products.

In addition to the commodity terms of trade reviewed above, FAO has now calculated the terms of trade for agricultural products according to two alternative methodological and conceptual approaches (Table 1-26). Country net barter terms of trade are calculated by dividing the unit value index of agricultural exports by that for all merchandise imports, country by country. The country income terms of trade are derived by multiplying the net barter terms of trade index by the index of the volume of total agricultural exports. Because of different country and commodity coverage, as well as the differences in methodology, the three approaches show somewhat different trends, especially for the developing countries. Although the country terms of trade are so far available only up to 1976, it is of interest to compare them with the simpler and thus more readily available commodity terms of trade.

The country net barter terms of trade in developed countries peaked in 1973 and declined in subsequent years. The indices show a marked deterioration for the MSA and least developed countries (LDCs), and no significant trend for the other developing countries. The deterioration for the MSAs and LDCs resulted from a relative weakening of prices of their exports of jute, rubber, tea and tobacco, and a relative strengthening of prices of their imports of cereals, fertilizers, and petroleum.

The country income terms of trade (which reflect the purchasing power of agricultural exports) of the developed countries also peaked in 1973 and declined in succeeding years,

but remained at a much higher level than in 1970-72. The indices show the same deterioration for the MSAs and LDCs, but some improvement for the other developing countries. The general level of the index for the other developing countries, however, is sharply lower than the index for the developed countries.

Table 1-26. Country terms of trade of agricultural exports for total imports

	1971	1972	1973	1974	1975	1976
	..... 1970 = 100					
	<u>Net barter terms of trade</u>					
Developing countries ^{1/}	93	98	100	100	91	96
MSAs and LDCs	93	89	88	88	81	83
Other developing countries	93	84	107	107	96	103
Developed countries ^{2/}	103	112	137	121	115	103
	<u>Income terms of trade</u>					
Developing countries ^{1/}	91	95	105	98	90	103
MSAs and LDCs	93	94	93	86	80	88
Other developing countries	90	96	112	105	95	111
Developed countries ^{2/}	108	130	180	154	150	144

^{1/} 74 countries. - ^{2/} 21 countries.

MARKET SITUATION FOR MAIN COMMODITIES

Few commodities were in short supply on world markets in 1977 and the first half of 1978. The main changes were in the direction of more abundant supplies, and better market balance for commodities that were in tight supply in 1976. Among the latter, supplies were notably larger for coffee, cocoa and tea, but there was also a substantial increase in the production of cotton. There was still relative shortage in 1977 of some oilseed products, as well as of hides and skins and jute, in spite of the slackening of demand for the latter group of products.

Structural surpluses continued to plague world markets for dairy products and sugar and, as already noted, there was a further substantial accumulation of cereal stocks. Competition from synthetics continued to be a problem for most raw materials, but renewed preference for the natural products and growth in exports of processed products were sometimes offsetting factors. Natural rubber was an example of a raw material for which the decline in market share in 1976 and 1977 was directly linked to higher prices. In the case of cotton, hard fibres and jute, the increase in processed exports by developing countries at least partly offset the decline in the export market for the primary products.

The general easing of supplies during the 1977/78 season, and the accumulation of substantial stocks of some commodities are major factors in the outlook for agricultural export earnings. Inflation in most industrialized countries remained high in 1977/78, although lower than in the preceding few years. In addition, the pace of economic expansion continued to be slow. The combined effect of these factors was reflected in relatively weak demand for imports, particularly of raw materials. As a result, most agricultural export prices, especially for those commodities exported by developing countries, declined in the first half of 1978 (Table 1-27). Export prices for most major groups of commodities in the first six months of 1978 averaged considerably below their corresponding values in 1977, with the decline most pronounced for beverage crops.

Export availabilities of cereals were ample in most of the main producing countries to meet strong import demand in 1977/78, especially for wheat and rice, and world cereal trade was a record 163 million tons in 1977/78, an increase of 9% over the previous season. The rise in world wheat imports of over 10 million tons accounted for most of the expansion. The developing countries accounted for more than 70% of the increase in wheat imports. Import demand for wheat also rose on account of a smaller crop in the U.S.S.R., as well as the low price of wheat, compared with other cereals, during the greater part of 1977. In response to buoyant demand, export prices of cereals resumed their upward trend in the second half of 1977 and the first half of 1978. Added strength to wheat and coarse grain prices came from the United States measures to reduce production and establish farmer-owned reserves to be released only when prices reached certain levels. Other factors included shipping delays in North America, the lower wheat crop in Argentina and higher soybean prices. Subsequently, however, the favourable outlook for the 1978 world cereal crop has led to continuing price declines for cereals since April-May 1978, and world trade in these commodities is forecast to fall in 1978/79.

In world markets for livestock products, cyclical declines in supplies and somewhat improved demand for beef and veal, and for sheepmeat resulted in higher export prices, notably to the United States, in 1977 and the first half of 1978. Following a relatively large increase in milk production in 1977, the growth of world output slowed down substantially during 1978 and international prices strengthened.

After an unusually small output of fats and oils and oilmeals in 1977, there was a recovery in 1978 which pushed world output slightly above the longer-term trend. However, as the season progressed, lower than expected crops were harvested in a number of exporting countries and import demand remained unusually strong. Prices of most oilseeds, oils and meal products, which had fallen sharply in mid-1977, showed some recovery in 1978.

Owing to larger supplies, the world markets for tropical beverages were better balanced in 1977, and prices fell sharply in the second half of the year and in early 1978. The International Coffee Agreement composite indicator price peaked in April 1977 at an average of 315 U.S. cents per pound, but fell to an average of 126 cents in July 1978. This was still above the trigger price of 77 cents which governs the imposition of export quotas. Coffee prices recovered somewhat in subsequent months. Cocoa prices peaked in July 1977, fell sharply until January 1978, and fluctuated in the following months. At the mid-1978 level of 140 cents per pound, world market prices were in excess of the International Cocoa Agreement price range of 65 to 81 cents. Tea auction prices started to decline after April 1977, as stocks in importing countries were replenished and tea plucking accelerated in response to higher prices. After stabilizing in late 1977 and early 1978, prices at all auction centres weakened.

The already low world free market price of sugar declined, with some fluctuations, from an average of 10.04 cents per pound in April 1977 to 6.43 cents in July 1978, followed by a partial recovery later in the year. Large world carryover stocks, prospects of further accumulation, difficulties in developing a sugar policy in the United States, and higher exports from the EEC were major factors causing the decline.

Unfavourable weather resulted in a considerably reduced output of fruits and correspondingly higher prices in Europe and North America during 1977. Citrus prices benefited from the scarcity of competing fruits in importing countries, as well as from the reduction in exportable supplies in the Mediterranean citrus producing countries. The fairly balanced supply and demand situation for bananas which prevailed in 1976 continued to mid-1977, but later there was a significant increase in the export supplies which depressed prices in most importing countries.

The unfavourable weather in the major European producing countries in 1977 also restricted the output of wine, for the second consecutive season. Prices improved noticeably for both quality and table wines. Smaller crops in a number of major producing

Table 1-27. Price of international significance for selected commodities

	Wheat US\$/mt	Maize US\$/mt	Rice US\$/mt	Cassava US\$/mt	Soybeans US\$/mt	Soya meal USC/lb	Soybean oil US\$/mt
<u>1977</u>							
January	110	112	259	121	272	251	502
February	112	111	257	114	282	248	553
March	106	107	261	110	314	272	630
April	103	106	252	103	365	316	722
May	97	101	257	101	353	298	741
June	94	85	264	106	308	253	666
July	98	85	272	112	245	193	555
August	97	77	275	101	224	176	498
September	102	78	275	93	205	174	502
October	107	83	278	107	194	179	490
November	115	93	288	116	220	200	500
December	117	96	322	116	229	200	541
<u>1978</u>							
January	118	95	340	89	223	200	522
February	119	101	374	91	222	188	534
March	126	106	396	82	257	215	629
April	133	112	411	85	272	224	624
May	128	113	410	97	275	221	657
June	129	107	404	88	263	208	631
July	130	91	384	90	251	207	586
August	130	87	366	99	246	202	587
September	134	94	368	113	250	208	630
October	...	...	...	...	250	...	...
	Palm oil US\$/mt	Coconut oil US\$/mt	Coffee US\$/lb	Cocoa USC/kg	Tea USC/kg	Sugar USC/lb	Bananas DM/mt
<u>1977</u>							
January	458	549	218	156	195	8.34	604
February	496	570	246	173	223	8.59	762
March	593	724	305	183	375	8.98	853
April	651	805	315	163	415	10.04	940
May	665	732	277	172	340	8.95	869
June	632	626	243	193	321	7.87	769
July	537	506	209	198	306	7.39	706
August	499	448	201	180	217	7.61	801
September	446	467	196	175	189	7.31	764
October	433	485	172	167	229	7.09	615
November	446	506	182	158	204	7.07	554
December	501	569	186	145	212	8.09	519

Table 1-27. continued

	Palm oil US\$/mt	Coconut oil US\$/mt	Coffee US\$/lb	Cocoa USC/kg	Tea USC/kg	Sugar USC/lb	Bananas DM/mt
<u>1978</u>							
January	477	550	192	125	240	8.77	535
February	522	568	186	126	238	8.48	734
March	561	654	166	150	232	7.74	766
April	588	622	162	156	216	7.59	887
May	614	611	153	142	210	7.33	906
June	637	675	160	132	217	7.23	618
July	635	674	127	140	212	6.43	640
August	600	687	126	153	197	7.08	454
September	564	809	151	170	207	8.18	500
October	...	...	152	...	...	...	384
November	...	...	145	...	...	...	...
	Oranges DM/mt	Cotton USC/lb	Wool USC/kg	Jute £/long ton	Sisal £/long ton	Rubber M\$/mt	Hides USC/kg
<u>1977</u>							
January	959	79	440	175	505	2 086	105
February	939	85	434	187	500	2 066	96
March	964	88	431	186	505	2 062	95
April	1 107	86	432	186	515	1 994	97
May	1 079	83	426	186	515	1 971	95
June	1 185	71	428	186	510	1 923	82
July	1 185	66	434	186	510	1 928	80
August	1 487	64	419	184	515	1 970	83
September	1 618	62	420	184	520	2 152	83
October	1 496	61	428	192	515	2 137	82
November	1 166	60	429	193	515	2 063	90
December	1 691	61	432	189	510	1 987	90
<u>1978</u>							
January	982	65	427	205	470	2 023	106
February	982	66	431	205	465	2 057	106
March	1 022	68	429	205	480	2 076	101
April	1 146	69	439	205	475	2 077	106
May	845	70	437	205	475	2 176	104
June	1 040	71	448	215	465	2 360	110
July	1 210	71	453	215	455	2 333	112
August	1 261	73	449	215	475	...	132
September	1 232	74	448	215	465	2 538	136
October	1 276	...	456	...	...	...	138

Note: Wheat: U.S.No. 2 Hard Winter (ord.) f.o.b. Gulf. Maize: U.S. No. 2 Yellow f.o.b. Gulf.
Rice: Thai White Rice 5% brokens f.o.b. Bangkok. Cassava: c.i.f. Rotterdam.
Soybeans: U.S. No. 1 Yellow f.o.b. Gulf. Soya meal: U.S. 44% protein, c.i.f. Rotterdam.
Soybean oil: Crude oil Dutch f.o.b. exmill. Palm oil: Malayan 5%, bulk n.f.s. c.i.f. European ports. Coconut oil: Philippines/Indonesia c.i.f. Rotterdam.
Coffee: Composite price ICA (International Coffee Agreement, 1976). Cocoa: ICCO daily indicator price. Tea: London auctions, all tea. Sugar: Raw, International Sugar, Council composite price. Bananas: Central America, f.o.b. importer to wholesaler, Hamburg. Oranges: Wholesale price for Germany - average. Cotton: U.S. Memphis Territory, SM 1-1/16" c.i.f. Liverpool. Wool: Australia, New Zealand average price 64 S. Jute: Raw Bangladesh, B.W.D., f.o.b. Chittagong-Chalna. Sisal: East African U.G. c.i.f. U.K./Europe. Rubber: R.S.S. No. 1, f.o.b. Kuala Lumpur. Hides: U.S. Light native cows, 30/53 lb/up, Chicago.

countries resulted in a slight drop in world tobacco production in 1977. Tobacco exports were also marginally lower, while auction prices tended to record levels.

Sluggish textile demand, associated with inflation, slow economic growth, and competition from manmade fibres, continued to affect cotton consumption in most industrialized countries. World exports of cotton declined by 4% in 1977, but appear to have recovered in 1978, particularly reflecting additional purchases by China to make up for a drastic fall in domestic production, and by other importing countries for the replenishment of stocks. The increase in world import demand has led to a rise in cotton prices since November 1977. Jute was in short supply in 1977/78, and prices rose during most of the period. Production of sisal and henequen in 1977 was marginally lower than in the previous year. The import demand for raw fibres continued to decline, but this was more than compensated by larger exports of manufactured twines from producing countries.

There was an unexpectedly small increase in natural rubber production in 1977, and consequently a stronger and more stable market situation. The higher level of prices in 1976 reduced natural rubber's share of the total elastomers market from 31% in 1976 to 30% in 1977, resulting in a return to the trend of most of the postwar period.

The growth of world production of cattle hides came to a halt in 1977, and the output of sheepskins fell again after the temporary recovery in 1976. The strong growth in demand for leather manufactures in 1975 and 1976 slowed down in 1977, and was reflected in a smaller volume of world trade. Prices remained high in 1978.

TRADE PROBLEMS AND POLICIES

Little progress has been made towards mitigating the long-standing problems of international trade in agricultural products. The chronic instability of prices and export earnings is illustrated by the recent situation for sugar, coffee, cocoa and tea. Although the share of the developing countries in world agricultural export earnings has recovered slightly in each of the last two years, there is as yet no clear evidence of a reversal of the long-term trend. The volume of exports of the developing countries has grown very slowly. Problems of access to markets persist for a wide variety of temperate zone products as well as competing tropical products. National support policies, with a high incidence of protection, continue to result in some instances in excess production and the accumulation of surplus stocks, which are often disposed of in world markets with the help of subsidies.

The progress towards liberalization of imports from developing countries has been very limited to date. Implementation of the Generalized System of Preferences (GSP) agreed at the Second Session of UNCTAD in 1968 has been slow, and most of the growth which can be attributed to it has been in exports from a small number of beneficiaries. Import barriers thus remain high, and are compounded by the widespread use in the developed countries of support measures favouring domestic production and by competition from synthetics. Moreover, while imported raw materials are usually admitted into the industrialized countries free of tariff or at very low duties, manufactures made from the same primary products bear tariffs which rise with the degree of processing and may also be subject to quantitative restrictions including import quotas and "voluntary" export restraints, such as those relating to textiles. The only exceptions are the products of processing industries which have already declined in the developed countries, such as jute goods, coir products, and rough-tanned or finished leather.

Progress has similarly been slow in the discussions and negotiations on an overall Integrated Programme for Commodities, which has been a major focus of UNCTAD since its Fourth Session in Nairobi in May 1976. The first part of the negotiating conference on a Common Fund, held in March-April 1977, reached no agreement and the second part, which was held in November-December 1977, was suspended following failure to agree on the capital structure of a fund and the scope of its utilization. Negotiations were

reconvened in November 1978, but closed without adopting an agreed text. Of the meetings on individual agricultural commodities, for which FAO is providing intensive technical support, only those on rubber have made substantial progress towards the negotiation of an international agreement, although work toward international agreements on tea, jute and hard fibers has proceeded beyond the preliminary stage.

The economic provisions of the International Coffee Agreement were not in force because market prices were still higher than the floor price. Negotiations regarding the establishment of an agreed price range which would make it operative were in progress in the International Coffee Council. The International Cocoa Agreement was also not fully operative because prices were above the established price range and the buffer stock is non-existent. A Preparatory Committee of the International Cocoa Council met in late 1978 to prepare a draft of the Third Agreement to be negotiated in early 1979. The new International Sugar Agreement provides for buffer stock operations and the holding of special stocks (reinforced by export quotas if necessary) to protect an agreed price range. These economic provisions came into force in mid 1978. However, the EEC is not a party to the Agreement, and its ratification has been delayed in some countries, notably the United States. Negotiations for a new international grains agreement continued in 1978, and considerable progress was made concerning a new Food Aid Convention and a coarse grains consultative arrangement.

As regards the seventh round of the GATT multilateral trade negotiations, which began in 1975, the delegations of some major trading nations, including the United States, the EEC, Canada and Japan, reached a framework of understanding in July 1978 on the principal elements of a comprehensive package which they considered sufficient to ensure a successful conclusion of the negotiations in accordance with the objectives of the Tokyo Declaration, and to provide substantial benefits for developing countries. This package was to be finalized by the end of 1978. The developing countries, however, considered that the statement regarding the framework of understanding did not adequately reflect certain issues of major concern to them and that it omitted others, notably tropical products, the principle that safeguards should not discriminate against developing countries, the right of these countries to use subsidies, and the elimination of quantitative restrictions on products of major interest to them. Furthermore, it did not accurately reflect the current state of negotiations on key issues such as wheat, meat and dairy and other products, where offers on tariff and non-tariff measures were far from the objectives outlined in the Tokyo Declaration. Finally, the developing countries expressed concern at the lack of concessions in some sectors of great importance to them, including textiles and other products, and at their exclusion from the consultations leading to the framework of understanding.

The FAO Intergovernmental Group on Bananas set up a Working Party on the Elements of an International Agreement on Bananas, which might, *inter alia*, provide for the establishment of production and export goals compatible with world banana requirements, and for a suitable price mechanism. Under the informal price arrangement for sisal and henequen, operated by the FAO Intergovernmental Group on Hard Fibres, quotas were temporarily suspended in March 1978 to allow for subsequent changes. At the same time, the price arrangement was extended to abaca, with provisions for consultations should prices move outside the indicative price range.

DEVELOPMENT ASSISTANCE

During 1977 there was a sharp recovery in official commitments ^{1/} of external assistance to agriculture (OCA) from all sources (except the centrally-planned countries) for all activities covered under the OECD "broad" definition of agriculture ^{2/}. OCA rose to an estimated US\$ 6,706 million from \$ 5,043 million in 1976 and the previous highest level of \$ 5,453 million to 1975 (Table 1-28). This represents an increase in constant prices of 22% over the low 1976 figure and 12% above 1975.

The World Bank continues to be the largest single source of external funds for direct investment in agriculture, contributing 40% of total OCA in 1977. World Bank loans and interest-free credits from the International Development Association (IDA) approved for agriculture in 1977 were 45% above the average level of the previous three years. They totalled \$ 2,687 million in 1977, of which IDA commitments were \$ 814 million. In the first ten months of 1978, approved World Bank and IDA loans and credits to agriculture in the "broad" definition increased to \$ 3,263 million compared with \$ 2,153 million in the comparable period of 1977.

Just over half of the increase in OCA came from the multilateral agencies, their share of the total being 56% in 1977 or about the same as in 1975 and 1976. The World Bank contributed \$ 397 million and IDA \$ 362 million of the additional \$ 912 million committed by the multilateral agencies in 1977. Bilateral lending by DAC member countries and the EEC also rose substantially, by an estimated \$ 780 million. All the regional development banks, as well as OPEC member countries on a bilateral basis, also expanded their lending to agriculture. FAO committed \$ 16 million in 1977 under the new Technical Cooperation Programme (TCP), and \$ 43 million under Trust Fund technical assistance.

OCA in the OECD "narrow" definition (roughly equivalent to food production), which rose only slightly from \$ 3,251 million in 1975 to \$ 3,390 million in 1976, increased to \$ 4,807 million in 1977 (Table 1-29). This represents an increase in constant prices of 30% over 1976 and as much as 34% over the low 1975 figure. Concessional loans shared in this general movement with an increase in constant prices of 12% in 1976 and 20% in 1977. Their share of total commitments varied between 66% (1975 and 1977) and 71% (1976).

Despite the considerable improvement in OCA, in the "narrow" definition it still amounted to little more than half of the requirements estimated by the World Food Council (WFC) as \$ 8,300 million (at 1975 prices). The shortfall in assistance on concessional terms was of the same proportion. The establishment of the International Fund for Agricultural Development (IFAD) in December 1977 is one of the major achievements so far in response to the World Food Conference, but the commitment of its initial capital of just over \$ 1,000 million in 1978-80 can obviously do little to bridge a gap of such magnitude.

The major requisite for bridging this gap is of course a substantial expansion of external assistance to all sectors. A larger share of the total would, however, still be needed for agriculture, even if it were raised to the International Development Strategy (IDS) target of 0.7% of DAC Member Countries' GNP (more than double the current proportion). More bilateral donors need to follow the example of the multilateral agencies in giving much greater priority to agricultural and rural development ^{3/}. The replenishment of IFAD's resources should also receive priority attention during 1979-80. A vital part in the expansion of agricultural investment is already played by FAO in its technical assistance, and its pre-investment work for both bilateral and multilateral donors.

1/ Data on flow of external resources to agriculture on a net disbursement basis are not yet available.

2/ Including rural development and rural infrastructure, agro-industries, fertilizer production, and regional and river projects as part of the agricultural sector.

3/ During 1973-76 agriculture represented about 14% of the total commitments of development assistance. The figures were almost 30% for the multilateral agencies as a whole, compared with only 11% for the DAC bilateral programmes. In 1977, however, 14% of DAC bilateral commitments went to the agricultural sector, compared with only 10% in 1976.

Table 1-28. Official commitments of external assistance to agriculture in the OECD
"broad" definition 1/

Source	1974	1975	1976	1977 ^{2/}
	..... US\$ million			
<u>Value</u>				
Multilateral agencies ^{3/}	1,983	2,988	2,845	3,742
DAC bilateral ^{4/}	1,868	1,730	1,836	2,545
OPEC bilateral	336	735	362	419
TOTAL	4,187	5,453	5,043	6,706
In constant 1975 prices ^{5/}	4,704	5,453	4,993	6,096
Annual change %		+ 16	- 8	+ 22
	 %		
<u>Distribution</u>				
Multilateral agencies	47	55	57	56
DAC bilateral	45	32	36	38
OPEC bilateral	8	13	7	6
TOTAL	100	100	100	100

Source: OECD and FAO.

1/ Including rural development and rural infrastructure, agro-industries, fertilizer production and regional and river projects. - 2/ Preliminary. - 3/ African Development Bank and Fund (AfDB/ADF), Arab Bank for Economic Development in Africa (ABEDA) from 1976, Arab Fund for Economic and Social Development (AFESD), Asian Development Bank (AsDB), Inter-American Development Bank (IDB), Islamic Development Bank in 1977, OPEC Special Fund in 1977, FAO Technical Cooperation Programme (FAO/TCP) in 1977, UNDP/FAO, World Bank (IBRD/IDA). - 4/ Including EEC. - 5/ Deflated by the United Nations Unit Value Index for the Export of Manufactures.

Another prerequisite is that the developing countries themselves should also give higher priority to agriculture both in their own domestic investment programmes and in negotiating external assistance. The failure of some developing countries to give food production sufficient priority has undoubtedly discouraged potential donors, particularly as some kind of balance is usually required between external and domestic components of an investment project. As discussed later, information on government expenditure in agriculture, although scanty, is slowly improving. Already there is evidence to show that in some countries such expenditure appears to be far from proportionate to the sector's share of the GNP, although this is not in itself sufficient to indicate the adequacy of allocations in relation to requirements.

Table 1-29. Official commitments of external assistance to agriculture in the OECD
"narrow" definition 1/, total and concessional 2/

Source	1974	1975	1976	1977 ^{3/}
..... US\$ million				
<u>Total</u>				
Multilateral agencies	1,491	1,783	1,883	2,747
DAC bilateral ^{4/}	1,505	1,236	1,418	1,960
OPEC bilateral	103	232	89	100
TOTAL	3,099	3,251	3,390	4,807
In constant 1975 prices ^{6/}	3,482	3,251	3,356	4,370
Annual change %		- 7	+ 3	+ 30
..... %				
<u>Concessional</u> ^{2/}				
Multilateral agencies	642	688	1,041	1,248
DAC bilateral ^{4/}	1,348	1,217	1,280	1,790 ^{5/}
OPEC bilateral	103	232	89	100 ^{5/}
TOTAL	2,093	2,137	2,410	3,138
In constant 1975 prices	2,352	2,137	2,385	2,853
Annual change %		- 9	+ 12	+ 20
Concessional as % of total	68	66	71	66

Source: OECD and FAO.

1/ Mainly relating to food production.- 2/ All grants and loans with a minimum grant element of 25%. - 3/ Preliminary. - 4/ Including EEC. - 5/ Estimates based on partial data and past trends. - 6/ Deflated by the United Nations Unit Value Index for the Export of Manufactures.

A major problem in many developing countries, especially the poorest, remains the need for more assistance (including training) in the identification and preparation of agricultural investment programmes and projects. Inadequate capacity in this area has led to a big gap between commitments and disbursements which is probably widening. FAO is giving increased emphasis to assistance of this kind but its capacity is limited. New approaches to development assistance will also be needed if it is to play a greatly expanded role, especially in the poorest countries which need greater flexibility in the types of financing, in programme and sector assistance, in balance of payments assistance, budgetary support, and recurrent cost support for local development finance and financing institutions. However, it must be emphasized that the problem of absorptive capacity in the developing countries is dwarfed by the need for a greatly enlarged flow of external resources.

A paramount need is for considerably expanded external assistance on concessional terms for the agriculture of the poorest developing countries. The poorest countries as a group have so far received much less assistance for agriculture per caput than the other developing countries. However, the World Bank in particular is now giving increasing attention to this problem, and IFAD plans that the largest proportion of its resources should go to these countries on concessional terms. Many bilateral and multilateral donors have indicated that a shift is taking place in their commitments for agriculture, particularly concessional lending, in favour of the poorest countries and small farmers.

Preliminary information for 1977 from both types of donor shows that official commitments were probably made available to the MSA countries on slightly less favourable terms than in 1976. Although the average grant element of Official Development Assistance (ODA) from DAC members and the EEC was around 86% in 1977, compared to 84% in 1976, only 85% of multilateral capital assistance loans were committed in 1977 on ODA terms compared to 95% in 1976, indicating a hardening in lending terms from this important source.

Further, an analysis of recent flows of commitments to agriculture in the "broad" OECD definition shows that the poor, densely-populated countries of Asia have generally continued to receive far less per caput than the relatively better-off developing countries (Table 1-30). In sharp contrast, poor African countries have continued to receive relatively large per caput commitments which partly reflect high per caput development costs in a number of sparsely populated African countries. In 1977, for instance, 11% of total commitments to agriculture went to the 22 poor African countries included in Table 1-30, which had only 6% of the total population of the developing countries. The 28% of the population living in the seven poor Asian countries, in contrast, received only 16% of the total.

Although total commitments to the 29 poor African and Asian countries increased from \$ 1,074 million in 1973-74 to \$ 1,171 million in 1976 ^{4/} and to \$ 1,400 million in 1977 (at 1975 prices), commitments to the remaining developing countries rose at an even faster rate. As a result, the share of these poor countries fell from 35% in 1973-74 to 27% in 1977. A large part of the commitments to this group of countries was, however, on a concessional basis, in contrast to the better-off countries where most of their increased borrowing was on non-concessional or commercial terms.

^{4/} Comparable data are not yet available for 1975.

Table 1-30. Official commitments of external capital assistance to agriculture ^{1/}
for selected countries in African and Asia (with per caput GDP below
\$ 300 in 1975) and in other developing countries

	Africa (22 countries) ^{2/}	Asia (7 countries) ^{3/}	Other developing countries	Total developing countries
..... US\$ million				
A. <u>At current prices</u>				
1973-74 ^{4/}	346	524	1,597 ^{5/}	2,467
1976 ^{6/}	557	626	2,886	4,069
1977 ^{6/ 7/}	608	943	4,200	5,751
B. <u>At 1975 prices</u> ^{3/}				
1973-74 ^{4/}	427	647	1,972 ^{5/}	3,046 ^{5/}
1976 ^{6/}	551	620	2,858	4,029
1977 ^{6/}	552	857	3,819	5,228
.....Per caput US\$.....				
C. <u>At 1975 prices</u> ^{8/}				
1973-74 ^{4/}	2.46	0.80	1.06 ^{5/}	1.07 ^{5/}
1976 ^{6/}	2.99	0.73	1.48	1.36
1977 ^{6/ 7/}	2.92	1.00	1.93	1.73

Source: 1973-74: Consultative Group on Food Production and Investment in Developing Countries (CGFPI); 1976 and 1977: OECD and FAO.

^{1/} In the OECD "broad" definition. - ^{2/} Benin PDR, Burundi, Central African Empire, Chad, Ethiopia, The Gambia, Guinea, Kenya, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Sudan, Tanzania United Republic, Togo, Uganda, Upper Volta, Zaire. - ^{3/} Afghanistan, Bangladesh, Burma, India, Nepal, Pakistan, Sri Lanka. - ^{4/} DAC bilateral and EEC; ODA only; OPEC bilateral, World Bank and Regional Development Banks. - ^{5/} Latin America: 1973-75 average. - ^{6/} DAC bilateral and EEC; OPEC multilateral (but not bilateral); World Bank, Regional Development Banks. - ^{7/} Preliminary. - ^{8/} Deflated by United Nations unit value index for the export of manufactures.

INVESTMENT IN AGRICULTURE

As already noted, there has been some improvement in the information, obtained mainly from OECD, on commitments of external resources for agriculture. But there is still very little information on the actual disbursement of these resources, or on internal capital and recurrent expenditures.

As part of its response to this situation FAO is taking action in two related fields. First it is examining the whole system for collecting information on economic accounts for agriculture, which so far has met with little response from the developing countries. A radical improvement in this direction would enable FAO to exercise its responsibilities as the main provider of information on the flow of internal resources for agriculture. A new statistical questionnaire has been issued to Member Governments requesting information on both capital and recurrent expenditure on agriculture by central governments during 1973-77. This enquiry will be put on an annual basis for later years. Second, FAO is carrying out an analysis of the data on gross fixed capital formation in agriculture which is available in the United Nations system of national accounts for 17 developing countries for the period 1963-75. FAO is also working on World Bank data of public capital and recurrent expenditure on agriculture in 53 developing countries in 1967-73.

NATIONAL ACCOUNTS STATISTICS

The data available in the national accounts statistics, published by the United Nations, on total investment (public and private, domestic and external) in agriculture in a number of countries, vary considerably in their accuracy and completeness from one country to another, but they make possible some preliminary observations.

There is a very wide range in investment in agriculture per unit of land and labour, both between the developed and the developing countries, and within the two groups of countries. In the developed countries investment per hectare of agricultural land in 1970-74 varied from only \$ 10 in the highly extensive agriculture of Australia to over \$ 1,000 in Japan's intensive agriculture (Table 1-31). In the developing countries too investment per hectare mainly reflects the intensity of agricultural production, but the range (from less than \$ 1 in Ethiopia to \$ 150 in the Republic of Korea) is at a very much lower level. Investment per agricultural worker in the developed countries varied from about \$ 80 in Portugal and South Africa to more than \$ 3,000 in the United States, and in the developing countries from \$ 1 in Kenya to over \$ 100 in Costa Rica.

Table 1-31 shows the changes in the role of agriculture among countries at different levels of development in 1970-75. As might be expected, as income (GDP) per caput increases, the share of agriculture in total GDP decreases and so does its share of gross fixed capital formation. However, the rates of decline of these two shares are not equal. As a result, the proportion of agricultural GDP invested in this sector tends to rise with the level of per caput income.

The data in Table 1-32 provide further confirmation of this relationship. With the rising level of income, agriculture's share of gross fixed capital formation declines less than proportionately to its share of GDP or of the labour force. Indeed in some developed countries the proportion of gross fixed capital formation going to agriculture is much higher than this sector's share of GDP or even of the labour force. The cross-country data thus provide some evidence that economic development is associated with a relative intensification of the investment rate in the agricultural sector.

As in any cross-country analysis, these associations have to be interpreted with caution, avoiding any inference of causal relationships. Indeed, the question of adequacy of the level of investment allocations in agriculture can be meaningfully analyzed only in the context of each developing country, taking into account its framework of policies, plans and programmes. The only conclusion which can be drawn in a preliminary way

Table 1-31. Gross fixed capital formation in agriculture, selected countries, annual average, 1970-75

	<u>Total</u>	<u>Per hectare</u>	<u>Per agricultural worker</u>	<u>Per caput GNP</u>	<u>Gross fixed capital formation in agriculture as proportion of agricultural GDP</u>	<u>Agriculture's share of Gross fixed capital formation</u>	<u>GDP</u>
	Million US dollars ^{3/}	1/ 2/	US dollars ^{3/}			%	
<u>Developing Countries</u>							
Costa Rica ^{4/}	28	55	113	960	10	11.1	19.9
Cyprus	2	5	19	1,240	12	8.5	15.6
Egypt ^{4/}	22	0	4	260	5	11.8	27.7
El Salvador ^{5/}	7	10	10	460	2	4.3	26.4
Ethiopia ^{5/}	24	-	3	100	3	13.1	49.2
India ^{4/}	1,984	12	12	140	7	21.5	43.1
Iraq ^{4/}	11	2	9	1,250	14	9.7	12.4
Kenya	5	3	1	220	7	9.6	27.9
Korea, Rep. of	364	150	64	560	9	9.4	26.1
Jamaica ^{4/}	13	48	75	1,110	13	4.4	7.4
Mauritius	10	90	102	610	9	10.7	30.4
Pakistan ^{4/}	198	10	18	160	7	16.3	32.2
Papua, New Guinea ^{5/}	7	21	6	470	3	3.8	31.2
Rhodesia ^{4/}	22	9	17	550	14	11.5	15.8
Syrian Arab Rep.	94	17	100	720	17	16.1	20.4
Thailand	207	12	14	350	7	10.0	31.0
Tunisia	12	3	19	730	11	9.5	18.7
<u>Developed countries</u>							
Australia ^{5/}	457	10	1,133	5,700	22	5.5	6.7
Belgium	232	264	1,514	6,270	17	2.6	3.3
Canada	1,605	37	2,605	6,930	33	6.1	4.1
Denmark	300	112	1,421	6,810	19	6.4	7.5
Finland	319	121	859	5,420	18	7.0	11.2
France	2,550	136	1,045	5,950	20	5.1	6.0
Greece	384	94	234	2,340	14	9.9	16.8
Italy	1,888	153	632	2,810	17	6.7	8.4
Israel	127	294	1,253	3,790	23	4.1	4.9
Japan	5,778	1,037	681	4,450	32	4.4	5.7
Netherlands	515	612	1,513	5,750	28	4.6	5.5
Norway	297	375	2,048	6,760	31	5.9	5.9
Portugal ^{4/}	85	23	84	1,570	6	4.9	14.8
Sweden	448	149	1,883	8,150	24	4.6	4.2
South Africa	429	30	157	1,270	21	6.2	8.6
United Kingdom	987	142	1,491	3,780	25	3.2	2.5
United States	8,156	39	3,133	7,120	20	3.7	3.3

Source: Based on material in United Nations Yearbook of National Accounts 1976 (and earlier years), and FAO data.

^{1/}Arable land and permanent crops. - ^{2/}Area, labour force and per caput GNP based on 1975 data. - ^{3/}National currencies have been converted into U.S. dollars using World Bank Tables (1976). - ^{4/}1970-74. - ^{5/}1970-72.

Table 1-32. Share of agriculture in gross fixed capital formation related to its share of gross domestic product and of the total labour force, selected countries, annual average, 1970-75

<u>Developing countries</u>	Related to share of GDP (x 100)	Related to share of labour force (x 100)
Syrian Arab Republic	79	33
Iraq <u>1/</u>	78	22
Rhodesia <u>1/</u>	73	19
Jamaica <u>1/</u>	60	18
Costa Rica <u>1/</u>	56	29
Cyprus	55	23
Tunisia	51	21
Pakistan <u>1/</u>	51	29
India <u>1/</u>	50	32
Egypt <u>1/</u>	43	23
Korea, Republic of	36	21
Mauritius	35	35
Kenya	34	12
Fiji	34	17
Thailand	32	13
Ethiopia <u>2/</u>	27	16
El Salvador <u>2/</u>	16	8
Papua New Guinea <u>2/</u>	12	5
<u>Developed countries</u>		
Canada	149	94
United Kingdom	128	133
United States	112	132
Sweden	110	71
Norway	100	62
France	85	47
Denmark	85	72
Netherlands	84	70
Israel	84	50
Australia <u>2/</u>	82	81
Italy	80	46
Belgium	79	69
Japan	77	30
South Africa	72	21
Finland	63	42
Greece	59	24
Portugal <u>1/</u>	33	17

Source: Based on material in United Nations Yearbook of National Accounts 1976 (and earlier years) and FAO data.

1/ 1970-74. - 2/ 1970-72.

Note: The calculation used in this table is as follows: In, e.g., Syrian Arab Republic agriculture's share of gross fixed capital formation averaged 16.1% during 1970-75 and its average share of gross domestic product in this period was 20.4%. When these two shares are related to each other (and multiplied by 100): $\frac{16.1}{20.4} \times 100$, the value 79 is obtained, as shown in column 2. Similarly, in 1970-75, 49.3% of the Syrian Arab Republic's labour force worked in agriculture while only 16.1% of GFCF went to that sector, hence: $\frac{16.1}{49.3} \times 100$ gives the value 33 shown in column 3.

is that agriculture's share in gross fixed capital formation in most developing countries should rise from its present levels, particularly in relation to this sector's share of GDP and of the labour force. To throw light on this point, the available data (for 14 developing and 15 developed countries) have been analyzed in Table 1-33, which presents the annual average growth rates of gross fixed capital formation separately for agriculture and the whole economy and for the periods of 1963-69 and 1970-75.

In both groups of countries the rates and pattern of growth of capital formation appear to have changed significantly but somewhat contrastingly between the two periods. Whereas during 1963-69 capital formation in agriculture in most (12) of the developed countries had grown at rates lower than total capital formation, during 1970-75 the growth rate of the former had accelerated and surpassed that of the latter in ten of these countries. This change took place in spite of a slowing down of total capital formation in seven countries. In general, therefore, there has been an absolute as well as relative (to other sectors) strengthening of the investment rate in agriculture during 1970-75 in most developed countries.

Less than half of the developing countries had experienced a slackening of the growth of total capital formation between the two periods. But growth of capital formation in agriculture had slowed down in more of these countries (seven out of 12). What is more disturbing is that in each period there were six countries (not the same ones) in which agricultural capital formation had been declining (negative growth rate). In nearly all these countries, agricultural production had grown during 1970-77 at rates well below the average for all developing countries.

The positive side of the picture is presented by five countries where the growth of capital formation in agriculture had accelerated and surpassed that of total capital formation between these two periods. In three of these countries, the acceleration of the rate of agricultural investment had been achieved in spite of a slowing down of the growth of total investment, which indicates a shift of priorities in favour of agriculture. It is significant that these countries had achieved agricultural production increases during 1970-77 at annual rates of 4% or more (See Table 1-4).

In the absence of relevant data for more recent years, it is not possible to say whether the rate of investment in agriculture in the developing countries may have improved following the easing of the critical food, fertilizer and balance of payments situation of 1972-74. However, there is some encouraging evidence from India, which indicates that a sharp increase in agricultural investment took place between 1974/75 and 1976/77 (Table 1-34). In this period, net domestic capital formation in agriculture is estimated to have risen from 7,990 million rupees to 13,640 million rupees (at 1974/75 prices), or by 71%, raising agriculture's share of gross domestic capital formation from 8.4% to 13.2%.

PUBLIC CAPITAL EXPENDITURE ON AGRICULTURE

Information on public capital expenditure on agriculture is available in the World Bank Tables covering the period 1967-73. More recent material relating to 1974-76 will be available in late 1979. Although the World Bank data relate to a slightly different period from that discussed above on the basis of the United Nations system of national accounts, they illustrate similar trends. Thus during 1967-73, the share of agriculture in public capital expenditure increased in only 20 out of 57 developing countries, improved little or remained unchanged in nine and declined in 28. In constant prices, public capital expenditure in agriculture in this seven year period increased in only 17 out of 45 developing countries ^{5/}and actually fell in 28 (Table 1-35).

^{5/} The lower total is explained by lack of price data for 12 of the 57 countries.

Table 1-33. Annual average real growth rates in gross fixed capital formation, total and in agriculture 1/ selected countries

	<u>1963-69</u>		<u>1970-75</u>	
	Total	Agri- culture	Total	Agri- culture
 %			
<u>Developing countries</u>				
Costa Rica	8.7 ^{2/}	14.9	8.8 ^{3/}	-14.0 ^{3/}
Egypt	...	-11.8	6.5 ^{3/}	- 3.4 ^{3/}
Guatemala	8.5	- 3.4	8.5 ^{3/}	13.1 ^{3/}
India	2.8 ^{2/}	5.7 ^{2/}	1.8 ^{3/}	2.9 ^{3/}
Iran	13.4 ^{2/}	11.3 ^{2/}	5.5 ^{3/}	16.1 ^{3/}
Iraq	4.1	13.7	14.2 ^{3/}	-1.9 ^{3/}
Jamaica	14.6 ^{4/}	- 3.7 ^{4/}	- 5.8 ^{3/}	- 5.9 ^{3/}
Kenya	16.9 ^{4/}	8.9 ^{4/}	4.0	2.2
Korea, Republic of	25.7	11.9	11.4 ^{3/}	18.8 ^{3/}
Pakistan	- 2.3	- 0.3	1.8 ^{3/}	-13.7 ^{3/}
Syrian Arab Republic	12.1	- 0.5 ^{6/}	15.6	1.0
Tanzania	9.6 ^{6/}	3.1 ^{6/}	...	- 1.4 ^{7/}
Thailand	...	...	9.8 ^{7/}	8.3 ^{7/}
Tunisia	- 0.5	- 0.1	12.8	17.1
<u>Developed countries</u>				
Belgium	4.7	3.7	3.9	7.8
Canada	5.1	- 0.4	6.8 ^{3/}	13.5 ^{3/}
Denmark	5.8	- 6.4	3.7 ^{3/}	20.0 ^{3/}
Finland	3.1	0.7	7.6	2.0
France	6.3	5.1	3.7	7.2
Greece	12.7	7.2	3.5	2.4
Israel	1.5	- 0.3	11.1	7.7
Italy	4.7	1.6	3.0	1.2
Japan	15.0	17.0	5.7	7.5
Netherlands	6.8	4.7	- 0.1	11.7
Norway	2.4	3.7	8.9	2.2
Portugal	7.1	7.9	9.3	2.8
Sweden	3.1	0.2	0.8	7.2
United Kingdom	4.3	1.2	2.4	6.2
United States	4.2	1.7	2.3	6.5

Source: Based on material in United Nations Yearbook of National Accounts 1976 (and earlier years).

1/ Current values deflated by World Bank Country Inflation Indicators (World Development Report 1978, August 1978, Table 1), based on 3-year moving average where appropriate - 2/ 1966-69. - 3/ 1970-73. - 4/ 1965-69. - 5/ 1970-71. - 6/ 1967-69. - 7/ 1971-74. - 8/ 1961-69.

Table 1-34. Net domestic capital formation in India, total and in agriculture, at factor cost

	1974-75 ^{1/}	1975-76 ^{1/}	1976-77 ^{2/}
	..... Million rupees		
<u>In current prices</u>			
Agriculture	7,990	9,480	13,310
Total	95,140	98,870	100,900
<u>In 1974-75 prices ^{3/}</u>			
Agriculture	7,990	9,875	13,640
Total	95,140	102,990	103,380
 %		
(1) Agriculture as % of total investment	8.4	9.6	13.2
(2) Agriculture's share of GNP	45	46	43
(3) Ratio $\frac{(1)}{(2)} \times 100$	19	21	31

Source: Reserve Bank of India Bulletin, April 1978, p. 265 and 268.

^{1/} Provisional. - ^{2/} Quick estimate. - ^{3/} Deflated by World Bank data.

It also appears that poorer countries tended to put agriculture much lower on their priority lists than warranted by its importance. Thus, in countries where agriculture contributed an average of 40% or more of GDP, public capital expenditure on agriculture was less than one third of the share indicated by its contribution to GDP (Table 1-36). Conversely, in the relatively better-off oil-producing countries, agriculture received far more public capital expenditure than its share of GDP appeared to indicate.

Table 1-35. Annual real growth in government capital expenditure on agriculture, 45 developing countries, 1967-73

	Annual change %	Number of countries
<u>Plus</u>	20 and above	3
	15.0 to 19.9	3
	10.0 to 14.9	5
	5.0 to 9.9	3
	0 to 4.9	3
<u>Minus</u>	4.9 to 0	5
	9.9 to 5.0	8
	14.9 to 10.0	8
	19.9 to 15.0	3
	20 and above	

Source: Based on material in World Bank Tables.

Table 1-36. Relationship between share of agriculture in government capital expenditure and GDP, 55 developing countries, 1967-73

Agriculture's share of GDP %	Number of countries	Ratio between agriculture's share of capital expenditure and GDP x 100 (unweighted average)
Below 10	7	294
10-20	12	93
20-30	11	77
30-40	13	54
40 and above	12	31

Source: Based on material in World Bank Tables.

PUBLIC CURRENT EXPENDITURE ON AGRICULTURE

Preliminary analysis of public current expenditure on agriculture, based on data in the World Bank Tables, does not appear to support the thesis that the relatively discouraging rates of public capital expenditure on agriculture in many developing countries during 1967-73, reviewed above, were associated with a marked shift of public spending towards current items such as fertilizer, food subsidies, etc. Current public expenditure on agriculture increased in constant prices in only eight of the 18 countries where public capital expenditure on agriculture also increased between 1967 and 1973. In the 25 countries where capital spending on agriculture declined during this period, current spending also declined in as many as 19 countries.

During this seven year period, the share of agriculture in total public current expenditure increased in only 19 out of 53 developing countries 6 (rising moderately in 12 and sharply in seven), improved little or remained unchanged in 11 and declined in 23 (falling slightly in 12, moderately in 10 and sharply in one). In constant prices, public current expenditure in agriculture increased in only 11 out of 43 developing countries and fell in 32.

As with public capital expenditure, the poorest countries which are most heavily dependent on agriculture also contributed least to current expenditure on agriculture in relation to its share of GDP (Table 1-37). Only in the higher-income countries did the share of total public current expenditure for agriculture come close to its share in GDP.

The World Bank data also show that there are wide differences between individual countries in the proportion of total public expenditure on agriculture allocated to current expenses, from as little as 1% in Afghanistan to as much as 87% in Rwanda (in 1972). Most countries (60%) allocated 40% or more to current expenditure, with a third allocating as much as 60% or more.

Table 1-37. Relationship between share of agriculture in government current expenditure and GDP, 52 developing countries, 1967-73

Agriculture's share of GDP %	Number of countries	Ratio between agriculture's share of capital expenditure and GDP x 100 (unweighted average)
Below 10	6	94
10-20	10	21
20-30	12	19
30-40	12	18
40 and above	12	12

Source: Based on material in World Bank Tables.

6 The different totals are explained by lack of comparable data.

NATURAL RESOURCES AND ENVIRONMENT

The State of Food and Agriculture 1977 included FAO's first preliminary benchmark survey of the state of natural resources and the human environment for food and agriculture. Additional information, based on recent FAO surveys, is now available on soil resources and on tropical forests.

SOIL RESOURCES

Previous attempts to appraise the potential of the world's land resources have been handicapped by inadequate data for some regions, lack of a uniform approach, and non-specificity as to the type of land use envisaged. The FAO study on potential rainfed land use by agroecological zones is designed to overcome these shortcomings and to provide more precise data for developing countries. The study uses the FAO/UNESCO Soil Map of the World and a climate resource inventory specially generated for the study to inventory soil/climate units, and matches these units with the soil and climatic requirements of 11 major crops at two input levels, to provide crop specific estimates of land suitability.

Provisional results for Africa indicate, for example, that the warm tropical lowland areas in Africa could provide 397 million ha for cassava production or 405 million ha for sweet potato production. Consideration of only the climatically most suited crop in the various growing periods and zones (e.g. millet in drier zones, cassava in wetter zones) indicates that a total of some 625 million ha in Africa are to some degree suitable for rainfed production of one or more of the 11 major crops. While this figure is much greater than the current 195 million ha of arable land, caution must be exercised to avoid over-estimating the land resources available for the expansion of arable cropping. Not only is the uncultivated arable land unevenly distributed, but a major part of it is in the warm humid tropics, where the risk of land degradation is high. It is necessary to develop appropriate farming systems adapted to the ecological and socio-economic conditions, with a view to ensuring sustained agricultural production. Much of the required increase in rainfed food production in Africa will need to come from increasing yields on the land already under cultivation, through the application of sound farming systems, including technologically appropriate soil and water conservation practices.

Land is vulnerable to the adverse effect of different forms of soil degradation. Soil and water conservation measures, suited to the varying land conditions, have to be determined to ensure sustained food supplies for the increasing population. Accordingly, an associated study to the one of the agroecological zones, the FAO/UNEP Assessment of Soil Degradation, was initiated in 1976, and its first phase was completed in December 1978. This study compiles and interprets existing data on the extent and intensity of soil and type of land utilization. A framework of a soil degradation assessment methodology has been proposed, which provides guidelines to technical field workers for assessment activities at the country level. A Provisional Map of Soil Degradation Risks for Africa North of the Equator and for the Near and Middle East has been prepared at the 1:15 million scale, together with an explanatory text which describes both present and potential soil degradation risks in the study area.

TROPICAL FORESTS

FAO has reassessed the recent and expected situation of the tropical forest resource with respect to the production of wood for industrial purposes. The assessment was carried out on a country by country basis through the compilation and interpretation of all available documentation, including a questionnaire sent to some tropical countries.

The area of natural tropical forest at the end of 1975 was assessed by type, state of management and "operability", and the future area projected at five-year intervals up to the year 2000 (Table 1-38). Tropical deforestation is estimated as 142 million ha in 25 years. This appears less alarming than the figures generally quoted, such as the suggestion that 50,000 ha are cleared every day.

Table 1-38. Areas of natural forests in tropical countries, 1975 and projections to 2000

	<u>Africa</u>		<u>America</u>		<u>Asia and Oceania</u>		<u>Total</u>	
	1975	2000	1975	2000	1975	2000	1975	2000
	..... Million ha							
<u>Closed^{1/} hardwood^{2/} forests</u>	202	187	628	562	291	242	1,121	991
Operable ^{3/}	134	119	497	435	188	142	819	696
Inoperable ^{3/}	68	68	131	127	103	100	302	295
<u>Softwood ^{4/} forests</u>	1.9	1.7	31.8	21.6	11.9	10.7	46	34
Operable ^{3/}	0.4	0.2	26.0	16.7	8.7	7.6	35	24
Inoperable ^{3/}	1.5	1.5	5.8	4.9	3.2	3.1	11	10
Total operable ^{3/} closed ^{1/} forests	134	119	523	452	197	150	854	720
Total closed ^{1/} forests	204	189	660	584	303	253	1,167	1,025

Note: Country coverage is Africa south of Sahara without Lesotho, South Africa, Swaziland; Latin America without Argentina, Chile, Uruguay; Asia and Oceania from Pakistan eastwards without Australia, China, Japan, Korea (D.P.R.), Korea (Rep. of), Mongolia, New Zealand.

^{1/} The distinction between closed and open is made only for vegetation types with broad-leaved species, and relates more to the types than to a fixed percentage of tree cover. - ^{2/} Predominantly broadleaved over large areas. - ^{3/} Inoperable forests are those reserved for non-productive purposes, permanently unproductive (of industrial wood), or inoperable because of the terrain (e.g. steepness, swampiness); the concept is therefore wider than economic accessibility, since distance to consumption or export centres is not considered. - ^{4/} Predominantly coniferous over large areas.

The present rate of deforestation is expected to slow down, not so much because of improved land use, as because there will be little pressure on the "core" of tropical hardwood forests (north of the Amazon, and in the Congo Basin) after most of the more inhabited parts have been converted to non-forest uses. The "operable" forests are much more prone to depletion than the permanently unproductive or inoperable ones, since the latter are on terrains that are unsuitable for agriculture. The proportion of undisturbed forests in the remaining operable forests will decrease, and temporarily unproductive, logged-over forests will represent an increasing part of them. The expected depletion of the small area of softwood forest is more serious in relative terms (almost a quarter) than that of hardwood forests, although much smaller in absolute terms.

Industrial plantations were similarly assessed at the end of 1975, and their area projected up to 2000 (Table 1-39). The total afforestation effort expected in 25 years (the addition of less than 12 million ha) is very small in relation to the expected deforestation of 142 million ha. However, this new afforestation is in addition to the replanting of logged-over plantations, the reforestation of some natural forests, and plantations for non-industrial purposes, such as fuelwood, charcoal and fruit trees.

Table 1-39. Areas of industrial plantations^{1/} in tropical countries, 1975 and projections to 2000

	<u>Africa</u>		<u>America</u>		<u>Asia and Oceania</u>		<u>Total</u>	
	1975	2000	1975	2000	1975	2000	1975	2000
	..... Million ha							
<u>Hardwood plantations</u>	0.51	1.05	0.94	4.54	1.63	4.32	3.08	9.91
Low-yielding ^{2/}	0.40	0.64	0.15	0.73	1.37	2.94	1.92	4.31
High-yielding ^{2/}	0.11	0.41	0.79	3.81	0.26	1.38	1.16	5.60
<u>Softwood plantations</u>	0.40	1.04	0.96	3.48	0.27	1.96	1.63	6.48
Low-yielding ^{2/}	0.27	0.44	0.41	1.79	0.24	1.26	0.92	3.49
High-yielding ^{2/}	0.13	0.60	0.55	1.69	0.03	0.70	0.71	2.99
<u>Total plantations</u>	0.91	2.09	1.90	8.02	1.90	6.28	4.71	16.39
Low-yielding ^{2/}	0.67	1.08	0.56	2.52	1.61	4.20	2.84	7.80
High-yielding ^{2/}	0.24	1.01	1.34	5.50	0.29	2.08	1.87	8.59

Note: See note to Table 1-38 for country coverage.

^{1/} Plantations for industrial wood only (i.e., excluding fuelwood and fruit trees); reforested areas are included as intensively managed operable closed forests in Table 1-38. - ^{2/} Below or above a net mean annual increment of 12 to 15 m³ per ha per year; in approximate terms the objective of low-yielding plantations is timber, and of high-yielding plantations is pulpwood.

Total industrial wood production from natural forests and plantations in 1975 and projections for 2000 are shown in Table 1-40. Estimated net removals in 2000 are almost 2 1/2 times those in 1975. In spite of this large increase, population and income growth in the tropical countries will so greatly increase the local demand for forest products that these countries will experience a progressive reduction in their total export potential for tropical wood products, as well as aggravated local shortages. In addition, there is the critical problem of shortages of fuelwood in less forested area.

The expected production in 2000 approximately balances the industrial wood requirements of the countries concerned estimated under FAO's basic demand projection. Although some exports of logs and processed wood may still be possible, they would be balanced by imports of pulp and paper. If technical and economic changes made the use of mixed tropical woods feasible for pulping on a large scale, much more wood could be harvested than is estimated in the table.

Beyond the year 2000, however, the situation is likely to become increasingly difficult. Drastic changes will be needed in land use and in the management of existing forest resources, as well as exceptional efforts in afforestation.

Finally, the study demonstrates the acute need for the continuous monitoring of tropical forest resources at regional and global and (where appropriate) national levels. This is the purpose of a project initiated jointly by FAO and UNEP at the end of 1978.

Table 1-40. Net removals of industrial roundwood^{1/} in tropical countries, 1975^{2/} and projections to 2000^{3/}

	<u>Africa</u>		<u>America</u>		<u>Asia and Oceania</u>		<u>Total</u>	
	1975	2000	1975	2000	1975	2000	1975	2000
	..... million m ³ under bark							
<u>Hardwood</u>	16.1	31	22.7	77	72.3	128	111.1	236
Operable forests	15.4	23	18.9	52	70.0	111	104.3	186
Low-yielding plantations	0.2	1	0.1	3	0.5	1	0.8	5
High-yielding plantations	0.5	7	3.7	22	1.8	16	6.0	45
<u>Softwood</u>	1.5	8	19.6	64	2.8	16	23.9	88
Operable forests	0.2	0.3	17.8	23	2.8	7	20.8	30
Low-yielding plantations	0.8	3	-	3	-	2	0.8	8
High-yielding plantations	0.5	5	1.8	38	-	7	2-3	50
Total industrial roundwood	17.6	39	42.3	131	75.1	144	135.0	324

Note: See note to Table 1-38 for country coverage, and the footnotes to Tables 1-38 and 1-39 for other definitions.

^{1/} Includes sawlogs, veneer logs, pitprops and pulpwood, and excludes other industrial wood, as well as fuelwood and charcoal. - ^{2/} Average 1974-76. - ^{3/} The projections are constrained by economic and technical considerations, and (especially for pulpwood qualities) fall short of the production potential.

2. PROBLEMS AND STRATEGIES IN DEVELOPING REGIONS

INTRODUCTION

Now that eight years of the Second United Nations Development Decade (DD2) have gone by, it is possible to see much more clearly the extent to which the food and agricultural sectors of the developing countries have or have not been able to meet the objectives set out at the beginning of the decade in the International Development Strategy (IDS). As is brought out in Chapter 1 of this report, it is now quite clear that the annual average rate of growth of food and agricultural production in the developing countries during DD2 will not only be considerably below the basic target of 4%, but is also likely to be below the rate achieved during the previous decade. There are, however, considerable differences among the individual developing regions.

At the same time, as DD2 draws to a close, attention is focussing increasingly on future development strategy, not only for the next decade but also for the two decades that now remain before the end of the century. The period between now and the year 2000 is particularly crucial for food and agriculture, especially in moving towards the basic objective of eliminating hunger and malnutrition from the world.

When the IDS for DD2 was prepared, a principal sectoral input was FAO's Indicative World Plan (IWP) ^{1/}. In the current work of the United Nations system on a new IDS for the 1980s and beyond, FAO's main contribution will be a long-term perspective study entitled *Agriculture: Towards 2000*. A first version of this study will be presented to the Twentieth Session of the FAO Conference in November 1979. A fuller version, including a discussion of regional strategies, will be issued in 1980.

Although it will thus be some time before the regional strategies are completed, some preliminary material is already available, and this forms the main basis for this chapter. The approach to each of the developing regions is far from uniform. This partly reflects the different problems in each region, but also the extent to which material is so far available.

In Africa, in spite of the generally good harvests in 1978, the rate of growth of production in the last eight years has been less than half that achieved in any of the other developing regions. This disquieting situation led the African Ministers of Agriculture, at the Ninth FAO Regional Conference for Africa in 1976, to call on FAO, in cooperation with other organizations, to prepare a Regional Food Plan aiming at self-sufficiency within 10 years. The perspectives and requirements for such a plan were presented to the Tenth Regional Conference in September 1978, and are the basis of the section on Africa in this chapter.

Many of the major problems of food and agriculture in south and southeast Asia concern rice, which provides 40% of the dietary energy supply of the 1,200 million people who live in this densely populated part of the world. The second section of this chapter examines the principal constraints on the development of rice production in the area, and indicates some elements of a preliminary strategy to overcome them.

Great interest has centred in recent years on developments in China. The chapter includes an account of the recent evolution of China's food and agricultural sector, together with a summary of the principal elements of the country's strategy for the future,

^{1/} FAO. Provisional Indicative World Plan for Agricultural Development, Rome, 1969.

Great interest has centred in recent years on developments in China. The chapter includes an account of the recent evolution of China's food and agricultural sector, together with a summary of the principal elements of the country's strategy for the future, as embodied in the Fifth Five-year Plan for 1976-80, and in the longer-term perspective of the master plan for 1976-85.

In Latin America, the process of agricultural "modernization" has probably gone further than in the other developing regions so far. However, the expansion of the modern sector appears to have been accompanied by a breakdown of the traditional sector, so that rural socio-economic disequilibria have been accentuated. A further section of this chapter examines the past trends in the agricultural modernization of Latin America, and indicates some preliminary conclusions for the future reorientation of agricultural development in the region.

The Near East is the region where food and agricultural production has increased fastest so far during DD2. However, this encouraging picture conceals the major defect that the rate of increase is a very unstable one, with considerable fluctuations from year to year as a result of the vagaries of the weather. The final section of this chapter analyzes the past trends in the Near East, and makes some suggestions for the achievement of greater food security in the future.

REGIONAL FOOD PLAN FOR AFRICA

Because of the gravity of the recent food situation, the African Ministers of Agriculture, in their "Freetown Declaration" of November 1976, requested "FAO, WFC and any other relevant international organization in cooperation with Member States of the OAU and the ECA to draw up a Regional Food Plan which would, on its implementation, enable Member States of the OAU to be self-sufficient in food within a period of 10 years." ^{1/} Such a plan was presented to the Tenth FAO Regional Conference for Africa in September 1978. ^{2/} Its main features are summarized below, including an analysis of the maximum feasible production and demand for food (MPD) during the next 10 to 15 years, and of the major programmes, policies and investments required for the necessary acceleration of the increase in food production.

As is clear from Chapter 1, Africa has lagged far behind the other developing regions in food production and supplies during DD2. A striking feature of this situation is that the region's self-sufficiency ratio (SSR) ^{3/} for food declined from 98% in 1962-64 to 90% in 1972-74. Meat and sugar are the only major commodity groups for which the SSR has not fallen. Food imports, especially of wheat, have increased steadily. The region's total food imports trebled between 1962-64 and 1972-74.

If these trends continued, there would be a further fall in SSRs for almost all the major food commodities, and the region's overall SSR for food would decrease to 81% by 1985. The annual rate of growth of demand for cereals is projected to rise from 2.9% in 1962-64 to 1972-74 to 3.1% in 1972-74 to 1985, for pulses from 2.4% to 2.6%, for meat from 2.2% to 4.4%, and for milk from 2.9% to 3.9%. The only commodity groups for which the growth of demand would not accelerate are rootcrops and fish. For all commodity groups except rootcrops, the growth of production would lag behind demand, and there would be substantial decreases in SSRs (Table 2-1).

Table 2-1. Projected trend self-sufficiency levels and demand and production growth rates in Africa, major commodity groups

	Self-sufficiency ratios			Annual growth rates 1972-74 to 1985	
	1962-64	1972-74	1985	Production	Demand
	..... % .....			.....% per year	
Cereals	96	83	76	2.2	3.1
Rootcrops	101	100	100	1.8	1.8
Pulses	110	107	90	1.2	3.1
Meat ^{1/}	98	105	84	2.4	4.4
Milk	93	85	76	3.0	4.0
Fish	93	101	87	1.7	3.0

^{1/} Including game.

^{1/} FAO, Report of the Ninth FAO Regional Conference for Africa, Freetown, Sierra Leone, 2-12 November 1976, Rome, 1977, p. 34-37.

^{2/} FAO, Regional Food Plan for Africa, ARC/78/5, Rome, July 1978.

^{3/} Domestic production/domestic utilization x 100.

Such trends would clearly be unacceptable. They would lead to serious starvation, and economic and social development would be crippled by food shortages. Accordingly the MPD projections in the Regional Food Plan assume that the danger is fully recognized, and that the political will exists at the national level to launch an intensive effort to step up food production. It is also assumed that there would be a significant acceleration of general economic development, that a series of interlocking measures would be taken to raise food output well above the trend line, and that such measures would be complemented by an intensification of intra-African trade, regional cooperation to make use of comparative advantages, improvement of diets through better income distribution, and appropriate marketing and pricing policies.

If the African countries vigorously pursue appropriate strategies and receive adequate external assistance, the regional SSR for food could be raised to 94% by 1985 and be maintained at that level up to 1990. The MPD projections indicate that there would be more than 100% self-sufficiency in rootcrops and pulses in 1985 and 1990 (Table 2-2). These would not represent exportable surpluses from the region, but would be needed as substitutes for other foods, especially cereals and meat. There would be a reversal of the declining trend in self-sufficiency for cereals, but lower SSRs for meat, milk, and fish.

Table 2-2. Projected MPD^{1/} self-sufficiency ratios and demand and production growth rates in Africa, major commodity groups

	Self-sufficiency ratios			Annual growth rates			
	1972-74	1985	1990	1972-74-to 1985		1985-90	
	..... % .....			Production	Demand	Production	Demand
	..... % .....			..... % per year			
Cereals	83	89	89	4.0	3.4	3.8	3.4
Rootcrops	100	105	106	2.7	2.3	2.8	2.4
Pulses	107	109	109	3.7	3.5	3.7	3.8
Meat	105	88	79	4.3	5.9	4.6	6.9
Milk	85	69	70	3.4	5.1	5.4	5.0
Fish	101	84	82	2.6	4.1	1.5	2.0

^{1/} Maximum feasible production and demand.

Although food imports would not decrease, there would be a reduction in the share of those from outside the region, especially of cereals. The level of cereal imports would depend very much on the seriousness with which governments pursue policies and programmes for encouraging the consumption of rootcrops and other local foods in urban areas. With rising incomes and rapid urbanization, consumers tend to shift from traditional staples to wheat and other imported foods. This can be controlled through the development and promotion of locally-produced substitute foods, such as composite flours incorporating millet, sorghum, cassava and other products. These measures would help curb rising imports, and increase the demand for local products that have good production potential. The success of such programmes depends on the extent to which consumption patterns can be changed through food promotion, and nutrition and family welfare education. Women have a special and important role to play in bringing about these changes.

FOOD PRODUCTION

The cropped area would need to be increased by about one third between 1975 and 1990, and the ratio of cropped area to arable area to rise from 52% in 1975 to 60% in 1990. The largest increases in area would be for maize, millet and sorghum, and pulses. A high proportion of the increase would come from converted rangeland.

In many countries, non-food crops occupy the best land, continuing the colonial pattern which favoured industrial crops for export. Much of the newly developed land is being used for such commodities, and indeed in many countries the proportion of land used for domestic food production may even decline. A reconsideration of this trend is imperative. In countries with an acute shortage of cultivable land, the choice between food and industrial crops may be a difficult one. However, it is clearly desirable that, where possible, the better land should be reserved for food crops.

As regards the land available for livestock production, it has been estimated that the eradication of trypanosomiasis and onchocerciasis would open up 7 million km² of the African savanna for cattle grazing, thus increasing Africa's annual beef output by about 1.5 million tons.

Table 2-3 indicates the projected contribution of changes in area, yield and cropping pattern to the increase in production between 1975 and 1990 in the different subregions of Africa. It reflects the scarcity of both land and water resources in some subregions, and the relative attractiveness of area expansion in others. The lowest area contribution is in the Sahel, and the highest in central Africa. The highest yield contribution would be in northern Africa, which already has a developed infrastructure and a relatively large irrigation system. The contribution from changed cropping patterns reflects an increase in the share of crops with high value per hectare. Area expansion would remain the major contributor to increased production in the future, continuing the current rate of expansion of 2% per year. Yields would have to rise by 1.1% per year in 1975-90 as compared with the current rate of 0.9%, for the attainment of the MPD targets.

Table 2-3. Estimated contribution of changes in area, yield and cropping pattern to output increases between 1975 and 1990

Subregion	Area	Yield	Cropping pattern	Total
 %			
Northern	55	45	-	100
Sahel	46	37	17	100
Western	49	41	-	100
Central	58	25	17	100
Eastern and southern	55	33	12	100
TOTAL AFRICA	53	39	8	100

NUTRITION

The MPD estimates show an improvement in food self-sufficiency in terms of dietary energy in all subregions in 1985 and 1990, except in western Africa in 1990 (Table 2-4). The MPD projections of supplies of dietary energy, protein and fat are significantly higher than the trend-based projections (Table 2-5). However, most of the protein, as well as dietary energy, would continue to be provided by cereals.

Table 2-4. Levels of self-sufficiency in basic foods ^{1/}

	1972-74		1985 ^{2/} MPD		1990 ^{2/} MPD	
	Balance ^{2/}	SSR	Balance ^{2/}	SSR	Balance ^{2/}	SSR
	000 tons	%	000 tons	%	000 tons	%
Northern Africa	-5,798	78	- 5,698	85	-5,775	88
Sahel	-1,000	83	-495	95	-545	95
Western Africa	-1,000	94	-2,190	95	-4,252	92
Central Africa	-506	94	+135	101	-181	99
Eastern and southern Africa	-597	98	-415	99	-277	100
TOTAL AFRICA	-9,822	90	-8,663	94	-11,030	94

^{1/} Cereals, rootcrops, pulses, meat and fish. - ^{2/} In wheat equivalent calculated on the basis of dietary energy.

On a per caput basis, the nutritional requirements of dietary energy, protein and fat would either be met or exceeded by 1985 and 1990 for all of the subregions, except for protein in central Africa and fats in eastern and southern Africa. Because of higher incomes, demand for protein would increase faster than for dietary energy in all subregions, and the quality of protein would improve. In the absence of household food consumption data and of data distinguishing between urban and rural consumption, however, it is not possible to judge how the improved per caput supplies would affect the nutritional status of the poorer population groups.

SUBREGIONAL PROSPECTS FOR FOOD SELF-SUFFICIENCY

Northern Africa

In assessing food demand and production prospects and in devising food development strategies, certain special characteristics of this subregion should be kept in view. First, wheat imports represent a special problem, since the subregion's present share of over 70% of total African imports is expected to grow further. Second, except in Sudan, the possibilities for increasing food production by area expansion are limited. Third, there are countries in this subregion with rich oil and mineral resources, where foreign exchange would thus not be a critical constraint on the growth of food consumption.

Increases in arable land are expected to contribute about 55% of the total output increases in the subregion, largely because of expansion in Sudan. In most countries, food development programmes would depend on raising yields through extension of the irrigation network and increased use of fertilizers and pesticides. The irrigated area would increase from 7.6 million ha in 1975 to 9.1 million in 1990, of which 40% would be devoted to the production of cereals, pulses and rootcrops. The subregion has a well developed fertilizer industry, and raw materials are available for its expansion.

Table 2-5. Per caput daily dietary energy, protein and fat supply in Africa and its subregions

	1975	1975 Require- ments	1985 Trend	1985 MPD	1990 MPD
<u>NORTHERN AFRICA</u>					
Dietary energy (kcal)	2,443	2,260	2,557	2,670	2,759
Protein (gm)	67.1		70.5	74.2	77.4
Fat (gm)	47.5		52.5	58.1	64.0
<u>SAHEL</u>					
Dietary energy (kcal)	1,926	2,200	2,123	2,243	2,361
Protein (gm)	60.9		66.0	70.2	74.2
Fat (gm)	40.7		43.7	47.2	50.6
<u>WESTERN AFRICA</u>					
Dietary energy (kcal)	2,151	2,170	2,208	2,279	2,375
Protein (gm)	50.7		53.5	56.3	60.5
Fat (gm)	41.2		45.8	49.1	54.3
<u>CENTRAL AFRICA</u>					
Dietary energy (kcal)	1,959	2,080	2,063	2,133	2,242
Protein (gm)	35.5		40.1	42.5	45.9
Fat (gm)	32.2		37.9	40.4	43.3
<u>EASTERN AND SOUTHERN AFRICA</u>					
Dietary energy (kcal)	2,078	2,150	2,156	2,269	2,360
Protein (gm)	55.6		57.7	61.3	64.5
Fat (gm)	31.6		33.8	37.3	40.9
<u>TOTAL AFRICA</u>					
Dietary energy (kcal)	2,169	2,180	2,261	2,358	2,453
Protein (gm)	55.6		58.7	62.0	65.6
Fat (gm)	39.0		43.0	46.9	51.4

Requirements of dietary energy, protein and fat would be met by 1985. Cereal self-sufficiency would improve from 74% in 1972-74 to 85% in 1990 (Table 2-6), largely because of surpluses of rice in Egypt and millet and sorghum in Sudan. Even for wheat, which can be produced by all countries in the subregion except Sudan, an improvement in self-sufficiency is expected. However, the subregion's cereal imports in 1990 would remain at about the same level as in 1972-74. Pulses, which occupy an important place in the diet and are also used extensively for livestock feed, would continue to be in surplus. Rootcrops would also continue to be in surplus. The expansion in livestock production in Sudan would not be sufficient to meet the expected sharp increase in subregional demand, even if trade barriers within the subregion were lowered. Thus further deterioration in the self-sufficiency levels for meat and milk is unavoidable, unless part of the irrigated land could be kept for pasture and fodder crops. Apart from Morocco, all countries would have deficits in fish supplies in 1985 and in 1990.

Table 2-6. Self-sufficiency for major food commodities in northern Africa

Commodity	1972-74		1985		1990	
	Balance	SSR	Balance	SSR	Balance	SSR
	000 tons	%	000 tons	%	000 tons	%
Cereals	-5,979	74	-5,816	83	-5,887	85
- Wheat	-5,737	51	-6,124	63	-6,671	64
- rice	+309	115	+1,076	136	+1,678	147
- maize	-198	94	-317	93	-372	93
- millet/sorghum	-46	98	+215	105	+1,014	122
Rootcrops	+46	102	+211	105	+619	112
Pulses	+167	118	+203	114	+260	115
Meat	-1	98	-231	91	-532	85
Milk	-742	87	-4,226	63	-4,035	72
Fish	+69	116	-124	85	-144	84

Note: Northern Africa covers Algeria, Egypt, Libya, Morocco, Sudan, Tunisia.

Sahel

Proposals for increasing food production in this subregion are embodied in FAO's Perspective Study on Agricultural Development in the Sahelian Countries, 1975-1990. This study has already been extensively used as a basis both for national agricultural planning and for development assistance.

Among the countries of the subregion, both Chad and Mali have relatively good natural resource bases but poorly developed infrastructure. Mauritania, Niger and Upper Volta are relatively poor in natural resources, as well as lacking in infrastructure. Gambia and Senegal have poor natural resource bases, but better developed infrastructure. In all cases, however, increased food production would require, in varying degrees, measures that include: intensification of production while safeguarding the ecological balance and avoiding soil degradation; better control of available water supplies and development of small-scale irrigation schemes; maintaining adequate food reserves; improving pastures, pasture management practices and animal health; and promoting commercial livestock production.

To meet production goals, the cropped area under irrigation would have to double between 1975 and 1990. Changes in cropping patterns are expected to contribute 17% of the output increase in the Sahel (the highest proportion among the subregions), compared to 37% from higher yields and 46% from area expansion (the lowest among the subregions).

The expected increase in the proportion of "settled" producers would influence the structure of demand in the subregion. Dietary energy supplies are expected to rise by 23% between 1975 and 1990, when they would reach 107% of the estimated per caput requirements. Millet and rice would continue to be the main sources of dietary energy. The demand for rootcrops and pulses would probably decline, while that for livestock products would continue to increase.

There would be substantial increases in the SSRs for all food commodities except meat (Table 2-7). The great potential for increasing rice production through irrigation is indicated by the projected rise in the SSR from 43% in 1972-74 to 100% in 1990. There would be surpluses of pulses for export by 1985, as their role in the diet would remain limited. The subregion would continue to be more than self-sufficient in meat and fish. It is expected that the disastrous effects of the drought in the early 1970s, when cattle stocks decreased from 21.8 million head in 1970 to 15.6 million in 1975, would be overcome by 1985, thus allowing for export surpluses in spite of the expected sharp increase in demand.

Table 2-7. Self-sufficiency for major food commodities in the Sahel

Commodity	1972-74		1985		1990	
	Balance	SSR	Balance	SSR	Balance	SSR
	000 tons	%	000 tons	%	000 tons	%
Cereals	-1,044	79	-709	91	-743	92
- wheat	-183	4	-312	17	-400	23
- rice	-413	43	-174	85	-2	100
- maize	-85	68	-12	96	+15	104
- millet/sorghum	-269	92		98	-222	97
Rootcrops	-17	97	-32	97	-56	96
Pulses	-6	99	+73	111	+57	107
Meat	+89	136	+115	123	+101	115
Milk	-252	75	-199	87	-255	87
Fish	+180	143	+389	165	+473	176

Note: The Sahel covers Cape Verde Is., Chad, Gambia, Mali, Mauritania, Niger, Senegal, Upper Volta.

Western Africa

Even under the MPD assumptions, the general level of food self-sufficiency in this subregion would continue to fall steadily in the next decade, except for cereals, rootcrops and pulses (Table 2-8). The major problem would be the provision of adequate supplies of cereals, livestock products and fish. Nigeria has the potential to raise its foreign exchange earnings from oil and mineral resources, and Cameroon, Ghana and Ivory Coast have well developed export crop industries. These factors will influence the structure of future demand and production prospects.

Table 2-8. Self-sufficiency for major food commodities in Western Africa

Commodity	1972-74		1985		1990	
	Balance	SSR	Balance	SSR	Balance	SSR
	000 tons	%	000 tons	%	000 tons	%
Cereals	-1,756	86	-1,849	91	-3,197	87
- wheat	- 728	1	-1,700	1	-2,621	1
- rice	-372	83	-171	95	-76	98
- maize	-160	93	+37	101	-5	100
- millet and sorghum	-360	95	+357	104	-1	100
Rootcrops	+24	100 ^{1/}	+610	101	+50	100
Pulses	-29	97	+73	105	+96	105
Meat	-88	89	-671	62	-1,283	52
Milk	-425	49	-957	43	-1,490	39
Fish	-162	86	-757	63	-1,008	57

Note: Western Africa covers Benin, Cameroon, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Nigeria, Sierra Leone, Togo.

^{1/} Cassava only.

The share of the cropped area under foodcrops is expected to decline from 75% in 1975 to 70% in 1990, but the total cropped area would increase from 39 to 51 million ha. Projected output levels would be attained mainly by raising fertilizer use per hectare, providing effective pest control programmes, and increasing irrigation. This would help in arresting shifting cultivation, and in introducing appropriate crop rotations. Higher yields would account for 41% of the production increase between 1975 and 1990, compared with 49% for area expansion. The irrigated area would increase from 143,000 ha in 1975 to 640,000 ha in 1990. Meat production is expected to increase moderately, as areas are gradually freed from animal trypanosomiasis.

Per caput dietary energy requirements would be exceeded by 5% in 1985, and by 9% in 1990. The level of cereal self-sufficiency would be maintained up to 1990. But the consumption of wheat, for the competitive production of which the subregion is not ecologically suited, is expected to increase substantially, entailing large imports to meet requirements. Other than wheat, the expected increase in the demand for cereals would be met by increased production of millet and sorghum in the northern zones and rice and maize in the southern and coastal zones.

Despite anticipated increases in the production of meat and milk, the level of self-sufficiency for these products would deteriorate progressively by 1985 and 1990, owing to the increase in demand. With the exception of Guinea-Bissau, the demand for fish exceeds production in all countries in the subregion, although marine resources, particularly pelagic stocks, offer good opportunities for more intensive exploitation.

Central Africa

The ecological setting in parts of central Africa is similar to that of the forest zones of western Africa, where the high level of consumption of rootcrops has resulted in protein deficiencies. This dietary problem should be the main element of future strategies for food production in this subregion.

Because large tracts of land can be brought under cultivation, 58% (the largest among the subregions) of the total production increase between 1975 and 1990 would come from area expansion, compared with 25% (the lowest among the subregions) from higher yields and 18% from changes in cropping patterns. The total arable area would increase from 19.2 million ha in 1975 to 24.5 million ha in 1990.

The 1972-74 levels of self-sufficiency would not be maintained for cereals, meat and milk (Table 2-9). The place of pulses in the diet is limited, although the level of protein intake is below nutritional requirements. By 1990, the demand for pulses is expected to increase only slightly, and the subregion will continue to be self-sufficient. Because of increased demand for wheat and rice, a 10% fall in the per caput demand for rootcrops is expected by 1985, providing surpluses for export or livestock feed. Environmental constraints (such as tsetse fly) would continue to limit livestock production.

Table 2-9. Self-sufficiency for major commodities in Central Africa

Commodity	1972-74		1985		1990	
	Balance	SSR	Balance	SSR	Balance	SSR
	000 tons	%	000 tons	%	000 tons	%
Cereals	-497	73	-1,095	67	-1,696	62
- wheat	-293	4	-654	3	-960	2
- rice	-45	84	-159	75	-211	69
- maize	-47	95	-116	93	-211	89
- millet and sorghum	-2	99	+20	107	+23	107
Rootcrops	+20 ^{1/}	100	+3,400	122	+4,292	125
Pulses	+17	107	+12	103	+18	104
Meat	-23	93	-131	75	-214	68
Milk	-97	62	-163	61	-263	55
Fish	-37	95	-74	91	-76	92

Note: Central Africa covers Angola, Central African Empire, Congo, Equatorial Guinea, Gabon, Sao Tome and Principe, Zaire.

^{1/} Cassava only.

Eastern and southern Africa

This subregion could achieve high levels of self-sufficiency for most products of vegetable origin, if specialization in maize and rootcrops in the lowland zones and wheat and other temperate food products in the highland zones are adopted (Table 2-10). Cropped area is expected to increase from 33.1 million ha in 1975 to 45.6 million ha in 1990, but the increase in irrigated area would only be from 1.4 million to 1.8 million ha, mostly for rice in Madagascar and Mauritius. Thus, most of the increase in production is expected from expansion in cropped area, which would contribute 55%, compared with 33% for yield increases, and 12% for changes in cropping patterns.

The demand for all commodity groups is expected to increase markedly, especially for meat, milk and fish. There would be a progressive improvement in the per caput intake of dietary energy, protein and fats, with the possibility of exceeding per caput dietary energy requirements by 1985. The demand for oilseeds and sugar would rise faster than for other products of vegetable origin.

It would not be possible to reach full self-sufficiency in wheat, meat, milk and fish even by 1990. The relatively high level of maize consumption, however, suggests that it would be possible to replace some imported wheat with domestic maize, which could be produced in surplus. The production of rice, and of millet and sorghum is also expected to exceed the self-sufficiency level by 1985. The subregion would continue as a net exporter of pulses and rootcrops. Although it has a comparative advantage over most of the other subregions in the production of meat and milk, self-sufficiency levels would decline substantially by 1990 because of the large increase in demand. The expansion of dairy production by introducing intensive methods of husbandry may reduce this

Table 2-10. Self-sufficiency for major food commodities in eastern and southern Africa

Commodity	1972-74		1985		1990	
	Balance	SSR	Balance	SSR	Balance	SSR
	000 tons	%	000 tons	%	000 tons	%
Cereals	-993	95	-808	97	-776	98
- wheat	-620	65	-1,032	66	-1,266	68
- rice	-359	86	+144	104	+86	102
- maize	+150	102	+620	105	+1,020	107
- millet and sorghum	-59	99	+76	101	+115	102
Rootcrops	+169	101	+554	103	+1,294	105
Pulses	+164	109	+235	109	+307	110
Meat	+245	116	-89	97	-484	87
Milk	-243	94	-1,095	83	-2,001	75
Fish	-15	98	-301	75	-343	74

Note: Eastern and southern Africa cover Botswana, Burundi, Comoros Is., Djibouti, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Reunion, Rwanda, Seychelles, Somalia, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.

problem. Self-sufficiency in fish is also expected to decline, despite the possibilities for greater local participation in the fisheries of the southeast Atlantic offered by exclusive national jurisdiction, as well as some selective increase in catches from inland waters such as Lake Tanganyika and the Okavango.

INTRA-AFRICAN TRADE IN FOOD PRODUCTS

Although the 1985 and 1990 projections indicate that the regional and subregional SSRs under the MPD assumptions would improve on their 1972-74, levels, the net import gap for most of the traded food commodities would also increase, in particular for livestock and fish products.

The 1985 and 1990 SSRs reflect the implicit assumption either that there will be free movement of these commodities from surplus to deficit areas within Africa, or that African imports from the rest of the world will be balanced by exports from Africa. However, the assessment of the patterns of African food trade between 1962-64 and 1972-74 indicates that this basic assumption may not be realistic. Because of past difficulties, the Freetown Declaration called for a policy of collective self-reliance, whereby intra-African trade would play a vital role in the improvement of food self-sufficiency.

Table 2-11 summarizes the projected extra-African import requirements for cereals, livestock products and fish for 1985 and 1990 under three alternatives. Alternative I shows the likely magnitude of the extra-African import requirements if the trend in intra-African food trade between 1962-64 and 1972-74 is projected to 1985 and 1990. Alternative III depicts the most optimistic situation, where the gap to be filled by extra-African imports is the minimum possible because it assumes no restraints on the movement of commodities from surplus to deficit areas within Africa. The second, and most realistic alternative is built on the assumption that the relative importance of intra-African trade will rise gradually above the trend, as a result of concerted efforts at subregional and regional level to remove the major barriers to intra-African trade.

Table 2-11. Extra-African import requirements of major traded food commodities

	1972-74	Alternative I ^{1/}		Alternative II ^{2/}		Alternative III ^{3/}	
		1985	1990	1985	1990	1985	1990
..... 000 tons							
<u>Cereals</u>							
Wheat	7,529	10,204	12,566	10,144	12,548	9,822	12,548
Barley	650	1,712	2,779	1,702	2,751	1,641	2,751
Rice	944	1,085	1,258	874	850	-	-
Maize	603	927	1,010	774	617	-	-
Millet and sorghum	-	621	852	-	-	-	-
All cereals	9,726	14,549	18,465	13,414	16,766	9,980	12,543
<u>Livestock products</u>							
Meat products	58	1,373	2,707	1,323	2,607	1,007	2,412
Milk products	1,803	6,721	8,093	6,691	8,058	6,680	8,044
<u>Fish products</u>							
Fish for food	243	913	1,447	893	1,327	71	354
TOTAL VALUE (million US\$) ^{4/}	3,540	12,353	17,222	11,264	15,772	10,333	15,051

^{1/} Assuming that the share of intra-trade in total imports at the subregional and regional level will follow the 1962-64 to 1972-74 trends. - ^{2/} Assuming that the share of intra-trade in total imports at the subregional and regional level will increase gradually above trends (1962-64 to 1972-74) up to levels below full regional utilization of disposable surpluses. - ^{3/} Assuming that all surpluses at subregional and regional levels are utilized to meet deficits before importing from outside the subregion or region. - ^{4/} At 1975-76 average import prices (f.o.b.).

The differences in the extra-African import requirements under Alternatives I and II are not very substantial. For example, under Alternative II, extra-African cereal imports would be about 13.5 million tons in 1985 and 17 million in 1990, compared with 14.5 and 18.5 million tons under Alternative I. This is not because intra-African trade in food cannot be promoted faster than indicated by past trends, but because by 1985 and 1990 this trade would still be highly constrained by the limited availability of surpluses of most of the food commodities traded.

Under the most probable Alternative II, the extra-African import bill for cereals, livestock products and fish would reach US\$11,300 million in 1985 and US\$15,800 million in 1990, at 1975-76 f.o.b. prices. This is indeed alarming, particularly in comparison with the 1972-74 import bill of about US\$3,500 million.

Although Alternative III appears to be unrealistic, it does provide a challenge to the countries to cooperate further in removing the obstacles to trade. Under this alternative, extra-African imports of cereals would be lower in 1985 and 1990 by about 4 million tons than under Alternative II, and imports of fish products would be only one fourth those under Alternative II, although imports of meat and milk would not differ.

MAJOR INVESTMENT PROGRAMMES

Table 2-12 summarizes preliminary estimates of the capital investments required to meet production targets. The investments included are only those required for the development of irrigated and rainfed agriculture, mechanization, and livestock. They do not include investments in marketing, processing plants, transportation, storage, research, extension, manpower training, or investments required for the development of cocoa, coffee, tea, sugar, oilseeds and fisheries.

Table 2-12. Preliminary estimates of capital investments required to achieve food production targets in Africa

	1975-85	1985-90	Total	1975-90 Annual average
	..... million US \$ <u>1/</u>			
Development of non-irrigated arable lands	967	499	1,466	98
Irrigation:				
- Development	5,200	3,200	8,400	560
- Improvement	1,614	641	2,255	150
Mechanization	4,838	3,244	8,082	539
Livestock development	3,989	2,542	6,531	43
TOTAL	16,608	10,126	26,734	1,783

1/ At 1975 prices.

Because of the recent droughts, many governments are seeking to expand irrigation networks and improve existing ones. Although irrigation is already well developed in northern Africa, the largest increase in irrigated area would be in this sub-region. Significant expansion is also envisaged for the Sahel, where concern about food security has attracted attention to the potential for irrigation. The proposals of the Club des Amis du Sahel (based on the FAO perspective study) have been used here, although with some modification. These proposals, which include huge programmes for river and lake basin development, are ambitious, and their achievement may not be easy with respect both to raising finance and to the implementation and operation of schemes.

In the other subregions, the use of irrigation is generally restricted to special crops such as rice and sugarcane. While the growth of irrigation in these subregions would be rapid, its contribution to output would remain relatively limited, especially in central Africa, where rainfall is abundant and more evenly distributed throughout the year.

The cost of trypanosomiasis control would constitute a major part of the investments required for the development of non-irrigated agriculture and the livestock industry. Trypanosomiasis is the disease that has most profoundly affected population settlement and livestock development in several areas of the continent. To bring the relatively better watered savanna lands of the region under cultivation will require an enormous investment. The cost of freeing the 10 million km² affected by the disease would amount to US\$2,000 to 3,000 million.

With regard to the development of the onchocerciasis zone, it is estimated that from the total 700,000 km² which are being regularly treated in the antivectorial campaign, some 100,000 km² of fertile valley soils are available for development. Much of the remaining area will also benefit from the improvement in human health and living conditions and a more rational man/land distribution. The cost of the onchocerciasis control programme would be about US\$ 250 million, and another US\$ 250 million would be needed for the period up to the year 2000 for the maintenance of control.

The proposed rapid increases in the cultivated area will call for increased mechanization and greater use of animal power. In the Sahel and eastern Africa, this could be achieved to a fair degree through increasing the number of draught animals. Northern Africa is the most advanced in mechanization, and the number of draught animals has declined significantly. The tractor park in Africa as a whole would need to grow by 7% per year. Tractor numbers would increase from 227,000 in 1975 to 662,000 by 1990, and the number of hectares of cropland per tractor would be reduced from 520 in 1975 to 280 in 1990. The subregions would have markedly diverse growth rates for tractor numbers: 5% a year in northern Africa, 16% in the Sahel and 14% in western Africa. The investment required for mechanization during 1975-90 would be almost as large as for irrigation.

The total amount of capital investments needed for the proposed development of irrigated and rainfed agriculture, mechanization, and livestock is estimated at around US\$26,700 million for the 15-year period 1975-90. Of this amount, 43% would be needed for northern Africa, 23% for eastern and southern Africa, and 18% for western Africa, and the remainder for the Sahel and central Africa.

Considering the large foreign exchange component in the investments, external assistance would be needed on a much greater scale than in the past. Assuming that about half of the financial requirements for capital investment would have to come from external sources, the average amount of foreign financial assistance would reach the level of about US\$ 900 million annually. This is almost double the amount that the World Bank committed for agricultural development in Africa in 1977. In addition, the sustained development of the food sector would require large complementary investment outlays for the improvement of infrastructure and supporting services.

INPUT PROGRAMMES

The annual costs of the main input requirements would more than treble between 1975 and 1990 (Table 2-13). The largest increase would be in fertilizer requirements, which would be as high as 6.5 million tons of plant nutrients in 1990, or four times as much as in 1975. The growth rates vary greatly between the subregions, and are in general inversely related to the existing level of fertilizer use. Thus central Africa, with the lowest per hectare fertilizer use, would show the highest growth rate (20% per year) and northern Africa, at the other extreme, would increase its fertilizer

Table 2-13. Preliminary estimates of costs of inputs required to achieve food production targets

	Annual costs		
	1975	1985	1990
	..... million U.S. \$		
Fertilizers	1,074	2,897	4,201
Seeds	432	496	528
Feeds	555	1,200	1,785
TOTAL	2,061	4,593	6,514

requirements by only 7% per year. An overwhelming share (85%) of the increased fertilizer would be needed to meet the requirements of high-yielding varieties of seed. A number of countries have raw material resources for fertilizer production. Building plants to process these raw materials would save foreign exchange in the long run, generate new employment opportunities and produce significant economic multiplier effects.

NATIONAL POLICY OPTIONS AND REGIONAL COOPERATION

The food situation and problems, as well as the factors underlying them, differ from one country to another. The strategies and policies to be adopted will therefore have to be country-specific and conceived within the framework of overall social and economic development. The general objectives of social and economic development should stress a pattern of growth of food and agricultural production, the benefits of which are widely shared and contribute to the alleviation of poverty, malnutrition and unemployment. Socio-economic policies related to income distribution, employment and population determine not only the dietary intake and nutritional status of the majority of the population, but also the production structures that should be adopted to increase food output. Major policy and programme choices which face African governments relate to income policies in favour of agriculture to correct the disparity between farmers' incomes and those of urban and industrial workers; price stabilization policies; policies and institutions to secure improvements in the efficiency of marketing, storage, transport and processing; introduction of appropriate technology (irrigation, mechanization and fertilizers); expansion of credit, extension and other services for small farmers; and the control and eradication of human and livestock diseases (trypanosomiasis and onchocerciasis) to increase production and make possible the settlement of disease-free areas.

In addition to the major investment and input programmes discussed in the previous section, several areas of action may be singled out because of the considerable impact they will have on future food output. These include the use of input packages of improved seeds, fertilizers and plant protection materials; improvement of the quality, orientation and coverage of programmes for credit, marketing, extension and training, the use of appropriate mechanical power on farms; and the improvement of transport, storage facilities and communications in the rural areas. In the longer term, programmes that will have far-reaching impact will include the development of new irrigation schemes, improvement of land and water conservation, research, and the development of infrastructure.

Special reference should also be made to fishery policies. The establishment of extended zones of jurisdiction offers opportunities for greater local participation in the fisheries of the northwest and southwest coasts of Africa. There are also more limited possibilities for increased catches along the Mediterranean coasts of northern Africa. The realization of these opportunities depends, however, on the restriction of the activities of foreign vessels, the expansion and modernization of national fleets, the construction of port and processing facilities, the improvement of local distribution systems, and the training of fishermen. In addition, an important aspect of the rational management and development of the fisheries off many African countries is the need for international consultation and cooperation.

Subregional and regional cooperation also offers considerable potential for action to increase production and expand intra-African trade in food commodities. The share of intra-African trade in total imports of food fell from 18% in 1962-64 to 12% in 1972-74. The reversal of this trend is a major challenge facing the existing schemes for economic integration and cooperation which so far have made little progress in removing trade barriers and establishing common tariffs for imports from outside the region. Perhaps it is because of the problem faced by governments in producing enough food to meet domestic needs that efforts for improved self-sufficiency through intraregional trade have been limited. In these circumstances, schemes for economic integration and cooperation should give priority attention to assisting governments in strengthening and adapting their production structures. This can be done through the mobilization of investment funds, the promotion of joint production ventures, and agreements for production specialization. Opportunities for new integration ventures also exist in the production and distribution of fertilizers and other agricultural chemicals, and the promotion of intercountry transport and communications systems.

Most of the large number of intergovernmental organizations for economic and technical cooperation in Africa deal directly or indirectly with food development. They are engaged in a variety of important programmes such as regional river basin development, food security, storage, processing, marketing and price stabilization, and investment and finance. Many of them have not yet been particularly effective in improving food output. The strengthening of their staffing and a better coordination of their programmes are urgently needed.

RICE PRODUCTION IN SOUTH AND SOUTHEAST ASIA

Rice is the staple food of most of the 1,200 million people in south and southeast Asia, and accounts for 40% of their total dietary energy supply. In six countries, the share of rice in dietary energy supplies is more than two thirds, and only in Pakistan does wheat contribute a larger share than rice (Table 2-14).

Table 2-14. Per caput dietary energy supplies and share of rice and wheat, selected countries of south and southeast Asia, 1972-74

	<u>Per caput dietary energy supplies</u>			<u>Share of</u>	
	<u>Total</u>	<u>Percent of requirements</u>	<u>Change from 1969-71</u>	<u>Rice</u>	<u>Wheat</u>
	kcal per day	..... %	.....
Bangladesh	1949	84	-4	74	9
Burma	2131	99	-2	76	1
India	1970	89	-3	33	18
Indonesia	2033	94	+3	56	2
Kampuchea	2095	94	-5	78	1
Lao	2076	94	-1	80	1
Malaysia	2534	114	+7	46	10
Nepal	2015	92	-1	47	8
Pakistan	2132	92	-1	12	46
Philippines	1953	86	-	45	5
Sri Lanka	2078	94	-9	43	14
Thailand	2315	104	-1	70	1
Vietnam	2288	106	...	69	5

Of the 13 countries included in the table, per caput dietary energy supplies rose only in Indonesia and Malaysia between 1969-71 and 1972-74. Only in Malaysia, Thailand and Vietnam were these supplies above estimated nutritional requirements in 1972-74.

A main cause of the inadequate progress in improving nutritional levels has been the lag in rice production. Out of the nine countries that have quantitative targets for rice production, in only three (Pakistan, Philippines and Thailand) have the latest targets been met (Table 2-15). In south and southeast Asia as a whole, the average increase in rice production in 1961-76 was only 2.2% a year, which is well below the population growth of 2.5% a year. The average yield of 1.8 tons per ha is very low, and only Malaysia, Indonesia, Pakistan, Sri Lanka and Vietnam have yields much above this average. Yields have grown only slowly, except in Indonesia, Lao, Kampuchea, Pakistan and the Philippines.

Table 2-15. Paddy production, yields and production targets, selected countries of south and southeast Asia

	<u>Production</u>					<u>Target</u>	<u>Yield</u> 1972-74
	1973	1974	1975	1976	1977		
	..... million tons						tons/ha
Bangladesh	17.9	16.9	19.1	17.6	19.8	22.6 (1977)	1.7
Burma	8.6	8.6	9.1	9.3	9.5	...	1.7
India	66.1	59.7	73.4	64.4	78.0	81.0 (1978)	1.6
Indonesia	21.5	22.7	22.3	23.1	23.4	26.8 (1978)	2.5
Kampuchea	1.1	0.6	1.5 ^{1/}	1.8 ^{1/}	1.8 ^{1/}	...	1.3
Lao	0.9	0.9	0.9	0.9 ^{1/}	0.7 ^{1/}	...	1.3
Malaysia	2.0	2.1	2.0	1.9	1.8	2.7 (1980)	2.6
Nepal	2.4	2.5	2.6	2.4	2.3	...	1.9
Pakistan	3.7	3.5	3.9	4.1	4.4	4.2-4.5 (1979) ^{2/}	2.3
Philippines	5.6	5.7	6.2	6.5	7.2	7.0 (1977)	1.6
Sri Lanka	1.3	1.6	1.2	1.3	1.7	2.4 (1976)	2.2
Thailand	14.9	13.4	15.3	15.1	14.6	14.7 (1976)	1.9
Vietnam	11.1	11.0	12.0	10.8	11.2	13.5 (1978)	2.2
TOTAL	157.0	149.1	169.5	159.1	175.6	...	1.8

^{1/} FAO estimates.- ^{2/} Depending on alternative assumptions of fertilizer availability.

RICE PRODUCTION PROGRAMMES

A basic objective in all rice deficit countries is to become self-sufficient in rice and in foodgrains as a whole. Some countries, like Indonesia, have policies both to raise rice output and to reduce dependence on rice as a staple foodgrain by encouraging the production of other foodstuffs.

Rice exporting countries (Burma, Pakistan, Nepal and Thailand) have attached varying degrees of importance to world rice market conditions while setting their plan targets. In Thailand, for example, the rice production targets under the third (1972-76) and fourth (1977-81) plans were in part influenced by the difficulties encountered in the rice export trade in the late 1960s and early 1970s. The planned growth of rice production was thus reduced from 6.6% a year for 1961-66 to 4% for 1967-71, and only 1.6% for 1972-76. However, in view of the improved export opportunities during the last few years, the fourth plan envisages a slightly higher growth rate of 2.3%. Pakistan's policy since 1971 has favoured the production of low-yielding but high quality basmati rice, because of the export demand for this type. Lately, however, Pakistan has also been encouraging the production of IR6, a high-yielding variety (HYV) with good export prospects.

Current measures to stimulate rice production emphasize the extension and improvement of irrigation and better water management, the propagation of HYVs and other improved varieties, the greater use of fertilizers and pesticides, and the development and improvement of agricultural extension services and credit facilities. Countries with a high man/land ratio, or where large investments are involved in bringing new areas under cultivation (such as Bangladesh, India and Nepal) put greater emphasis on the more intensive cultivation of existing lands and improved yields. Several countries also plan to intensify the use of available land through multiple cropping. In contrast, Indonesia and Malaysia have encouraged the extension of cultivation to new areas by land reclamation, drainage, irrigation and settlement.

The "package approach", involving the use of various inputs in an integrated manner, has been accepted as an effective method of securing desired increases in productivity. The Masagana 99 programme in the Philippines, the BIMAS programme in Indonesia and the Minikit programme in India provide typical examples of this approach. These programmes have mainly concentrated on providing fertilizers, HYVs and pesticides to the farmers, along with supporting services such as extension and credit. Special programmes for the development, multiplication and distribution of seeds of HYVs and other improved varieties have been introduced by almost all the countries in varying degrees, with particular emphasis on varieties that are suitable for different agro-climatic regions, are pest and disease resistant and are suited to consumers' tastes.

Bangladesh, India, Nepal and the Philippines have concentrated their rice development efforts in selected areas or regions, such as irrigated areas or areas of assured rainfall. In India, for example, considerable attention has been given to the development of rice cultivation in controlled irrigation areas. Bangladesh, India, Thailand and Vietnam have expanded rice production in the second or dry season, when the incidence of insect pests and diseases is low, and it is easier to practise effective water control and management.

The most common economic incentive is an assurance of a guaranteed minimum or procurement price. For the effective implementation of price policies, special governmental or farmers' agencies have been established, such as the Food Corporation in India, BULOG and BUUDS/KUDS in Indonesia, the National Paddy and Rice Authority in Malaysia, and the National Grain Authority in the Philippines. In support of these policies many countries have plans to improve processing, marketing, warehousing and storage facilities. Several countries have increased their support or procurement prices in recent years, but (as costs have also risen) the real gain in prices has usually been limited.

Subsidies are also provided for key inputs, such as those for fertilizer in Indonesia and Sri Lanka, and for fertilizer, pesticides and irrigation water in Bangladesh. In Indonesia, bank interest rates on loans for production programmes are also subsidized. However, in recent years, Bangladesh and Indonesia have adopted the policy of gradually reducing subsidies for inputs because of their high cost. In Bangladesh it is proposed to reduce fertilizer subsidies even further by 1980.

Because of their stiff straw, the HYVs resist lodging and can thus respond to much heavier applications of fertilizer than the traditional varieties. However, despite this high yield response and the fertilizer subsidies provided by governments, the consumption of fertilizers is still very low in most countries. In Bangladesh, 80 to 90% of fertilizers are generally used for rice crops, but the average level of fertilizer application on rice in 1975/76 was only about 50 kg per ha (for all three crops). Rates of application vary widely among the different countries. A key reason for these differences is the varying ratio of rice prices to the cost of fertilizers. Other important factors include soil fertility, water control, farm size, farmers' education, the availability and distribution of fertilizers, and the availability of farm credit.

FOODGRAIN IMPORTS

South and southeast Asia as a whole changed during the period 1961-76 from a small net exporter of rice to being a small net importer. The volume of gross imports fell by 0.9 million tons, but this was nearly all due to the drop in Indian imports. On balance, the volume of rice imports by other importing countries did not change. Reflecting lagging production, the gross exports of south and southeast Asia fell by 1.6 million tons between 1961 and 1976. Pakistan was the only country to increase its rice exports.

Simultaneously, gross imports of wheat have grown from 7.2 million tons in 1961-65 to 9.8 million tons in 1972-76, with all countries except India importing more than in the early 1960s. Large increases occurred in Bangladesh, Indonesia, Sri Lanka and Vietnam. Although dependence on wheat has grown, this must be seen in perspective. In fact, increased wheat imports accounted for only 6% of the 42.5 million tons increase in the total supply (excluding stock changes) of wheat and rice in south and southeast Asia between 1961-65 and 1972-76. Higher rice production accounted for 52% of the increase and larger wheat production for 42%. However, the self-sufficiency ratio for wheat and rice together declined marginally from 94 to 93%.

The total value of imports of wheat and rice rose from US\$ 1,000 million in 1961-65 to about US\$ 2,500 million by 1972-76. Although part of the imports was provided on concessional terms, the outlays for commercial imports were substantial.

DEMAND AND SUPPLY PROSPECTS

The economic demand for rice in south and southeast Asia is projected to increase by 2.7% a year between 1972-74 and 1985, under the basic assumption about income growth in the latest FAO Commodity Projections. It should be noted, however, that meeting this growth in effective demand would imply only limited improvements in nutritional levels. Fully meeting nutritional requirements would imply far higher rates of growth.

On the basis of these projections, the demand for rice (paddy) would increase in the next decade by an average of 4.8 to 5.3 million tons a year. If the rate of growth of production of 2.2% a year during 1961-76 were to continue, production would increase by only 3.7 million tons a year. There are two ways in which this projected gap between demand and production can be closed. One is to increase imports of rice and other cereals. But this would worsen the already weak balance of payments position of most countries. The other more desirable alternative is to accelerate the increase in the production of cereals, rice in particular, so as at least to meet the expected growth in demand, and if possible reduce dependence on wheat imports from outside south and southeast Asia. This objective does not imply self-sufficiency in rice for each importing country, but rather that the import requirements of the rice-deficit countries would be matched by the export availabilities of the exporting countries.

To achieve self-sufficiency in rice in south and southeast in the next decade, it would be necessary to increase production by about 50 million tons of paddy over the average level of about 165-170 million tons attained in recent years. To check the further substitution of rice by imported wheat, paddy production would have to be stepped up by an additional 5 million tons. This would imply an annual rate of growth of almost 3%. This may appear modest in relation to the 4% agricultural production target of the IDS and the World Food Conference, and in the light of the nutritional needs, but it would represent a significant achievement compared with the past growth rate of only 2.2%. To sustain an annual increase of 3%, governments will have to assign a higher priority to agriculture in the allocation of funds both for investment (especially for irrigation) and for current expenditure (particularly for fertilizers).

FINANCIAL REQUIREMENTS

A recent estimate by the International Rice Research Institute (IRRI), adjusted for country coverage, indicates that annual investment and current expenditures on irrigation development and fertilizers in the region were about US\$1,200 million (at 1975 prices) between 1963-67 and 1968-72, but only US\$800 million between 1968-72 and 1973-74 ^{1/}.

^{1/} Robert W. Herdt, Amanda Te and Randolph Barker. The prospects for Asian rice production, International Rice Research Institute, Los Baños, Department of Agricultural Economics, Staff Paper No. 77-3, April 1977.

In more recent years, however, there has been a considerable increase in external assistance for irrigation projects. For example, from 1972/73 to 1976/77 their number rose from two to 12, and their amount from US\$ 12 million to US\$ 350 million. Asian Development Bank loans for irrigation projects increased from one in 1973 to six in 1977, and the amount loaned from US\$ 10 million to US\$ 125 million.

Taking into account past performance, country programmes, and the potential for irrigation development, FAO estimates that over the next decade it would be feasible to improve irrigation facilities on 12 million ha and to create new irrigation facilities on 5 million ha, with an annual investment of US\$ 1,500 million at 1975 prices. These irrigation facilities, supported by increased application of fertilizers and other inputs on irrigated lands (at an annual cost of US\$ 900 million), would lead to additional production of about 49 million tons of paddy per year by 1985, as against the additional requirement of 55 million tons. The remaining 6 million tons would need to be obtained from higher productivity on non-irrigated rice land. The measures required for this purpose, such as the development of better varieties, extension and training, and land improvement, would also require additional investment.

CONSTRAINTS ON PRODUCTION

The Asian rice-growing environment is extremely heterogeneous, and high yields can only be obtained where there are specific natural conditions, including optimum water supply and certain types of soils and climatic conditions. Improvements, where feasible, would require large financial and technical resources.

The theoretically cultivable but so far unused land reserve which is suitable for rice cultivation being only 11 million ha, the potential for the expansion of rice acreage is limited. Some promising potential does exist, in particular in Sabah and Sarawak in Malaysia, and Kalimantan and Sumatra in Indonesia, although land reclamation costs would be high. Consequently, a very substantial part of the required increase in output would have to come from the expansion of multiple cropping and from higher yields. This in turn would presuppose the better and more widespread utilization of existing technology, research into new technologies, and the simultaneous improvement of infrastructure. Certain gains could, however, be made simply by improving the layout, level, accessibility and size of paddy fields, as the Indian command area development projects have shown.

Problematic soils, such as acid soils, peat, and deltaic soil structures, cover about 10% of the total rice area, and yields on such soils are very low. Corrective measures such as drainage, improved water supply and application of chemicals would be necessary in order to increase soil productivity, and this too would be very costly.

Assured water supply, drainage and flood protection are the most critical preconditions for increasing rice output and reducing annual fluctuations caused by droughts and floods. The urgent need for such corrective action is illustrated by the fact that irrigated rice acreages, which cover only 36% of the total rice area, contribute about 60% of the total paddy output. Double cropping and HYV cultivation have hitherto been limited to areas where a controlled supply of irrigation water is available. As new water development will in future generally take place on less favoured sites, this will require more sophisticated technology and higher capital outlay. In fact, it has been estimated by ESCAP that, in the southeast Asian member countries of ASEAN, the construction of new irrigation facilities alone may claim about 64% of the total investment expenditure required for the modernization of rice production. Overall project costs are therefore likely to increase progressively, unless less capital-intensive technologies are introduced.

In spite of high initial investment in irrigation, many projects are functioning below their potential. This has been mainly due to deterioration from lack of proper maintenance, shortage of water to meet new demands stemming from modern production techniques and double cropping, inadequate water distribution systems and adduction methods, particularly at the farm level, and lack of communication between irrigators and farmers. Although the improvement and rehabilitation of existing but underused irrigation projects will require some additional investment, the return will be considerably higher than from new irrigation projects. This should therefore be given high priority. Institutional and administrative reforms should be introduced to remove constraints on the fuller utilization of existing facilities and to promote community involvement in decision-making on all aspects of water distribution and the maintenance of irrigation facilities.

The existing new cultivation technologies are primarily suited to irrigated rice lands. Thus the lack of improved varieties suitable for rainfed conditions, high risks in fertilizer use on non-irrigated lands, and the limited resources available to the small farmers who generally work on them are main causes of the low yields in rainfed areas. The more intensive use of rainfed areas has also been impeded by insufficient knowledge by the farmers of the land improvements and water conservation practices required, including suitable cultural practices. Research priorities should be reoriented to elaborating suitable land utilisation and cultivation practices and improved seed varieties for rainfed areas. The problems of upland rice cultivation need to be carefully analyzed, with a view to identifying measures conducive to improved returns. In Luzon (Philippines), Java (Indonesia) and northern Thailand, rice cultivation has been extended to marginal upland areas in subsistence farming, mainly under heavy population pressure in the lowlands. These marginal areas could give better returns if rice were substituted by less water-demanding crops such as maize, cassava and pulses, but this would require more farmer training and extension on alternative possibilities of crop production for subsistence farmers.

HYVs of the semi-dwarf type have been adopted on approximately 30% of the rice acreage. On the remaining acreage (mainly rainfed lowland) indigenous, tall indica varieties with a low yield potential predominate. The basic HYV requirements for rainfed and deepwater land radically differ from those for irrigated land. The varietal spectrum for the former is not yet very broad, and the needs of non-irrigated rice areas for HYVs cannot yet be met satisfactorily. Research has recently been started on a fairly wide front with regard to rainfed and deepwater rice, but it normally takes eight to ten years for varietal research to make any significant impact on farm production.

Insufficient supply of certified, improved or even mechanically cleaned seeds is a basic deficiency caused by inadequate provisions for the production, processing and storage of seed of various varieties in required quantities which are suitable for different environments. The scarcity of seed, usually more severe in drought years, calls for the establishment of a seed security system, preferably with widely decentralized seed production centres, at provincial and district rather than national or regional levels, in order to respond to specific sub-national varietal and quality requirements. At the same time, appropriate policies are called for to encourage farmers to use improved certified seeds.

There is still considerable scope for raising yields by increasing the use of fertilizers and improving fertilizer application practices. However, larger fertilizer inputs will be required for achieving the same increase in output in the future unless new techniques for the more efficient and economic utilization of fertilizers are adopted. Adequate and timely supplies of fertilizers at prices that would induce farmers to increase fertilizer use are further factors on which action is required. Extensive use of organic fertilizers, including azolla and algae, can in many cases decrease the chemical fertilizer requirements and reduce production costs.

Some 10 to 20% of rice production is at present lost because of damage by pests and diseases. The damage is less severe in upland, rainfed and deepwater areas, because the HYVs on irrigated land are more prone to pests and diseases than local varieties. The need for pest control is therefore likely to increase substantially, with the wider adoption of improved varieties, greater intensity of land use, and heavier application of fertilizers. As pests and diseases generally follow agro-ecological distribution patterns cutting across national borders, pest control measures need to be organized at country and sub-regional levels.

There is still a wide gap between what is known by agricultural science and what is practised by Asian farmers. Substantial increases in output can still be obtained by narrowing the differences between potential and actual yields. A major obstacle is the low level of farm management proficiency, owing to the lack of proper training. Other important constraints are inadequate extension and input delivery systems, insufficient credit facilities, the absence of farmers' and rural workers' associations, and land ownership patterns which prevent small farmers from benefiting from technological and organizational innovations.

Faulty land preparation, insufficiently tended seedbeds, uneven plant density, inefficient on-farm water management, and monocultural practices are among the major agronomic shortcomings which limit increases in yields. Better crop rotation through the introduction of legumes, and improved agronomic practices are indispensable preconditions for increased yields.

Mechanization makes possible more effective cultivation practices and more timely operations. It should therefore be looked upon as a complement to the more restricted "package" of production requisites so far associated with the "green revolution". The highly mechanized rice farming system in Japan, consuming 1,000 kg of oil (in terms of crude petroleum) per ha has attained an average yield of 5.8 tons/ha of paddy, whereas southeast Asian continental rice farming, relying only on human and animal energy inputs, reaches average yields of only 1.25 tons/ha. But on a transitional level, as in the Philippines, with an energy input of 160 kg of crude oil equivalent per ha, average yields have risen to 2.75 tons/ha. Appropriate mechanization has to be developed for various conditions and farm types based on economic and social considerations (especially employment aspects) as well as technical. Manual and animal draught power are likely to remain important factors for some time to come, while more mechanical power equipment would need to be introduced on a priority basis wherever it is necessary to carry out such operations as heavy earthworks for land reclamation and irrigation, and the sinking of tubewells, etc. that neither man nor animals can execute safely, well or quickly.

In addition to technical factors, there are various important economic and institutional constraints. There is often inadequate clarity and consistency in national production policies. Appropriate economic and institutional policies, including those on input and output prices, wages and labour, production subsidies, credit and marketing, need to be developed in order to provide adequate incentives to rice farmers within a coherent planning framework.

An overriding constraint in most countries is the lack of the financial resources needed for the introduction of technical improvements. Large investments are needed above all for the development and improvement of irrigation systems, and for the increased use of fertilizers and pesticides. Most countries are not in a position to bear such investment burdens on their own, and substantial increases in external financial and technical assistance will be needed. At the same time their own capacity to absorb a larger flow of investment must be enhanced, for instance by strengthening their capacity for project identification, appraisal, monitoring and implementation.

Most countries have domestic price policies which ensure to the producer a certain minimum price. The role and impact of the minimum prices vary, however, depending on the objectives of national policies. The most common aim is self-sufficiency in supply. Until 1973, and often owing to the urban bias in the price policies of importing countries, paddy prices had been kept more or less constant in some countries. They were raised only after the food crisis of 1973-75, in some cases about twofold (Table 2-16). Since 1973, there have been upward revisions of producer prices in rice-exporting countries, but there is still scope for further rises in several countries.

Table 2-16. Procurement or support prices for rice in selected countries

<u>Country</u>	<u>Product category</u>	<u>Type of price system</u>	<u>1969/70</u>	<u>1975/76</u>
			.....\$/ton.....	
Bangladesh	paddy	procurement price	64-68	134
Burma	"	" "	36	56
India	"	" "	61-75	63-83
Indonesia	"	support price	50	101
Malaysia	"	procurement price	103	168-187
Pakistan	Basmati	" "	196	243
	IR-6	" "	117	129
Philippines	paddy	support price	93-104	166
Sri Lanka	"	" "	118	205
Thailand	"	average wholesale price of paddy No. 1 in Bangkok	55	117

Producer price policies have often missed their full impact on small farmers' incomes and production because of substantial gaps between the administrative setting of prices and their effective implementation. More efficient market intervention mechanisms are needed in many countries for the effective application of the support prices which are a key to the farmers' willingness to undertake the risks and investments involved in a more dynamic pattern of paddy production. Improvements in marketing systems could also contribute to a rise in producer prices, thus providing additional financial incentives.

The same considerations apply to pricing policies for inputs, in particular fertilizer. Relationships between paddy and fertilizer prices, responses to fertilizers, and levels of fertilizer doses applied by farmers are here of particular importance. The financial capacity of most countries to provide subsidies is limited, so that the supply of fertilizer at reasonable and stable prices on world markets is a critical precondition for achieving higher output.

Major structural and institutional impediments deprive a majority of producers of both incentives and means for intensified cultivation. These include the uneven distribution of holdings, insecure tenancy arrangements, and inadequate access to land for small farmers. Effective agrarian reforms and tenancy legislation are urgently needed in many countries. Cooperative and credit systems continue to be dominated by large farmers, while extension and input delivery systems do not adequately benefit the small farmers. Local cooperative and associative arrangements, such as the irrigation associations of Japan and the Republic of Korea, point to potential solutions. In view of the low risk-bearing capacity of small farmers, the feasibility of introducing crop insurance schemes needs to be investigated.

Although there has been a sharp increase in the flow of external financial assistance for irrigation projects and command area development, especially from the World Bank Group, little assistance has gone into the preparation of rice production investment projects as such. The few international assistance projects mostly cover activities directly or indirectly related to irrigated rice. IRRI has only recently started to conduct research on rainfed rice, which contributes 40% of the rice production of south and southeast Asia.

FUTURE STRATEGY

The complexity of the task of achieving a sufficient acceleration in rice production in south and southeast Asia means that a simple, one-dimensional, production-oriented approach will not suffice for all countries with their differing climates, population pressures, social structures, and resource endowments. Some of the main elements of the necessary future strategy are discussed below.

The main policy objectives must be reduced dependence on external supplies and the raising of consumption levels to acceptable standards. Paddy production must be increased by 55 million tons in the next decade, and the annual rate of increase raised from 2.2 to nearly 3%. Given the limited scope for bringing new land under cultivation, this increase has to come mainly from the extension of double cropping and the raising of average paddy yields to 2.5 tons per ha.

It is therefore necessary to strengthen all elements in the farming systems to such an extent that the farmers have a real choice in the use of the inputs at their disposal, have the knowledge to draw optimal benefit from their potential, and have the resources and incentives to use them to maximum efficiency. Assured and controlled water supply is an essential component, with the extension of irrigation to at least 5 million ha of new paddy land and the improvement of existing irrigation facilities on another 12 million ha, preferably using less capital-intensive technology. The investment requirements for the achievement of these objectives will be large, and will require increased external assistance.

With the greater part of the rice area continuing to be under rainfed conditions, substantial improvements in the productivity of rainfed rice lands are imperative. A strategy must be worked out aiming at yield increases over a broader area base that will reduce regional disparities. The possibilities must be looked into of alternative cropping patterns, bringing higher nutritional and economic returns than rice, for marginal areas.

As the new rice technology includes a whole set of new production factors, it will be necessary to introduce "package" programmes providing all ingredients simultaneously and in judiciously combined quantities. The composition of such packages will have to vary according to the specific conditions of each country.

The production strategy must be bolstered by adequate economic incentives and institutional supports, such as better pricing, marketing and credit policies, improved extension services, and the promotion of cooperatives and small farmer groups. Policies are also needed to improve the pattern of food distribution, and to reduce hunger and malnutrition through increases in the incomes of the poorer population groups.

Additional financial resources will have to be mobilized from internal sources, private and public, as well as from external donors. Governments will have to devote substantially more public funds to the stimulation of rice cultivation. Investment by the farming community itself must be encouraged by appropriate government action on prices, marketing, input supply and credit.

AGRICULTURAL DEVELOPMENT IN CHINA

There have been several important new initiatives in agricultural planning and policy-making in China. The Government has taken steps to reassert stricter central planning and a higher degree of control over plan implementation by lower-echelon production collectives, in line with the recommendations of the Second National Conference on Agriculture held in December 1976 and January 1977, and of subsequent sectoral planning and policy conferences. A ten-year master plan for 1976-85, encompassing both the current and the next five-year planning periods, was published in 1978. The Government reviewed the quantitative targets of the current Fifth Five-Year Plan (1976-80), the attainment of which seemed to have been imperilled by factional opposition from the "Gang of Four". Harmonizing these targets with longer-term perspectives for the year 2000, it set several mid-term targets. The most important of these are the grain production targets of 300 million tons by 1980 and 400 million tons by 1985.^{1/} They imply an increase in the rate of growth of overall agricultural output to an annual 4 to 5% during the Sixth Plan (1981-85). Rural mechanization is to reach 70% by 1980 and 85% by 1985. Population growth is to be further reduced to 1% or less per year by 1980.

Thus China's rural planning is now operating under a triple time frame, with relatively detailed annual, quinquennial (1976-80) and decennial (1976-85) targets for production levels and growth rates. All production units have been exhorted to marshal their forces in a disciplined and coordinated way and to adhere strictly to planning directives to ensure plan execution by 1985. There is also the more distant horizon of the year 2000, by which time China is to be "a powerful socialist country with a well-developed, all-round modernized economy, which has taken its place in the forefront of the leading countries of the world". In order to reach this goal, there are to be far-reaching modernization drives in agriculture and three other sectors between 1985 and 2000, but concrete policies and quantitative targets have not been announced so far.

The principal goals of present planning and policy-making are the expansion and stabilization of production, the gradual elimination of annual fluctuations, and a socially just distribution. The utilization of all production factors must be in line with a clearly defined hierarchy of politico-economic priorities, leading to the construction of an integrated, homogeneous society that has eliminated the principal social contradictions, among them those stemming from differentials in industrial and agricultural production and from those in urban and rural levels of living. Policies and methods, once tested and found sound, are being continuously refined rather than changed. Approaches are being reaffirmed which stress the Chinese approach to specifically Chinese problems, rather than searching for universal solutions borrowed from other systems. Greater coherence in development approaches is being sought through a comprehensive strategy with the widest possible scope, with the reaffirmation of the principle of "putting politics in command", and judging each target by its merits under one common socio-political denominator.

Maximum emphasis continues to be placed on self-reliance. This implies the maximum internalization of local development costs by the production units themselves, in order to leave the state investment institutions free to tackle national and interregional development tasks. At the national level, it means the mobilization of all resources in a rational way, without neglecting international comparative cost advantages, but without

^{1/} Unified grain equivalent (UGE), including rootcrops and pulses in terms of grain equivalent (See Table 2-17).

making the country dependent on foreign suppliers. Agriculture remains the foundation of the entire economy. Thus its capability for production growth, labour absorption, and supplying food and industrial raw materials will continue to govern the rate and pattern of expansion in industry and other sectors.

Within agriculture, foodgrain production remains the "key link". This means that food production and food security have maximum priority, and that economic modernization and agricultural expansion can take place only if adequate food supplies are assured. At the same time, cash crop production is to be gradually expanded, and rural diversification pursued through the expansion of handicrafts and small-scale industries, village forestry and freshwater fishbreeding.

All lower-echelon economic activities are subordinated to provincial, regional and national planning directives and priorities. Lower-level planning observes the major long-term guidelines on such things as capital accumulation and investment, labour force utilization, enlargement of the productive base, and wage determination set by the national planning authorities.

NATURAL DISASTERS AND RECENT PRODUCTION PERFORMANCE

Although production conditions were far from ideal, the achievements of the first two years of the Fifth Plan, and particularly of 1977, seemed to support the continuation of the policy lines defined first in the 1960s and early 1970s. From autumn 1976 onward, climatic conditions increasingly worsened, and a series of natural disasters broke out in major producing areas. Autumn drought, following immediately upon a series of disastrous earthquakes, occurred first in the main winter wheat belt and then spread to the entire north and northwest and deep into the south. The winter and then the spring of 1977 brought abnormally low temperatures and late frosts, followed by spells of torrential rains in the Yangtze valley and summer floods and hailstorms in northern China, typhoons in the south, and drought in the north and west again, thus making 1977 one of the worst years in a generation.

Even under such adverse conditions, China's farmers were able to limit damage to the spring harvest and, by increased efforts during the second sowing period, to offset some of the losses through increases in the autumn harvest. In some parts of the country, grain production even increased somewhat over the 1976 level, for example in Sichuan, Guizhou, Fujian and Jiangxi. Although no official figures have been published, it seems that total cereal output may have attained or surpassed 280 million tons (UGE).

In the last two years farmland improvement, land reclamation, large and small-scale irrigation works, expansion of chemical fertilizer supply, breeding, selection and distribution of better seed varieties, provision of more farm tools, tractors and other mechanized implements have not only continued but have been intensified. It is therefore likely that only the very unfavourable weather conditions of 1977 held back what otherwise would have been a year of rapid production growth. As soon as weather conditions improve, these improvements in production conditions should make an impact, and China's agricultural production may be expected to recover vigorously from the indifferent performance of the last two years. It may therefore be assumed that the first of the current production goals, 300 million tons of grain (UGE) by 1980, may be achieved or even surpassed, provided the weather is favourable. FAO estimates of grain production in China are shown in Table 2-17.

Serious natural calamities, such as those which struck China with particular severity in 1977, inevitably occur regularly in so vast a country with such complex topography and such adverse climate. It is unavoidable that each year one province or another is hit by drought or floods, premature or belated frost, or untimely heat waves. Even so, 1977 was one of the worst years since the founding of the People's Republic in 1949, a period during which China had already suffered particularly heavily from

Table 2-17. Estimated cereal production in China

Million tons UGE <u>1/</u>		Million tons UGE <u>1/</u>	
1949	113 ^{2/}	1972	240
1952	154	1973	263
1957	185	1974	275
1962	203	1875	286
1965	222	1976	293
1970	243	1977	281
1971	246		

Source: FAO estimates based on Chinese publications.

1/ The concept of Unified Grain Equivalent (UGE) appears to have been changed over time. It includes wheat; rice (paddy); coarse grains; rootcrops (formerly at a uniform grain equivalent of 4 : 1, but now at varying equivalents of 4 to 5 : 1); pulses (at a grain equivalent of 2 : 1); and soybeans to the extent that they are used for direct human consumption in the different provinces. - 2/ Revised official figure.

natural calamities. While these natural adversities may to a great extent be ascribed to climatic fluctuations, at least part (such as floods) must be attributed to the impact of centuries of human action, such as the almost complete deforestation of China prior to 1949, with its destructive effects on the water table, soil fertility and stability, topography, wind velocity, and rainfall.

This combat against the forces of nature, including the repair of past ecological damage, receives the highest priority in China. In March 1977, after the onset of several disasters, the Government issued an emergency circular calling on the whole nation to mobilize immediately and battle against natural calamities. Anti-disaster headquarters, uniting civil administration, party, and productive units, were set up at once in all stricken areas to enroll peasants, city dwellers, the army, students and schoolchildren, aged pensioners, as well as the labour force from temporarily closed rural industrial enterprises. A wide range of measures were implemented to minimize losses, and ensure that spring sowing was completed on time. By an enormous expenditure of human labour, potential floods were dammed, frost killings were prevented, storm-lodged grain was straightened by hand, thin stands were resown, emergency water was brought to drought-stricken farmland, and the threat of a considerable reduction in national grain production was averted. The rural communities are increasingly capable, by making full use of all resources, particularly manpower, to ward off disastrous crop failures, even under the most adverse conditions.

In spite of the widespread natural disasters in 1977, some industrial crops did even better than in 1976. Cotton production increased, although it remained below the record. There were also large increases in the production of hemp and tea. China was able to maintain exports of rice, soybeans, vegetables, fruit, meat and fish to well-established markets in Hong Kong, Japan, southeast Asia and elsewhere, although export volumes frequently fell short of previous levels, and had to be compensated by Chinese purchases in the world markets. Wheat deliveries from Argentina, Australia and Canada, which in 1976 had declined to their lowest levels since the 1960s, expanded again in 1977. This was presumably to protect the rapidly

changing demand patterns and nutritional habits in large parts of China, and particularly in urban industrial centres. Rather than disrupt the accumulation of reserve stocks and the promotion of regional self-sufficiency, and rather than resort to bulk movements of food over long distances, the Government no longer rules out large food imports as a precautionary measure, particularly when international grain market prices are low.

PRODUCTION SPECIALIZATION

A novelty in China's food production strategy is the selection of more than 200 counties, grouped into 12 "base areas for grain production", on which modern inputs such as chemical fertilizers, improved seeds and irrigation equipment will be concentrated. This is expected to enable these "surplus output bases" to double and perhaps even treble their marketed grain by 1985. In these high-production areas the grain delivered to the state trading organizations is already about 30% of the total grain harvest (in comparison with about 20% in well-managed and fairly productive rural counties at the beginning of the Fifth Plan period). It may therefore be assumed that these counties will not aim at a delivery target as high as 60 to 90% of their 1976 output. As their own requirements will also grow (perhaps by 1% or less a year), this would mean that their total output would have to grow by 40 to 70% between 1976 and 1985. This would imply production increases of 4 to 8% a year, which are very ambitious in view of the high yields already achieved in the mid-1970s.

This change suggests that the Chinese planners are now willing to revert to a policy originally introduced as an emergency measure in the early 1960s, under which state aid and input supplies were concentrated on a few areas where yields were high and likely to increase further, and crops were found to be particularly responsive to increases in strategic inputs. A number of factors probably lie behind the revival of the "surplus base area" policy. One is the desire for self-sufficiency in grain within an economic region rather than in too localized a framework. Another is the improved supply of modern inputs, which makes possible their concentration on selected areas without neglecting the more backward regions. It probably also reflects the desire to end China's need for grain imports as soon as possible.

A second new policy is closely related. Selected provinces and counties are to establish other base areas for the intensified production of cash crops such as cotton, oilseeds and sugar crops, which will supersede grains as the major commodities for state procurement in these areas. This would imply a high degree of specialization in the selected communes, and thus a potential shift from the principle of grain self-sufficiency. It can only be accomplished if other collectives in the region can guarantee sufficient surplus grain to cover grain deficits in the cash crop base areas. There is thus a shift in the policy of local self-sufficiency in food production from the strictly localized (commune and county) framework to a wider (most likely provincial) one, involving inter-regional movements of food supplies.

Similarly, greater specialization is being promoted in the grazing areas of the north and northwest, where livestock has traditionally played a dominant role. Livestock production is encouraged, instead of the expansion of cultivation in marginal zones. Pastures are being rehabilitated and protected by large-scale irrigation and shelter-belt schemes. Requirements of grain and other feed are increasingly obtained from external sources, for example in Sinjiang and Inner Mongolia from adjacent grain-surplus counties and provinces.

MODEL VILLAGES AND COUNTIES

For rural socio-economic development in its widest sense, the Government has chosen a unique but well-tested approach which has already brought tangible results in China's development effort during the last 15 years. This is the selection of a small number of so-called "model" collectives which embody the principles and try out the

procedures that the planners want to see followed throughout the country. The most widely heralded of these model collectives are the Tachai Brigade for individual villages, and Hsiyang Hsien for rural counties, both in Shanxi province. Both are visited each year by more than a million Chinese rural planners, administrators, agronomists, and cadres in general. By direct observation in the course of government-sponsored tours, combining field demonstrations, lectures and occasional practical exercises, they learn how accelerated development is generated through a combination of hard work, frugality, self-reliance and "walking-on-two-legs" techniques (i.e. a judicious mix of modern and intermediate techniques).

Tachai Brigade (village) in particular is widely acclaimed as the prototype, not of a quick transition from poverty to high profits and individual affluence, but of development by the people's own initiative. Attention to the common well-being is expressed by the brigade's repeated refusals to ask the Government for cash aid and tax reductions when natural calamities reduced the harvest, its self-discipline and innovative spirit, and its preference for collective work over the interests of private profit.

Hsiyang County is heralded as a model of fast, well-organized, all-round development. It has high rates of marketed output (in contrast to auto-consumption), and of capital accumulation (in contrast to excessive private consumption). It has accomplished a swift transition through various organizational and technological stages to decentralized rural industrialization, in contrast to reliance on supplies from the state industries. It has concentrated on capital construction and infrastructure development through the intensive use of the county's own productive assets, mainly manpower, instead of waiting for state investment and letting labour use slacken in the dead season.

China's rural communities are thus called on to transform themselves by emulating Tachai and Hsiyang. About 400 counties had already reached Hsiyang standards by the end of 1977, and 300 to 400 (out of approximately 2,300) are to accomplish this transformation before 1981 if the current plan is fulfilled. Eight standards for the attainment of this goal were set out by the Second National Conference on Agriculture in January 1977. The first three are of an institutional nature: ideological rectification and the strengthening of motivational forces, particularly by revamping the local party committees; the strengthening of the leadership and management functions of the poor and lower middle peasant segment in the communes; and the intensive participation of local cadres in production, and particularly manual work. These are followed by five other, more technical standards: mechanization of 70% of all the main productive functions; satisfactory development of the local infrastructure and of the research system; advanced diversification of production; high rates of capital accumulation, commercialization, and collectivity (i.e., integration of the means of production); and raising the incomes and productivity of the poorest work teams to the present average levels in the commune or county.

LAND AND WATER DEVELOPMENT

Major emphasis is given to expanding the acreage under cultivation. In spite of considerable efforts, China still has only 0.11 ha of arable land per person, which the Government regards as too low. Although almost 1.6 million ha per year were reclaimed or opened up during the Fourth Plan period, a good deal of this gain only compensated for transfers of other agricultural land to industrial uses, to infrastructure, and particularly to extensive water storage projects, predominantly in valley sites. The Chinese authorities therefore consider these gains as of only "sporadic nature", and intend to mobilize much more of the estimated 35 to 40 million ha of unused or waste land which constitute "short-term" reserves for production. By 1985, 13.4 million ha are to be reclaimed, at an average rate of 1.67 million ha a year. The previous approach, through small-scale projects using human labour, will be massively supplemented and accelerated by mechanized means, which appear to be in increasing supply. In Shanxi

and the Shanghai Municipal Region, two focal points of land reclamation work, 19,000 tractors have been allocated to these and other projects of "rural capital construction".

After reclamation, the land is systematically cleared of stones and debris, and is improved in hill areas by levelling, contour-ploughing and terracing, and in the plains by shaping into geometrical plots which allow the use of mechanization. The soil is enriched with top soil meticulously collected from silting reservoirs and gullies, behind ravine dams or dredged out from ponds and river beds, which is mixed with large quantities of compost and green manure, and occasionally deep-ploughed. Such efforts have made it possible to drain and transform two-thirds of China's low-lying fields previously prone to waterlogging, to wash half of the alkaline or saline acreage, and to improve more than a third of the red lateritic soils in the south. Water adduction, formerly mainly by manual means, then more and more by simple gravity or rain-collecting devices, is now increasingly through mechanical or electrified pumping systems.

At the end of the process there emerges the so-called "high and stable yield field". This is a plot of high soil quality, optimally tended, ready to be used for multiple cropping, and relatively immune to drought or torrential rainfall. These fields obtain yields far higher than the averages attained in traditional Chinese agriculture even under optimum conditions. Thus in Honan and Shandong, high and stable yield areas which had average yields of 1.9 tons per ha of grain (then almost double the national average) in 1953 had attained 7.7 tons per ha by 1973 and were routinely used for a second wheat crop each year. So far China has created more than 35 million ha of these high and stable yield plots, which are now found even in such remote and badly endowed regions as the northern Shanxi mountain area. Potentially at least, almost all Chinese crop land is destined to be turned into such high-quality acreage. The present target is to have one mou (1/15 ha) per member of the rural labour force by 1985, or about 55 million ha. This task of reclamation and improvement has offered a remunerative outlet for the labour of millions of commune members, who would otherwise have been redundant in the production cycle of their communes for large parts of the year outside the two peak seasons of labour demand.

Land improvement has been accompanied by extensive irrigation campaigns, with the aim of reducing the effects of erratic rainfall on crop production, especially in the semi-arid areas of the northwest. Here too, the emphasis was initially on small projects which the local collectives could undertake using their own means. Where large schemes were started, they were broken down into many small-scale components, and turned over to local implementation by the communes as far as this was technically possible. In this way, more than 70,000 dams and reservoirs, with a total water reserve capacity of more than 300,000 million m³, have been built since 1949.

The long-established Chinese policy in this field is to maximize water storage, and to avoid as far as possible the unused flow-off of excess water, such as seasonal rainwater. Thus, already in the 1960s, provinces prone to drought were assigned the task of developing their storage capacity to such an extent that sufficient water for the crops could be assured even if there was no rainfall during 60, 90 and in some places 120 days of the crop season. Very elaborate reservoir and water communication networks, covering large areas, have been worked out, which the Chinese call the "melons on a vine" system. In this respect, a rural county in Hubei has become the national trend-setter. The present rate of irrigation development is about 5,000 new reservoirs (mostly small ones) per year, involving the extension of the irrigated area by at least 1.6 million ha a year, which is the same as during the Fourth Plan period.

An interesting feature of Chinese irrigation is that for many years now local irrigation and construction authorities have been operating under instructions to conceive dams in such a way that it is subsequently feasible to install power generating equipment at the outflow. Older dams are systematically modified to add power generation. The Chinese early perceived the possibilities for rural electrification inherent in the small

generating gear which many commune and county plants now manufacture in large quantities, in order to make use of even the smallest streams with sufficient water pressure. A second subsidiary objective in this multipurpose concept is the systematic use of all reservoirs for fishbreeding.

The emphasis on small-scale, commune-constructed irrigation projects has not prevented the emergence of some large schemes, such as the Huai and Hai River schemes, whose distribution areas each cover more than a million ha of cultivable land. Also along the middle and upper flow of the Yellow River, a number of large dams regulate water inflow from the tributaries, and distribute excess water into irrigation systems which are still being developed. The Yellow River system, when finished, will consist of over 30 major dams and many more ancillary storage and deviation devices; it will have a major impact on future production in the potentially very rich but hitherto dry loess hill areas in Shanxi, Shenxi and Gansu. In the Yangtze valley, two natural lakes (the Poyang and Dongting), have been linked with the river and thus made into giant natural reservoirs. Other large hydroelectric dams have been constructed in upper tributary areas of the Yangtze in Anhui, Zhejiang and Jiangxi. Two still larger projects, already planned in the early 1960s but postponed for lack of resources, have now been revived. These are for the deviation of excess water from the lower Yangtze into the Honan, Shandong and Jiangsu plains and from there into the Yellow River and Huai system, and from the Yellow River into the great northern plain of Hobei.

These irrigation efforts are complemented by the development of groundwater resources, especially in the north, where the number of newly dug irrigation wells has reached 1.7 million. Formerly mainly human labour was used to lift water. According to some sources, about a third of the total rural labour input went into drawing water by bucket, water wheel, treadmill, "dragon chain" and other simple devices before 1949. Pumping has been a priority area for rural mechanization. Whereas China had no power wells before 1949, the installed pumping capacity (mainly by diesel engines, and to a smaller extent by electric pumps) rose from 9 million HP in 1965 to over 50 million in 1977. As more and more counties and even some communes are manufacturing their own pumping equipment, the rapid mechanization of water pumping is likely to continue.

All this has resulted in a considerable increase in the irrigated and drained acreage. About half of all the cultivated area is now under irrigation, fulfilling the minimal requirements of water supply set by the Government, and two thirds of the areas needing drainage are now safe from waterlogging. This has allowed south China, where formerly two crops a year were the rule, to proceed to triple cropping.

MOBILIZATION OF RURAL MANPOWER

Many of the large-scale and all of the small-scale infrastructural projects have hitherto been carried out by the massive use of manpower. This use of labour is one of the most interesting, original and successful features of Chinese rural development. Proceeding from the imperative to provide gainful employment for all the adult population in need of a livelihood and capable of making a productive contribution, the Government very early made it a major goal to "turn consumers into producers" or, in other words, to mop up rural unemployment and seasonal underemployment by organizing labour-intensive work projects that would improve the production or the material conditions of the villages themselves. This strategy is based on the proposition that all latent manpower represents unused production capital.

Thus for many years the Chinese have, particularly during the slack winter season, mobilized for infrastructural improvement all labour forces not otherwise needed in the villages. The campaign goes under the heading of "farmland capital construction". During the last seven years it has involved 100 to 160 million participants annually, with average individual inputs of 40 to 100 days. In this way, annual averages of 5.3 million ha of cropland have been levelled and freed from stones and debris, 0.66 million ha have been terraced, 1.6 million ha have been brought under permanent irrigation, 5 million ha of forests and shelterbelts planted, and countless roads, bridges, tunnels, culverts,

canals and dams created. In 1977 alone, a total of 1.26 million projects were executed, ranging from huge land reclamation and improvement schemes in major watershed basins, involving the labour force of several provinces (such as the Haiho River Scheme south of Peking) to the building of a road or a small irrigation dam.

At first these projects were mainly seasonal. However, many of them are now implemented by year-round work, for which a more or less permanent labour force of about 28 million specialists in farmland capital construction has slowly been formed. Implementation is no longer exclusively labour intensive. More and more machines, mainly tractors, are being brought in. This is in order to alleviate toil, to shorten the execution period, and (as seems to be the case in more and more communes) because the formerly large manpower surpluses have been gradually absorbed by other tasks and are giving way to labour shortages.

One of the socially important characteristics of the drive is its remuneration system. In order to put farmland construction labour on the same income basis as farm labour in the narrow sense, individual workers, as members of their communes equally participating in the distribution of the net proceeds of all collective activities, are allotted work points depending on the quantity and quality of their work. A few communes add up the total number of man-days invested in such infrastructural projects, and divide them as an equal charge to the entire labour force, under a system which is called "labour accumulation". Where the state investment budget pays for a given project, the total payment is transferred to the commune treasury and credited to the collective revenue. Thus any distinction has been avoided in remuneration between "rich" peasants tilling fields and raising livestock, and "poor" road-gang labourers toiling away for a daily cash pittance. Only the amount and quality of the effort, the technical skills brought to it and the hardship endured during the execution determine the remuneration.

Another, perhaps even more important, aspect of this system is that it allows the internalization of development costs by the rural productive collectives themselves to a surprisingly high degree, because it maximizes the utilization of the one production factor which has been abundant everywhere. As long as manpower can locally substitute for capital, the investment resources at the Government's disposal can be stretched to great lengths. It is this approach, called "walking on two legs", which has enabled China to maintain high rates of economic growth and equip the rural sector with a considerable array of infrastructural assets.

MECHANIZATION

The modernization of Chinese agriculture inevitably included mechanization from the very beginning. As was foreseen already at the time of the first steps towards agrarian reform, mechanization was essential to expand food supplies for a growing population, raw material supplies for industry, ^{2/} and exportable surpluses to help pay for imports of investment goods for the industrial sector. But an immediate transition to mechanized cultivation was not feasible, because China did not possess the capital resources for a huge agricultural investment programme, and because the agricultural sector was structurally unable to absorb such investments and put them to profitable use.

As Chairman Mao explained in the mid-1950s, rural collectivization had to precede mechanization for three reasons. First, only large, socialized production units, such as the subsequently created People's Communes, could handle farm machinery with a sufficient degree of efficiency, both in technical and financial terms. Second, in view of the many competing investment requirements of the central Government, it was not desirable or even conceivable to make farm mechanization a responsibility of the central

^{2/} In 1975 three quarters of the raw materials for light industry still came from agriculture.

investment authorities. Rather, it was advisable to bring the agricultural production collectives themselves to the point where they would be able to internalize these investment costs, both directly in terms of financing the acquisition of machinery and equipment, and indirectly in providing the production capacity to manufacture the equipment in a decentralized manner in the rural areas. Third, it was obvious that progressive mechanization would eventually result in huge shifts in the economic and social structure of the villages, and that as long as no alternative employment outlets were available the consequences could be disastrous. Urban industry, in spite of rapid expansion, was not capable of offering sufficient alternative employment. It was therefore preferable to develop and diversify the rural economy in such a way that, when rapid mechanization began, redundant manpower would easily find alternative employment elsewhere.

Yet, in spite of these constraints, mechanization has been remarkably rapid. In the mid-1950s Mao Tse-tung anticipated that two or three five-year plans would be required for the full establishment of capable and efficient socialist production collectives, and another three plan periods for mechanization up to the level of "mechanization in the main". This target is now to be reached, roughly on time, by 1980,

The groundwork for farm mechanization was laid in the adoption of a new set of guidelines under the "General Line" in 1961, whereby agriculture, as "the foundation of the economy", was to receive the priority support of industry in the form of equipment for the manufacture of tractors, engines, pumps and tools by the local sector itself. The creation of this decentralized production capacity has been mainly financed from the resources of the communes and counties themselves. In this way, China's rural counties have established over 1,600 factories producing farm machinery, and 2,700 repair shops and spare parts plants. This made it possible to increase the country's output of large tractors at an average annual rate of 20%, and that of walking tractors by 46%. Tractor-ploughed acreage now accounts for one third of China's total cultivated area.

Farm mechanization is conceived as much more than just tractorization. Irrigation and drainage equipment was increased 5 1/2 times between 1965 and 1976. Power generation equipment for rural small-scale hydroelectric complexes grew by 30 to 50% each year, and local investment and manufacture provided over 70,000 small hydroelectric stations in rural areas. One result of this transformation is the emergence of a vast group of skilled personnel, such as machine operators, maintenance workers, technicians, and management specialists, whose total number now exceeds 10 million. All provinces, prefectures and many counties now have their own agro-machinery research and training institutions. This drive is being sustained by a steady demand pull from the agricultural sector itself, where labour shortages make increases in labour productivity by way of mechanization imperative if plan targets are to be fulfilled. Thus, at the beginning of the Fifth Plan, an overall increase of 70% in labour requirements in the rural sector in five years was anticipated. Some particularly advanced communes reported rises in manpower inputs of 200% and more during the preceding plan.

Present plans call for the mechanization of 70% of all main functions in crop production, animal husbandry, forestry and ancillary work, plant protection, processing, irrigation and drainage by 1980, and 85% by 1985. The number of skilled operating and maintenance personnel is to double, and the number of tractors and other movable equipment is to increase by 32 to 110% by 1985 according to category. The strategy to attain these goals, according to the Third National Conference on Agricultural Mechanization held in Peking in 1977, is basically an extension of the lines followed so far, with an indirect role for national industry as the supplier of production equipment and the sponsor of small plants in the rural sector. The latter have to bear the principal burden of equipping the collectives with the necessary machinery and implements.

Technologically, the well-tested strategy of "walking on two legs" is to be continued. That is to say, modern technology is to go hand in hand with intermediate technology. But more and more manufacturing plants are to shift from simpler devices and types to more sophisticated, technically efficient ones, for which the national large-scale industry will furnish blueprints and technical knowhow. Testing, selection and adaptation to local needs will remain widely decentralized, as will the sequence of steps each county and commune will follow. Each local unit will decide, in the light of its own specific needs, which path to follow and which priorities to choose. Such an approach also makes it much easier for local bodies to justify the financial burden on their own accumulation funds, revenues and members' savings. The state and its central investment funds intervene only in a subsidiary way, and in cases where the burden clearly exceeds the financial capacity of the collective.

AGRICULTURAL MODERNIZATION IN LATIN AMERICA

The pattern of agricultural development in Latin America shows a number of contradictory features. Increased food production contrasts with hunger and malnutrition among a large part of the population, increased agricultural incomes with the spread of rural poverty, and progress in the application of modern technology with the persistence of primitive forms of agriculture. This reflects the particular way in which agriculture has been modernized, mainly through the growing importance of market forces and of modern enterprises in a relatively small part of the sector.

These problems were discussed at the ECLA/FAO Technical Meeting on Rural Social Development in Latin America, held at Montevideo, Uruguay, from 9 to 11 August 1978. The following brief discussion is based mainly on part of the documentation prepared for this meeting ^{1/}, and on its conclusions ^{2/}.

In view of the diversity of the situation in Latin America, a considerable amount of generalization is inevitable. The discussion mainly emphasizes elements common to countries that have recently experienced an acceleration in the growth of commercial agriculture. Details that would be more relevant to individual countries have had to be omitted.

MAIN CHARACTERISTICS OF AGRICULTURAL DEVELOPMENT

Agricultural production rose by the far from negligible rate of 3.2% a year between 1950 and 1975. Production structures have also shown considerable flexibility, particularly in the case of some export commodities. Agricultural production enterprises have developed closer links with agroindustries and international marketing enterprises.

Domestic demand for agricultural products has increased rapidly. More than two thirds of this demand comes from urban areas, reflecting the rapid expansion of urban populations and of non-agricultural incomes.

The slow growth of agricultural exports and the declining share of Latin America in world trade in agricultural products mainly reflect external conditions beyond the control of the producer countries. They appear to be due more to protectionist policies in importing countries, and to the world economic recession, than to insufficiencies in Latin American production. The concentration on relatively few products and markets, a main characteristic of Latin American agricultural exports, is also dependent on the institutional and historical factors governing the trade relations of the region with the rest of the world. Moreover, although the lack of dynamism in external markets has had serious consequences, it can have had only a limited effect on agricultural expansion, in view of the small share of external demand in the total demand for most agricultural products.

Although agricultural imports have increased, this growth has generally remained within reasonable limits. About 40% of the total have consisted of wheat, the production of which is subject to various ecological and other constraints in many parts of the region.

There has been rapid technological change in Latin American agriculture. Thus, fertilizer use has risen almost twentyfold in the past 25 years, tractor numbers have increased sevenfold and the irrigated area has doubled (Table 2-18). At the same time, the agricultural labour force increased by only 50% and the harvested area by 70%. Although land expansion continued to be the major factor in the production increase, the annual rate declined from 2.7% during the 1950s to 1.9% in the present decade. Average crop yields per ha increased by 1.2% a year (1.8% if Brazil is excluded) in 1950-74. Labour productivity has also increased at an appreciable rate, as is indicated by the rise of over 2% per year in real per caput GDP in agriculture.

^{1/} Rural social development in Latin America, ECLA/FAO/78/2, Santiago, 1978.

^{2/} Report of the ECLA/FAO Technical Meeting on Rural Social Development in Latin America, Montevideo (Uruguay), 9-11 August 1978, LARC/78/2 - Sup.2, Aug. 1978.

Table 2-18. Indicators of agricultural modernization, Latin America and selected countries

	Average 1948-52	Average 1961-65	1970	1974	1975	1976	Annual rate of change		
	.....000 tons .....						.....% per year		
	.....000 ha.....								
<u>FERTILIZER USE</u>	278	1,239	2,922	4,289	4,400	5,258	20	12	10
Argentina	15	24	87	71	55	72	10	9	- 3
Brazil	35	224	961	1,716	1,791	2,371	30	20	7
Chile	30	95	148	158	94	116	9	2	- 4
Colombia	13	121	144	249	214	247	20	6	9
Mexico	21	260	593	922	1,158	1,165	29	12	12
Peru	63	94	84	142	104	129	5	3	5
	.....000								
<u>TRACTOR NUMBERS</u>	122	446	652	770	805	826	13	5	4
Argentina	50	139	178	184	188	190	9	2	1
Brazil	13	93	157	236	254	270	21	9	10
Chile	7	21	30	27	28	28	9	2	- 1
Colombia	8	24	28	24	24	25	23	-	- 2
Mexico	23	72	115	135	140	145	12	6	4
Peru	3	8	11	12	12	13	10	4	3
	.....000 ha.....								
<u>IRRIGATED AREA</u>	6,900	9,961	11,060	11,879	12,185	12,874	20	12	10
Argentina	1,000	1,587	1,700	1,780	1,800	1,820	4	1	1
Brazil	132	546	796	990	950	980	13	5	4
Chile	1,000	1,084	1,180	1,238	1,260	1,280	2	1	1
Colombia	78	231	250	270	280	285	8	2	1
Mexico	2,504	3,700	3,950	4,340	4,479	4,816	4	2	3
Peru	900	1,041	1,106	1,120	1,130	1,150	2	1	1

Another important change has been the development of a subsector of modern commercial agricultural enterprises. Such enterprises are not new, particularly as regards exports. However, their considerable recent expansion has assumed a different character, with the intensification of agricultural production, and an increasing orientation towards the domestic market.

As against such generally positive developments, many negative aspects remain. The living conditions of the majority of the rural population in Latin America, who depend basically on agriculture, continue to be depressed and precarious. Rural poverty has continued to spread, in spite of the substantial increase in agricultural GDP per caput.

In many countries at least a quarter of the rural labour force is unemployed. Poverty, unemployment and underemployment have caused rapid migration to urban areas, but the nonagricultural sectors have been unable to absorb this largely unskilled labour force, and "poverty belts" have grown up around the large urban centres. Between 1950 and 1976 over 40 million people migrated to urban areas. They represented almost half of the natural increase in the rural populations. The number of migrants increased from less than 1 million a year in the early 1950s to about 2 million in recent years, although it appears that migration pressures have now passed their peak.

Improvements in nutritional levels have been far from sufficient. FAO's Fourth World Food Survey indicates that about 46 million people in Latin America, or about 16% of the total population, were severely undernourished in 1972-74, and this estimate appears to be conservative. Between 1961-63 and 1972-74, the per caput dietary energy supply in Latin America increased by only 0.5% per year, compared with an increase of 3.2% in per caput income. A better distribution of this increased income would have resulted in a more marked improvement in food consumption.

The problem of overutilization and underutilization of land, traditionally associated with the latifundia-minifundia complex, does not seem to have changed significantly. In many instances, the larger tracts of land continue to be used at much less than full capacity. In addition, new lands have been opened up for agriculture without due regard for the ecological consequences. Thus, technological progress and the commercialization of agriculture may in fact have contributed to the deterioration of natural resources.

Except in those countries where consistent agrarian reform policies have been implemented, the traditional land tenure system and the concentration of land ownership, continue to exercise a strong influence. This is particularly true where agriculture is the principal economic activity, and where technological backwardness makes land the main production factor.

NATURE AND EFFECTS OF AGRICULTURAL MODERNIZATION

However, there is nothing to indicate that the persistence of traditional patterns has obstructed technological progress and the expansion of production. There have been some significant transformations in agrarian structure, even in countries where agrarian reform was not undertaken. Despite its obvious influence on many factors, the persistence of traditional forms of land tenure and utilization is not sufficient by itself to explain the contradictions in the pattern of agricultural development in Latin America. The origins of these contradictions are probably to be found mainly in the way in which the process of agricultural modernization has taken place.

One key aspect of this process is already apparent from Table 2-18. Technological progress, which is a main feature of agricultural modernization, has been highly concentrated geographically. Brazil and Mexico alone accounted for more than two thirds of the region's fertilizer use in 1976. Almost three quarters of the total number of agricultural tractors were in Argentina, Brazil and Mexico. What is still more important is that, in these and other countries, only a very small proportion of the farms have adopted modern technology.

A main feature of the transformation of agriculture in Latin America is the dichotomy between the expansion of the modern subsector and the stagnation of the traditional subsector. In this sense, the problems indicated earlier appear to be the consequence of the transformation itself, rather than of the persistence of traditional forms of production. The modern subsector has expanded through the development of a small group of enterprises taking advantage of technological change, and developing closer links with the rest of the economic system.

In the past agricultural production for the market was carried out within a system of production based on the extensive use of land and the institutional control of labour. The availability of labour was a prerequisite for the successful functioning of the production system. This system, most commonly exemplified by the hacienda and the latifundia-minifundia complex, itself constituted a type of "traditional" agriculture, in spite of its purely mercantile character. This "traditional" agriculture was characterized by very low productivity of land (and also generally of labour), and on the other hand by a high surplus labour potential resulting from the concentration of ownership, which increased with the acceleration of population growth. The labour surplus was the key element in reconciling low productivity and relatively low prices in both internal and external markets, without affecting the returns to the other factors of production.

However, a number of factors brought a crisis in the traditional extensive system of production. These included changing conditions in internal and external markets, the incorporation of new and often less productive areas, the introduction of technological innovations, and the growing importance of the urban-industrial economy, with the ensuing socio-political changes.

Among the alternative possibilities for facing the new situation, it was the modernization model which prevailed. This approach mainly sought the intensification of production in the more productive areas. However, the transposition of this new model to the traditional framework caused serious distortions within the agricultural sector and in its relations with the rest of the economy. The other alternative would have been profound structural changes both in agriculture and in the economic system as a whole.

Government policy in the allocation of resources has favoured modernizing projects and entrepreneurial groups. Thus the expansion of production and the application of modern technology has tended to occur on a relatively small number of large or medium-sized holdings, located on the best lands. Generally, these holdings are the direct beneficiaries of much of the public investment in infrastructure, as well as of incentives in the form of credit, remunerative prices, protected markets, and extension.

Economic and physical productivity are considerably higher in the modern subsector than in the traditional one. Consequently, the expansion of the modern subsector greatly increases its share of total production and income. There is evidence that the modern sector contributed the major part of the total increase in agricultural production in recent years. This is particularly evident in the case of Mexico, where less than 4% of the total production units, mainly situated in the irrigated areas of the north and north Pacific, contributed over 80% of the production increase during 1950-60.

The expansion of commercial agriculture does not necessarily imply the adoption of intensive production methods. This depends on the nature of the available factors of production, as can be illustrated by comparing Brazil and Mexico. In Mexico the possibility of optimizing the use of the best land through the introduction of irrigation stimulated the development of a modern "green revolution" type of intensive exploitation. In Brazil, however, the abundance of land and the possibility of incorporating new areas of high natural fertility has permitted the coexistence of two types of modern exploitation: an intensive version in the older zones such as Saõ Paulo, where the agricultural frontier has practically stabilized; and an extensive version, generally in the high fertility frontier areas (mainly the centre-west), based on labour substituting mechanization, although much labour is often essential during the initial stage of expansion for such tasks as land clearance.

The increase in the mainly urban commercial demand favours the modern agricultural subsector, which is best equipped to satisfy it. At the same time, the traditional subsector must face increasing competition from the modern sources of supply in satisfying the growth of demand, however slow, in rural areas. Thus the modern subsector, with its greater financial means and higher profitability, tends to drive the traditional subsector out of the market.

Modernization inevitably fits into a framework of political conditions which tend to guarantee the stability of institutions and to eliminate obstacles to rapid and unencumbered commercial activities. The powerful agricultural entrepreneurs enter into various forms of agreement with financial groups, storage agencies, agroindustries, and the centres which supply modern technology. Modernization also requires a land market subject to a minimum of restrictions.

The modern subsector benefits from a much greater availability of capital goods and technological inputs, and often of better quality land. It generally employs much less labour than traditional agriculture to achieve a similar level of production. Its expansion has resulted in an increase in rural-urban migration; an increase in the number and proportion of wage labourers in the agricultural labour force; and the expansion of subsistence agriculture, in terms of persons and production units, or occasionally also in terms of land area.

There is a growing tendency to adopt forms of hiring and remuneration of the labour force which exclude practically all "lost time" in their employment. Hence the continuous increase in the proportion of part-time workers in the total of employed labour. For the employers this represents a real reduction in their labour costs, ^{3/} and at the same time a transfer to the wage-earning and small-scale sector of part of the maintenance costs of the agricultural labour force.

Another factor is the employment, on the basis of the control of land ownership, of the surplus labour for capital formation. This occurs chiefly in the agricultural frontier areas, to which part of the rural population is displaced because of the stagnation of small-scale agriculture and the consolidation of the modern subsector in the regions already incorporated. This capital formation is practically free of cost for the employers, since it is based on the granting to the "landless" of cultivation rights (normally for family subsistence) in return for which they perform the necessary activities.

The reduction of the income of the agricultural labour force does not modify cost relations in favour of the traditional subsector, nor does it restrict the use of new technology in the modern subsector, as might perhaps be expected. This is due both to the differences in productivity per worker in the two subsectors, and to the subsidizing of the costs of adopting modern technology by credit facilities and other means. This deliberate reduction of the cost of adopting modern technology limits the competitive capacity of the traditional subsector, and reduces the possibility of increasing agricultural employment and improving income distribution.

This form of articulation between the two subsectors is accompanied in some cases by a certain degree of specialization in production. The traditional subsector, especially at the peasant level, is oriented towards the less profitable lines, generally those of mass consumption and less dynamic demand, whose prices are controlled for economic policy reasons. This contributes in many cases to the progressive impoverishment of the producers, who have no other production possibilities.

^{3/} Although in some cases there has been a slight tendency to increase the nominal wages of this category of worker, the employers benefit from a second source of economy, through the non-payment of social security benefits, which are usually obligatory in the case of permanent employees.

TOWARDS A BETTER PATTERN OF AGRICULTURAL DEVELOPMENT

The above brief sketch suggests certain tentative conclusions.

First, it does not seem that the difficulties of the Latin American agricultural system in reaching higher production levels and solving nutritional and employment problems can be ascribed to any lack of natural and human resources or technical capacity on the part of the farmers. Except in the case of a few countries, products, and temporary situations, agricultural production appears to have met the effective market demand.

It is the overall functioning of the system, especially the expansion of the modern subsector and the simultaneous stagnation of the traditional subsector, which provides the key to what has happened. Thus efforts aimed at correcting or improving partial aspects of the overall situation have a limited effect, and do not alter the functioning of the system as a whole.

Second, it appears unlikely that the future development of the present agricultural system, and especially of its modern subsector, will reduce its inherent contradictions. On the contrary, the past performance indicates that these problems may even worsen. This suggests the need for more deliberate action in the process of economic decision-making and in the allocation of resources to limit the socio-economic imbalances created by the expansion of the modern subsector, and to ensure that the benefits of technical progress also reach the small farmers and landless labourers.

Third, it is clear that long-term development must inevitably include the transformation of traditional agriculture. The specific challenge to be faced is to make possible a transition from traditional agriculture to a modern form which will promote better use of the production potential and a general improvement in the well-being of the people. This would imply a modification of the most important features of the modernizing model. The depth and scope of the modification is dependent on the institutional conditions of each country, and the policy decisions which it adopts. In any event, a planned effort to transform the traditional sector should involve a number of essential areas that are discussed below.

The first is agrarian reform. It is paradoxical that, while the great majority of the rural population does not have sufficient land to cultivate, Latin America has an abundance of unexploited agricultural land. Even excluding the permanent workers in the modern subsector, the available information indicates that in most countries not less than 60% of the agricultural population (sometimes as much as 80%) does not have access to land, or has markedly insufficient access. The importance of this stems from the fact that the ownership of land is essential in determining the final distribution of income generated by agricultural activity. In addition, inadequate access to land means, in many cases, inadequate access to markets and to support services, such as credit and extension. This places the traditional subsector, and particularly the small farmers, in an extremely vulnerable position as regards competitiveness on the market.

In these circumstances, any significant effort toward an ordered transformation of the traditional subsector presupposes the establishment of new forms of enterprises which will permit a greater number of participants to share the benefits of productive activity, and a more equitable distribution of the income generated. Such enterprises would also facilitate the provision of the support services and nonagricultural resources indispensable to their development. The reforms would generally involve at least three essential aspects: a greater access to land and water resources, without which it will be difficult in some countries to find a solution to the problems of production, employment and income in the traditional subsector; the organization of agricultural production enterprises on the basis of social participation (e.g. associative enterprises), permitting the establishment of economically viable units and the social accumulation of capital; and the organization of appropriate support services, including extension, credit and marketing.

The introduction of modern technology may be highly profitable at the private level, but it often presents some negative aspects at the societal level. In the case of Latin America, there has often been a precipitous application of technological innovations, discovered and developed elsewhere, especially in the case of mechanization.

It therefore appears necessary to adopt more selective criteria in the introduction of advanced technology. Even more important, Latin America should develop its own technology for adoption by the mass of its farmers. The experience of some Asian countries suggests the existence of alternative methods of ensuring a more orderly transition towards a productive agricultural sector with gradually reduced manpower needs.

It is also important to note the paramount importance of orienting agricultural research towards the ecological conditions of "traditional" zones. One example is that there is so far an insufficient technological basis for modernizing the Andean, tropical, and arid and semi-arid areas, where irrigation would be uneconomic.

A more rational transformation of the agricultural sector would require the adoption of new criteria for the allocation of government resources. In particular, the reorientation of resource allocations should favour rural development programmes aimed at expanding the existing infrastructure, and the technical and institutional facilities of the traditional subsector. While such programmes have become common in the region in recent years, their massive implementation is a prerequisite for limiting the spread of rural poverty. The viability and success of these programmes will largely depend on the simultaneous introduction of the other priority measures indicated above.

In the agricultural sector, the programmes of reform and rural development and the policies of resource reallocation suggested would have a positive effect on nutritional levels. Similar poverty-oriented policies could be introduced in nonagricultural sectors. In both cases, the implementation of national food and nutrition policies and programmes for the low-income and other vulnerable groups of the population would constitute valuable additional measures.

SOME ASPECTS OF FOOD SECURITY IN THE NEAR EAST

As is indicated in Chapter 1, food and agricultural production has increased faster in the Near East during the 1970s than in any other developing region. This successful performance, however, masks a number of unsatisfactory features. The increase in production has not been consistent, and especially in certain countries there have been substantial fluctuations from year to year, mainly because of weather, while the recent desert locust invasions also illustrate the vulnerability of production in the region. In spite of the rapid expansion of production, the region's dependence on food imports has increased. Moreover, in this oil rich region, although there has been a slight decline in the numbers of undernourished people, they still represented about 16% of the total population in 1972-74.

INSTABILITY OF PRODUCTION

At the regional level, food production dropped by 5% in 1973 and again by 2% in 1977. On the first occasion, the decline coincided with worldwide food shortages, so that even the oil-exporting countries had difficulty in importing the necessary supplies. At the level of the individual countries, the annual fluctuations in production are, of course, more frequent, and even greater. Table 2-19 shows that annual changes in food production in 1971-77 were especially large in Iraq, Jordan, Libya, Saudi Arabia and Syria.

Table 2-19. Annual changes in food production in selected Near East countries

	1970 to 1971	1971 to 1972	1972 to 1973	1973 to 1974	1974 to 1975	1975 to 1976	1976 to 1977
 %						
Afghanistan	-8	14	8	2	2	5	-2
Egypt	4	1	1	1	3	1	1
Iran	-1	12	4	5	4	6	-3
Iraq	1	30	-27	-2	-11	23	-11
Jordan	39	10	-35	77	-38	5	-13
Kuwait	-3	2	4	4	2	-	2
Lebanon	12	8	-8	11	-13	-3	2
Libya	15	48	1	4	18	10	-8
Saudi Arabia	-6	-22	10	30	7	-11	7
Sudan	4	3	3	13	4	-4	3
Syria	7	51	-40	77	6	17	-8
Turkey	5	2	-7	10	9	6	-2
Yemen A.R.	35	2	-1	-9	18	-7	-2

The instability particularly affects cereals, which account for about half of the arable land of the region, and provide more than 60% of the dietary energy supplies. A measure of the instability of cereal production in certain countries of the region is shown in Table 2-20. In Egypt, with a large irrigated area, the instability index is low. At the other extreme, in countries like Jordan, where production is almost entirely from rainfed areas, the index is many times higher.

Table 2-20. Instability index^{1/} of cereal production in selected Near East countries

	1961-65 to 1970	1970-77
Afghanistan	5	5
Cyprus	21	57
Egypt	5	2
Iran	10	5
Iraq	14	24
Jordan	33	63
Lebanon	16	18
Libya	23	28
Saudi Arabia	4	39
Sudan	25	7
Syria	25	37
Turkey	4	10
Yemen, A.R.	7	10
Yemen, P.D.R.	8	6

^{1/} Calculated on the basis of the formula:

$$\frac{\sum (x_i - \bar{x})^2}{n - 1} \text{ in which } x_i = \left(\frac{x_t + 1}{x_t} \right) - k, \left(\frac{x_t + 2}{x_t} \right) - k, \dots, \frac{x_{tn}}{x_{tn-1}} - k,$$

where k is the rate of growth of $x_t, x_{t+1}, \dots, x_{tn}$; x_t = 1961-65 production;
 x_{tn} = 1977 production.

The instability index has been substantially higher during the 1970s than the 1960s in Cyprus, Iraq, Jordan, Saudi Arabia and Syria. In Sudan it was very much lower, but in the remaining countries the change was smaller. While these changes mainly reflect differences in the weather, other factors include changes in cropping patterns and cultivation practices. For example, the planting of large undifferentiated stands of single improved varieties may have increased the incidence of plant pests and diseases. Similarly, the expansion of production into marginal areas is likely to have accentuated the instability of production. On the other hand, a big increase in the irrigated area, as in fact took place in Sudan, is likely to have reduced the instability of production.

DEPENDENCE ON FOOD IMPORTS

In spite of the rapid expansion of food production, the region's dependence on food imports has increased. In 1975-77 the self-sufficiency ratio (SSR) for cereals ranged all the way from zero in such oil-exporters as Bahrain, Kuwait and Qatar to 103 in Turkey (Table 2-21). Ten countries imported more than half of their cereal supply. Between 1961-65 and 1975-77 the SSR for cereals fell in 12 countries, and improved in only two (Afghanistan and Turkey). Provided supplies are readily available in world markets the rich oil-exporting countries can cope with low and even declining SSRs. However, the SSR for cereals also declined significantly in such non-oil exporting countries as Cyprus, Egypt, Jordan, Lebanon, Syria, Yemen Arab Republic and Yemen People's Democratic Republic, where it is obviously a much more serious matter.

Table 2-21. Self-sufficiency ratio for cereals in selected Near East countries

	1961-65		1975-77	
 % %
Afghanistan	98	100	Libya	46
Bahrain	-	-	Oman	-
Cyprus	87	34	Qatar	-
Egypt	78	70	Saudi Arabia	54
Iran	94	81	Sudan	98
Iraq	96	65	Syria	115
Jordan	57	18	Turkey	97
Kuwait	-	-	Yemen A.R.	99
Lebanon	22	9	Yemen P.D.R.	48

Only Turkey still had a small export surplus of cereals in 1975-77. Afghanistan was approximately self-sufficient, and Sudan not far from self-sufficiency. In 1961-65 the countries not far from self-sufficiency also included Afghanistan, Iran, Iraq, Syria (with an export surplus), and Yemen A.R.

NUTRITIONAL SITUATION

The Near East is the only developing region where it is estimated that there has been a slight decline in the number of undernourished people, from about 31 million in 1969-71 to about 29 million in 1972-74. However, about 16% of the total population were still undernourished in the latter period.

Table 2-22 indicates that the estimated number of undernourished people actually rose between 1969-71 and 1972-74 in the three major agricultural countries of Egypt, Sudan and Turkey. In Afghanistan and Sudan they still accounted for 30% or more of the population in 1972-74. Considerable progress in reducing the numbers of undernourished was made in Iran and Libya, and smaller progress in other oil-rich countries of Iraq and Saudi Arabia. But in 1972-74 there were still about 7 million undernourished people in these four countries, ranging from 7% of the population in Libya to 15% in Iran.

Table 2-22. Number of undernourished people in selected countries of the Near East, 1969-71 and 1972-74

	Number		Share of population	
	1969-71	1972-74	1969-71	1972-74
	..... million	.....	..... %	.....
Afghanistan	7.3	6.8	43	37
Egypt	2.3	2.9	7	8
Iran	6.5	4.6	23	15
Iraq	1.6	1.4	17	14
Libya	0.3	0.1	13	7
Saudi Arabia	1.1	1.0	14	12
Sudan	4.7	5.2	30	30
Syria	0.8	0.7	12	10
Turkey	2.5	2.7	7	7

Source: FAO, Fourth World Food Survey, Rome, 1977, p. 127-128.

The effect of rising incomes from oil exports has been mainly on the average per caput supplies of dietary energy at the national level. Table 2-23 indicates that between 1969-71 and 1974-76 there were very substantial improvements in per caput dietary energy supplies in Iran, and smaller, although still substantial improvements in Iraq and Saudi Arabia. Whether the large numbers of undernourished people in these countries in 1972-74 will have been reduced by 1974-76 will depend on how well distributed have been the increases in per caput income that have occurred.

Table 2-23. Per caput dietary energy supplies in relation to nutritional requirements in selected Near East countries, 1969-71 and 1972-74 and 1974-76

	1969-71	1972-74	1974-76 ^{1/}
.....% of requirements			
Afghanistan	81	82	82
Egypt	104	103	107
Iran	97	110	126
Iraq	91	95	97
Jordan	93	89	86
Lebanon	100	102	101
Saudi Arabia	89	93	98
Sudan	92	89	93
Syria	98	101	104
Turkey	112	113	115
Yemen, A.R.	81	87	89
Yemen, P.D.R.	89	85	79

Source: Revised FAO estimates.

^{1/} Preliminary.

Syria and Yemen Arab Republic also achieved large increase in per caput dietary energy supplies between 1969-71 and 1974-76. There were also smaller increases in each of the other countries shown in the table, with the exception of Jordan and Yemen People's Democratic Republic. In Afghanistan per caput dietary energy supplies remained about 20% below the nutritional requirements in 1974-76. Only in Turkey, among the countries shown in the table, were these supplies more than 10% above requirements.

MAIN REQUIREMENTS FOR FOOD SECURITY

Several sets of measures have to be pursued if the food security of the Near East is to be improved. A particularly important aspect is the need for appropriate action, especially long-term investment, to achieve a more sustained increase in the production of cereals and other food products. The year-to-year instability of production has to be reduced by the further expansion of irrigation, by the development and use of crop varieties less susceptible to weather fluctuations and to pests and diseases, and by limiting crop production as far as possible to the ecologically most suitable areas. Income distribution has to become more equitable if, even in a year of good harvests, food security is ever to extend to the poorest population groups. Reserve stocks have to be built up, together with the necessary facilities for holding them. Improved patterns of international trade could contribute to the region's collective food security. There are also many possibilities, not only through trade, whereby intraregional cooperation could contribute to greater food security in the Near East.

The following discussion summarizes the present situation as regards national cereal stock policies, and storage capacity. It goes on to discuss the trade aspects of food security, and finally mentions a number of areas where collective, self-reliant action within the region may contribute to enhanced food security.

National cereal stock policies

National cereal stock policies and storage capacity in various countries of the region are summarized below, on the basis of government replies to an FAO questionnaire.

Afghanistan: A national reserve for food security is under consideration, with a target of up to 300,000 tons of cereals. There were 280,000 tons of Government controlled storage capacity in 1973.

Cyprus: FAO assistance has been requested to formulate an explicit policy, with the aim of building up reserves of four months' consumption of wheat and two months' of feedgrains. Storage capacity is 83,000 tons, and an additional 30,000 tons of silo capacity is planned by 1980.

Egypt: General policy is to keep a three-months' stock of essential commodities, including cereals. Present storage capacity is 1.2 million tons (1 million tons "shuna", 106,000 tons silos, 95,000 tons warehouses). Planned additional capacity is 200,000 tons silos by 1982 and a further 50,000 tons by 1983.

Iran: There is an explicit policy, with a target of 200,000 to 300,000 tons of rice. Government storage capacity for wheat was 750,000 tons in 1975, and it was planned to raise the total capacity to 2 million tons by 1978.

Iraq: There is a stock policy for rice, with the target of an emergency stock equivalent to three months' consumption. It is planned to increase grain storage facilities from 400,000 tons to 1.3 million tons by 1980. The total capacity requirement is estimated at 2 million tons, equivalent to a year's consumption.

Jordan: A policy has not yet been formulated because of the lack of storage capacity, but it is aimed to establish a reserve stock of wheat equivalent to 50% of annual domestic demand. Additional storage capacity of 60,000 tons is planned.

Lebanon: A policy is being studied on the basis of a tentative proposal for a stock of 120,000 tons of wheat (four months' consumption). Storage capacity is 205,000 tons, of which 105,000 tons silos and 100,000 tons flat warehouses.

Libya: There is an explicit policy, with a target of six months' consumption requirements of wheat. Storage capacity in 1975 was 100,000 tons of silos and 116,000 tons of ground stores. An additional 110,000 tons of silos and 72,000 tons of ground stores were in construction.

Saudi Arabia: A policy is being formulated, with targets of six months' supply of grains and three months requirements of rice. Government silo capacity in 1978 was 180,000 tons, and an additional 120,000 tons was expected by March 1979.

Sudan: There is no clearly defined policy of national reserves for food security. Present storage capacity is 420,000 tons, of which 300,000 tons Government. An additional 145,000 tons Government silos is planned by 1981/82 and 200,000 tons Government warehouses by 1982/83.

Syria: An explicit policy has been formulated, with the target of a minimum food reserve of 110,000 tons of cereals. It was planned to increase the storage capacity from 130,000 tons in 1975 to a total of 810,000 tons of modern grain storage capacity by the end of 1978.

Turkey: There is an explicit policy for wheat and barley. Targets are 800,000 tons of wheat (half to be provided by the WFP) and 15 to 29% of consumption for rice. Government wheat stocks in 1978 totalled 5.4 million tons, of which 257,000 tons National Reserve Stock and 200,000 tons Emergency Stock. There are 1.8 million tons Government silo and warehouse capacity, and an additional 1.7 million tons is planned by the end of 1980.

Yemen A.R.: There is no explicit policy, but a project has been set up to study and design a work programme. The Government has 10,000 tons warehouse capacity, plus 25,000 tons in poor condition. Merchants have 50,000 tons warehouses, while there are 500,000 tons of farm storage (of which 60% can be used for long-term storage). The Government has a project for 20,000 tons of silo capacity and 18,000 tons warehouse capacity by the end of 1979.

Yemen P.D.R.: An explicit policy has been formulated, with a Government target of a year's supplies as working stocks and four months' supplies as reserve stocks for all food grains, especially wheat and rice. These are equivalent to 96,000 tons working stocks and 32,000 tons reserve stocks of wheat, and 55,200 tons of working stocks and 18,400 tons of reserve stocks of rice. Stocks are expected to be 44,000 tons of wheat and 26,000 tons of rice by the end of 1978. Problems in implementing the stock policy include the lack of storage facilities. The Government has 30,000 tons of warehouse capacity.

Trade aspects of food security

As already noted, 10 of the 18 countries shown in Table 2-21 above have to import more than half of their total cereal supplies. Of these, six are oil exporters and therefore in a comfortable position to defray the costs of their cereal imports. The other four (Cyprus, Jordan, Lebanon and Yemen P.D.R.), however, usually face considerable difficulties in raising the necessary foreign exchange. Egypt, although requiring only 30% of its total cereal consumption to be covered by imports, is in a similar situation because of its serious shortage of foreign exchange. Among the Arab countries of the region, the rudiments of a framework have therefore been created whereby the more prosperous oil exporters, under various loan and assistance schemes, assume part of the burden of the food import requirements of their poorer neighbours.

A rationalization of the region's imports of cereals and other food products is highly desirable. There would appear to be various possibilities to increase the security of supplies by way of improvements in the efficiency of regional food import practices, for some intensification of intraregional exchanges, and for reducing the risks of sudden threats to supply, both in terms of volume and of prices, by the diversification of supply sources. Such an approach, which would presuppose a coordinated regional agricultural strategy, should help to reduce the risk of food insecurity resulting from climatic and political hazards, even before longer-term measures aiming at increasing regional supplies become effective.

Trade in agricultural products is essentially transacted on a bilateral basis, with little coordinated effort to obtain the best terms feasible either in importing food or in marketing exports. The bargaining position of the countries in dealings with extra-regional suppliers or buyers could be improved by the collective buying of essential commodities, and regional or subregional stock building. Collective buying would reduce managerial costs, for instance by mounting joint purchasing or marketing missions. It might be worthwhile exploring the possibility of establishing joint marketing organizations, which would optimize the use of scarce expert knowledge and market intelligence.

The present role of intraregional trade is small. Food exports are heavily centred on markets in developed countries. Likewise the developed countries provide more than half the imported food supplies, mainly cereals, vegetable oils and meat products. The region's dependence on the same group of countries for its agricultural inputs is even greater.

It is clear from Table 2-24 that there is very little scope for the diversion of regional exports to accommodate the imports of the same commodity groups. Not only was the region on a net export basis only for fruits and vegetables, and oilseeds and cakes, but there are other problems as well. The quality and composition of the different commodity groups are of particular importance. Exports of citrus fruit, shrimps and durum wheat, and imports of temperate-zone fruits, lower-priced fish products and non-durum wheat are examples. In the case of oilseed products, pulses and (to a smaller extent) cereals, other factors are at work, such as institutional constraints and market imperfections stemming from the past, which have left import mechanisms that cannot be suddenly replaced.

Table 2-24. Gross exports and imports of main food products in the Near East, 1975-77

	Exports	Imports	Balance
	..... Million \$		
Cereals	145	2,374	-2,229
Fruits and vegetables	508	385	+ 123
Oilseeds and cakes	225	87	+ 138
Vegetable oils	31	548	- 517
Sugar (refined)	33	837	- 804
Meat	21	477	- 456
Dairy products	13	617	- 604
Pulses	56	77	- 21
Fish products	50	76	- 26

A strategy of diversifying extraregional import supply sources may be another element in improving food security in the Near East. This would help to forestall political pressures from traditional suppliers of major food commodities such as cereals. The degree of vulnerability is a function of the extent of supply concentration in the hands of a few countries or transnational trading organizations. Particularly high risk commodities include wheat, maize, oilseeds and vegetable oils, and animal fats.

One method of import diversification is the creation of new supply sources through direct investment in other developing countries possessing suitable underutilized resources, for example in Africa south of the Sahara. A second approach consists in spreading purchases as widely as possible among established suppliers. These methods would lessen the degree of import concentration among a few sources, and give weight to those sources which involve lesser political risks.

Here an impediment would lie in the relatively large share of concessional imports and food aid in the total import volume. For countries such as Afghanistan, Egypt, Jordan and the Yemens, such sources cover an important share of the food deficit. The dependence on a few sources of food aid could be partially reduced by greater use of multilateral arrangements, perhaps involving capital surplus countries of the region and developing cereal exporting countries.

Collective action

A number of possible lines of collective action to improve the region's food security have already been mentioned in the above discussion of trade, including assistance from the richer to the poorer countries to help meet their food import deficits, the creation of new supply sources by direct investment, collective purchasing and marketing, and regional or subregional stock building. Some of these, together with possible collective initiatives in other areas related to food security are discussed further below.

As regards joint efforts to develop production within the region, a principal example is the Basic Programme of Agricultural Development in Sudan (1976-85). Sudan is considered as the potential breadbasket for the whole Arab world. 100 projects have been identified, with an estimated total investment of \$5,000 million, and the Arab Authority of Agricultural Investment and Development established, with an initial capital of \$ 500 million, to put the programme into action.

The Jongolei Canal Project, in the Upper Nile of Sudan, is a joint project between Sudan and Egypt, which could provide additional water sufficient to irrigate more than 1 million ha. A proposal for the establishment of an organization embracing all the Nile countries is under discussion. Similar cooperation could be developed for the Euphrates (Iraq, Syria and Turkey), and the Orontes (Lebanon and Syria). Projects to combat desertification also offer opportunities for collective action.

There are considerable possibilities for joint ventures in such fields as the manufacture of fertilizers, pesticides, farm machinery, and vaccines against animal diseases, and in seed industry development. Other possible areas include further regional research and training centres, and the financing of national agricultural credit institutions in the poorer countries by the richer countries of the region.

Little consideration has yet been given to the establishment of reserve stocks at the regional or subregional level. Another potential area for cooperation in improving the region's food security would be for the richer countries to assist the poorer countries in establishing national food reserves, both through the establishment of storage, transport facilities and other infrastructure, and through the provision of funds to purchase food for stocking.

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ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
.....THOUSAND METRIC TONS.....												
WORLD												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	988871	1181731	1197828	1213824	1317403	1280013	1376420	1335389	1361453	1470262	1466419	2.49
WHEAT	254576	331423	314601	318634	354396	347392	376890	360344	354583	417747	386648	2.48
RICE PADDY	254711	292340	301396	315446	317676	305820	332145	332792	359690	350026	371967	2.51
BARLEY	98474	127907	133205	136024	147249	148131	164696	165107	149666	184315	173024	3.65
MAIZE	216494	252636	267508	261802	306727	305540	311516	294382	324285	333415	349469	3.34
MILLET AND SORGHUM	73829	80305	87249	90191	92726	84552	98580	90442	92979	96947	100466	1.83
ROOT CROPS	485500	541875	529580	554891	543642	523615	574073	554557	554009	564315	571462	.65
POTATOES	281823	314416	289483	309862	292351	281225	316979	295395	286626	291457	293485	.49
CASSAVA	78335	92988	95134	97650	96939	99396	99694	101705	103732	107497	110652	1.77
TOTAL PULSES	42251	44510	44640	46210	45164	45473	46241	46872	44387	49769	47395	.76
CITRUS FRUIT	25440	33350	36991	37556	40299	42733	45957	46110	50335	49708	51431	4.99
BANANAS	23571	30191	31133	31671	32894	33051	33585	34061	33111	34861	35973	1.66
APPLES	20815	24295	26630	27044	26385	24288	28196	26522	29897	29862	27674	1.61
VEGETABLE OILS, OIL EQUIV	28953	33024	33475	35906	37358	36568	40161	39485	42761	40989	45359	3.33
SOYBEANS	32476	44006	45225	46536	48480	51965	62669	57294	69673	63028	77630	6.34
GROUNDNUTS IN SHELL	15871	16115	17080	18404	19158	15990	17025	17479	19431	17829	17371	.63
SUNFLOWER SEED	7349	9923	9891	9934	9796	9614	12089	10993	9413	10154	11791	1.25
RAPESEED	4293	5535	5010	6704	8080	6767	7192	7182	8486	7554	7675	4.15
COTTONSEED	20214	21773	21509	22293	23700	25247	25648	26369	23092	23101	26693	1.74
COPEA	3621	3879	3794	4004	3946	4101	3676	3909	4367	5056	4775	2.56
PALM KERNELS	1058	997	1043	1182	1216	1192	1339	1369	1514	1551	1551	4.71
SUGAR (CENTRIFUGAL, RAW)	56775	66674	67643	74177	74949	73288	77877	77375	80858	85663	91078	3.11
COFFEE GREEN	4419	3895	4284	3888	4638	4565	4135	4723	4576	3634	4302	.31
COCA BEANS	1245	1233	1367	1520	1585	1429	1333	1530	1539	1367	1426	.72
TEA	1093	1268	1302	1350	1365	1484	1538	1557	1607	1661	1765	3.69
COTTON LINT	10931	11470	11567	11807	12663	13610	13794	13893	12340	12233	14231	1.74
WOOL AND SIMILAR FIBRES	3362	2839	3738	3583	3344	3983	4552	3756	3806	4112	4330	3.23
SILK	642	610	648	619	668	672	635	693	606	605	480	-3.27
TOBACCO	4383	4766	4621	4669	4539	4865	4935	5299	5444	5676	5660	2.60
NATURAL RUBBER	2185	2694	2990	2950	3042	3027	3445	3426	3311	3594	3609	3.66
TOTAL MEAT	83947	99521	101898	106517	110333	113046	114380	120518	122593	126107	129659	2.98
TOTAL MILK	357832	398421	397413	400002	402305	412512	419020	426561	430724	458173	452125	1.45
TOTAL EGGS	16473	19654	20416	21372	22011	22565	22754	23395	23920	24234	25013	2.51
WOOL GREASY	2611	2737	2792	2844	2778	2729	2569	2532	2646	2607	2585	-1.02
FISHERY PRODUCTS 1/												
FRESHWATER + MARINE FISH	7412	9281	9573	10212	10698	10758	10968	10986	11345	11200	11573	2.27
MOLLUSCS + CEPHALOP	35640	49217	47778	54428	54189	49350	49556	53010	52107	55334	53410	.90
AQUATIC MAMMALS	3957	5055	4873	5109	5238	5528	5561	5608	5977	6480	6832	3.52
AQUATIC BIRDS	25	28	31	25	22	17	11	10	11	12	11	-12.29
AQUATIC INVERTEBRATES	72	114	82	164	129	134	195	118	116	124	168	2.92
AQUATIC PLANTS	676	921	840	1003	1161	1155	1364	1568	1394	1493	1519	7.05
FOREST PRODUCTS 2/												
SAWLOGS (CONIFEROUS)	499541	533271	535039	549654	570197	564548	594065	569130	540895	599216	615695	1.25
SAWLOGS (DECIDUOUS)	169902	193645	201939	208945	211098	219928	239651	227804	209012	240409	245815	2.26
PULP (WOOD PARTICLES)	221490	263694	290911	314210	308553	303589	326428	356644	323562	323130	319709	1.91
BIRCHWOOD	1311663	1050042	1058568	1066211	1079686	1094096	1101844	1126615	1143137	1163993	1165260	1.27
SAWLOGS (CONIFEROUS)	276686	305630	310761	312181	325213	332302	338878	321136	304908	329234	335984	.68
SAWLOGS (DECIDUOUS)	77678	87416	93215	92500	93984	95564	99036	97294	91613	97833	99309	.96
WOOD-BASED PANELS	40264	61399	65514	69338	78059	87192	95564	88202	84462	95150	98721	5.18
PULP FOR PAPER	69049	92796	99064	102957	103163	109218	115637	120346	106135	116491	118027	2.43
PAPER + PAPERBOARD	86711	115073	123926	128057	129863	138766	148337	151272	132209	148438	151835	2.73
WESTERN EUROPE												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	105364	132577	133990	128547	148436	148128	150723	159108	146808	142352	153334	1.60
WHEAT	45565	51841	50145	47763	56704	56073	55432	62866	52961	57227	53551	1.24
RICE PADDY	1397	1364	1673	1556	1598	1411	1784	1729	1703	1547	1367	.16
BARLEY	27480	37914	39394	36000	42039	44217	45077	47495	45666	42587	51364	2.98
MAIZE	14236	19321	21727	23449	25563	25436	28934	26439	27411	24073	29385	3.39
MILLET AND SORGHUM	142	373	400	413	446	453	523	497	498	474	653	4.74
ROOT CROPS	72458	66901	60263	64092	61234	56419	56535	58535	47533	45041	54467	-3.29
POTATOES	72269	66751	60118	63948	61087	56272	56395	58351	47394	44893	54324	-3.30

see notes at end of table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
TOTAL PULSES	2594	2498	2534	2436	2258	2039	1966	2058	1897	1627	1706	- 4.79
CITRUS FRUIT	4114	5129	5911	5220	5585	6480	6531	6666	6697	6721	6633	3.08
BANANAS	372	424	470	456	459	406	480	426	385	362	399	- 1.98
APPLES	10198	10632	12161	11591	10670	8964	11569	9908	11492	10110	8239	- 2.16
VEGETABLE OILS, OIL EQUIV	1709	1882	1900	2009	2235	2224	2415	2255	2621	2188	2401	2.84
SOYBEANS	9	3	6	8	7	10	26	59	47	56	84	45.53
GROUNDNUTS IN SHELL	26	19	16	17	18	16	18	16	19	17	20	.71
SUNFLOWER SEED	247	373	482	482	669	665	841	695	856	774	998	9.78
RAPESEED	549	1020	979	1080	1288	1464	1445	1622	1316	1384	1311	3.92
COTTONSEED	356	295	340	323	326	370	288	360	327	295	406	1.20
SUGAR (CENTRIFUGAL, RAW)	8589	10427	11158	10738	12459	11595	12246	11167	12846	13748	15155	3.36
TEA		1										- 7.79
COTTON LINT	191	159	178	170	169	199	155	191	176	149	197	.61
JUTE AND SIMILAR FIBRES	1											
TGBACCG	313	321	294	317	304	334	350	329	398	435	384	3.56
TOTAL MEAT	16524	19923	20138	21422	22342	22166	22745	24684	24821	25144	25598	3.00
TOTAL MILK	111157	122497	119434	117991	117741	122551	124315	125485	126675	129197	131946	1.08
TOTAL EGGS	3740	4264	4479	4747	4730	4911	4808	4879	5027	5075	5089	1.73
WOOL GREASY	189	175	166	163	162	160	163	167	162	163	163	.41
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	147	169	160	157	164	165	171	181	192	185	184	1.91
MARINE FISH	7950	10005	9380	9958	10002	10086	10170	10162	9766	10722	10756	.94
CRUST+ MOLLUS+ CEPHALOP	631	756	802	795	854	976	1012	952	1059	1034	1063	4.11
AQUATIC MAMMALS	5	10	9	11	9	7	6	5	7	7	8	- 4.48
AQUATIC ANIMALS	8	4	4	6	7	2	5	5	2	4	3	- 5.01
AQUATIC PLANTS	124	140	132	135	133	126	129	132	131	129	171	-.96
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	71480	74315	79302	84900	86262	85086	95978	93409	74275	84772	85455	.66
SAWLOGS NONCONIFEROUS	20836	22489	23451	24645	23146	22488	24621	23697	20565	20244	21326	- 1.35
PULPHWOOD+PARTICLES	61562	67592	74023	83637	87070	77251	78854	86949	86266	79433	70508	.64
FULLWOOD	64493	47638	43432	41631	38687	34167	30729	30581	28332	29034	28091	- 6.06
SAWWOOD CONIFEROUS	40640	43514	46085	47754	49365	49779	53419	51705	42945	47706	48519	.55
SAWWOOD NONCONIFEROUS	9659	11188	11533	11973	12587	12499	13076	12292	9878	11565	12684	.10
WOOD-BASED PANELS	9872	14698	16553	17871	19530	22412	25355	24432	22823	25307	24862	6.07
PULP FOR PAPER	17405	21878	23533	24642	23705	24969	26847	27496	23126	24057	23323	.57
PAPER+PAPERBOARD	23412	30588	33548	34855	34435	36580	39962	41195	33222	38300	38881	2.13
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	172153	222627	217276	234854	242732	235275	257698	263325	208383	293426	265770	2.17
WHEAT	78994	114451	106614	118985	123455	111857	136880	111752	90309	125563	120711	.34
RICE PADDY	510	1216	1298	1470	1641	1826	1561	2096	2231	2130	2397	7.85
BARLEY	26619	36927	41531	46770	44992	47885	66993	68374	49605	83285	66771	7.60
MAIZE	24582	22202	27582	23178	24468	29089	29955	28226	27704	30919	31075	3.19
MILLET AND SORGHUM	2772	2807	3461	2233	2160	2227	4571	3178	1254	3410	2221	- 1.84
ROOT CROPS	148036	177531	155384	169291	152576	149907	181028	153757	151141	152743	144457	- 1.40
POTATOES	148034	177528	155381	169288	152572	149903	181025	153754	151137	152741	144455	- 1.40
TOTAL PULSES	6562	7996	8779	8529	7856	7820	9104	9490	6107	5319	7519	-.44
CITRUS FRUIT	39	36	46	140	42	56	58	126	158	132	205	17.86
APPLES	3856	6079	6361	7377	7343	6934	8196	7348	6744	10436	9736	5.43
VEGETABLE OILS, OIL EQUIV	3551	4625	4288	4484	4447	4105	5150	4867	4318	4520	4735	.54
SOYBEANS	400	575	485	693	715	457	711	710	1111	634	897	6.61
GROUNDNUTS IN SHELL	1	3	2	2	2	3	3	3	5	4	4	7.69
SUNFLOWER SEED	6032	7988	7787	7437	7090	6546	6768	1978	6328	6652	7845	- 1.29
RAPESEED	573	864	441	861	973	834	966	953	1310	1527	1251	9.05
COTTONSEED	3332	3979	3737	4450	4643	4779	5009	5501	5138	5403	5731	4.42
SUGAR (CENTRIFUGAL, RAW)	11752	13678	12846	12925	11959	12672	13758	11849	12876	11602	13916	-.44
TEA	45	56	60	67	69	71	75	81	66	92	99	6.21
COTTON LINT	172	2010	1934	2146	2371	2382	2466	2497	2669	2601	2737	3.80
JUTE AND SIMILAR FIBRES	41	45	53	50	57	56	5	35	36	49	50	- 1.56
TGBACCG	421	554	503	536	522	614	61	608	649	700	672	3.37
TOTAL MEAT	14661	18202	18276	18836	20187	21224	21523	23338	24112	22366	23907	3.42
TOTAL MILK	94262	117033	116442	116091	118591	120140	126622	131048	129672	128623	136423	1.77
TOTAL EGGS	2624	3188	3310	3564	3907	4087	4322	4622	4804	4749	5157	5.52
WOOL GREASY	440	508	482	510	519	513	527	558	566	534	562	1.46

see notes at end of table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	.....THOUSAND METRIC TONS.....											PERCENT
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	791	1075	1039	1204	1272	1177	1201	1072	1339	1069	1086	.20
MARINE FISH	3675	5750	6236	6914	7010	7597	8506	9393	9997	10333	9237	6.66
CRUST+ MOLLUS+ CEPHALOP	114	112	123	114	119	102	105	109	119	108	248	3.84
AQUATIC ANIMALS		1	1	5	5	5	5	2	5	2	2	3.84
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	167917	156262	157863	166303	166373	167416	169630	168472	170898	168068	174034	.97
SAWLOGS NONCONIFEROUS	33351	33040	33716	35080	35640	35650	35813	35984	36957	41346	42719	2.48
PULPWOOD+PARTICLES	27342	38633	40593	44660	46125	47240	59446	62358	58856	56586	57404	5.23
FUELWOOD	117985	106829	103536	101654	101436	100803	97564	96672	95214	92537	87338	- 1.86
SAWWOOD CONIFEROUS	107344	111347	113076	116480	119127	119346	117331	116371	117590	114643	112432	.09
SAWWOOD NONCONIFEROUS	19999	19529	19808	20311	20774	20782	20524	20302	20502	20007	19932	.15
WOOD-BASED PANELS	5266	8655	9155	9899	10715	11412	12644	13866	15122	15792	17425	8.27
PULP FOR PAPER	5653	7038	8098	9878	9397	9729	10162	11724	12366	13003	13037	6.38
PAPER+PAPERBOARD	6778	9604	9773	10587	11136	11649	12288	12811	13495	13930	14248	4.79
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS												
WHEAT	48404	60054	57532	45808	58465	56596	62720	61792	74843	81894	74974	4.46
RICE PADDY	3084	4724	4169	3801	3890	3875	4208	5098	5824	5246	4501	2.58
BARLEY	12536	16378	17382	17949	23167	20478	19312	15306	17672	18624	20856	.78
MAIZE	96634	115099	120939	108105	146367	144262	146845	121997	151706	162943	165788	4.04
MILLET AND SORGHUM	13912	18575	18541	17353	22048	20355	23451	15817	19128	18284	20083	.14
ROOT CROPS												
POTATOES	15134	16422	17185	17891	17081	15873	16225	18656	17431	19191	19041	1.38
	14454	15811	16543	17289	16555	15316	15669	18046	16827	18578	18470	1.44
TOTAL PULSES												
	1161	1084	1237	1116	1139	1135	1035	1323	1166	1140	1046	- .19
CITRUS FRUIT												
BANANAS	6678	7555	10174	10292	11135	11031	12604	12167	13237	13415	13855	5.64
APPLES	3101	2880	3537	3307	3282	3059	3216	3391	3682	3318	3453	1.14
VEGETABLE OILS, OIL EQUIV												
SOYBEANS	5471	7307	7573	8039	8248	8612	9941	8114	9857	8259	11503	3.58
GROUNDNUTS IN SHELL	19741	30373	31048	30958	32288	34956	42514	33383	42480	35293	47229	4.17
SUNFLOWER SEED	890	1155	1150	1353	1363	1485	1576	1664	1750	1701	1690	5.04
RAPESEED	33	95	96	111	273	411	394	299	386	413	1327	27.78
COTTONSEED	279	441	758	1638	2155	1300	1207	1164	1749	838	1777	7.31
	5556	4209	3690	3690	3846	4892	4550	4091	2919	3764	5009	.39
SUGAR (CENTRIFUGAL, RAW)												
	4705	5515	5200	5383	5581	5898	5329	5048	6441	6168	5568	1.08
COFFEE GREEN												
	3	2	1	2	1	1	1	1	1	1	1	-11.06
COTTON LINT												
	3245	2242	2175	2219	2281	2984	2825	2513	1807	2304	3133	1.60
TOBACCO												
	1065	875	930	965	875	878	909	1021	1096	1043	971	1.75
TOTAL MEAT												
TOTAL MILK	20098	23559	23854	24850	25712	25632	24622	26118	25416	27704	27806	1.62
TOTAL EGGS	65355	61509	61161	61388	61712	62468	60052	60062	60066	62246	63523	.11
WOOL GREASY	4116	4324	4301	4377	4472	4423	4245	4210	4113	4135	4132	-.73
	129	98	90	87	84	81	73	65	60	54	51	- 7.07
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	375	382	321	411	354	319	335	306	257	329	354	- 1.95
MARINE FISH	2597	2477	2537	2661	2673	2488	2485	2374	2399	2604	2528	-.31
CRUST+ MOLLUS+ CEPHALOP	979	1038	976	1033	1038	1022	1011	1055	1063	1164	1279	2.02
AQUATIC MAMMALS		5	4	5	5	4						-99.00
AQUATIC ANIMALS	3	4	5	4	2	2	4	6	2	6	9	6.17
AQUATIC PLANTS	25	50	56	56	184	182	180	224	197	205	212	19.16
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	197633	233713	227771	227741	246128	239166	255365	237683	222108	270260	280000	1.62
SAWLOGS NONCONIFEROUS	37834	38062	38827	38931	38424	41002	41472	37932	32125	36879	37200	-.94
PULPWOOD+PARTICLES	112192	127782	144216	150005	137726	142366	149291	165000	133931	141053	144000	.57
FUELWOOD	39723	25979	24862	19430	17894	16836	17623	17672	17217	18768	18050	- 3.48
SAWWOOD CONIFEROUS	86799	96488	95252	90379	100139	104867	109561	96191	87609	106334	113998	1.24
SAWWOOD NONCONIFEROUS	17022	18420	21376	18172	17556	17346	17896	17626	14831	16390	15565	- 2.60
WOOD-BASED PANELS	19557	26559	26529	26314	31054	34656	36275	31038	28707	33804	34804	2.83
PULP FOR PAPER	36420	49210	52316	52576	52624	56078	58644	59779	50411	57738	59253	1.58
PAPER+PAPERBOARD	42670	54515	57997	57370	58270	62859	64974	64617	54919	63009	63915	1.30

see notes at end of table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	11351	19645	15169	13479	15583	11673	17804	17094	18575	18344	15400	.88
WHEAT	8470	15246	11003	8177	8930	6979	12385	11605	12185	12094	9741	-.01
RICE PADDY	136	221	255	247	300	248	309	409	388	417	530	9.33
BARLEY	1076	1866	1931	2525	3324	2063	2655	2804	3513	3191	2681	5.08
MAIZE	193	217	200	251	313	330	241	236	338	363	400	6.25
MILLET AND SORGHUM	251	314	451	581	1355	1254	1044	1096	923	1151	975	11.70
ROOT CROPS	808	977	1135	1021	1108	1074	1003	868	977	957	998	- 1.27
POTATOES	803	969	1126	1012	1099	1064	991	855	967	945	986	- 1.28
TOTAL PULSES	49	47	84	80	92	129	92	126	155	189	122	11.61
CITRUS FRUIT	247	325	299	394	372	435	401	433	459	425	456	4.09
BANANAS	126	125	131	131	128	124	125	118	97	116	90	- 3.31
APPLES	432	498	537	557	588	511	574	487	527	439	466	- 1.64
VEGETABLE OILS, OIL EQUIV	22	34	38	59	73	111	85	93	98	74	88	10.39
SOYBEANS	1	1	2	5	9	34	38	63	74	45	55	61.64
GROUNDNUTS IN SHELL	18	31	17	43	31	46	38	29	32	35	32	2.25
SUNFLOWER SEED	2	3	6	13	59	148	102	84	113	80	75	41.88
RAPESEED	1	1	4	34	55	25	11	9	12	9	14	14.69
COTTONSEED	7	54	55	48	31	73	53	50	54	41	46	- 1.24
SUGAR (CENTRIFUGAL, RAW)	1801	2768	2214	2525	2793	2835	2526	2848	2854	3296	3342	3.10
COTTON LINT	4	32	32	29	20	44	31	31	33	25	28	-.84
TOBACCO	18	15	21	23	23	19	20	20	18	18	19	-.24
TOTAL MEAT	2472	2816	2918	3097	3233	3545	3629	3181	3520	4020	4015	3.73
TOTAL MILK	12381	13184	13614	13716	13411	13514	13155	12645	12712	12980	12532	-.83
TOTAL EGGS	194	230	234	247	259	267	265	290	268	250	246	1.09
WOOL GREASY	1062	1134	1211	1257	1225	1202	1044	986	1088	1066	1013	- 2.06
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	1	1	2	2	3	4	4	4	5	4	5	15.48
MARINE FISH	69	81	80	97	93	93	115	122	97	110	131	4.72
CRUST+ MOLLUS+ CEPHALOP	45	79	59	65	81	79	70	77	70	72	102	2.27
AQUATIC ANIMALS	1											- 4.06
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	5552	7025	7557	7801	7576	7912	8339	6537	6356	7595	7178	-.72
SAWLOGS NONCONIFEROUS	7275	7643	7261	6992	7457	6984	6902	7240	6490	6631	6518	- 1.53
PULPHOOD+PARTICLES	2260	2717	3284	3557	3745	3640	5374	5006	7613	7191	8546	13.48
FUELVOOD	3665	3059	3002	2776	2776	2719	2402	2850	1870	1250	1250	- 9.36
SAWWOOD CONIFEROUS	2272	2398	2462	2540	2312	2515	2836	2882	2821	3067	2917	2.83
SAWWOOD NONCONIFEROUS	2481	2655	2510	2531	2637	2497	2482	2533	2505	2430	2340	-.93
WOOD-BASED PANELS	416	650	686	789	800	747	933	988	920	1055	1048	5.57
PULP FOR PAPER	623	870	996	1075	1090	1127	1326	1505	1524	1660	1714	7.91
PAPER+PAPERBOARD	889	1215	1368	1514	1540	1546	1686	1732	1697	1761	1868	4.11
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	36824	40882	42191	41562	43049	44100	38482	44130	42787	47242	42719	-.77
WHEAT	4070	5591	4223	4845	5341	5837	4643	4871	4498	5660	4141	-.92
RICE PADDY	3611	4512	4679	4690	4903	4580	4682	4935	5293	5540	5671	2.38
BARLEY	2783	4593	3318	3426	3860	4133	2634	3593	2881	4563	2536	- 2.78
MAIZE	9653	11147	12049	11464	12066	13059	11210	13278	13154	13650	13273	2.00
MILLET AND SORGHUM	15294	13618	16385	15603	15331	14992	13668	15858	15492	16096	15548	-.63
ROOT CROPS	56950	64775	68044	69046	69128	69208	70948	73280	74260	77064	77409	1.86
POTATOES	1357	1552	1687	1810	1867	2077	2223	2279	2516	2557	2616	6.20
CASSAVA	33873	37912	38881	40631	39516	39861	40552	41852	42828	44352	44741	1.75
TOTAL PULSES	3215	3817	4047	4333	3848	4158	3923	4373	4485	4783	4267	1.63
CITRUS FRUIT	1529	1976	2012	2304	2237	2339	2419	2442	2187	2435	2447	2.02
BANANAS	3093	3205	3459	3771	3637	3696	3971	4176	4130	4189	4408	3.17
APPLES	37	36	38	37	42	43	47	49	57	51	55	5.34
VEGETABLE OILS, OIL EQUIV	3796	3623	3726	3848	4222	3674	3556	3793	4039	3979	3786	-.45
SOYBEANS	64	64	70	67	72	73	75	77	78	83	89	3.14
GROUNDNUTS IN SHELL	4738	4777	4867	4447	4934	3923	3242	3778	4059	4155	3315	- 3.48
SUNFLOWER SEED	31	35	38	61	51	77	73	67	64	69	77	7.58

see notes at end of table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS.											PERCENT
RAPESEED	20	20	20	20	20	20	20	20	20	20	20	-
COTTONSEED	617	817	1047	1137	979	1001	981	917	884	1004	1035	.21
COPIA	148	155	151	160	159	151	159	158	157	182	189	1.87
PALM KERNELS	782	619	647	728	718	657	608	708	688	739	762	1.47
SUGAR (CENTRIFUGAL, RAW)	1783	2329	2517	2555	2781	2875	2941	2951	2737	3081	3099	2.79
COFFEE GREEN	996	1182	1252	1324	1234	1305	1354	1260	1291	1249	1268	.36
COCOA BEANS	930	844	999	1093	1162	1015	941	1017	998	855	917	-.77
TEA	62	58	111	120	118	148	153	150	152	182	195	7.30
COTTON LINT	313	431	548	583	508	528	513	487	479	527	543	.40
JUTE AND SIMILAR FIBRES	13	15	17	23	19	19	19	19	19	19	19	1.03
SISAL	408	375	390	365	342	332	330	349	249	203	209	-6.82
TOBACCO	195	156	152	164	183	192	174	200	228	239	248	5.72
NATURAL RUBBER	160	179	184	212	231	237	244	244	239	222	236	2.82
TOTAL MEAT	2810	3275	3382	3482	3451	3429	3412	3437	3501	3657	3720	1.03
TOTAL MILK	5251	6109	6274	6397	6318	6146	5927	5847	6072	6387	6557	.14
TOTAL EGGS	310	374	386	400	411	414	424	442	467	493	517	3.48
WOL GREASY	47	55	59	55	54	60	66	62	65	67	68	2.44
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	683	927	987	1181	1157	1277	1327	1320	1344	1422	1453	4.76
MARINE FISH	601	1121	1290	1499	1570	1936	1953	1851	1534	1509	1642	3.17
CRUST+ MOLLUS+ CEPHALOP	13	27	34	29	35	41	42	59	65	71	67	12.20
AQUATIC ANIMALS	1	2	3	1	2	2	1	1	1	1	1	-7.96
AQUATIC PLANTS	3	4	3	7	6	6	7	5	7	7	8	8.36
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	553	795	844	917	1043	1014	1042	1051	1043	1085	1108	3.35
SAWLOGS NONCONIFEROUS	9892	12759	14386	14734	15306	15681	17524	15133	14310	16196	16459	1.72
PULPWOOD+PARTICLES	514	806	894	958	1307	1428	1375	1498	2137	2204	2181	12.65
FUELWOOD	197665	219605	225261	232835	236016	243033	248830	255031	262781	265876	269657	2.37
SAWWOOD CONIFEROUS	259	327	343	382	407	409	396	416	430	478	474	3.88
SAWWOOD NONCONIFEROUS	1789	2200	2545	2645	2734	2593	3100	3144	3185	3170	3228	4.03
WOOD-BASED PANELS	266	399	466	534	600	694	750	772	693	735	785	7.16
PULP FOR PAPER	121	202	221	231	239	255	281	290	305	294	319	5.07
PAPER+PAPERBOARD	92	136	156	172	180	184	186	196	217	224	256	6.05
LATIN AMERICA												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	53082	61857	64045	71119	72434	67835	74472	78311	78963	86047	85236	3.58
WHEAT	11757	10478	12397	11510	11568	12432	12084	13467	14970	19321	11557	3.53
RICE PADDY	9018	10200	10151	11778	10681	10925	11795	11910	13769	15285	14910	4.63
BARLEY	1427	1400	1314	1203	1389	1778	1665	1253	1560	1881	1370	1.99
MAIZE	26919	33515	33087	37953	39319	35082	37380	39375	37997	37192	43210	1.95
MILLET AND SORGHUM	2476	5041	5960	7661	8378	6004	10018	11248	9508	11140	13078	9.81
ROOT CROPS	36897	46610	48607	48692	49907	48340	44706	44590	45513	46226	47052	-.62
POTATOES	7553	8692	9181	9553	9444	8383	8585	9947	9196	9668	10180	1.08
CASSAVA	25746	33654	34889	34619	35827	35405	31927	30659	32049	32336	32636	-1.06
TOTAL PULSES	3786	4478	4249	4376	4871	4871	4527	4646	4706	3979	4759	.14
CITRUS FRUIT	6126	8168	8606	8608	9546	9834	10952	12973	13829	13270	13875	7.02
BANANAS	11756	16388	16659	17069	17758	18213	17819	17920	16757	18034	18569	1.07
APPLES	786	860	822	849	882	912	632	1284	1152	1141	1418	5.66
VEGETABLE OILS, OIL EQUIV	2292	2643	2761	3077	3026	3238	3581	4231	4438	4685	5316	8.15
SOYBEANS	459	1069	1509	1926	2573	3886	6100	9180	11510	12642	14594	36.72
GROUNDNUTS IN SHELL	1167	1231	1176	1354	1573	1445	1242	977	1043	1048	1129	-2.76
SUNFLOWER SEED	727	1032	967	1221	926	917	969	1033	807	1193	955	-.55
RAPESEED	57	55	71	77	91	85	46	41	68	111	89	2.40
COTTONSEED	2766	3008	3075	2902	2492	3013	3016	3320	2862	2392	3322	-.04
COPIA	265	280	224	227	244	236	202	230	223	214	217	-1.82
PALM KERNELS	202	253	250	286	285	287	290	299	299	344	306	2.66
SUGAR (CENTRIFUGAL, RAW)	17167	18739	18710	23404	21834	21054	23337	24508	24059	25950	26687	3.74
COFFEE GREEN	3163	2398	2669	2198	2999	2894	2415	3081	2880	1966	2591	-.12
COCOA BEANS	288	352	328	366	377	368	350	456	478	454	449	3.73
TEA	14	25	29	34	40	41	40	44	51	46	46	6.96
COTTON LINT	1539	1681	1696	1574	1391	1677	1672	1857	1528	1318	1760	-.38
JUTE AND SIMILAR FIBRES	71	81	73	65	66	81	115	78	110	113	110	5.78
SISAL	214	210	233	233	307	328	290	326	340	185	252	1.21
TOBACCO	498	546	541	536	533	565	563	679	671	713	774	4.28
NATURAL RUBBER	30	27	30	31	30	32	28	24	25	26	28	-1.51
TOTAL MEAT	8330	9946	10601	10666	10095	10621	10865	11177	11760	12479	12867	2.63

see notes at end of Table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
TOTAL MILK	20396	24146	24788	25102	26051	27057	26458	28088	30784	32330	33409	3.71
TOTAL EGGS	933	1231	1321	1402	1467	1544	1639	1711	1781	1790	1922	4.88
WOOL GREASY	343	345	351	339	322	309	299	291	296	305	300	-1.95
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	215	249	264	155	162	200	201	286	276	247	254	2.65
MARINE FISH	8428	12870	11154	14749	13268	6851	4657	6823	5929	7473	6115	-9.48
CRUST+ MOLLUS+ CEPHALOP	275	374	387	433	431	454	443	439	450	541	500	3.19
AQUATIC MAMMALS	17	8	8									-17.47
AQUATIC ANIMALS	8	34	16	67	38	60	49	34	47	22	61	3.04
AQUATIC PLANTS	45	86	91	88	74	79	81	90	95	107	129	3.56
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	11014	13986	14928	16237	16603	16808	16359	16315	19171	20329	20107	3.82
SAWLOGS NONCONIFEROUS	14729	15995	16127	17172	18380	18456	19279	19550	21406	24153	24841	5.04
PULPWOOD+PARTICLES	4166	7310	7570	8512	8726	9022	9080	9866	11556	12908	12942	6.75
FUELWOOD	159639	170747	172828	175621	180060	182568	183244	191117	192464	195885	195987	1.69
SAWWOOD CONIFEROUS	5275	6684	6994	7420	7405	7692	7063	7430	9051	9734	10375	4.45
SAWWOOD NONCONIFEROUS	6528	7380	7900	7939	8304	7969	8393	8678	9584	10801	11874	4.71
WOOD-BASED PANELS	767	1356	1477	1669	1948	2383	2563	2669	2834	3147	3375	10.96
PULP FOR PAPER	1109	1804	1920	2137	2211	2442	2678	2974	2844	3259	3729	7.97
PAPER+PAPERBOARD	2105	3125	3409	3787	4079	4251	4672	5238	4781	5249	5683	6.51
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	36594	41148	43093	40017	44418	47319	40657	44908	51879	56022	53464	3.31
WHEAT	17623	20356	21195	19983	23135	25956	21221	24349	28404	31357	30103	4.95
RICE PADDY	3407	4541	4524	4482	4535	4583	4446	4304	4602	4742	4848	.52
BARLEY	6657	7053	7392	6004	6410	7275	5197	6238	7859	8957	8071	2.13
MAIZE	3650	4157	4257	4215	4268	4265	4536	4842	5028	5486	5260	3.21
MILLET AND SORGHUM	3680	3490	4131	4019	4397	3795	3918	4001	4586	4082	3829	.70
ROOT CROPS	3082	3579	3744	3821	3931	4311	4581	4606	4953	5613	5805	5.62
POTATOES	2753	3241	3397	3485	3590	3946	4245	4229	4524	5174	5374	5.84
CASSAVA	125	95	93	93	92	92	92	92	130	131	131	4.34
TOTAL PULSES	1496	1495	1660	1480	1609	1827	1533	1747	1638	1895	1880	2.19
CITRUS FRUIT	1425	2173	2268	2344	2680	2762	2896	3060	3129	3115	3380	5.02
BANANAS	160	217	227	223	276	277	283	297	293	291	295	3.77
APPLES	563	1019	856	992	1137	1279	1237	1323	1287	1348	1205	3.96
VEGETABLE OILS,OIL EQUIV	926	1052	1093	1199	1243	1556	1265	1543	1417	1542	1469	4.14
SOYBEANS	5	11	14	18	18	24	30	47	82	122	127	33.67
GROUNDNUTS IN SHELL	418	360	499	447	502	684	656	1036	1042	957	982	12.84
SUNFLOWER SEED	118	244	347	435	511	613	616	486	550	611	520	7.40
RAPESEED	6	7	8	3	3	1	1	1	1	6	6	-9.80
COTTONSEED	2140	2405	2617	2570	2813	2941	2780	3036	2535	2353	2733	.31
SUGAR (CENTRIFUGAL,RAW)	1128	1769	1760	1881	2329	2190	2221	2322	2455	2857	2794	5.50
COFFEE GREEN	6	5	5	5	5	6	6	6	6	6	6	2.63
TEA	22	48	53	53	50	69	66	67	77	82	82	6.62
COTTON LINT	1193	1407	1523	1490	1630	1699	1608	1763	1453	1375	1616	.36
JUTE AND SIMILAR FIBRES	3	3	3	2	2	2	3	2	2	2	2	-3.18
TOBACCO	178	219	198	204	235	241	214	238	252	373	308	5.28
TOTAL MEAT	1845	2180	2271	2324	2391	2426	2511	2651	2757	2809	2917	3.27
TOTAL MILK	10002	11366	11270	11116	11142	11579	11922	12357	12790	13235	13371	2.22
TOTAL EGGS	217	307	308	318	336	376	394	411	460	489	493	6.25
WOOL GREASY	127	144	152	148	144	146	147	155	155	159	161	1.12
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	111	123	132	129	123	130	130	127	135	138	141	1.13
MARINE FISH	346	368	408	496	488	515	504	632	675	626	450	4.39
CRUST+ MOLLUS+ CEPHALOP	22	29	31	23	26	33	37	31	27	32	33	1.81
AQUATIC MAMMALS	1	2	8	5	4	3	3	2	2	2	2	-10.15
AQUATIC ANIMALS	1	1										-93.66
AQUATIC PLANTS	1	1	1	1	1				1			-98.71
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	1967	3105	3461	3269	3689	3624	4259	4569	4770	4778	5188	5.97
SAWLOGS NONCONIFEROUS	832	1293	1445	1263	1416	1775	1626	1805	1287	1314	1765	1.69
PULPWOOD+PARTICLES	151	254	438	874	672	960	1133	1363	869	906	1732	16.09
FUELWOOD	33129	38720	40256	38981	38561	39520	37000	39954	41394	48761	45203	1.88
SAWWOOD CONIFEROUS	1067	1952	2167	2194	2190	2179	2303	2293	2271	2758	2912	3.49

see notes at end of table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
SAWWOOD NONCONIFEROUS	389	558	610	670	579	711	741	734	704	822	863	4.34
WOOD-BASED PANELS	137	280	306	322	349	389	406	427	511	620	667	10.01
PULP FOR PAPER	94	146	144	177	290	349	437	394	338	327	352	11.55
PAPER+PAPERBOARD	190	265	291	329	413	515	595	606	638	658	718	12.39
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	163244	192982	202422	211718	209423	200157	225491	212166	238983	234606	252700	2.59
WHEAT	15769	23536	25898	28063	30909	33880	32774	29984	32447	38343	39032	4.90
RICE PADDY	114928	132294	138965	141708	142294	133025	150933	143943	162878	153993	171584	2.40
BARLEY	3902	5337	4235	4461	4444	4334	3979	3947	5021	5131	3281	-1.73
MAIZE	11059	13734	13294	16056	13737	13551	15969	15776	17549	16158	15665	2.16
MILLET AND SORGHUM	17517	17987	19841	21349	17975	15299	21768	18451	21022	20922	23075	1.81
ROOT CROPS	30332	35568	36627	36745	37248	39121	41902	43742	45859	48754	50492	4.22
POTATOES	4342	6208	6846	6093	7032	6854	6552	6949	8658	9726	9498	4.94
CASSAVA	17056	19806	19813	20236	20037	22470	25472	27400	27070	29002	31100	5.76
TOTAL PULSES	13414	13728	12431	13894	13266	12732	12725	11481	12422	14765	13462	.02
CITRUS FRUIT	1906	2232	2162	2178	2202	2215	2355	2462	2635	2882	2935	3.59
BANANAS	6350	7937	7985	7844	8504	8262	8737	9009	9437	9796	10095	2.92
APPLES	202	386	453	523	609	729	857	946	1054	1069	1108	13.23
VEGETABLE OILS,OIL EQUIV	6793	7164	7300	8098	8672	7945	8718	8912	10245	10075	10279	4.24
SOYBEANS	600	725	682	799	816	841	925	1092	1158	1035	1111	5.99
GROUNDNUTS IN SHELL	6070	5806	6294	7363	7422	5236	7124	6407	8121	6568	6976	1.41
SUNFLOWER SEED				1	1	1	1	1	1	1	5	29.92
RAPESEED	1597	1986	1737	1968	2421	1869	2221	2131	2648	2348	1998	2.11
COTTONSEED	2920	3305	3311	3079	4044	3819	3789	3933	3440	2988	3467	.11
COPIA	2883	3138	3080	3304	3218	3412	3021	3202	3652	4330	4030	3.08
PALM KERNELS	64	104	121	143	184	212	234	292	340	385	435	17.62
SUGAR (CENTRIFUGAL,RAW)	5641	5309	7103	8532	8284	7184	8586	9605	10457	11347	12548	7.98
COFFEE GREEN	233	283	322	322	363	320	312	321	348	360	380	2.10
COCOA BEANS	7	9	10	12	13	14	17	21	25	24	29	14.16
TEA	681	732	718	729	726	757	781	796	803	819	884	2.10
COTTON LINT	1461	1653	1655	1541	2024	1911	1896	1966	1721	1494	1733	.10
JUTE AND SIMILAR FIBRES	2832	2154	3026	2841	2568	2894	3138	2187	2205	2455	2663	-.74
SISAL	8	9	8	5	2							-99.02
TOBACCO	735	907	901	863	814	922	872	962	893	882	1002	.83
NATURAL RUBBER	1868	2398	2693	2652	2729	2704	3114	3092	2986	3263	3256	3.21
TOTAL MEAT	2880	3343	3457	3587	3696	3761	3844	3973	4053	4151	4275	2.67
TOTAL MILK	28878	30307	31466	32633	33784	35004	36302	36840	37376	37896	38307	2.69
TOTAL EGGS	527	677	763	783	847	920	969	1013	1055	1096	1158	5.89
WOOL GREASY	56	61	59	61	65	60	59	61	64	69	73	1.60
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	1869	2253	2399	2324	2360	2376	2422	2513	2572	2595	2678	1.72
MARINE FISH	2896	4470	4744	4799	5294	5641	6184	6739	6906	7159	7589	6.43
CRUST+ MOLLUS+ CEPHALOP	509	842	845	1086	1187	1132	1239	1215	1449	1707	1761	8.31
AQUATIC MAMMALS	1	1	1	2	2							-98.77
AQUATIC ANIMALS	2	8	8	36	32	24	87	27	24	51	51	19.22
AQUATIC PLANTS	53	130	107	131	135	147	242	356	284	326	346	15.56
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	1718	2130	2467	2289	2667	2579	1954	2688	3051	2975	4041	5.13
SAWLOGS NONCONIFEROUS	29888	45177	48705	53580	54525	60249	73827	68323	57979	75054	76500	5.63
PULPWOOD+PARTICLES	265	625	971	1354	1360	1847	2623	3058	2810	2851	2959	18.47
FUELWOOD	245779	278608	284581	289761	300716	307315	315608	320861	328764	336795	344467	2.42
SAWWOOD CONIFEROUS	1048	1472	1483	1443	1707	1643	1530	1932	1782	1781	2643	4.91
SAWWOOD NONCONIFEROUS	8715	10595	11355	11937	11515	13406	13736	13799	13928	15811	16303	4.67
WOOD-BASED PANELS	657	1995	2069	2216	2562	3069	3849	3165	3305	3723	4499	9.05
PULP FOR PAPER	513	870	927	983	1067	1110	1252	1334	1312	1462	1539	6.61
PAPER+PAPERBOARD	846	1209	1353	1490	1660	1883	2030	2096	2071	2182	2746	8.30
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	182683	204820	211243	231211	238311	233384	243547	250426	259558	263696	264032	2.83
WHEAT	22666	27435	29364	31504	33579	35451	36636	37556	41689	43621	40613	5.01
RICE PADDY	102152	114466	117459	129156	133662	129872	136229	142371	145867	145804	149132	2.91
BARLEY	14509	15357	15855	17070	17071	15578	16919	15785	15595	15804	15794	-.23
MAIZE	24216	27867	28883	30956	31993	30942	32007	33072	34223	35289	35775	2.63

see notes at end of table

ANNEX TABLE 1. VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
MILLET AND SORGHUM	17375	17843	17833	20560	20035	19580	19744	19558	20072	21070	20593	1.39
ROOT CROPS	109574	119094	129396	135184	143140	130834	149310	149027	158735	160761	163840	3.36
POTATOES	25985	28936	30973	33014	35062	33087	37125	37160	41292	42594	43096	4.48
CASSAVA	1371	1342	1276	1284	1275	1373	1451	1499	1449	1466	1832	3.02
TOTAL PULSES	7567	8961	9278	9583	9925	10367	10980	11272	11530	11802	12070	3.53
CITRUS FRUIT	822	1046	1076	1149	1195	1203	1283	1325	1312	1328	1353	2.97
BANANAS	908	1316	1283	1189	1162	1110	1173	1104	972	1011	1030	- 2.97
APPLES	406	497	503	518	523	543	573	603	619	641	656	3.43
VEGETABLE OILS, OIL EQUIV	3825	4203	4241	4576	4635	4532	4905	4977	5117	5108	5090	2.38
SOYBEANS	10891	11012	11266	11931	11855	11553	12126	12531	12986	12790	13305	1.98
GROUNDNUTS IN SHELL	2156	2356	2553	2867	2779	2593	2805	2898	3000	3099	2894	2.23
SUNFLOWER SEED	65	70	73	75	80	82	85	90	93	98	105	4.44
RAPESEED	1035	1074	943	992	1052	1152	1262	1201	1354	1305	1205	3.30
COTTONSEED	2472	3616	3527	4003	4435	4261	5085	4997	4780	4738	4764	3.68
COPRA	31	29	25	29	30	30	32	31	30	31	31	1.50
PALM KERNELS	10	22	25	26	29	32	35	36	38	40	42	7.38
SUGAR (CENTRIFUGAL, RAW)	2410	3579	3765	3763	4127	4085	4217	4427	4363	4677	4856	3.23
COFFEE GREEN	7	9	9	9	9	8	10	10	10	10	10	1.32
TEA	186	222	239	255	268	299	317	318	325	334	345	5.03
COTTON LINT	1236	1808	1764	2002	2218	2130	2543	2498	2390	2369	2382	3.68
JUTE AND SIMILAR FIBRES	398	540	565	601	630	930	1230	1430	1432	1473	1485	14.88
SISAL	10	9	10	8	9	8	8	10	9	9	11	1.01
TOBACCO	760	934	864	868	863	918	1024	1061	1038	1063	1069	2.63
NATURAL RUBBER	123	83	78	49	47	48	52	60	55	78	83	.77
TOTAL MEAT	12747	14233	14748	15780	16473	17266	18036	18706	19415	20476	20950	4.48
TOTAL MILK	4655	4944	5084	5333	5475	5641	5930	6196	6452	6716	7031	4.01
TOTAL EGGS	2812	3440	3493	3524	3571	3633	3687	3788	3906	4034	4145	2.08
WOOL GREASY	78	77	77	79	80	79	81	82	82	81	84	.85
FISHERY PRODUCTS ^{1/}												
FRESHWATER + DIADROMOUS	2977	3855	3988	4386	4837	4858	4894	4896	4896	4908	5121	2.83
MARINE FISH	2788	3640	3206	4175	4540	4712	4832	4887	5074	5209	5383	5.06
CRUST+ MOLLUS+ CEPHALOP	71	108	150	175	215	261	305	288	285	332	335	12.35
AQUATIC MAMMALS						1						5.22
AQUATIC ANIMALS								1		1	1	18.97
AQUATIC PLANTS	1	3	2	3	3	4	6	8	7	10	11	18.81
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	12744	14627	15093	15342	15772	16232	16767	17007	18187	18187	18187	2.69
SAWLOGS NONCONIFEROUS	8381	9359	9960	9454	9499	10514	11509	11749	12269	12675	12675	3.99
PULPWOOD+PARTICLES	1492	2125	2220	2550	2680	2810	2930	4000	4291	4291	4291	9.37
FUELWOOD	132549	147330	150120	153650	156300	159965	162118	165151	168345	168345	168345	1.61
SAWWOOD CONIFEROUS	7406	9000	9381	9664	10004	10354	10604	11074	11724	11724	11724	3.22
SAWWOOD NONCONIFEROUS	4862	5820	6196	6143	6351	6571	6753	6734	6739	6739	6739	1.57
WOOD-BASED PANELS	377	748	858	1042	1406	1569	1871	1358	1367	1540	1570	7.68
PULP FOR PAPER	2572	3147	3316	3487	3604	3722	3837	4693	5025	5051	5070	6.17
PAPER+PAPERBOARD	2987	3833	4067	4290	4536	4817	5027	6127	6638	6721	6721	7.35

^{1/} Nominal catch (live weight) excluding whales^{2/} Except for Pulp for Paper and Paper and Paperboard, all forest products are expressed in thousand cubic metres

ANNEX TABLE 2. INDICES OF FOOD PRODUCTION

	TOTAL					CHANGE 1976 TO 1977	PER CAPUT					CHANGE 1976 TO 1977
	1973	1974	1975	1976	1977		1973	1974	1975	1976	1977	
	1969=100					PERCENT	1969=100					PERCENT
FOOD PRODUCTION												
WORLD	108	110	113	115	118	2.61	102	102	103	103	103	
DEVELOPED COUNTRIES	108	110	112	113	115	1.77	105	106	107	108	109	.93
WESTERN EUROPE	105	111	109	110	111	.91	103	108	106	106	107	.94
BELGIUM-LUXEMBOURG	106	113	109	101	104	2.97	105	111	108	99	102	3.03
DENMARK	98	111	105	100	104	4.00	96	108	102	97	100	3.09
FRANCE	110	112	107	109	110	.92	107	108	103	105	105	
GERMANY FED. REP. OF	100	104	101	99	102	3.03	98	102	99	98	101	3.06
IRELAND	101	117	139	125	137	9.60	97	111	130	116	126	8.62
ITALY	101	106	107	105	106	.95	99	103	103	101	100	.99
NETHERLANDS	105	116	121	122	127	4.10	102	112	116	115	119	3.48
UNITED KINGDOM	107	114	108	105	111	5.71	106	113	107	104	110	5.77
AUSTRIA	102	106	109	108	106	- 1.85	100	104	107	107	105	- 1.87
FINLAND	99	102	107	119	107	- 10.08	98	100	104	116	104	- 10.34
GREECE	109	120	125	129	127	- 1.55	108	118	122	124	121	- 2.42
ICELAND	125	121	129	125	135	8.00	121	115	121	116	124	6.90
MALTA	104	106	94	116	110	- 5.17	105	105	93	114	107	- 6.14
NORWAY	103	122	108	106	119	- 12.26	101	118	104	102	114	11.76
PORTUGAL	100	102	102	98	89	- 9.18	100	101	101	97	87	- 10.31
SPAIN	117	120	126	129	123	- 4.65	114	116	120	122	115	- 5.74
SWEDEN	101	122	108	116	116		100	120	106	113	113	
SWITZERLAND	102	103	106	112	111	- .89	98	99	102	109	110	.92
YUGOSLAVIA	106	117	116	123	129	4.88	104	113	111	116	121	4.31
USSR AND EASTERN EUROPE	115	113	112	114	117	2.63	112	109	107	109	110	.92
ALBANIA	108	110	112	125	130	4.00	100	99	98	107	108	.93
BULGARIA	106	98	104	114	111	- 2.63	105	95	102	111	108	- 2.70
CZECHOSLOVAKIA	114	117	115	115	123	6.96	112	115	112	111	118	6.31
GERMAN DEMOCRATIC REP.	111	121	120	115	120	4.35	111	122	121	117	122	4.27
HUNGARY	117	121	126	116	130	12.07	116	119	124	113	126	11.50
POLAND	112	114	116	110	109	- .91	110	110	111	104	102	- 1.92
ROMANIA	117	121	125	154	148	- 3.90	113	117	119	146	139	- 4.79
USSR	116	111	108	113	114	.88	112	107	103	107	107	
NORTH AMERICA DEVELOPED	105	106	114	118	121	2.54	102	102	109	112	114	1.79
CANADA	104	97	108	121	120	- .83	100	92	101	111	110	- .90
UNITED STATES	105	107	114	118	121	2.54	103	103	110	112	114	1.79
OCEANIA DEVELOPED	116	110	119	127	123	- 3.15	110	103	110	116	112	- 3.45
AUSTRALIA	119	113	122	128	124	- 3.13	113	106	113	117	113	- 3.42
NEW ZEALAND	107	101	111	125	120	- 4.00	102	94	101	113	109	- 3.54
DEVELOPING COUNTRIES	107	110	116	119	121	1.68	100	100	103	103	103	
AFRICA DEVELOPING	100	106	106	110	108	- 1.82	92	95	93	94	90	- 4.26
ALGERIA	95	100	103	112	102	- 8.93	87	88	88	93	81	- 12.90
MOROCCO	97	109	92	105	82	- 21.90	89	97	79	88	67	- 23.86
TUNISIA	132	134	154	149	146	- 2.01	124	123	138	130	124	- 4.62
BENIN	101	99	97	109	112	2.75	93	89	85	92	92	
GAMBIA	97	112	114	114	105	- 7.89	91	103	104	102	91	- 10.78
GHANA	105	116	99	97	94	- 3.09	97	105	87	83	78	- 6.02
GUINEA	89	92	95	101	101		83	84	85	88	86	- 2.27
IVORY COAST	111	126	135	136	144	5.88	103	115	119	117	121	3.42
LIBERIA	112	120	119	125	128	2.40	105	110	106	109	109	
MALI	70	76	92	59	99		65	69	81	85	84	- 1.13
MAURITANIA	76	74	73	82	84	2.44	72	69	66	72	73	1.39
NIGER	68	83	75	106	91	- 14.15	63	75	66	89	75	- 15.73
NIGERIA	94	102	106	109	110	.92	86	92	93	93	91	- 2.15
SENEGAL	91	120	139	126	96	- 23.81	85	110	123	109	81	- 25.69
SIERRA LEONE	102	102	108	113	116	2.65	95	92	95	97	97	
TOGO	85	67	71	72	76	5.56	78	60	62	61	62	1.64
UPPER VOLTA	90	101	112	109	102	- 6.42	84	92	100	95	87	- 8.42
ANGOLA	102	102	100	104	106	1.92	95	93	88	90	90	
CAMEROON	104	113	112	113	116	2.65	98	104	102	100	101	1.00
CENTRAL AFRICAN EMPIRE	113	115	115	116	121	4.31	106	106	103	102	104	1.56
CHAD	79	89	90	92	94	2.17	76	86	83	83	83	
CONGO	102	102	108	117	118	.85	95	92	96	101	99	- 1.98
GABON	105	107	107	109	111	1.83	103	103	103	104	105	.96
ZAIRE	105	108	110	112	114	1.79	98	98	97	96	96	
BURUNDI	113	113	111	114	116	1.75	107	103	99	99	98	- 1.01
ETHIOPIA	100	100	97	101	98	- 2.97	93	90	86	87	82	- 5.75
KENYA	103	102	103	109	112	2.75	93	90	87	90	89	- 1.11
MADAGASCAR	99	110	112	111	117	5.41	91	98	97	94	95	1.06
MALAWI	116	117	110	120	120		108	106	98	104	101	- 2.88
MAURITIUS	113	111	85	119	127	6.72	108	104	78	107	114	6.54
MOZAMBIQUE	109	106	97	97	97		102	97	87	85	83	- 2.35
RWANDA	103	129	125	124	125	.81	93	113	106	102	99	- 2.94
RWANDA	105	103	117	124	127	2.42	97	92	102	105	104	- .95
TANZANIA	104	102	107	111	115	3.60	95	91	92	93	93	
UGANDA	106	107	107	112	115	2.68	97	95	92	94	94	
ZAMBIA	109	119	125	132	132		100	105	107	110	106	- 3.64
BOTSWANA	112	121	118	133	128	- 3.76	105	110	105	116	108	- 6.90

ANNEX TABLE 2. INDICES OF FOOD PRODUCTION

	TOTAL					CHANGE 1976 TO 1977	PER CAPUT					CHANGE 1976 TO 1977
	1973	1974	1975	1976	1977		1973	1974	1975	1976	1977	
	1969=100					PERCENT	1969=100					PERCENT
FOOD PRODUCTION												
LESOTHO	120	105	93	124	111	- 10.48	114	98	85	110	97	- 11.82
SHAZILANO	112	121	110	124	129	4.03	103	109	96	105	107	1.90
SOUTH AFRICA	97	121	108	110	117	6.36	89	108	94	93	96	3.23
LATIN AMERICA	106	112	117	122	126	3.28	98	101	102	104	104	
COSTA RICA	113	114	130	130	130		105	103	115	112	110	- 1.79
EL SALVADOR	118	116	131	128	142	10.94	107	102	112	106	114	7.55
GUATEMALA	112	111	116	129	134	3.88	103	99	101	109	109	
HONDURAS	108	99	88	99	109	10.10	98	86	74	81	86	6.17
MEXICO	108	116	118	113	123	8.85	99	102	101	93	98	5.38
NICARAGUA	104	108	119	126	131	3.97	95	94	101	103	105	1.94
PANAMA	107	111	117	115	120	4.35	99	99	102	97	98	1.03
BARBADOS	96	88	84	90	102	13.33	95	86	82	87	98	12.64
CUBA	87	88	94	95	101	6.32	82	82	85	84	88	4.76
DOMINICAN REPUBLIC	111	112	105	117	111	- 5.13	100	98	89	96	88	- 8.33
HAITI	105	108	104	107	101	- 5.61	100	102	97	98	91	- 7.14
JAMAICA	103	109	109	111	109	- 1.80	99	103	101	102	98	- 3.92
SOUTH AMERICA	106	114	119	127	130	2.36	98	103	105	109	108	- .92
ARGENTINA	104	107	111	120	120		100	102	104	111	109	- 1.80
BOLIVIA	117	121	130	134	129	- 3.73	108	109	115	115	108	- 6.09
BRAZIL	112	123	129	143	146	2.10	103	109	112	121	120	- .83
CHILE	89	103	109	106	115	8.49	84	96	100	95	102	7.37
COLOMBIA	110	116	126	129	134	3.88	100	102	107	107	108	.93
ECUADOR	102	114	120	115	118	2.61	93	117	102	95	94	- 1.05
GUYANA	97	108	107	109	108	- .92	91	99	96	96	92	- 4.17
PARAGUAY	101	113	115	122	135	10.66	93	101	100	103	111	7.77
PERU	103	108	109	111	110	- .90	95	96	95	93	90	- 3.23
URUGUAY	97	105	103	116	96	- 17.24	94	101	98	109	89	- 18.35
VENEZUELA	105	111	118	114	128	12.28	96	98	102	96	104	8.33
NEAR EAST DEVELOPING	104	113	120	126	124	- 1.59	96	101	104	106	101	- 4.72
EGYPT	106	107	110	112	112		98	97	98	97	95	- 2.06
LIBYA	142	146	173	191	176	- 7.85	129	129	148	158	141	- 10.76
SUDAN	110	124	129	124	128	3.23	101	110	111	103	103	
AFGHANISTAN	111	114	116	122	119	- 2.46	103	102	102	104	99	- 4.81
CYPRUS	82	97	101	100	109	9.00	79	92	95	93	100	7.53
IRAN	116	122	127	134	136	1.49	106	108	109	112	110	- 1.79
IRAQ	95	93	83	102	91	- 10.78	85	81	70	83	71	- 14.46
JORDAN	80	141	86	91	79	- 13.19	72	124	73	75	46	- 38.67
LEBANON	110	122	111	101	103	1.98	101	108	96	85	84	- 1.18
SAUDI ARABIA	84	109	117	104	111	6.73	77	97	101	87	90	3.45
SYRIA	86	153	162	190	175	- 7.89	79	135	139	158	141	- 10.76
TURKEY	100	110	121	128	125	- 2.34	93	100	107	110	105	- 4.55
YEMEN ARAB REPUBLIC	116	105	124	116	114	- 1.72	106	94	108	98	93	- 5.10
YEMEN DEMOCRATIC	116	121	127	128	125	- 2.34	106	108	110	108	102	- 5.56
ISRAEL	120	128	130	134	141	5.22	109	113	112	113	116	2.65
FAR EAST DEVELOPING	109	106	116	116	122	5.17	101	96	102	100	103	3.00
BANGLADESH	102	97	109	102	112	9.80	97	92	100	91	98	7.69
INDIA	107	100	114	111	119	7.21	100	91	101	96	100	4.17
NEPAL	107	108	111	110	105	- 4.55	100	99	99	96	90	- 6.25
PAKISTAN	110	113	115	122	129	5.74	100	100	98	101	103	1.98
SRI LANKA	100	115	120	126	140	11.11	94	105	108	110	120	9.09
BURMA	103	106	106	111	112	.90	96	97	94	96	95	- 1.04
INDONESIA	117	120	120	122	126	3.28	109	108	106	105	105	
KOREA REP	104	111	121	127	135	6.30	98	102	109	112	117	4.46
MALAYSIA PENINSULAR	118	126	127	131	134	2.29	109	113	110	111	111	
MALAYSIA SABAH	121	128	149	145	163	12.41	109	110	126	117	126	7.69
SOMALIA	105	105	104	112	119	6.25	94	90	86	89	92	3.37
PHILIPPINES	114	119	128	143	140	- 2.10	103	104	108	117	111	- 5.13
THAILAND	123	121	128	135	124	- 8.15	111	106	109	111	99	- 10.81
JAPAN	101	104	110	100	108	8.00	97	98	103	93	99	6.45
ASIAN CENT PLANNED ECON	110	113	118	121	123	1.65	104	106	108	109	109	
CHINA	110	114	118	121	123	1.65	105	107	109	110	110	
KAMPUCHEA, DEMOCRATIC	61	52	67	71	71		57	47	59	60	59	- 1.67
KOREA DPR	117	126	135	146	156	6.85	108	114	118	125	130	4.00
LAO	105	109	112	111	113	1.80	98	100	100	98	97	- 1.02
MONGOLIA	112	117	122	118	117	- .85	102	104	105	99	96	- 3.03
VIET NAM	107	108	112	112	116	3.57	101	99	101	99	100	1.01

ANNEX TABLE 3. INDICES OF AGRICULTURAL PRODUCTION

	TOTAL					CHANGE 1976 TO 1977	PER CAPUT					CHANGE 1976 TO 1977
	1973	1974	1975	1976	1977		1973	1974	1975	1976	1977	
	1969=100					PERCENT	1969=100					PERCENT
AGRICULTURAL PRODUCTION												
WORLD	108	110	113	115	118	2.61	102	102	103	103	103	
DEVELOPED COUNTRIES	108	110	111	113	115	1.77	105	106	107	107	109	1.87
WESTERN EUROPE	105	111	110	110	111	.91	103	108	107	106	107	.94
BELGIUM-LUXEMBOURG	106	113	109	101	104	2.97	105	111	108	99	102	3.03
DENMARK	98	111	105	100	104	4.00	96	108	102	97	100	3.09
FRANCE	110	112	107	109	110	.92	107	108	103	105	105	
GERMANY FED. REP. OF	100	104	101	99	102	3.03	99	102	99	98	101	3.06
IRELAND	101	117	138	125	137	9.60	97	111	130	116	126	8.62
ITALY	101	107	107	106	106		99	103	103	101	101	
NETHERLANDS	106	117	122	123	128	4.07	103	113	117	116	120	3.45
UNITED KINGDOM	107	114	108	105	111	5.71	106	113	107	104	110	5.77
AUSTRIA	102	106	109	108	106	- 1.85	100	105	107	107	105	- 1.87
FINLAND	99	102	107	119	107	- 10.08	98	100	104	116	104	- 10.34
GREECE	108	118	125	129	128	- .78	107	116	122	124	121	- 2.42
ICELAND	123	119	126	123	132	7.32	118	113	118	114	121	6.14
MALTA	104	105	94	116	110	- 5.17	104	105	93	114	107	- 6.14
NORWAY	103	121	107	106	119	12.26	101	118	104	102	114	11.76
PORTUGAL	100	102	102	98	89	- 9.18	100	101	100	97	87	- 10.31
SPAIN	117	120	126	128	123	- 3.91	113	116	120	121	115	- 4.96
SWEDEN	101	122	108	116	116		100	120	106	113	113	
SWITZERLAND	102	103	106	112	111	- .89	98	99	102	109	110	.92
YUGOSLAVIA	107	117	117	123	128	4.07	104	113	111	116	121	4.31
USSR AND EASTERN EUROPE	114	113	112	114	117	2.63	111	109	108	109	110	.92
ALBANIA	110	111	113	123	128	4.07	102	100	98	105	106	.95
BULGARIA	108	102	109	117	115	- 1.71	107	99	106	113	111	- 1.77
CZECHOSLOVAKIA	114	117	115	115	122	6.09	112	114	112	111	117	5.41
GERMAN DEMOCRATIC REP.	110	121	120	115	120	4.35	111	122	121	117	123	5.13
HUNGARY	116	120	125	115	130	13.04	115	118	123	113	126	11.50
POLAND	111	113	116	110	109	- .91	108	109	110	104	102	- 1.92
ROMANIA	116	121	125	154	148	- 3.90	113	116	119	146	139	- 4.79
USSR	115	111	109	113	115	1.77	112	107	104	107	108	.93
NORTH AMERICA DEVELOPED	106	106	113	117	121	3.42	103	103	108	111	114	2.70
CANADA	103	97	107	117	118	.85	100	92	100	108	108	
UNITED STATES	106	107	113	117	121	3.42	103	104	109	112	114	1.79
OCEANIA DEVELOPED	109	104	112	118	114	- 3.39	104	97	104	108	104	- 3.70
AUSTRALIA	110	105	114	118	114	- 3.39	105	99	106	108	103	- 4.63
NEW ZEALAND	105	98	107	119	116	- 2.52	100	92	98	108	105	- 2.78
DEVELOPING COUNTRIES	107	110	115	117	121	3.42	100	101	103	102	103	.98
AFRICA DEVELOPING	100	106	106	110	108	- 1.82	93	95	93	94	90	- 4.26
ALGERIA	95	100	103	112	102	- 8.93	87	88	88	92	81	- 11.96
MOROCCO	98	109	92	106	83	- 21.70	90	97	80	89	67	- 24.72
TUNISIA	131	133	154	149	146	- 2.01	123	122	138	130	124	- 4.62
BENIN	101	98	96	106	110	3.77	94	88	83	91	91	
GAMBIA	97	112	114	114	105	- 7.89	91	103	104	102	91	- 10.78
GHANA	105	116	100	98	94	- 4.08	97	105	87	83	78	- 6.02
GUINEA	89	91	94	100	100		83	83	84	86	84	- 2.33
IVORY COAST	115	116	130	135	139	2.96	107	106	115	116	117	.86
LIBERIA	112	117	115	117	121	3.42	105	107	102	102	103	.98
MALI	71	78	95	102	103	.98	66	71	84	88	87	- 1.14
MAURITANIA	76	74	73	82	84	2.44	72	69	66	72	73	1.39
NIGER	68	83	76	105	91	- 13.33	63	75	66	89	75	- 15.73
NIGERIA	94	102	106	109	110	.92	87	92	93	93	91	- 2.15
SENEGAL	92	122	140	127	97	- 23.62	86	111	124	110	82	- 25.45
SIERRA LEONE	103	101	108	112	117	4.46	96	92	96	97	98	1.03
TOGO	84	68	71	73	76	4.11	78	61	62	62	63	1.61
UPPER VOLTA	90	101	111	110	104	- 5.45	84	92	99	96	88	- 8.33
ANGOLA	100	104	91	79	81	2.53	93	95	81	69	68	- 1.45
CAMEROON	104	113	109	110	113	2.73	98	105	99	97	99	2.06
CENTRAL AFRICAN EMPIRE	110	114	110	113	117	3.54	103	105	99	99	101	2.02
CHAD	82	94	98	96	99	3.13	78	88	90	87	88	1.15
CONGO	102	101	109	117	118	.85	94	92	96	101	100	.99
GABON	105	106	107	109	111	1.83	102	103	102	103	104	.97
ZAIRE	105	108	110	112	114	1.79	98	97	97	96	96	
BURUNDI	113	114	110	114	116	1.75	107	105	98	99	98	- 1.01
ETHIOPIA	99	100	98	102	99	- 2.94	92	90	87	88	83	- 5.68
KENYA	109	109	108	122	127	4.10	99	95	92	100	101	1.00
MADAGASCAR	102	111	114	113	119	5.31	94	99	98	95	97	2.11
MALAWI	118	118	116	125	131	4.80	110	108	103	109	111	1.83
MAURITIUS	114	112	86	119	128	7.56	108	105	79	107	114	6.54
MOZAMBIQUE	107	105	93	93	94	1.08	100	96	83	81	79	- 2.47
RHODESIA	99	124	128	128	123	- 3.91	89	109	108	104	97	- 6.73
RWANDA	105	105	119	126	129	2.38	97	94	103	107	105	- 1.87
TANZANIA	103	99	103	109	111	1.83	94	88	89	91	90	- 1.10
UGANDA	106	100	101	103	107	3.88	97	89	87	86	87	1.16
ZAMBIA	109	118	124	131	131		100	105	107	109	105	- 3.67
BOTSWANA	112	120	118	133	128	- 3.76	105	110	105	116	108	- 6.90

ANNEX TABLE 3. INDICES OF AGRICULTURAL PRODUCTION

	TOTAL					CHANGE 1976 TO 1977	PER CAPUT					CHANGE 1976 TO 1977
	1973	1974	1975	1976	1977		1973	1974	1975	1976	1977	
	1969-71=100					PERCENT	1969-71=100					PERCENT
AGRICULTURAL PRODUCTION												
LESOTHO	116	101	93	120	109	- 9.17	109	93	84	107	95	- 11.21
SWAZILAND	114	125	115	129	133	3.10	105	112	100	109	110	.92
SOUTH AFRICA	96	118	106	108	115	6.48	88	106	93	91	95	4.40
LATIN AMERICA	105	113	116	118	123	4.24	97	102	101	100	102	2.00
COSTA RICA	114	112	123	124	124		106	101	108	107	104	- 2.80
EL SALVADOR	110	118	128	118	123	4.24	100	105	110	98	99	1.02
GUATEMALA	113	117	116	127	133	4.72	104	104	101	107	108	.93
HONDURAS	108	102	95	103	120	16.50	97	88	80	84	94	11.90
MEXICO	108	116	115	111	120	8.11	98	102	97	91	96	5.49
NICARAGUA	109	121	127	129	141	9.30	99	107	108	106	112	5.66
PANAMA	107	110	117	115	119	3.48	98	98	102	97	98	1.03
BARBADOS	96	88	85	90	102	13.33	95	86	82	87	98	12.64
CUBA	89	90	95	97	102	5.15	84	83	86	86	89	3.49
DOMINICAN REPUBLIC	116	115	107	120	116	- 3.33	105	101	91	98	92	- 6.12
HAITI	105	107	106	105	101	- 3.81	101	102	98	96	91	- 5.21
JAMAICA	103	108	108	111	108	- 2.70	99	102	101	101	98	- 2.97
SOUTH AMERICA	105	114	118	121	126	4.13	97	103	103	103	105	1.94
ARGENTINA	103	107	111	120	120		99	101	104	110	109	- .91
BOLIVIA	125	126	134	135	131	- 2.96	116	114	119	116	110	- 5.17
BRAZIL	108	122	124	126	135	7.14	99	109	108	107	111	3.74
CHILE	89	102	109	105	115	9.52	84	95	99	95	101	6.32
COLOMBIA	109	112	123	124	131	5.65	99	99	105	103	105	1.94
ECUADOR	102	116	120	117	119	1.71	93	119	102	97	95	- 2.06
GUYANA	97	109	107	109	108	- .92	91	99	96	96	93	- 3.13
PARAGUAY	103	114	119	126	142	12.70	94	102	103	106	116	9.43
PERU	103	106	106	107	106	- .93	94	95	91	90	87	- 3.33
URUGUAY	93	99	98	111	93	- 16.22	90	95	94	105	87	- 17.14
VENEZUELA	106	110	119	113	127	12.39	97	98	103	95	104	9.47
NEAR EAST DEVELOPING	104	113	118	123	122	- .81	96	101	102	104	100	- 3.85
EGYPT	104	103	103	105	107	1.90	96	93	92	91	91	- 10.32
LIBYA	140	144	170	187	173	- 7.49	127	127	145	155	139	- 7.87
SUDAN	103	122	121	107	119	11.21	94	108	104	89	96	- 3.85
AFGHANISTAN	111	114	118	122	119	- 2.46	102	103	103	104	100	- 7.53
CYPRUS	82	96	101	100	109	9.00	79	92	95	93	100	- .91
IRAN	116	122	124	132	134	1.52	106	108	107	110	109	- 14.46
IRAQ	94	93	82	101	90	- 10.89	85	81	70	83	71	- 38.67
JORDAN	80	140	86	91	80	- 12.09	73	123	74	75	46	- 4.71
LEBANON	111	123	113	102	100	- 1.96	102	109	97	85	81	- 3.45
SAUDI ARABIA	84	109	117	104	111	6.73	77	97	101	87	90	- 9.66
SYRIA	90	143	150	174	162	- 6.90	82	127	128	145	131	- 4.50
TURKEY	101	112	120	128	126	- 1.56	94	101	106	111	106	- 5.05
YEMEN ARAB REPUBLIC	117	107	126	118	116	- 1.69	107	95	109	99	94	- 3.88
YEMEN DEMOCRATIC	115	120	125	123	121	- 1.63	105	107	108	103	99	- 3.54
ISRAEL	119	128	130	135	142	5.19	108	113	112	113	117	3.03
FAR EAST DEVELOPING	109	106	115	115	121	5.22	101	96	101	99	102	7.78
BANGLADESH	101	95	105	101	111	9.90	96	89	96	90	97	4.17
INDIA	107	101	114	111	119	7.21	100	92	101	96	100	5.26
NEPAL	107	107	110	109	105	- 3.67	100	98	98	95	90	- 4.17
PAKISTAN	109	112	111	116	124	6.90	100	99	96	96	100	6.12
SRI LANKA	96	105	109	111	121	9.01	90	96	97	98	104	- 2.06
BURMA	105	107	107	111	112	.90	98	97	95	97	95	- 5.26
INDONESIA	115	117	118	120	123	2.50	107	106	103	103	103	5.26
KOREA REP	107	113	123	129	137	6.20	100	104	111	114	120	- 2.73
MALAYSIA PENINSULAR	118	124	122	129	130	.78	109	111	106	110	107	- 6.31
MALAYSIA SABAH	120	122	139	139	153	10.07	107	105	118	111	118	1.08
SOMALIA	111	107	104	116	122	5.17	99	92	87	93	94	- 5.13
PHILIPPINES	114	119	128	143	140	- 2.10	103	104	108	117	111	- 9.35
THAILAND	119	118	124	130	122	- 6.15	108	104	106	107	97	- 7.00
JAPAN	101	103	109	100	107	7.00	97	98	102	92	98	6.52
ASIAN CENT PLANNED ECON	111	114	118	121	123	1.65	105	107	109	109	109	
CHINA	111	115	119	122	123	.82	106	108	109	110	110	- 1.67
KAMPUCHEA, DEMOCRATIC	61	53	66	71	71		56	48	58	60	59	- 4.03
KOREA DPR	117	126	134	145	154	6.21	108	113	117	124	129	- 1.03
LAO	104	108	111	111	113	1.80	97	99	99	97	96	- 2.04
MONGOLIA	111	117	121	116	117	.86	102	104	104	98	96	- 2.04
VIET NAM	107	108	112	112	116	3.57	101	99	101	98	100	2.04

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	-----THOUSAND METRIC TONS-----											
WORLD												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	51353	53302	48629	57145	58499	64942	81575	65384	73620	68839	73618	4.44
RICE MILLED	7536	7559	7924	8673	8659	8564	8446	8300	7755	8987	10819	2.09
BARLEY	6881	6390	7141	10469	11003	13817	12344	11590	12451	13780	12826	7.40
MAIZE	20476	28904	27471	29432	30966	37397	48052	49451	51285	61993	57122	10.36
MILLET	233	263	242	182	271	218	239	226	233	276	293	1.63
SORGHUM	3560	4802	4406	6209	6228	6165	9045	10748	10151	11159	11918	12.32
POTATOES	3294	3401	3592	3782	3263	5131	3916	3880	3897	4382	4509	2.66
SUGAR, TOTAL (RAW EQUIV.)	18630	20311	19476	21854	21355	22110	23166	23290	21673	22940	28555	2.76
PULSES	1566	1810	2172	1783	1782	1932	2007	1671	1811	1908	1953	- 1.18
SOYBEANS	5520	8755	9332	12622	12332	13788	15594	17223	16459	19753	19996	9.61
SOYBEAN OIL	622	603	666	1120	1333	1102	1053	1546	1363	1827	2111	12.70
GROUNDNUTS SHELLED BASIS	1395	1566	1282	995	868	911	961	840	897	1017	817	- 4.76
GROUNDNUT OIL	375	510	381	429	360	525	501	372	399	559	574	2.11
COPRA	1548	1252	1107	916	1067	1360	1045	529	1091	1156	873	- 2.65
COCONUT OIL	440	573	481	616	714	867	738	669	1043	1373	1117	9.94
PALM NUTS KERNELS	689	442	438	459	491	407	315	380	334	425	326	- 3.33
PALM OIL	611	689	861	906	1239	1386	1515	1683	2018	2113	2178	14.02
WILDEED CAKE AND MEAL	6936	9337	9765	11181	11864	12841	14360	14771	14532	18336	18634	8.01
BANANAS	4267	5663	5668	5805	6527	6749	6776	6627	6466	6644	6825	2.07
MANGOS+TANGER+CLEMEN	3260	3797	3993	4376	4241	4624	5032	4961	5119	5245	5405	3.97
LEMONS AND LIMES	533	672	711	725	756	728	781	821	813	954	885	3.35
COFFEE GREEN+ROASTED	2876	3377	3432	3281	3318	3559	3788	3408	3569	3671	2942	- 1.12
COCOA BEANS	1096	1064	1020	1134	1190	1249	1108	1195	1152	1144	988	- 0.07
TEA	626	728	683	740	762	759	787	800	814	862	871	2.39
COTTON LINT	3729	3849	3756	3974	4077	4107	4715	3792	3994	4003	3841	.23
WOLLE AND SIMILAR FIBRES	1048	1089	926	872	809	800	902	899	536	633	564	- 6.21
TOBACCO UNMANUFACTURED	931	1010	1021	1004	1043	1220	1240	1389	1269	1317	1274	3.65
NATURAL RUBBER	2304	2659	2928	2853	2892	2843	3354	3198	3035	3256	3310	2.14
WOL GREASY	1231	1246	1264	1254	1141	1198	1114	828	847	1006	1087	- 3.46
BUVINE CATTLE 1/	5120	6222	6543	6902	6920	7749	6917	6101	6833	6769	6797	.30
SHEEP AND GOATS 1/	8150	9714	9775	10047	10393	11033	10783	10498	11765	11286	12714	2.59
PIGS 1/	2894	3395	3926	4596	5352	6046	5852	6017	6293	6739	6719	7.42
TOTAL MEAT	3100	3980	4315	4601	4739	5362	5649	5126	5451	6163	6678	5.15
MILK DRY	146	169	190	204	255	271	337	325	339	393	503	11.81
TOTAL EGGS IN SHELL	428	344	367	413	431	437	461	514	568	522	546	5.47
FISHERY PRODUCTS												
FISH FRESH FROZEN	1462	1892	1890	2259	2314	2481	2832	2770	2856	2914	3290	6.16
FISH CURED	573	541	545	572	538	564	541	473	459	476	478	- 2.16
SHELLFISH	269	350	400	468	552	680	703	709	768	884	861	10.79
FISH CANNED AND PREPARED	521	550	593	613	607	674	743	747	725	831	772	4.32
SHELLFISH CANNED+PREPAR	51	72	75	77	77	90	91	90	87	107	111	4.60
FISH BODY AND LIVER OIL	665	822	701	634	709	749	551	558	597	584	549	- 3.72
FISH MEAL	1950	3559	3040	2996	3033	3008	1634	1954	2190	2114	2004	- 6.57
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	8480	20970	20427	24380	21615	25489	28761	26206	23865	28360	28343	3.45
SAWLOGS NONCONIFEROUS	17583	30162	35050	38751	40701	42822	52406	45172	36551	45657	47124	3.76
PULP,WOOD+PARTICLE	14111	20293	22554	26594	24110	23071	29208	32765	31424	32347	32321	5.42
FUELWOOD	2740	2392	2892	2779	2282	1828	2221	2515	2211	1882	2173	- 2.71
SAWWOOD CONIFERUS	40885	47528	47342	49349	51670	57095	60908	51830	43208	56281	61172	1.77
SAWWOOD NONCONIFERUS	4778	6340	6897	7186	7234	8398	10617	8957	8013	11719	11685	6.66
WOOD-BASED PANELS	4728	8150	8927	9402	10612	12376	14423	12722	12191	14050	14274	6.39
PULP FOR PAPER	9658	13273	14463	15116	13197	14756	16811	17392	13696	15642	15677	1.53
PAPER AND PAPERBOARD	14238	19892	22494	23379	23532	25309	27626	29911	22905	27106	28100	3.15
WESTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	4855	8416	10505	9392	7130	10140	12714	12393	14407	14494	12843	6.13
RICE MILLED	269	418	303	507	556	517	386	605	613	659	738	7.20
BARLEY	2461	4207	4324	4387	3780	5311	5586	5966	5686	5075	4395	2.60
MAIZE	1111	2537	3242	3883	5300	4593	5613	6012	5666	5876	4450	7.34
MILLET	4	4	3	4	10	4	9	7	14	11	12	16.35
SORGHUM	65	119	111	181	136	196	276	712	737	771	385	24.71
POTATOES	1835	1850	2415	2220	2138	2763	2485	2358	2579	2337	2708	2.54
SUGAR, TOTAL (RAW EQUIV.)	1465	1661	1448	1980	2025	2817	2827	2638	2249	2932	3924	8.93

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
PULSES	184	290	284	259	256	291	288	253	323	226	323	-27
SOYBEANS	2	6	8	19	17	269	113	16	111	189	120	40.92
SOYBEAN OIL	85	131	224	384	445	395	470	720	719	744	767	19.25
GROUNDNUTS SHELLED BASIS	14	13	13	16	14	17	17	17	13	24	21	5.18
GROUNDNUT OIL	37	52	48	34	31	32	54	51	74	49	44	2.80
COPRA	3	1	2	1	1	7	6	1	1	17	3	16.77
COCONUT OIL	47	56	70	52	79	143	117	78	203	269	163	16.79
PALM NUTS KERNELS					2	1	1	5	1	1	1	39.83
PALM OIL	19	21	26	30	55	77	80	68	86	98	111	19.94
FLAXSEED CAKE AND MEAL	970	1195	1342	1567	1793	2150	2722	2901	2281	2549	2412	9.10
BANANAS	117	53	43	45	41	30	23	27	35	25	31	-6.65
ORANGES+TANGER+CLEMEN	1316	1373	1444	1815	1514	1838	1943	1933	1999	2056	2113	4.73
LEMONS AND LIMES	356	427	483	475	470	424	384	444	461	525	464	.55
COFFEE GREEN+ROASTED	15	25	32	38	38	47	62	76	86	92	78	15.67
COCOA BEANS	6	5	6	4	4	2	3	6	11	15	30	19.86
TEA	18	51	39	41	53	47	58	61	43	46	60	2.29
COTTON LINT	78	95	75	98	99	74	101	79	65	89	70	-2.40
JUTE AND SIMILAR FIBRES	33	43	40	39	38	29	28	25	21	18	17	-10.39
TOBACCO UNMANUFACTURED	106	111	112	119	122	154	141	196	177	179	156	6.01
NATURAL RUBBER	62	23	15	19	19	24	30	40	29	32	27	6.97
WOOL GREASY	68	64	61	59	55	66	55	43	55	64	57	-1.14
BOVINE CATTLE ^{1/}	1730	2343	2478	2601	2736	3093	2566	2312	3416	3026	2976	2.59
SHEEP AND GOATS ^{1/}	1182	929	980	629	718	790	619	575	1152	1154	1282	3.81
PIGS ^{1/}	600	1168	1896	2348	2175	2445	2552	2576	2596	3111	3106	8.41
TOTAL MEAT	880	1319	1357	1556	1812	1824	1934	2216	2434	2390	2654	8.30
MILK DRY	120	152	174	183	224	221	277	274	287	321	404	10.28
TOTAL EGGS IN SHELL	233	156	190	229	224	237	262	308	345	334	348	9.02
FISHERY PRODUCTS												
FISH FRESH FROZEN	818	929	954	1106	1044	1066	1097	1021	1051	1117	1072	1.28
FISH CURED	349	330	338	339	314	349	328	281	277	289	281	-2.37
SHELLFISH	106	130	133	150	186	244	197	225	256	283	243	8.83
FISH CANNED AND PREPARED	197	181	178	188	177	198	235	225	210	244	235	3.71
SHELLFISH CANNED+PREPAR	9	14	17	19	22	27	29	25	27	34	35	9.58
FISH BODY AND LIVER OIL	221	258	270	169	149	195	271	196	249	330	337	4.30
FISH MEAL	367	789	658	606	724	840	797	803	864	950	1016	4.26
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	1108	1368	1225	1463	1354	1380	2236	2784	1704	2428	2590	8.82
SAWLOGS NONCONIFEROUS	963	1200	1233	1354	1474	1549	1850	1930	1663	2022	2070	6.50
PULPWOOD+PARTICLE	4554	5388	6476	8288	7755	6089	7114	7771	8245	8037	7134	2.56
FUELWOOD	1585	993	1182	1268	814	752	1021	1165	1069	850	1077	-6.64
SAWWOOD CONIFERUS	14029	15054	16237	16213	16529	17929	20295	17258	12640	17106	16575	.15
SAWWOOD NONCONIFERUS	1044	1345	1444	1504	1522	1766	2274	1852	1607	2894	2734	7.82
WOOD-BASED PANELS	2502	3555	3963	4217	4606	5257	6320	5835	5084	6079	6202	6.14
PULP FOR PAPER	5599	6897	7089	7156	5842	6639	8054	7454	5198	5656	5599	-2.44
PAPER AND PAPERBOARD	6056	8802	10171	10730	10845	12019	13760	14904	10637	13113	13737	4.23
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	4196	6951	8003	6827	9276	5883	7036	8307	5261	4137	5180	-5.15
RICE MILLED	30	29	5	10	17	92	90	149	16	11	9	2.06
BARLEY	1089	682	849	724	802	664	460	1046	902	781	1631	5.47
MAIZE	1762	735	1544	1116	884	946	1570	1727	983	1536	993	2.80
MILLET	4	1	4	5	4	4	6	14	8	13	7	21.33
POTATOES	719	707	311	631	344	1510	534	648	490	442	413	-1.67
SUGAR,TOTAL (RAW EQUIV.)	2469	2684	2149	2114	1706	962	819	787	438	573	625	-17.99
PULSES	199	242	487	157	249	127	118	119	119	109	117	-11.77
SOYBEANS		10	4	1	50	10	6	22	11	10	9	10.84
SOYBEAN OIL		11	9	3	3	3	6	8	1	5	1	-11.19
GROUNDNUTS SHELLED BASIS		1	1	2	3	1	1	1				-93.69
GROUNDNUT OIL		1										-78.64
FLAXSEED CAKE AND MEAL	254	341	338	69	58	65	75	42	44	42	54	-18.77
BANANAS				3								-61.07
ORANGES+TANGER+CLEMEN	3	9	13	2								-41.56
LEMONS AND LIMES	2											
COCOA BEANS	2											1.05
TEA	8	14	13	10	11	12	13	14	17	15	22	5.60
COTTON LINT	386	576	465	528	571	662	734	740	801	880	974	7.65
JUTE AND SIMILAR FIBRES	1	1	1	6	2	3	4					-98.74
TOBACCO UNMANUFACTURED	101	110	97	94	92	88	97	100	102	101	103	.29

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
NATURAL RUBBER	24											-91.21
WOOL GREASY	1	3	6	2	1	1	1	1	1	1	1	-17.63
BOVINE CATTLE ^{1/}	217	628	729	735	811	789	769	610	613	440	443	-4.99
SHEEP AND GOATS ^{1/}	708	1932	2301	2935	3104	3164	3142	2850	3433	3001	3124	4.15
PIGS ^{1/}	702	297	136	147	542	738	336	575	808	516	484	14.04
TOTAL MEAT	292	504	439	329	374	395	433	510	622	517	540	3.69
TOTAL EGGS IN SHELL	101	96	86	98	114	108	102	111	121	101	90	.94
FISHERY PRODUCTS												
FISH FRESH FROZEN	80	238	235	319	351	345	379	494	606	611	613	12.58
FISH CURED	37	25	23	22	17	16	15	13	19	14	14	-6.04
SHELLFISH	1	2	2	5	5	4	7	3	1	1	1	-10.19
FISH CANNED AND PREPARED	22	27	29	30	28	29	31	32	45	45	42	5.92
SHELLFISH CANNED+PREPAR	4	5	3	4	4	3	2	2	3	2	2	-9.37
FISH BODY AND LIVER OIL	32	60	64	35	15	17	6	6	4	2	2	-34.34
FISH MEAL	5	31	33	14	12	18	13	11	18	18	18	-4.75
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFERUS	3131	6115	6382	7572	7383	7982	10195	9829	8884	9534	9803	5.58
SAWLOGS NONCONIFERUS	70	249	252	288	275	290	334	397	354	226	203	- .20
PULPWOOD+PARTICLE	5366	7885	8232	9334	8437	8021	11019	12480	12170	12451	12065	5.95
FUELWOOD	391	301	326	282	212	221	239	308	230	194	195	-4.40
SAWWOOD CONIFERUS	9464	10933	10735	11006	10764	11059	11085	9865	10362	11009	10416	- .50
SAWWOOD NONCONIFERUS	686	870	894	936	948	827	825	767	749	748	879	-1.75
WOOD-BASED PANELS	519	1045	1062	1114	1108	1248	1481	1462	1594	1710	1771	6.82
PULP FOR PAPER	348	534	632	554	569	672	691	684	673	850	877	5.02
PAPER AND PAPERBOARD	340	728	930	1079	1107	1180	1264	1304	1095	1462	1514	6.50
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR+WHEAT EQUIV.	31865	27841	21101	30585	31171	37245	51359	36738	43455	38774	40158	6.33
RICE MILLED	1193	1898	1920	1741	1479	2037	1630	1726	2139	2107	2288	2.21
BARLEY	1993	1034	800	4146	5161	5749	5168	3547	4054	5432	4343	16.35
MAIZE	11365	14961	13968	14412	12918	22409	33215	29875	33520	44692	40580	15.83
SORGHUM	2864	3600	2752	3772	2849	3858	5629	5722	5848	5797	6139	9.30
POTATOES	274	303	327	321	254	300	313	356	367	855	503	8.20
SUGAR, TOTAL (RAW EQUIV.)	24	25	17	16	13	20	71	105	291	121	166	37.70
PULSES	269	274	347	403	340	359	416	339	387	394	374	2.21
SOYBEANS	5000	8054	8493	11868	11555	12034	13250	13953	12506	15357	16234	7.14
SOYBEAN OIL	507	441	413	696	823	618	439	766	355	506	768	1.53
GROUNDNUTS SHELLED BASIS	33	57	25	51	109	192	189	255	241	130	302	25.04
GROUNDNUT OIL	14	1	15	15	39	28	47	21	12	48	45	25.23
COCONUT OIL	3	3	4	5	10	6	11	5	8	26	17	21.14
COARSEST CAKE AND MEAL	1615	3003	3283	3968	4435	4012	4971	5215	4030	5162	4554	4.77
BANANAS	50	78	87	191	180	188	188	195	187	201	199	9.13
ORANGES+TANGER+CLEMEN	196	153	280	266	257	303	292	328	481	461	410	10.22
LEMONS AND LIMES	95	120	108	128	137	157	201	202	183	225	236	9.15
COFFEE GREEN+ROASTED	36	31	27	28	25	34	72	85	55	69	106	16.75
COCOA BEANS	7	6	9	6	5	4	9	23	9	10	14	9.61
TEA	1	3	3	3	3	3	3	3	4	3	4	3.79
COTTON LINT	1075	878	544	677	936	701	1246	1172	871	748	973	3.49
JUTE AND SIMILAR FIBRES	3	1	1	1	1	1	1	1	1	1	1	6.26
TOBACCO UNMANUFACTURED	245	301	295	264	249	314	313	335	293	292	314	1.05
NATURAL RUBBER	26	42	26	16	25	21	27	26	29	29	25	- .21
WOOL GREASY	2	1	1	1	1	1	1	1	1	1	1	-11.00
BOVINE CATTLE ^{1/}	459	390	282	335	338	405	699	360	421	684	651	8.00
SHEEP AND GOATS ^{1/}	43	144	129	140	220	174	214	293	344	250	214	8.70
PIGS ^{1/}	19	35	36	114	106	101	107	213	47	56	54	2.87
TOTAL MEAT	265	286	315	319	341	369	444	406	472	693	700	10.35
MILK DRY	18	9	7	6	11	18	23	21	17	16	16	11.13
TOTAL EGGS IN SHELL	10	14	12	15	11	11	18	21	22	22	38	11.30
FISHERY PRODUCTS												
FISH FRESH FROZEN	167	242	225	211	225	234	264	200	236	250	352	2.73
FISH CURED	54	50	50	53	58	52	49	49	47	62	65	1.68
SHELLFISH	22	27	38	36	38	36	47	39	42	48	71	7.23
FISH CANNED AND PREPARED	32	36	37	32	33	43	52	39	36	46	51	3.79
SHELLFISH CANNED+PREPAR	6	9	10	9	10	9	10	8	8	9	9	-1.38
FISH BODY AND LIVER OIL	79	38	104	93	118	95	121	101	93	91	60	1.83
FISH MEAL	50	65	73	77	72	42	63	85	35	63	61	-2.78

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	3786	11839	10926	13391	10854	14104	14248	12118	12196	14842	14362	2.30
SAWLOGS NONCONIFEROUS	388	508	432	368	339	497	567	622	328	470	481	.90
PULP WOOD+PARTICLE	3876	6618	7130	7777	6473	6768	7837	8402	6867	8337	8572	2.29
FUELWOOD	27	120	84	102	84	91	112	110	206	162	200	8.67
SAWWOOD CONIFEROUS	15851	19162	18274	20057	22023	25705	27339	22944	18553	26379	32305	4.38
SAWWOOD NONCONIFEROUS	633	660	752	674	787	1006	1072	705	807	814	847	2.11
WOOD-BASED PANELS	493	872	986	884	979	1225	1558	1518	1507	1567	1532	7.90
PULP FOR PAPER	3481	5338	6183	6823	6125	6628	7185	8076	6672	7664	7722	3.47
PAPER AND PAPERBOARD	7346	9537	10435	10504	10573	10972	11256	12259	9737	10959	11239	1.17
AFRICA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	6083	6993	5374	7376	9484	8712	5659	5326	8201	7875	8196	1.51
RICE MILLED	59	102	110	121	102	181	158	137	174	218	260	10.02
BARLEY	498	132	452	631	1123	1828	844	808	1760	2022	2157	26.64
MAIZE	2	3	1	22	38	19	3	1	11	79	40.30	40.30
MILLET	10	11	9	14	27	40	25	31	21	20	23	8.92
SORGHUM	16	19	69	54	517	993	736	748	856	815	829	48.96
POTATOES	16	13	19	30	22	16	21	16	21	25	29	3.59
SUGAR, TOTAL (RAW EQUIV.)	1052	1625	2066	1389	1574	2012	2087	1784	1999	2002	2558	3.76
PULSES	20	25	32	37	46	37	44	42	37	32	44	3.10
GROUNDNUTS SHELLED BASIS	1	1	1	1	1	1	7	7	2	2	9	36.96
SILSEED CAKE AND MEAL	2	3	1	2	1	2	1	1	1	3	1	-21.26
ORANGES+TANGER+CLEMEN	17	24	30	21	26	34	32	24	15	18	11	-7.52
LEMONS AND LIMES				1		1	1	1	1	1	1	4.26
COCOA BEANS				1		1	1	1	1	1	1	11.24
TEA	1	1	1	1	1	1	1	1	1	1	1	-2.14
TOBACCO UNMANUFACTURED			1	1	1							-4.49
WOOL GREASY 1/	820	852	910	941	863	905	859	634	588	750	826	-2.96
BOVINE CATTLE 1/	9	8	6	3	4	7	17	34	13	33	45	29.29
SHEEP AND GOATS 1/	247	375	376	566	788	891	1145	1159	1456	1847	3409	25.25
PIGS 1/	1	1	2	1	2	2	1	1	1	1	1	-8.67
TOTAL MEAT	857	982	1038	1210	1203	1368	1542	1208	1182	1446	1631	4.28
MILK DRY	5	4	4	9	10	14	15	15	13	14	38	20.47
TOTAL EGGS IN SHELL	3	4	4	3	3	4	4	2	2	2	1	-10.54
FISHERY PRODUCTS												
FISH FRESH FROZEN	4	4	4	8	10	14	14	13	12	19	28	20.86
SHELLFISH	6	13	13	14	16	18	17	16	16	14	17	2.66
FISH CANNED AND PREPARED		1	1	1	1	2	2	1	1			-1.67
SHELLFISH CANNED+PREPAR		2	2	2	3	4	3	2	2	2	3	1.75
FISH BODY AND LIVER OIL	7	7	6	4	6	6	8	8	4	8	6	1.15
FISH MEAL	1											-84.54
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	321	1432	1661	1809	1797	1844	1916	1302	534	958	1027	-8.06
SAWLOGS NONCONIFEROUS	19	12	11	11	13	14	9	12	3	1	4	-18.52
SAWWOOD CONIFEROUS	81	217	250	259	301	266	248	245	160	232	295	-.50
SAWWOOD NONCONIFEROUS	41	28	36	40	28	27	54	51	32	23	31	-.53
WOOD-BASED PANELS	22	47	64	68	87	75	93	52	61	28	33	-6.48
PULP FOR PAPER	64	94	80	98	100	114	142	232	335	375	452	22.77
PAPER AND PAPERBOARD	98	165	182	186	187	204	200	187	203	274	294	5.28
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	218	95	87	138	56	77	80	46	30	20	6	-23.24
RICE MILLED	56	90	80	88	58	52	43	29	17	52	32	-12.87
BARLEY	147	2	132	236	12		65	2	5			-87.24
MAIZE	403	844	619	274	347	541	507	326	211	164	59	-18.97
MILLET	47	64	71	73	73	56	36	59	32	46	41	-7.30
SORGHUM	9	2	13	5	2	1	1	2	5			-32.62
POTATOES	144	144	108	119	119	124	107	86	97	91	115	-3.18
SUGAR, TOTAL (RAW EQUIV.)	1166	1398	1444	1475	1258	1440	1571	1445	1096	1319	1287	-1.42
PULSES	314	396	365	403	299	461	457	351	313	377	236	-3.11
SOYBEANS	18	15	8	12	6	2	1	1	2	2	2	-22.59
GROUNDNUTS SHELLED BASIS	1050	1186	910	617	389	356	372	182	163	277	146	-19.63
GROUNDNUT OIL	214	347	247	276	151	318	242	158	227	288	243	-1.95

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
COPRA	85	80	78	74	69	59	69	62	45	60	53	- 4.81
COCNUT OIL	12	14	14	14	13	11	17	18	9	10	7	- 5.54
PALM NUTS KERNELS	626	357	344	382	414	334	254	319	270	362	274	- 2.89
PALM OIL	317	135	179	178	201	156	135	199	220	158	120	- .60
DILSEED CAKE AND MEAL	587	839	817	807	658	908	719	594	677	769	670	- 2.32
BANANAS	446	375	376	394	395	462	428	465	354	321	309	- 1.77
ORANGES+TANGER+CLEMEN	654	734	772	771	697	752	871	690	553	630	678	- 2.20
LEMONS AND LIMES	12	8	7	6	5	5	7	4	2	1	1	-17.88
COFFEE GREEN+ROASTED	785	983	985	1010	988	1067	1169	1175	1108	1160	889	.80
COCOA BEANS	884	815	755	866	918	977	887	866	810	858	710	- .58
TEA	58	90	102	109	112	134	138	135	130	144	154	5.46
COTTON LINT	265	330	358	449	403	378	399	293	271	337	276	- 3.75
JUTE AND SIMILAR FIBRES	3	1	4	3	1	1	1					-97.33
TOBACCO UNMANUFACTURED	128	69	73	84	98	114	130	131	132	147	128	- 8.63
NATURAL RUBBER	156	174	182	201	200	184	191	203	183	165	174	- .64
WOOL GREASY	6	7	7	7	4	5	5	6	4	3	3	- 7.71
BOVINE CATTLE	1138	1171	1143	1267	1307	1531	1473	1364	1058	1071	1129	- .97
SHEEP AND GOATS	2831	3529	3565	3266	3146	3738	3353	3287	3474	3240	3387	- .43
PIGS	17	2	16	23	24	22	17	13	13	13	14	6.20
TOTAL MEAT	52	51	54	64	72	74	93	71	60	58	59	1.04
MILK DRY		1	1	1	1	2	3	1	1	1	1	- 1.29
TOTAL EGGS IN SHELL	2			1	1	1	1	1	1	1	1	3.38
FISHERY PRODUCTS												
FISH FRESH FROZEN	25	19	18	32	42	63	106	102	70	66	81	19.22
FISH CURED	58	64	61	72	71	70	59	52	56	49	49	- 3.78
SHELLFISH	3	6	7	12	14	16	20	31	39	43	29	23.24
FISH CANNED AND PREPARED	53	61	62	60	69	61	82	80	59	79	67	1.86
FISH BODY AND LIVER OIL	9	15	17	17	13	25	31	18	12	7	6	- 8.74
FISH MEAL	65	85	123	93	80	150	142	95	83	43	22	-11.21
FOREST PRODUCTS												
SAWLOGS CONIFEROUS		43	47		65	13	14		15	14	14	- .78
SAWLOGS NONCONIFEROUS	5216	6461	7839	6842	6804	7377	8801	6935	5286	6372	6607	- 1.39
FUELWOOD	238	328	563	344	354	68	188	175	58	3	7	-38.79
SAWWOOD CONIFEROUS	32	67	82	97	100	74	104	108	98	105	107	4.08
SAWWOOD NONCONIFEROUS	636	755	736	760	657	722	896	831	718	812	788	1.04
WOOD-BASED PANELS	180	263	278	306	290	344	334	334	210	189	225	- 3.31
PULP FOR PAPER	93	170	176	191	195	204	217	235	170	369	364	7.56
PAPER AND PAPERBOARD	33	25	26	28	21	20	22	34	24	20	20	- 1.62
LATIN AMERICA												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR+WHEAT EQUIV.	3549	2452	2788	2466	1164	1812	3143	1941	2054	3340	6110	6.67
RICE MILLED	279	473	364	403	424	184	319	337	437	513	1021	5.99
BARLEY	240	182	216	112	104	122	170	119	28	60	107	-11.42
HAIZE	3302	5082	5524	6782	7764	3645	4113	6663	5088	4559	6899	- .22
MILLET	145	152	119	60	129	81	118	78	94	124	169	1.48
SCRGHUM	413	693	1388	2026	2319	635	2108	3154	2180	3499	4310	16.65
POTATOES	27	57	68	83	37	36	11	21	49	59	123	2.52
SUGAR, TOTAL (RAW EQUIV.)	8878	9513	9235	11647	10709	10894	11994	12129	11104	10578	13192	2.53
PULSES	91	171	143	87	97	163	167	175	233	318	367	12.37
SOYBEANS	57	69	311	291	225	1079	1841	2831	3435	3934	3441	56.05
GROUNDNUTS SHELLED BASIS	21	13	33	57	41	60	56	52	59	24	51	6.70
GROUNDNUT OIL	48	61	41	74	102	114	124	101	38	140	190	9.78
COPRA	19	7	7	4	3	2	1	3	2	2	2	-20.80
COCNUT OIL	3	3	4	5	9	11	9	5	5	5	5	3.35
PALM NUTS KERNELS	2	2	2	4	1	5	6	5	4	2	2	4.32
PALM OIL	3	3	6	4	6	3	6	6	3	4	2	- 4.36
DILSEED CAKE AND MEAL	1434	1508	1713	2180	2379	2636	2814	3214	4484	5717	7412	18.02
BANANAS	3336	4716	4687	4750	5197	5329	5345	5056	4875	5121	5227	.97
ORANGES+TANGER+CLEMEN	202	191	145	145	179	217	222	217	189	178	223	2.93
LEMONS AND LIMES	6	1	2	2	3	8	11	15	22	23	30	49.34
COFFEE GREEN+ROASTED	1865	2117	2098	1951	2035	2165	2233	1825	2048	2041	1541	- 1.86
COCOA BEANS	176	205	214	226	226	226	173	255	270	209	183	- .11
TEA	10	18	18	23	28	24	25	30	23	32	29	5.34
COTTON LINT	934	887	1173	923	682	861	829	663	806	605	661	- 4.78
JUTE AND SIMILAR FIBRES	5	4	6	3	7	4	4	3	1			-39.28
TOBACCO UNMANUFACTURED	127	117	140	150	160	184	185	244	244	256	244	9.19
NATURAL RUBBER	11	10	10	12	10	10	8	5	6	5	4	-10.02
WOOL GREASY	166	167	133	129	113	78	81	65	108	90	106	- 5.49

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	197	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
BOVINE CATTLE ^{1/}	1120	1202	1363	1476	1281	1491	1030	1041	994	1212	1249	- 2.06
SHEEP AND GOATS ^{1/}	98	252	151	216	158	81	48	65	92	84	105	-11.12
PIGS ^{1/}	62	37	23	29	27	42	32	33	43	68	38	6.37
TOTAL MEAT	669	687	936	941	742	1047	891	501	453	785	832	- 2.69
MILK DRY	1	1	2	2	6	12	15	9	14	34	34	60.78
TOTAL EGGS IN SHELL	6	3	4	4	4	1	1	1	1	1	3	-11.29
FISHERY PRODUCTS												
FISH FRESH FROZEN	31	40	47	56	60	64	107	131	146	196	261	23.24
FISH CURED	1	1	1	2	2	3	7	9	5	3	4	24.59
SHELLFISH	62	66	74	88	90	96	92	92	96	98	101	3.80
FISH CANNED AND PREPARED	19	9	8	9	16	21	20	20	16	27	47	17.98
SHELLFISH CANNED+PREPAR	4	4	5	4	3	2	1	1	3	3	4	- 4.03
FISH BODY AND LIVER CIL	143	345	174	218	308	318	10	93	148	39	19	-24.19
FISH MEAL	1221	2270	1862	1997	1957	1711	402	749	910	842	686	-13.84
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	37	14	17	10	8	9	14	9	15	18	18	3.63
SAWLOGS NONCONIFEROUS	418	390	378	362	302	217	524	202	40	70	43	-22.87
PULPWOOD+PARTICLE	313	363	418	380	373	382	284	183	107	115	115	-15.71
FUELWOOD	47	10	18	13	18	5	10	7	8	12	15	- 2.48
SAWWOOD CONIFEROUS	1272	1935	1600	1523	1724	1718	1530	1132	1135	1048	1061	- 6.58
SAWWOOD NONCONIFEROUS	273	400	505	585	552	622	872	837	592	641	729	5.43
WOOD-BASED PANELS	74	131	158	168	219	266	295	265	252	320	348	10.51
PULP FOR PAPER	42	142	164	158	150	267	300	318	332	382	340	12.83
PAPER AND PAPERBOARD	40	88	123	134	120	118	195	221	155	204	217	9.33
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	187	243	69	44	31	626	606	37	15	25	650	- 1.91
RICE MILLED	358	592	788	681	546	493	326	151	115	236	249	-16.33
BARLEY	451	150	363	226	17	142	17	7	12	364	158	-10.94
MAIZE	4	2	1	2	3	7	3	2	3	15	37	32.09
MILLET	15	11	10	4	3	7	9	4	4	6	3	- 8.43
SORGHUM	84	55	3	3	37	61	104	98	48	75	104	33.15
POTATOES	193	206	247	294	254	284	326	299	184	354	440	4.73
SUGAR, TOTAL (RAW EQUIV.)	238	107	260	144	163	160	55	59	58	47	82	-13.02
PULSES	190	124	137	110	123	143	170	106	102	112	163	.29
SOYBEANS	2											-74.90
GROUNDNUTS SHELLED BASIS	140	103	100	90	143	136	160	140	218	306	160	10.43
WILDCOKE AND MEAL	498	697	697	704	581	751	546	443	452	366	280	- 9.28
BANANAS	18	12	14	14	14	16	10	6	10	7	5	-10.32
ORANGES+TANGER+CLEMEN	188	334	402	448	600	527	766	685	762	783	873	10.68
LEMONS AND LIMES	43	87	85	88	114	108	152	129	119	154	132	6.31
COFFEE GREEN+ROASTED	10	4	5	7	7	10	8	6	4	4	5	- 3.15
TEA	2	11	14	18	23	19	26	19	4	8	8	- 9.28
COTTON LINT	766	866	863	1089	1101	1049	1097	706	856	1034	746	- 1.55
WOLLE AND SIMILAR FIBRES					1							-96.30
TOBACCO UNMANUFACTURED	75	88	80	87	94	137	120	122	76	85	72	- .81
Wool Greasy	16	14	14	12	15	21	25	10	8	5	5	-10.49
BOVINE CATTLE	167	128	165	155	134	92	52	77	19	11	15	-26.55
SHEEP AND GOATS	1489	1359	1198	1233	1146	932	987	980	720	722	598	- 8.16
TOTAL MEAT	3	3	6	6	8	13	31	22	14	8	18	17.59
TOTAL EGGS IN SHELL	3	14	13	15	19	21	15	17	18	2	2	-17.34
FISHERY PRODUCTS												
FISH FRESH FROZEN	11	10	11	11	8	14	20	15	6	5	3	- 9.64
FISH CURED	15	14	16	20	23	21	17	20	12	11	11	- 4.43
SHELLFISH	3	5	4	4	7	14	17	13	8	11	12	12.95
FISH CANNED AND PREPARED	1	1	1	2	1	1	1	1	1	2		2.70
FISH MEAL	1							1				28.23
FOREST PRODUCTS												
SAWLOGS CONIFERUS	2	1	1	4	17	14	7	5	4	3	3	9.20
SAWLOGS NONCONIFERUS	23	17	20	23	20	22	24	8	17	10	10	- 8.48
FUELWOOD	6	33	28	32	23	33	31	20	21	22	22	- 4.74
SAWWOOD CONIFERUS	1	5	10	30	57	37	29	57	19	15	15	6.56
SAWWOOD NONCONIFERUS	15	14	13	18	22	28	23	21	1	1	1	-27.71
WOOD-BASED PANELS	5	18	21	25	14	26	32	31	27	29	29	6.04
PAPER AND PAPERBOARD	1	4	5	4	5	4	11	22	9	10	10	15.37

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
THOUSAND METRIC TONS												
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	140	164	221	274	137	347	562	156	127	97	188	- 4.47
RICE MILLED	3945	2111	2240	2544	2913	3188	2204	2021	1902	3608	4783	4.83
BARLEY			3	6	5	1	19	95		32	28	43.95
MAIZE	807	1641	1731	1716	2140	1953	1630	2554	2279	2485	1768	3.06
MILLET	3	2	6	5	2	1	4	2	1	1	1	-22.02
SORGHUM	14	59	62	88	141	134	135	189	213	182	138	13.24
POTATOES	29	33	31	21	32	35	41	36	47	97	96	14.26
SUGAR,TOTAL (RAW EQUIV.)	1701	1166	1204	1620	2227	1862	2049	2629	2970	3858	4582	15.72
PULSES	216	167	219	225	233	216	220	185	206	229	227	1.20
SOYBEANS	18	23	15	20	18	20	59	18	32	38	47	10.36
SOYBEAN OIL	2		1	8	22	9	8	7	4	2	4	22.25
GROUNDNUTS SHELLED BASIS	47	62	87	66	61	51	64	110	94	184	74	6.64
GROUNDNUT OIL	44	6	6	8	8	7	11	8	11	12	7	4.29
COPRA	1231	987	810	657	791	1113	802	285	838	886	613	- 3.48
COCONUT OIL	330	446	339	487	548	643	527	510	761	1006	867	9.80
PALM NUTS KERNELS	59	83	91	73	73	67	54	50	58	57	45	- 6.69
PALM OIL	271	530	649	694	977	1147	1284	1400	1690	1822	1911	15.95
PIGMEAT	1455	1544	1357	1670	1735	1987	2182	1978	2017	3198	2658	7.75
BANANAS	35	28	52	138	302	461	503	705	872	846	879	46.01
ORANGES+TANGER+CLEMEN	16	22	22	28	29	33	41	39	62	86	79	17.29
LEMONS AND LIMES	1											-11.99
COFFEE GREEN+ROASTED	156	194	261	216	198	204	206	203	226	262	267	1.99
COCOA BEANS	3	4	4	4	5	8	10	14	15	19	19	23.19
TEA	474	484	437	480	462	451	458	455	507	513	489	.89
COTTON LINT	215	199	239	152	237	341	246	96	244	218	54	- 7.60
JUTE AND SIMILAR FIBRES	999	1035	870	815	755	758	862	868	512	612	545	- 5.90
TOBACCO UNMANUFACTURED	118	164	166	167	185	182	197	211	198	210	210	3.22
NATURAL RUBBER	1907	2328	2619	2560	2597	2566	3052	2869	2764	2963	3023	2.50
WOOL GREASY	22	5	4	2	3	2	2	3	1	2	2	- 6.73
BOVINE CATTLE ^{1/}	100	104	114	146	134	148	123	114	74	73	76	- 5.86
SHEEP AND GOATS ^{1/}	68	36	29	28	31	47	20	28	28	80	76	8.06
PIGS ^{1/}	150	19	11	11	15	7	13	5	10	22	10	- 2.50
TOTAL MEAT	4	7	7	7	7	15	19	26	32	43	46	28.92
MILK DRY	1	3	2	2	3	4	4	5	7	8	11	19.32
TOTAL EGGS IN SHELL	13	5	9	7	7	7	4	3	5	6	6	- 2.49
FISHERY PRODUCTS												
FISH FRESH FROZEN	76	141	164	198	217	229	304	282	418	286	526	13.28
FISH CURED	41	43	43	54	41	42	53	36	31	32	37	- 3.63
SHELLFISH	43	66	81	104	132	171	215	212	227	289	303	18.64
FISH CANNED AND PREPARED	6	6	10	6	6	7	11	17	18	27	37	21.14
SHELLFISH CANNED+PREPAR	10	16	13	15	13	20	23	26	27	34	38	12.51
FISH BODY AND LIVER OIL		1						1	1	1	1	15.11
FISH MEAL	14	27	32	45	44	65	81	66	58	84	109	14.18
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	33	76	37	1	4		14	9	356	424	393	83.47
SAWLOGS NONCONIFEROUS	10362	20967	24493	29032	30775	32177	39607	34184	28274	35879	37067	5.09
PULPWOOD+ARTICLE		15	296	629	506	763	754	986	906	592	592	28.80
FUELWOOD	442	599	683	730	771	654	617	725	610	636	654	- .51
SAWWOOD CONIFEROUS	9	5	8	7	8	109	189	117	134	251	258	65.66
SAWWOOD NONCONIFEROUS	1176	2072	2325	2518	2506	3120	4357	3676	3314	5572	5460	11.32
WOOD-BASED PANELS	303	1241	1335	1561	1975	2503	2974	2279	2433	2991	2989	10.43
PULP FOR PAPER			5	8	3	4	14	9	2	2	2	13.90
PAPER AND PAPERBOARD	26	62	68	58	59	99	197	116	109	152	146	12.32
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	169	14	10	8	5	5	12	5	4	4	4	-11.57
RICE MILLED	1447	1844	1751	1980	1648	1637	2743	2832	2330	1582	1437	-
BARLEY		1	1	1			16		6	2		10.06
MAIZE	244	144	74	45	120	110	65	130	315	430	356	19.82
MILLET	4	18	19	17	23	24	33	30	56	52	37	13.20
POTATOES	20	66	49	44	47	52	54	49	50	55	59	.27
SUGAR,TOTAL (RAW EQUIV.)	999	928	704	500	655	655	646	612	510	548	635	- 3.15
PULSES	74	118	154	94	132	128	115	86	87	105	89	- 4.16

see notes at end of table

ANNEX TABLE 4. VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
SOYBEANS	423	577	492	411	461	373	321	375	355	190	135	-12.07
SOYBEAN OIL	2	4	3	3	2						2	-34.62
GROUNDNUTS SHELLED BASIS	26	62	51	20	25	41	36	29	30	33	21	-5.95
GROUNDNUT OIL	5	28	12	8	12	15	13	16	15	14	7	-5.20
COPRA							1					19.69
COCONUT OIL	1	3	1									-97.85
PALM NUTS KERNELS	2											
LILSEED CAKE AND MEAL	21	46	44	35	43	28	44	32	30	29	23	-6.19
BANANAS	168	360	383	241	372	245	270	165	127	117	168	-11.79
ORANGES+TANGER+CLEMEN	41	79	83	75	87	90	83	74	79	56	77	-1.96
COFFEE GREEN+ROASTED	1	3	3	3	3	4	6	6	4	6	4	7.70
TEA	49	56	54	53	66	66	60	74	78	91	96	6.71
COTTON LINT	6	8	77	27	27	22	22	22	43	43	43	15.31
WUTE AND SIMILAR FIBRES	4	4	4	4	4	2	2	1		2	1	-17.16
TOBACCO UNMANUFACTURED	17	34	39	24	28	32	43	41	39	39	41	3.47
NATURAL RUBBER	112	76	70	38	33	32	40	49	18	55	51	-4.59
WOOL GREASY	20	26	24	18	16	16	18	16	19	19	16	-3.24
BOVINE CATTLE 1/	155	232	246	160	157	171	162	166	204	195	190	-1.26
SHEEP AND GOATS 1/	1387	1097	955	958	1042	1186	1220	1225	1030	873	482	-4.24
PIGS 1/	1345	1836	1806	1923	2460	2689	2794	2601	2775	2953	3012	6.21
TOTAL MEAT	43	97	120	115	118	185	192	141	153	184	130	4.69
TOTAL EGGS IN SHELL	33	41	40	38	45	41	47	46	46	43	44	1.53
FISHERY PRODUCTS												
FISH FRESH FROZEN	19	45	52	136	148	161	173	137	96	100	100	6.27
FISH CURED	5	4	5	4	6	4	6	4	5	5	5	2.68
SHELLFISH	5	9	19	23	29	37	43	40	42	54	54	18.46
FISH CANNED AND PREPARED		1	1	1	2	1	10	6	6	11	11	43.31
SHELLFISH CANNED+PREPAR	1	2	4	4	6	7	6	7	6	9	8	15.37
FISH MEAL	1	2	3	2	2	3	3	3	1			-29.18
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	48	57	97	100	106	119	98	125	145	96	96	4.26
SAWLOGS NONCONIFEROUS	87	75	78	43	12	28	5	3	17	12	12	-21.65
SAWWOOD CONIFEROUS	34	51	64	72	70	139	53	66	70	90	90	3.91
SAWWOOD NONCONIFERCUS	46	62	61	43	111	177	160	118	111	134	134	10.99
WOOD-BASED PANELS	159	417	523	591	811	953	959	687	770	870	870	6.89
PULP FOR PAPER	14	18	28	43	63	66	26	25	33	31	31	.37
PAPER AND PAPERBOARD	62	81	82	103	113	115	116	107	132	161	161	7.52

1/ Thousand head

2/ Except for Pulp for Paper and Paper and Paperboard, all forest products are expressed in thousand cubic metres

ANNEX TABLE 5. WORLD AVERAGE EXPORT UNIT VALUES OF SELECTED AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	US \$ PER METRIC TON											PERCENT
AGRICULTURAL PRODUCTS												
WHEAT	65	64	65	62	68	69	106	171	169	153	125	13.04
WHEAT FLOUR	85	85	85	86	91	93	135	210	237	214	191	14.06
RICE MILLED	121	173	158	130	119	136	226	401	377	282	283	11.50
BAHLEY	58	64	58	53	60	59	94	135	141	138	132	13.14
MAIZE	55	52	55	60	63	63	92	128	136	123	111	12.24
POTATOES	59	54	69	74	62	71	114	111	147	247	199	17.29
SUGAR CENTRIFUGAL RAW	116	101	107	118	128	148	187	384	515	309	240	17.15
SOYBEANS	101	103	98	109	115	126	216	246	225	215	273	13.37
SOYBEAN OIL	259	222	225	278	317	288	358	701	695	455	573	13.33
GROUNDNUTS SHELLED	177	159	190	208	230	250	339	512	513	460	608	16.70
GROUNDNUT OIL	320	272	316	340	391	378	444	935	803	723	822	14.83
COPIA	157	189	161	185	166	118	210	501	237	183	329	6.90
COCONUT OIL	262	316	274	307	288	208	358	929	418	361	558	7.97
PALM NUTS KERNELS	135	158	140	150	140	112	179	362	177	158	271	6.15
PALM OIL	208	149	144	222	225	189	253	530	464	366	522	15.91
PALM KERNEL OIL	244	330	267	308	302	243	341	826	455	399	563	8.15
OLIVE OIL	602	698	652	680	701	806	1168	1778	1855	1307	1276	11.85
CASTOR BEANS	114	145	127	117	121	158	384	329	207	253	329	12.16
CASTOR BEAN OIL	251	333	259	265	325	453	965	838	575	556	814	13.48
CUTTANSEED	67	72	62	65	78	73	100	134	135	148	179	12.80
CUTTANSEED OIL	284	268	271	302	357	317	355	602	676	554	605	11.56
LINSEED	126	128	122	112	105	120	258	427	340	285	279	15.29
LINSEED OIL	215	210	213	213	197	194	315	900	762	520	509	16.81
BANANAS	83	88	90	86	85	89	94	99	127	130	146	5.99
ORANGES	122	121	128	119	133	137	153	165	202	200	218	7.43
APPLES	139	147	157	157	169	186	249	241	317	277	362	10.82
RAISINS	299	322	334	334	300	362	727	907	718	677	946	14.60
DATES	108	125	105	109	124	154	166	213	245	241	269	11.84
COFFEE GREEN	720	756	720	937	826	903	1132	1251	1191	2254	4140	17.04
COFFEE BEANS	455	603	783	764	625	567	844	1325	1396	1500	2781	15.64
TEA	1124	970	915	940	932	985	929	1089	1272	1236	2025	6.67
COTTON LINT	628	631	616	629	693	778	880	1299	1120	1258	1522	11.40
JUTE	223	225	254	249	250	279	248	241	279	252	291	1.59
JUTE-LIKE FIBRES	154	116	148	136	166	205	153	168	215	359	406	12.71
SISAL	232	121	129	117	115	151	320	716	465	329	367	19.74
TOBACCO UNMANUFACTURED	1190	1257	1297	1288	1277	1380	1497	1752	2061	2183	2385	8.06
NATURAL RUBBER	559	376	492	444	382	340	552	821	562	746	843	8.95
RUBBER NATURAL DRY	476	327	416	385	327	309	568	712	540	735	794	10.59
WOOL GREASY	1233	988	1055	964	801	927	2058	2805	1761	1790	2150	11.71
CATTLE ^{1/}	129	135	150	154	172	229	281	259	299	282	293	10.28
BEEF AND VEAL	616	773	804	902	1056	1262	1652	1601	1658	1571	1787	10.71
MUTTON AND LAMB	434	462	481	529	554	586	872	1223	1067	1002	1133	12.54
PIGS ^{1/}	39	40	45	45	47	57	79	81	90	51	101	11.71
BACON HAM OF SWINE	707	742	808	865	855	1027	1507	1620	2020	1975	1648	13.59
MEAT CHICKENS	651	639	677	666	663	745	1045	1035	1139	1197	1244	9.08
MEAT PREPARATIONS	780	896	884	926	1135	1221	1447	1676	1537	1526	1636	8.27
EVAP COND WHOLE COW MILK	323	306	310	311	361	436	487	564	687	642	660	11.14
MILK OF COWS SKIMMED DRY	243	293	324	317	449	582	665	840	1001	842	670	14.19
BUTTER OF COW MILK	83.2	74.2	75.2	72.8	97.9	122.3	99.3	131.8	173.1	167.3	173.4	11.70
CHEESE OF WHOLE COW MILK	735	834	902	942	1076	1255	1461	1718	2026	1973	2150	12.47
FISHERY PRODUCTS												
FISH FRESH FROZEN	310	338	386	403	453	539	665	670	755	873	996	12.86
FISH CURED	358	424	450	473	567	641	859	1149	1225	1382	1602	17.77
SHELLFISH	826	1100	1192	1177	1276	1387	1783	1822	2058	2435	2746	11.05
FISH CANNED AND PREPARED	664	727	720	780	846	959	1191	1339	1329	1424	1652	10.46
SHELLFISH CANNED+PREPARED	1192	1265	1459	1536	1693	1705	2197	2617	2870	2769	3315	11.42
FISH BODY AND LIVER OIL	160	94	123	201	211	158	272	468	339	357	430	17.56
FISH MEAL	109	108	129	164	166	166	401	377	243	324	431	15.80
FOREST PRODUCTS												
SAWLOGS CONIFEROUS ^{2/}	18	21	22	24	24	27	46	52	51	52	59	14.22
SAWLOGS NONCONIFEROUS ^{2/}	24	25	25	23	23	25	39	49	40	50	53	10.92
PULPWOOD+PARTICLE ^{2/}	11	10	11	12	13	14	17	22	25	24	25	12.31
FUELWOOD ^{2/}	8	8	7	9	9	10	12	18	20	23	21	15.14
SAWWOOD CONIFEROUS ^{2/}	37	39	43	44	47	53	74	96	88	93	101	12.82
SAWWOOD NONCONIFEROUS ^{2/}	61	61	64	65	65	80	105	131	127	130	146	11.89
WOOD-BASED PANELS ^{2/}	114	116	120	122	121	136	170	191	187	200	211	7.99
PULP FOR PAPER	115	116	122	142	149	147	175	279	351	333	312	14.62
PAPER AND PAPERBOARD	163	171	176	185	195	209	253	350	417	407	416	12.80

^{1/} U.S. dollars per head^{2/} U.S. dollars per cubic metre

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
WORLD												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	49540	52472	48520	54894	57660	61047	76811	66500	72705	71212	72408	4.74
RICE MILLED	7470	7704	7521	8847	8593	8737	8987	8455	7538	9222	10229	1.93
BARLEY	7000	6463	7059	10723	10759	13995	12097	12424	12507	13659	12346	7.22
MAIZE	19857	28311	27017	28976	30778	37962	47120	49254	51621	61728	56407	10.52
MILLET	241	301	264	274	332	284	405	382	334	327	431	4.01
SORGHUM	3256	4433	4349	5735	6410	5389	7340	10230	9080	9752	9859	10.75
POTATOES	3217	3276	3393	3754	3189	4893	3848	3808	3764	4447	4462	3.06
SUGAR,TOTAL (RAW EQUIV.)	18332	19597	19138	22326	21363	21845	23308	22800	22242	23033	27867	2.89
PULSES	1440	1156	2078	1865	1744	2060	2019	1683	1877	1807	1937	-0.7
SOYBEANS	5430	8347	9378	12295	12712	13875	14695	17502	16314	19972	19662	9.81
SOYBEAN OIL	642	553	680	1037	1333	1107	1054	1485	1402	1610	2074	12.68
GROUNDNUTS SHELLED BASIS	1376	1590	1259	1052	870	851	963	863	888	1019	824	-4.82
GROUNDNUT OIL	382	479	409	431	388	519	538	391	430	516	521	1.49
COPRA	1504	1143	1116	866	1065	1315	1063	545	1040	1216	901	-1.71
COCONUT OIL	421	552	493	594	671	847	766	617	957	1394	1053	9.60
PALM NUTS KERNELS	694	409	442	435	493	404	316	371	309	386	329	-3.40
PALM OIL	593	672	857	924	1209	1372	1549	1560	1891	1944	2220	13.54
OLLSEED CAKE AND MEAL	7083	9589	10564	12109	13186	14400	15416	14748	14833	18352	18573	7.05
BANANAS	4078	5232	5350	5601	5986	6372	6369	6328	6288	6318	6541	2.40
ORANGES+TANGER+CLEMEN	3232	3688	4058	4332	4218	4695	4948	4861	4975	5128	5330	3.78
LEMONS AND LIMES	525	661	694	698	752	734	781	841	820	929	892	3.67
COFFEE GREEN+ROASTED	2892	3415	3244	3248	3367	3459	3628	3437	3637	3729	3093	-4.6
COCOA BEANS	1073	1080	1039	1110	1219	1250	1172	1155	1192	1161	1026	-2.7
TEA	628	715	705	739	742	751	756	820	800	846	894	2.45
COTTON LINT	4106	3948	3722	4047	3979	3960	4698	4125	4015	4133	3880	-5.0
JUTE AND SIMILAR FIBRES	957	1098	862	908	837	794	875	795	572	658	590	-5.79
TOBACCO UNMANUFACTURED	912	1011	1035	1021	1067	1218	1239	1286	1306	1299	1298	3.49
NATURAL RUBBER	2299	2719	2922	2887	2909	2949	3262	3327	3113	3293	3419	2.32
WOOL GREASY	1191	1197	1251	1206	1116	1200	950	749	847	1038	901	-4.19
BOVINE CATTLE	5200	6435	6866	6971	7113	7909	7180	6048	6596	6863	6710	-2.9
SHEEP AND GOATS	8357	10040	10063	9874	10001	11177	10731	9960	11277	10966	12317	1.87
PIGS	2793	3375	3976	4411	5409	5973	5779	5986	6375	6763	6666	7.51
TOTAL MEAT	3029	3840	4260	4524	4783	5270	5502	5050	5528	6016	6600	5.29
MILK DRY	164	222	231	247	231	237	229	227	244	297	336	3.28
TOTAL EGGS IN SHELL	405	322	347	400	422	433	442	503	522	500	545	5.72
FISHERY PRODUCTS												
FISH FRESH FROZEN	1426	1853	1819	2065	2133	2394	2720	2799	2780	2913	2973	6.24
FISH CURED	533	493	495	504	503	490	423	388	382	371	381	-3.95
SHELLFISH	291	407	436	499	566	683	712	768	810	936	879	9.94
FISH CANNED AND PREPARED	519	611	586	620	626	684	734	763	731	835	803	3.97
SHELLFISH CANNED+PREPAR	61	96	94	102	103	115	134	131	131	148	153	5.93
FISH BODY AND LIVER CIL	729	870	773	695	741	739	628	641	631	590	565	-4.07
FISH MEAL	1925	3531	3172	3013	2995	3114	1715	1879	2270	2187	2028	-6.45
FOREST PRODUCTS												
SAWLOGS CONIFEROUS	9001	21216	20852	24263	21591	26420	29856	26880	23936	27178	28796	3.27
SAWLOGS NONCONIFEROUS	16806	28806	33153	36119	38948	41840	48943	44388	35271	42856	42989	3.60
PULPWOOD+PARTICLE	13905	21502	22899	27989	23686	22633	28520	33617	31378	30843	31133	4.50
FUELWOOD	3658	2300	2705	2986	2967	2788	3559	3707	3302	3390	3492	4.18
SAWWOOD CONIFEROUS	40070	46752	47025	48906	50872	56802	60721	51734	41896	55799	60432	1.74
SAWWOOD NONCONIFEROUS	4601	6336	6778	6786	6774	7831	10610	9263	7881	10576	10806	6.19
WOOD-BASED PANELS	4702	8283	9213	9763	10471	12796	15271	13264	12097	14244	14497	6.28
PULP FOR PAPER	10018	13469	14761	15252	13237	14838	16511	17386	13423	15256	15388	1.05
PAPER AND PAPERBOARD	14105	19727	22078	23053	23857	24993	27069	28794	23109	26528	27286	2.99
WESTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	12787	10962	13572	13572	13348	13490	13594	12558	12460	13184	12599	-2.7
RICE MILLED	584	705	697	651	729	764	797	794	797	1214	1310	6.75
BARLEY	4378	4100	4617	6400	6684	5694	5364	6345	5477	6329	6127	2.97
MAIZE	13531	18760	16625	17473	19599	20166	22641	24324	25301	26441	26213	5.52
MILLET	87	178	86	62	130	108	119	100	105	83	175	-9.7
SORGHUM	2086	1155	614	1094	1547	584	1158	2813	2676	2899	2153	15.25
POTATOES	1818	1850	2357	2320	2047	2549	2390	2235	2372	3150	3000	4.14
SUGAR,TOTAL (RAW EQUIV.)	4627	4667	4431	4486	4661	4969	4950	5335	5263	4608	4224	-3.5

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
												PERCENT
	----- THOUSAND METRIC TONS -----											
PULSES	686	970	1174	937	887	1098	1103	786	794	828	939	- 2.35
SOYBEANS	2934	4737	5246	7220	7515	8323	8327	11275	10524	11719	11616	10.72
SOYBEAN OIL	247	113	172	335	469	368	316	545	576	532	502	15.88
GROUNDNUTS SHELLLED BASIS	1104	1311	1038	811	633	592	694	614	603	726	557	- 6.80
GROUNDNUT OIL	288	406	336	357	321	435	422	327	338	351	355	- .71
COPRA	786	603	612	450	624	822	630	354	816	961	670	3.15
COCONUT OIL	141	184	148	164	208	287	277	177	281	427	333	9.48
PALM NUTS KERNELS	618	359	371	367	435	350	251	329	260	327	271	- 3.77
PALM OIL	417	432	499	520	686	693	752	698	797	860	829	7.51
OILSEED CAKE AND MEAL	5867	7436	8154	9104	9800	10384	11047	9926	10113	12577	12595	5.22
BANANAS	1802	2231	2224	2119	2310	2554	2556	2430	2332	2259	2433	.92
ORANGES+TANGER+CLEMEN	2642	2755	3044	3223	3035	3309	3459	3200	3203	3177	3322	1.31
LEMONS AND LIMES	341	388	387	389	398	368	378	386	398	432	408	.76
COFFEE GREEN+ROASTED	1105	1387	1475	1496	1512	1606	1674	1642	1747	1810	1543	2.12
COCOA BEANS	554	541	552	533	552	602	584	574	564	565	561	-.52
TEA	292	340	278	316	306	289	298	313	289	297	336	-
COTTON LINT	1483	1420	1438	1349	1262	1281	1543	1145	1188	1318	1135	- 2.02
JUTE AND SIMILAR FIBRES	519	584	442	468	357	398	353	356	177	232	216	-10.58
TOBACCO UNMANUFACTURED	518	535	573	582	627	649	681	660	677	695	677	2.71
NATURAL RUBBER	765	786	848	901	912	910	947	958	875	941	951	1.53
WOOL GREASY	715	633	668	630	557	597	423	370	391	528	418	- 5.51
BOVINE CATTLE ^{1/}	1881	2988	3329	3287	3529	3933	3305	2691	3444	3306	3172	-.16
SHEEP AND GOATS ^{1/}	1371	2162	2499	2545	2461	3011	2529	1968	2570	2370	2352	-.25
PIGS ^{1/}	979	1298	1826	2129	2371	2999	2819	3009	3314	3630	3297	10.23
TOTAL MEAT	1922	2431	2684	2709	2858	3350	3446	2876	3108	3318	3456	3.32
MILK DRY	72	103	107	125	120	118	102	85	92	117	98	- 1.48
TOTAL EGGS IN SHELL	309	190	215	241	246	247	270	318	311	307	328	5.94
FISHERY PRODUCTS												
FISH FRESH FROZEN	712	881	827	932	974	1027	1143	1231	1148	1137	1200	4.25
FISH CURED	203	199	197	211	222	233	186	181	158	158	190	- 2.52
SHELLFISH	121	151	160	177	196	249	245	261	296	331	291	9.12
FISH CANNED AND PREPARED	257	272	255	248	256	283	311	288	276	307	289	1.72
SHELLFISH CANNED+PREPAR	23	36	37	42	46	57	56	60	64	64	68	7.71
FISH BODY AND LIVER CIL	595	764	660	599	620	665	569	570	558	537	515	- 3.44
FISH MEAL	1275	1994	2084	1885	1736	1855	1106	1087	1204	1191	1099	- 7.82
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	2290	2532	2379	2523	2252	2767	4316	4756	3221	4417	4790	8.84
SAWLOGS NONCONIFEROUS	6067	6998	8337	7784	8184	9070	10952	8668	6799	8540	8507	-.98
PULPWOOD+PARTICLE	8728	12056	13179	16917	14522	11855	14902	18077	17942	16196	15298	2.93
FUELWOOD	1775	1189	1598	1512	1415	1166	1772	2131	1979	1987	1961	5.62
SAWWOOD CONIFERUS	21867	23663	23880	24408	23558	25396	28214	23709	17177	24120	22122	- 1.31
SAWWOOD NONCONIFERUS	2243	3098	3363	3541	3426	3995	5677	4033	3619	5854	5527	6.27
WOOD-BASED PANELS	2717	4503	4780	5255	5272	6137	8098	6952	6082	7507	7612	6.07
PULP FOR PAPER	6061	7773	8525	9095	7218	8462	9386	9683	7293	8446	8337	-.27
PAPER AND PAPERBOARD	5355	8041	9394	9847	10213	11310	12528	13396	9807	12300	12641	4.24
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	8755	5850	4899	6872	8745	13121	20057	7501	13457	13035	12888	11.04
RICE MILLED	485	511	574	548	611	503	417	441	543	647	718	1.65
BARLEY	1070	968	857	2161	1319	5487	3416	2368	3283	4116	2297	14.36
MAIZE	1072	1342	1354	1065	2506	6090	7816	6927	9131	17550	9422	35.00
POTATOES	535	584	220	634	385	1365	584	600	514	472	413	1.01
SUGAR+TOTAL (RAW EQUIV.)	2933	2685	2004	4339	2868	2841	3578	2914	4027	4697	5661	7.92
PULSES	52	39	66	54	28	34	31	49	58	36	35	- 1.89
SOYBEANS	126	98	210	179	208	478	914	265	520	2093	1586	33.66
SOYBEAN OIL	70	28	23	26	69	87	34	37	31	42	53	5.01
GROUNDNUTS SHELLLED BASIS	113	90	56	57	64	69	52	66	60	54	57	- 2.50
GROUNDNUT OIL	3					1	1	4	4	6	2	45.99
COPRA	19	6	4	1	3	35	28	29	29	10	20	28.20
COCONUT OIL	27	52	23	36	43	38	24	28	42	92	50	5.17
PALM NUTS KERNELS	26	12	23	18	9	6	13	3	4	4	10	-13.61
PALM OIL	5	4	6	6	11	13	10	22	17	27	53	27.67
OILSEED CAKE AND MEAL	609	1371	1463	1852	2172	2790	3009	3407	3545	3767	3690	13.02
BANANAS	49	111	102	99	116	174	189	198	267	224	266	12.90
ORANGES+TANGER+CLEMEN	181	414	468	480	523	686	678	758	697	689	729	6.73
LEMONS AND LIMES	139	198	222	208	245	253	275	311	310	340	324	6.38
COFFEE GREEN+ROASTED	91	137	158	168	164	185	171	183	205	199	201	3.90
COCOA BEANS	111	193	174	180	225	239	215	250	280	256	187	2.94
TEA	33	33	40	42	57	64	54	69	88	86	81	11.13

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	----- THOUSAND METRIC TONS -----											
COTTON LINT	683	697	675	870	804	744	710	748	769	679	715	- .37
JUTE AND SIMILAR FIBRES	82	94	75	97	74	88	85	67	83	80	81	- 1.26
TOBACCO UNMANUFACTURED	156	126	107	120	130	160	151	142	147	127	135	1.89
NATURAL RUBBER	446	503	478	519	440	450	495	548	473	470	442	- .60
WOOL GREASY	110	128	137	139	144	143	148	151	162	162	178	3.11
BOVINE CATTLE $\frac{1}{2}$	130	102	113	90	70	61	90	233	506	192	240	15.68
SHEEP AND GOATS $\frac{1}{2}$	1786	1449	1403	1400	1316	1601	1907	1918	1520	1365	970	- 1.25
PIGS $\frac{1}{2}$	232	151	258	288	462	145	126	104	185	17	186	-13.62
TOTAL MEAT	364	293	273	454	535	282	269	600	539	398	745	7.66
MILK DRY	12	18	15	22	22	30	22	28	23	28	43	7.97
TOTAL EGGS IN SHELL	25	44	34	43	60	63	51	51	50	37	39	- .27
FISHERY PRODUCTS												
FISH FRESH FROZEN	155	139	134	185	129	128	120	130	141	147	114	- 1.50
FISH CURED	49	28	20	14	31	20	18	18	24	28	28	1.99
FISH CANNED AND PREPARED	28	38	32	30	30	27	27	26	41	48	41	2.92
FISH BODY AND LIVER OIL	69	17	20	21	17	21	15	28	34	5	7	- 8.69
FISH MEAL	157	344	340	461	567	453	287	438	498	461	371	1.19
FOREST PRODUCTS $\frac{2}{2}$												
SAWLOGS CONIFEROUS	424	887	967	1033	1013	780	1188	1248	830	787	806	- 1.41
SAWLOGS NONCONIFEROUS	197	595	614	475	514	480	577	541	588	545	574	- .15
PULPHWOOD+PARTICLE	1188	1393	1526	1288	1480	1397	1208	1533	1722	1548	1440	1.10
FUELWOOD	635	83	37	53	36	33	32	31	32	31	31	- 7.55
SAWWOOD CONIFEROUS	2352	2860	2814	3097	3299	2999	2841	3438	3599	2638	2609	- .28
SAWWOOD NONCONIFEROUS	399	460	416	398	385	371	354	441	442	369	365	- 1.24
WOOD-BASED PANELS	226	445	601	745	740	835	939	1127	1248	1396	1371	12.88
PULP FOR PAPER	349	696	707	875	894	857	913	869	1106	1043	1035	4.62
PAPER AND PAPERBOARD	420	973	1182	1402	1351	1440	1420	1507	1713	1707	1727	5.64
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR+WHEAT EQUIV.	113	13	38	43	10	3	4	83	17	23	35	4.77
RICE MILLED	57	58	58	83	144	94	92	71	74	80	80	1.44
BARLEY	220	162	215	232	205	360	181	328	307	195	180	1.46
MAIZE	634	813	691	547	249	448	825	1320	818	838	623	4.07
MILLET							1					17.50
SORGHUM			1	1			1					- 7.62
POTATOES	150	186	199	189	163	141	175	239	208	223	301	4.30
SUGAR+TOTAL (RAW EQUIV.)	4541	5390	5289	5717	5725	5656	5707	6137	4485	5035	6380	.11
PULSES	19	19	17	19	26	29	32	66	44	34	52	13.67
SOYBEANS	402	299	405	442	425	309	232	391	385	401	318	- .44
SOYBEAN OIL	12	10	10	23	24	17	19	34	23	31	28	11.75
GROUNDNUTS SHELLED BASIS	42	52	50	49	52	54	60	60	61	62	55	2.20
GROUNDNUT OIL	6	13	8	9	5	7	7	6	7	8	7	- 3.81
COPRA	287	292	272	198	190	209	199	292	199	27	199	-96.16
COCONUT OIL	167	241	240	282	298	374	280	271	435	603	495	9.19
PALM OIL	24	55	89	76	116	226	196	217	483	416	282	24.71
OLLSEED CAKE AND MEAL	276	257	262	252	213	238	216	300	301	386	395	5.21
BANANAS	1612	1862	1824	2045	2125	2146	2169	2268	2179	2411	2410	2.95
ORANGES+TANGER+CLEMON	203	238	242	242	241	259	265	259	264	339	380	4.47
LEMONS AND LIMES	17	17	18	19	17	18	19	20	23	24	25	4.39
COFFEE GREEN+ROASTED	1456	1614	1301	1267	1398	1343	1405	1246	1324	1290	986	- 2.73
COCOA BEANS	329	250	236	301	338	308	326	268	248	252	186	- 2.61
TEA	78	94	86	83	103	93	102	105	96	107	117	2.71
COTTON LINT	118	99	85	77	90	93	86	72	61	73	53	- 5.24
JUTE AND SIMILAR FIBRES	73	52	37	33	20	16	33	31	23	25	14	- 8.23
TOBACCO UNMANUFACTURED	84	121	107	101	87	153	158	163	177	161	179	6.99
NATURAL RUBBER	468	604	654	621	685	685	727	759	747	818	903	4.00
WOOL GREASY	87	83	62	50	34	30	18	8	13	17	12	-20.45
BOVINE CATTLE $\frac{1}{2}$	974	1045	1051	1220	1081	1260	1264	716	516	1183	1184	- 2.15
SHEEP AND GOATS $\frac{1}{2}$	43	71	45	40	43	58	71	33	61	71	52	1.17
PIGS $\frac{1}{2}$	4	21	18	72	78	90	88	197	30	46	44	7.22
TOTAL MEAT	445	562	664	711	668	797	785	637	719	862	755	2.68
TOTAL EGGS IN SHELL	4	8	7	18	7	6	12	15	12	13	19	8.06
FISHERY PRODUCTS												
FISH FRESH FROZEN	331	497	492	525	531	728	792	689	611	709	725	4.70
FISH CURED	37	33	30	38	34	32	33	31	30	37	30	- .56
SHELLFISH	102	123	130	140	132	149	140	148	139	157	158	2.34
FISH CANNED AND PREPARED	68	88	83	101	87	108	104	131	82	103	78	.36

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
SHELLFISH CANNED+PREPAR	18	26	26	28	25	31	32	33	27	35	41	4.10
FISH BODY AND LIVER CIL	48	32	27	31	28	10	11	8	7	11	8	-16.28
FISH MEAL	290	780	327	228	257	357	63	62	108	128	74	-20.30
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	1233	1576	1501	1786	1787	2387	1954	1737	1728	2025	2174	2.79
SAWLOGS NONCONIFEROUS	350	534	469	477	415	459	459	492	318	291	294	-6.00
PULPHOOD+PARTICLE	3377	3239	2437	2552	1996	2081	1863	2187	1859	2039	2188	-3.69
FUELWOOD	90	116	146	176	209	187	158	191	209	181	303	6.61
SAWWOOD CONIFERUS	11316	13983	14058	13859	17378	21522	21750	16639	14175	15583	25061	4.69
SAWWOOD NONCONIFEROUS	969	1091	1355	1008	1116	1429	1732	1412	963	1287	1351	1.37
WOOD-BASED PANELS	1334	2694	3058	2723	3481	4666	4147	3245	3100	3645	3872	2.96
PULP FOR PAPER	2369	2953	3407	2979	2973	3266	3531	3587	2712	3270	3392	.69
PAPER AND PAPERBOARD	5495	6289	6644	6557	6858	7143	7546	7602	6161	6996	7033	.86
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	175	46	5	16	80	47		50	134	112		-14.75
RICE MILLED	4	6	6	7	5	5	6	7	7	6	9	2.70
BARLEY		3	30	14	24	13		5	4			-84.69
MAIZE	1	2	1	1	2	1	1	1	1	1	2	-1.11
SUGAR,TOTAL (RAW EQUIV.)	126	146	154	139	157	186	171	153	192	173	185	2.64
PULSES	9	17	17	14	16	16	12	16	20	13	11	-2.45
SOYBEANS	2			1	11			33	16	10	15	52.98
SOYBEAN OIL	5	9	7	11	9	4	6	10	18	38	29	16.72
GROUNDNUTS SHELLED BASIS	5	4	6	11	5	6	5	6	4	7	10	3.42
GROUNDNUT OIL	9	7	6	8	6	5	3	4	4	2	2	-12.17
COPRA	36	35	37	33	35	26	24	20	12	10	9	-15.31
COCONUT OIL		1	1	1	2	8	9	13	11	19	12	42.03
PALM OIL	3	3	4	5	7	8	7	14	16	17	20	24.46
OILSEED CAKE AND MEAL	5	32	21	30	30	24	12	21	15	3	6	-17.90
BANANAS	30	29	23	24	22	24	33	37	43	29	35	5.09
ORANGES+TANGER+CLEMEN	14	13	17	14	15	16	18	18	18	15	17	2.30
LEMONS AND LINES											1	33.99
COFFEE GREEN+ROASTED	15	21	23	28	30	29	29	32	35	32	34	5.05
COCOA BEANS	15	19	12	20	17	18	21	21	25	16	19	2.66
TEA	37	35	39	35	34	37	36	34	35	33	35	-.61
COTTON LINT	21	12	6	5	7	9	4	9	4	4	5	-6.68
JUTE AND SIMILAR FIBRES	9	10	11	12	13	19	16	26	17	14	12	4.06
TOBACCO UNMANUFACTURED	16	13	17	17	17	15	14	17	17	17	13	.17
NATURAL RUBBER	41	47	50	51	46	51	55	74	52	61	75	4.58
WOOL GREASY	2	1	3	2	4	4	5	6	1	1	1	-11.73
BVINE CATTLE 1/				1	2	3	3	3	1	1	2	39.67
SHEEP AND GOATS 1/				2	2	1	1	1				-5.17
TOTAL MEAT	1	2	1	1	1	1	2	4	2	2	2	8.31
FISHERY PRODUCTS												
FISH FRESH FROZEN	14	21	23	22	29	22	18	22	19	19	21	-1.76
FISH CURED	5	4	5	4	4	4	3	6	4	4	5	.86
SHELLFISH	1	1	1	1	1	1	2	1	1	3	3	16.46
FISH CANNED AND PREPARED	13	13	13	13	14	15	25	27	23	19	25	8.90
SHELLFISH CANNED+PREPAR	1	2	2	3	3	3	4	6	5	6	7	17.81
FISH BODY AND LIVER CIL	4	5	4	5	5	1	1	1	1	1	1	-20.58
FISH MEAL	8	28	30	27	32	27	14	14	24	13	8	-12.07
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	7	18	13	4	4	5	1	3		5	3	-66.95
SAWLOGS NONCONIFEROUS	145	110	116	127	93	95	101	106	41	46	36	-12.32
FUELWOOD	1	1	1	1	1	1	1	1	9	4	1	19.11
SAWWOOD CONIFERUS	620	633	709	654	675	672	793	886	637	693	754	1.38
SAWWOOD NONCONIFEROUS	207	235	229	278	273	254	338	449	282	346	445	6.56
WOOD-BASED PANELS	26	53	58	65	73	73	92	131	123	137	120	11.96
PULP FOR PAPER	203	254	271	323	298	242	315	352	302	234	277	.09
PAPER AND PAPERBOARD	428	496	506	528	557	531	631	677	664	439	572	1.34

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	1795	2780	2260	2867	3582	3735	4519	4638	5190	5252	6605	11.27
RICE MILLED	576	597	622	698	868	790	962	996	589	879	1571	6.82
BARLEY	144	54	68	25	30	78	107	115	175	69	332	20.38
MAIZE	243	148	303	386	621	464	485	836	866	661	969	18.02
MILLET	95	107	145	167	169	132	195	163	162	148	191	3.40
SORGHUM	42	63	45	68	42	98	108	192	70	100	102	9.38
POTATOES	233	160	144	163	147	130	195	207	187	153	224	3.43
SUGAR, TOTAL (RAW EQUIV.)	1210	1246	592	1307	1381	1399	1427	1350	1327	1465	1963	4.25
PULSES	72	53	55	62	66	77	76	51	88	74	74	3.77
SOYBEANS	10	1	1	4			13	10	8	16	29	55.48
SOYBEAN OIL	55	54	46	87	132	97	86	141	148	117	198	13.52
GROUNDNUTS SHELLED BASIS	24	23	27	27	16	20	24	13	21	9	9	-10.10
GROUNDNUT OIL	15	11	12	13	10	23	38	8	7	29	27	6.86
COPRA	4	4	4	3	7	5	6	2	3	3	3	-4.82
COCONUT OIL	12	9	8	14	16	17	15	15	10	13	13	2.92
PALM NUTS KERNELS	11	1		1	1				1			-82.20
PALM OIL	11	16	24	19	29	27	41	39	30	59	70	14.57
WILDCOOKIE AND MEAL	16	35	38	52	55	53	49	64	58	74	74	7.83
BANANAS	38	30	43	38	37	56	59	47	41	44	46	3.30
ORANGES+TANGER+CLEMEN LEMONS AND LIMES	9 1	9	10	11	9	10	11	11	13	12	13	3.70
COFFEE GREEN+ROASTED	46	50	41	39	30	35	36	50	56	62	49	3.75
COCOA BEANS	1	1	1	1	1	2	2	2	1	1	1	2.23
TEA	34	37	40	40	39	40	35	41	40	38	41	-3.2
COTTON LINT	16	42	28	31	28	33	41	50	54	49	40	5.17
JUTE AND SIMILAR FIBRES	20	45	37	42	59	58	74	94	76	64	58	6.70
TOBACCO UNMANUFACTURED	32	30	29	34	37	41	46	58	54	42	47	6.70
NATURAL RUBBER	7	13	14	16	17	16	22	27	19	29	31	9.62
WOOL GREASY		1	1	1	1	1	1	1	1	2	2	13.21
BOVINE CATTLE 1/	858	872	979	947	935	922	895	755	637	607	641	-5.18
SHEEP AND GOATS 1/	1757	1574	1510	1398	1498	1396	1270	1259	1222	1070	1055	-4.33
PIGS 1/	10	3	3	5	9	8	4	1				-38.52
TOTAL MEAT	52	39	44	46	53	55	42	44	58	81	125	9.53
MILK DRY	2	3	5	5	9	6	11	19	13	12	14	18.47
TOTAL EGGS IN SHELL	4	1	1	1	1	2	2	4	7	12	24	42.62
FISHERY PRODUCTS												
FISH FRESH FROZEN	66	62	79	107	145	148	185	254	281	283	206	17.40
FISH CURED	94	69	74	80	73	63	60	51	49	53	43	-6.02
SHELLFISH	2	1	1	5	2	1	1	3	1	1	1	-3.75
FISH CANNED AND PREPARED	33	35	32	55	51	57	67	65	63	93	107	12.32
SHELLFISH CANNED+PREPARED		1										4.47
FISH BODY AND LIVER OIL	1	1	2	2	2	3	3	4	1	1	1	-4.76
FISH MEAL	7	5	9	11	11	13	9	11	8	11	11	4.58
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	8	9	25		7	20	8	15	44	47	43	13.90
SAWLOGS NONCONIFEROUS	103	125	162	232	221	197	221	256	145	171	240	2.74
PULPWOOD+PARTICLE		1		5	14	5						-42.27
FUELWOOD	46	87	82	95	73	77	32	23	18	18	18	-20.13
SAWWOOD CONIFEROUS	479	400	709	914	937	648	628	685	603	812	860	2.94
SAWWOOD NONCONIFEROUS	133	184	169	190	157	165	144	183	163	139	142	-2.46
WOOD-BASED PANELS	80	144	149	153	190	140	150	183	199	196	207	4.00
PULP FOR PAPER	20	26	28	47	34	34	54	72	62	68	74	12.65
PAPER AND PAPERBOARD	227	312	371	453	480	444	542	632	535	544	567	6.20
LATIN AMERICA												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	5026	6753	6650	5652	6279	6951	8715	8587	7212	8974	8434	4.01
RICE MILLED	416	386	391	384	471	415	377	662	580	603	609	6.33
BARLEY	129	132	126	162	137	120	186	320	263	186	185	7.02
MAIZE	465	640	668	1417	667	906	2592	2920	3920	2654	3670	24.34
SORGHUM	71	69	21	219	377	654	476	1149	1348	612	1239	45.41
POTATOES	210	230	223	221	182	468	259	226	196	185	187	-2.23
SUGAR, TOTAL (RAW EQUIV.)	304	182	416	187	260	363	435	257	114	231	636	2.97
PULSES	163	210	209	234	211	220	253	273	317	306	284	4.88

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	-----THOUSAND METRIC TONS-----											
SOYBEANS	50	81	88	191	204	164	204	590	127	458	660	21.20
SOYBEAN OIL	54	89	84	112	125	103	158	239	137	252	276	13.76
GROUNDNUTS SHELLED BASIS	3	9	5	5	6	10	6	12	54	26	26	23.90
GROUNDNUT OIL	15	8	17	15	15	17	33	12	42	61	61	21.62
COPRA	78	27	8	2	12	1	1	1	21			-85.31
COCONUT OIL	10	10	9	19	13	18	32	28	39	80	22	19.15
PALM OIL	6	3	6	3	10	9	23	9	3	18	13	13.96
OILSEED CAKE AND MEAL	93	109	148	176	309	246	253	317	244	386	529	14.72
BANANAS	247	239	287	303	252	224	218	253	208	162	173	- 5.18
ORANGES+TANGER+CLEMEN	17	9	8	11	12	11	17	16	16	16	16	8.40
LEMONS AND LIMES	3	3	2	2	2	2	1	3	1	4	4	3.79
COFFEE GREEN+ROASTED	46	45	58	47	50	53	56	82	51	64	48	2.04
COCOA BEANS	20	20	18	26	28	20	16	20	15	17	18	- 4.55
TEA	9	11	15	13	12	12	12	18	10	10	10	- 2.96
COTTON LINT	68	82	79	74	85	83	95	67	67	81	68	- 1.58
JUTE AND SIMILAR FIBRES	14	14	13	25	11	13	26	46	40	22	24	10.54
TOBACCO UNMANUFACTURED	16	15	15	14	14	11	14	24	16	19	17	3.10
NATURAL RUBBER	84	90	95	102	117	138	139	167	143	159	170	7.57
WOOL GREASY	14	20	19	14	18	14	5	4	6	8	7	-13.84
BOVINE CATTLE 1/	608	537	568	545	597	664	590	632	659	759	631	2.75
SHEEP AND GOATS 1/	142	135	128	140	180	137	64	227	316	44	85	- 4.58
PIGS 1/	67	37	23	33	38	48	38	42	48	62	61	8.52
TOTAL MEAT	64	104	103	121	134	154	126	234	158	192	237	9.25
MILK DRY	54	37	44	41	24	32	39	34	54	70	98	9.36
TOTAL EGGS IN SHELL	8	7	8	8	7	7	6	6	7	8	16	4.58
FISHERY PRODUCTS												
FISH FRESH FROZEN	12	28	29	37	41	39	58	69	127	104	96	18.60
FISH CURED	72	93	102	91	77	73	74	60	68	62	58	- 5.90
SHELLFISH	1	4	7	9	4	4	7	9	5	4	3	- 4.60
FISH CANNED AND PREPARED	21	25	26	32	36	41	33	37	45	44	48	7.05
SHELLFISH CANNED+PREPAR		1	1	1	1	1	1	1	1	1	1	- 6.52
FISH BODY AND LIVER CIL	9	37	42	25	55	29	19	24	23	23	23	- 6.84
FISH MEAL	57	137	134	162	224	187	44	61	139	76	59	-10.10
FOREST PRODUCTS 2/												
SANLOGS CONIFEROUS	26	2	72	65	19	16	25	27	7	10	10	- 4.73
SANLOGS NONCONIFEROUS	273	230	209	224	224	180	135	146	158	99	101	- 9.25
FUELWOOD	41	4	4	5	9	12	19	27	24	24	22	26.28
SANWOOD CONIFEROUS	1212	1599	1601	1569	1631	1499	1460	1230	1229	1348	1417	- 2.62
SANWOOD NONCONIFEROUS	88	97	143	148	186	181	195	677	733	325	553	22.43
WOOD-BASED PANELS	56	106	119	118	165	150	134	176	162	158	138	3.71
PULP FOR PAPER	426	521	535	607	559	637	636	815	518	509	439	- .93
PAPER AND PAPERBOARD	938	1576	1654	1917	1721	1773	1754	2040	1674	1688	1803	.71
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	3936	4599	3431	4941	7841	4872	5454	7814	8251	6942	8995	8.62
RICE MILLED	344	355	393	469	645	575	499	934	907	1104	1405	15.56
BARLEY	144	102	180	510	925	297	594	530	473	446	889	16.00
MAIZE	315	354	201	260	317	460	423	803	807	1014	1318	21.05
MILLET	16	5		1	4	5	6	32	3	11	12	40.10
SORGHUM	3	5	4		9	2	4	2	77	142	163	64.69
POTATOES	108	137	124	103	144	122	114	165	171	143	204	4.62
SUGAR,TOTAL (RAW EQUIV.)	1316	1102	1009	1061	1287	1213	1682	1778	2190	1909	2315	10.23
PULSES	98	108	95	101	87	151	108	128	242	228	178	10.06
SOYBEANS		14	5	9	7	14	28	62	28	19	46	22.65
SOYBEAN OIL	78	73	110	146	188	181	108	232	270	334	189	12.55
GROUNDNUTS SHELLED BASIS	24	11	8	8	15	9	7	8	10	13	13	2.27
GROUNDNUT OIL	5	3	3	2	2	2	2	1	2	3	2	- 2.04
COPRA	4	2	3			1			8	7		- 5.61
COCONUT OIL	5	6	7	9	8	8	5	8	22	30	4	7.07
PALM NUTS KERNELS									1	1	1	18.14
PALM OIL	36	60	62	102	85	91	89	78	144	64	167	6.84
OILSEED CAKE AND MEAL	30	46	54	82	116	136	88	97	100	221	230	15.94
BANANAS	35	48	56	63	80	79	135	176	254	296	290	25.74
ORANGES+TANGER+CLEMEN	79	129	134	191	213	206	285	404	530	650	606	21.62
LEMONS AND LIMES	15	20	23	25	27	13	15	27	24	36	25	3.24
COFFEE GREEN+ROASTED	38	57	39	47	54	59	54	56	49	47	42	- .73
COCOA BEANS	3	3	3	3	3	3	2	2	4	3	2	- .49
TEA	87	93	122	126	102	122	113	143	130	159	153	4.58
COTTON LINT	12	8	6	6	7	8	12	12	35	7	21	12.78

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77
	THOUSAND METRIC TONS											PERCENT
JUTE AND SIMILAR FIBRES	27	34	27	30	20	18	27	31	31	40	34	2.62
TOBACCO UNMANUFACTURED	21	24	24	24	25	27	29	32	43	44	50	9.15
NATURAL RUBBER	20	40	34	41	51	52	48	56	51	50	43	2.86
WOOL GREASY	12	19	18	21	18	29	20	23	26	27	32	5.80
BOVINE CATTLE ^{1/}	208	255	193	184	173	206	177	162	166	158	167	- 3.59
SHEEP AND GOATS ^{1/}	2729	3998	3817	3774	3860	4292	4268	3966	4992	5469	7235	5.82
PIGS ^{1/}				1								-93.21
TOTAL MEAT	20	40	53	63	60	76	89	141	247	344	448	30.92
TOTAL EGGS IN SHELL	8	25	29	36	44	54	43	53	75	62	52	10.21
FISHERY PRODUCTS												
FISH FRESH FROZEN	8	22	19	20	22	21	22	29	40	48	40	10.54
FISH CURED	4	3	3	3	3	5	3	4	4	3	2	- 1.08
SHELLFISH					1					1		1.01
FISH CANNED AND PREPARED	10	9	10	15	14	16	23	27	38	45	43	21.37
FISH BODY AND LIVER OIL	1	1	1	1	2	1	1	1	1	1	1	- 4.90
FISH MEAL	1	6	5	6	7	18	11	23	24	41	41	27.92
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	31	48	112	120	76	154	152	109	202	156	156	10.52
SAWLOGS NONCONIFEROUS	60	90	37	32	65	44	47	49	84	107	107	8.25
PULPWOOD+PARTICLE	41	35	8	41	17		29	20	102	21	21	7.82
FUELWOOD	219	296	393	322	213	154	344	180	177	177	177	- 7.50
SAWWOOD CONIFEROUS	916	897	927	1219	1201	1638	1485	1610	1456	2971	3773	14.79
SAWWOOD NONCONIFEROUS	83	86	156	96	114	103	107	93	184	191	191	7.01
WOOD-BASED PANELS	72	85	118	125	136	236	331	407	413	416	416	21.94
PULP FOR PAPER	40	68	72	60	96	63	70	69	90	188	188	10.83
PAPER AND PAPERBOARD	282	451	523	469	615	592	540	573	784	719	719	5.42
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR+WHEAT EQUIV.	7943	10598	8134	8612	7501	6689	10952	11497	14705	13559	7184	2.78
RICE MILLED	4166	3371	3497	4470	4138	4428	4608	3063	3029	3698	3908	- .66
BARLEY	152	156	121	32	77	349	494	497	539	8	326	4.59
MAIZE	445	555	770	768	970	1181	1344	1257	1442	1964	2591	15.99
SORGHUM	12	400	377	33	2		1188	727	204	398	13	3.55
POTATOES	134	95	92	91	95	87	96	100	89	96	108	1.00
SUGAR, TOTAL (RAW EQUIV.)	903	1337	1598	1348	1397	1148	1497	1147	1172	1172	1559	- 1.09
PULSES	167	150	178	168	144	191	127	102	100	94	88	- 7.77
SOYBEANS	67	58	73	136	149	146	168	135	153	433	366	19.55
SOYBEAN OIL	100	131	175	252	269	184	178	175	117	194	614	5.93
GROUNDNUTS SHELLED BASIS	44	30	24	24	21	23	23	24	19	44	24	.96
GROUNDNUT OIL	38	27	25	24	25	25	28	24	24	49	59	7.52
COPRA	178	45	58	46	65	86	36	20	59	110	98	5.19
COCONUT OIL	34	26	27	36	41	35	59	29	38	46	68	7.73
PALM NUTS KERNELS	13	13	17	12	8	26	35	22	20	27	19	7.70
PALM OIL	75	69	124	150	224	240	315	358	276	317	603	20.49
DLSEED CAKE AND MEAL	100	128	179	187	199	232	151	272	333	455	565	15.17
BANANAS	40	40	41	53	45	46	55	50	56	45	48	1.75
ORANGES+TANGER+CLEMEN	83	115	129	151	158	179	193	170	208	199	213	6.53
COFFEE GREEN+ROASTED	60	34	67	51	37	25	46	34	31	43	33	- 3.24
COCOA BEANS	5	9	5	6	8	12	12	9	9	9	9	3.77
TEA	32	41	46	45	49	49	54	52	64	71	81	7.06
COTTON LINT	428	567	488	569	600	538	672	577	740	830	807	5.17
JUTE AND SIMILAR FIBRES	94	83	59	46	146	96	111	71	79	119	96	4.30
TOBACCO UNMANUFACTURED	38	98	109	65	59	60	51	74	57	61	67	- 4.46
NATURAL RUBBER	112	105	133	89	91	92	115	136	130	149	159	4.86
WOOL GREASY	7	15	21	24	20	21	14	16	26	27	34	5.40
BOVINE CATTLE ^{1/}	207	272	296	296	274	329	303	286	286	274	285	- .15
SHEEP AND GOATS ^{1/}	307	284	302	321	334	352	244	224	253	296	279	- 1.85
PIGS ^{1/}	1500	1864	1847	1882	2447	2680	2700	2629	2796	3004	3075	6.32
TOTAL MEAT	47	87	90	97	97	100	109	125	149	173	207	9.79
MILK DRY	25	61	59	54	56	50	54	59	59	63	74	1.77
TOTAL EGGS IN SHELL	47	46	47	51	55	52	56	53	58	57	64	3.02
FISHERY PRODUCTS												
FISH FRESH FROZEN	92	103	96	117	119	126	140	132	148	159	167	5.92
FISH CURED	59	57	57	56	52	55	42	32	32	22	21	-11.62
SHELLFISH	36	32	29	38	48	61	68	80	68	97	87	14.25
FISH CANNED AND PREPARED	69	82	87	86	94	86	91	97	115	119	109	3.91
SHELLFISH CANNED+PREPAR	18	24	21	20	15	18	17	15	14	17	16	- 3.75

see notes at end of table

ANNEX TABLE 6. VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	AVERAGE 1961-65	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	THOUSAND METRIC TONS											
FISH BODY AND LIVER CIL	2	5	7	10	8	5	6	2	2	7	3	- 8.96
FISH MEAL	45	57	77	78	78	86	53	60	99	84	88	2.67
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	124	472	230	293	435	373	827	773	460	749	1194	13.84
SAWLOGS NONCONIFEROUS	1288	4277	4461	5156	5736	5854	5981	5132	5758	6613	7500	5.00
PULPWOOD+PARTICLE	9	2					13	61	61			19.74
FUELWOOD	817	459	383	435	432	421	409	455	480	466	466	1.31
SAWWOOD CONIFEROUS	24	12	15	13	37	38	41	65	179	179	180	40.66
SAWWOOD NONCONIFEROUS	195	628	467	469	480	662	1207	1108	977	1501	1629	15.34
WOOD-BASED PANELS	136	148	168	184	232	261	344	337	390	463	483	14.84
PULP FOR PAPER	203	268	308	315	341	502	476	466	296	397	472	4.61
PAPER AND PAPERBOARD	634	1066	1166	1212	1382	1272	1418	1312	1135	1418	1433	2.24
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	5326	6313	4772	6909	4934	6564	7710	7956	5042	3721	9342	1.10
RICE MILLED	340	1268	1045	1274	719	948	963	1241	742	732	297	- 9.57
BARLEY	451	54	97	244	327	452	279	321	174	333	200	11.73
MAIZE	288	422	491	731	732	2090	3079	2797	1598	1921	2086	21.59
MILLET	11											
POTATGES	2											-98.50
SUGAR,TOTAL (RAW EQUIV.)	878	871	1070	1152	1127	1184	1281	678	717	1020	1953	1.91
PULSES	19	21	28	29	25	40	40	32	33	39	44	6.53
SOYBEANS	148	385	472	618	525	712	799	1181	856	831	982	10.56
SOYBEAN OIL	4	17	36	21	32	44	123	34	52	38	179	18.09
GROUNDNUT CIL	1											-89.89
COPRA	14	1	4	4	4	4	4	4	3	3	3	2.02
COCONUT OIL	17	14	20	22	30	38	20	20	44	33	17	4.41
OILSEED CAKE AND MEAL		1	2	2	3	5	6	5	5	33	45	47.08
COFFEE GREEN+ROASTED	1	1	1									- 4.38
COCCA BEANS	5	1		1	1	2	8	6	8	7	7	46.41
TEA	6	4	4	4	4	4	6	7	6	5	5	6.23
COTTON LINT	544	179	207	267	305	327	632	616	386	394	370	9.96
JUTE AND SIMILAR FIBRES	40	64	51	52	63	27	97	14	35	29	28	- 9.70
TOBACCO UNMANUFACTURED	6	15	13	13	15	24	20	23	11	13	15	.33
NATURAL RUBBER	128	234	299	210	194	219	301	235	274	271	293	2.19
WOOL GREASY	13	13	18	20	20	25	23	18	17	27	32	6.18
SHEEP AND GOATS ^{1/}		4	4	4	4	4	5	6	6	5	5	5.15
TOTAL MEAT	1	2			1	2	2	2	29	11	10	64.89
FISHERY PRODUCTS												
FISH FRESH FROZEN				1	1		1	8	7	9	4	46.70
SHELLFISH	1	1	1	1	1	1	3	4	4	4	4	19.72
FISH CANNED AND PREPARED		16	15	1	2	11	3	1	2			-39.33
FISH MEAL	2	15	33	35	45	48	33	40	88	115	77	18.10
FOREST PRODUCTS ^{2/}												
SAWLOGS CONIFEROUS	561	5	1	2	2	122	492	610	196	200	200	96.82
SAWLOGS NONCONIFEROUS	484	1186	1264	1564	2252	4000	3990	3801	3887	4183	4183	16.95
SAWWOOD CONIFEROUS		1	1	1	16	2			21	29	29	52.92
SAWWOOD NONCONIFEROUS	2	8	12	10	10	8	9	27	23	30	30	16.88
WOOD-BASED PANELS	4	5	1	1	2	5	1	1	3	11	11	16.67
PULP FOR PAPER	107	210	123	99	224	56	57	66	32	50	50	-15.95
PAPER AND PAPERBOARD	57	97	103	157	227	105	60	82	67	87	87	- 5.97

^{1/} Thousand head^{2/} Except for Pulp for Paper and Paper and Paperboard, all forest products are expressed in thousand cubic metres^{3/} Excluding imports of Singapore

ANNEX TABLE 7. INDICES OF VALUE OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969-71=100.....											
WORLD												
AGRICULTURAL PRODUCTS	86	86	91	101	108	127	189	237	244	256	290	16.60
FOOD	84	84	89	100	111	131	195	257	277	268	288	17.65
FEED	79	81	85	102	113	131	281	265	226	323	405	20.78
RAW MATERIALS	95	94	101	100	99	114	170	200	166	195	226	11.22
BEVERAGES	82	89	89	107	104	125	164	165	176	268	377	16.26
FISHERY PRODUCTS	73	75	84	101	115	139	188	203	214	264	313	17.52
FOREST PRODUCTS	72	81	92	107	106	125	182	237	210	254	271	15.92
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	85	84	88	100	112	134	207	254	267	271	294	17.74
FOOD	83	82	86	100	114	136	209	260	285	282	295	18.48
FEED	74	76	84	100	116	130	291	296	211	279	323	19.05
RAW MATERIALS	107	102	99	101	100	116	179	222	181	203	257	12.26
BEVERAGES	69	76	84	98	118	159	219	229	252	288	373	19.92
FISHERY PRODUCTS	77	78	87	100	113	139	193	206	205	252	292	16.39
FOREST PRODUCTS	73	81	92	103	106	124	174	236	213	251	268	15.77
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	73	76	87	99	114	143	203	239	274	280	315	18.96
FOOD	71	75	87	98	115	141	199	238	275	280	312	19.05
FEED	74	72	81	100	119	153	368	381	274	344	419	23.92
RAW MATERIALS	113	101	99	103	98	125	176	220	203	236	233	12.73
BEVERAGES	67	74	81	98	121	165	230	231	257	293	362	20.22
FISHERY PRODUCTS	77	75	84	100	116	142	201	222	221	273	319	18.16
FOREST PRODUCTS	73	78	91	103	107	125	184	259	222	263	275	16.82
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	101	98	101	94	105	113	150	192	189	185	210	10.64
FOOD	100	95	103	93	105	109	149	193	182	170	184	9.49
FEED	210	175	188	47	64	56	99	117	118	317	284	9.52
RAW MATERIALS	109	113	94	101	105	129	152	193	210	229	298	13.30
BEVERAGES	73	83	94	95	111	135	159	187	224	221	253	14.29
FISHERY PRODUCTS	79	87	90	103	106	119	151	189	237	220	223	13.48
FOREST PRODUCTS	79	84	91	103	106	118	165	222	224	240	265	15.35
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	92	88	81	103	115	135	249	318	315	322	329	20.51
FOOD	92	86	80	105	115	138	265	337	350	350	338	21.81
FEED	69	74	81	102	117	123	271	270	185	254	282	17.29
RAW MATERIALS	101	102	89	96	115	123	173	242	195	206	273	13.47
BEVERAGES	83	94	92	109	99	130	265	376	285	515	1168	30.76
FISHERY PRODUCTS	75	77	92	98	111	131	206	182	196	257	335	16.94
FOREST PRODUCTS	72	83	93	103	104	126	165	210	197	242	260	14.67

ANNEX TABLE 7. INDICES OF VALUE OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	1969=100											
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	96	88	93	103	104	128	187	223	217	225	252	14.30
FOOD	89	84	83	101	116	145	179	223	259	253	261	16.28
FEED	63	64	87	121	92	112	235	274	205	219	483	20.89
RAW MATERIALS	111	95	110	107	83	96	201	221	142	174	234	10.46
BEVERAGES	93	98	93	92	115	147	151	204	228	238	204	12.52
FISHERY PRODUCTS	50	74	87	89	124	160	185	176	184	208	288	15.07
FOREST PRODUCTS	59	73	85	98	117	146	228	288	201	294	345	20.73
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	86	89	95	103	102	117	162	212	211	234	284	14.86
FOOD	87	89	94	101	105	120	164	251	260	238	273	15.83
FEED	87	88	86	106	108	132	267	221	248	387	524	22.65
RAW MATERIALS	85	87	102	99	98	112	162	182	153	187	198	10.21
BEVERAGES	87	94	91	111	98	113	144	144	150	260	378	14.80
FISHERY PRODUCTS	63	69	78	103	119	139	178	196	233	291	358	19.84
FOREST PRODUCTS	63	79	92	99	109	133	238	243	189	274	293	16.82
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	84	91	96	106	98	111	143	183	170	205	262	12.42
FOOD	86	95	99	105	96	110	134	191	180	183	214	10.56
FEED	106	111	101	111	88	117	175	142	133	196	219	8.53
RAW MATERIALS	86	81	91	104	105	112	152	193	148	183	182	10.23
BEVERAGES	79	88	91	111	99	112	155	165	165	259	397	16.16
FISHERY PRODUCTS	75	80	94	97	109	141	227	249	241	261	253	16.37
FOREST PRODUCTS	77	87	106	99	95	119	214	230	166	221	226	12.58
LATIN AMERICA												
AGRICULTURAL PRODUCTS	83	87	93	105	102	121	173	218	232	251	316	16.47
FOOD	82	81	90	104	107	125	179	265	286	240	285	17.30
FEED	74	73	80	101	119	146	326	257	343	549	820	30.94
RAW MATERIALS	88	97	112	98	89	110	150	169	158	163	205	8.84
BEVERAGES	83	95	91	113	97	116	152	137	140	286	378	14.83
FISHERY PRODUCTS	66	74	78	106	116	111	97	131	132	173	200	10.08
FOREST PRODUCTS	64	79	96	98	106	120	176	233	203	203	217	13.38
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	83	86	95	99	107	125	163	179	162	196	202	10.87
FOOD	82	89	109	94	98	127	172	184	179	219	256	12.75
FEED	97	96	96	110	94	130	142	141	91	78	72	- 2.21
RAW MATERIALS	84	84	85	101	114	123	158	178	154	188	172	9.98
BEVERAGES	58	81	88	111	101	135	180	182	121	163	248	10.77
FISHERY PRODUCTS	73	77	82	96	122	153	229	240	232	234	274	16.79
FOREST PRODUCTS	67	81	88	105	107	141	197	304	152	136	136	8.22

ANNEX TABLE 7. INDICES OF VALUE OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969=71=100.....											
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	90	91	97	100	103	109	155	231	222	255	301	15.86
FOOD	87	91	88	98	114	117	157	311	319	321	362	20.44
FEED	93	97	82	111	108	119	278	245	215	351	379	19.25
RAW MATERIALS	83	85	110	99	91	101	164	186	147	200	213	10.89
BEVERAGES	114	102	93	105	102	104	103	123	148	194	344	11.77
FISHERY PRODUCTS	62	68	85	96	119	172	282	302	425	540	755	31.62
FOREST PRODUCTS	58	78	88	100	112	134	268	261	200	326	354	19.56
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	108	105	103	92	105	126	191	250	248	212	208	12.33
FOOD	116	110	103	93	103	119	183	269	270	213	195	12.12
FEED	107	109	107	81	112	97	193	148	157	231	220	10.54
RAW MATERIALS	85	90	106	87	106	153	246	195	177	208	221	11.97
BEVERAGES	84	94	90	95	115	124	129	163	184	217	338	14.31
FOREST PRODUCTS	60	64	80	94	125	188	209	167	152	204	204	13.14

ANNEX TABLE 8. INDICES OF VOLUME OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	1969-71=100											
WORLD												
AGRICULTURAL PRODUCTS	90	93	95	101	104	112	121	115	116	126	129	3.70
FOOD	90	92	93	102	105	114	124	120	121	132	139	4.65
FEED	79	84	89	103	108	115	131	135	133	170	177	8.40
RAW MATERIALS	95	98	99	100	100	106	112	100	98	104	104	.51
BEVERAGES	89	94	99	101	101	109	117	108	114	117	104	1.81
FISHERY PRODUCTS	88	93	94	101	105	114	114	111	115	126	132	3.71
FOREST PRODUCTS	79	89	96	102	102	112	125	122	101	121	125	3.25
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	89	92	91	101	107	116	130	125	127	136	142	5.25
FOOD	88	91	91	102	107	116	131	126	130	139	144	5.56
FEED	75	79	88	101	111	112	138	143	119	148	141	6.66
RAW MATERIALS	103	105	97	100	103	110	117	110	101	108	117	1.24
BEVERAGES	75	80	85	98	117	138	140	146	160	168	172	9.38
FISHERY PRODUCTS	93	95	98	100	102	111	116	109	113	123	126	3.07
FOREST PRODUCTS	81	90	97	102	101	110	122	122	99	117	122	2.81
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	80	86	92	101	107	117	128	133	137	144	147	6.39
FOOD	79	87	93	101	106	114	126	131	135	141	146	6.09
FEED	76	76	86	101	114	137	174	190	157	181	177	10.71
RAW MATERIALS	110	105	100	102	99	113	112	121	118	125	111	2.07
BEVERAGES	73	77	83	98	120	144	143	144	162	171	166	9.61
FISHERY PRODUCTS	92	94	97	101	102	112	114	107	113	125	124	3.07
FOREST PRODUCTS	79	89	98	102	100	110	129	127	94	116	119	2.62
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	106	107	107	93	100	95	100	109	102	97	103	- .16
FOOD	107	107	110	91	99	89	93	103	92	83	87	- 2.17
FEED	225	193	189	49	63	56	72	89	92	160	149	1.08
RAW MATERIALS	110	112	95	101	104	116	125	125	133	142	154	4.77
BEVERAGES	78	85	93	97	109	114	111	129	136	135	152	6.25
FISHERY PRODUCTS	99	99	97	103	101	101	97	111	141	134	131	4.08
FOREST PRODUCTS	87	92	96	103	101	104	115	111	108	119	119	2.73
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	94	94	85	106	109	124	154	138	140	156	163	7.23
FOOD	92	90	83	108	109	129	160	139	150	168	172	8.43
FEED	69	76	84	102	113	104	129	131	103	134	127	5.35
RAW MATERIALS	111	113	94	97	110	111	132	133	107	103	122	1.57
BEVERAGES	94	105	100	105	95	120	216	258	211	252	374	16.34
FISHERY PRODUCTS	88	89	102	95	103	104	126	98	102	115	149	3.63
FOREST PRODUCTS	82	91	96	102	102	112	117	118	98	116	124	2.70

ANNEX TABLE 8. INDICES OF VOLUME OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	-----1969-71=100-----											
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	87	89	91	102	107	115	113	93	97	115	127	2.55
FOOD	88	88	87	101	112	121	120	104	111	128	142	4.49
FEED	63	67	89	132	78	113	144	94	117	178	209	9.71
RAW MATERIALS	86	92	95	104	97	104	99	72	72	92	99	1.58
BEVERAGES	101	109	100	91	108	124	111	128	133	137	108	2.71
FISHERY PRODUCTS	68	83	87	96	117	128	121	112	113	107	132	3.86
FOREST PRODUCTS	64	81	89	101	110	122	151	156	156	170	204	10.37
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	93	95	99	101	100	107	110	103	104	115	114	1.81
FOOD	94	94	96	102	102	110	111	108	106	121	129	2.98
FEED	86	91	92	105	103	117	120	119	145	194	217	9.59
RAW MATERIALS	89	93	102	100	98	103	108	92	94	100	92	- .42
BEVERAGES	94	99	102	100	98	104	111	100	104	107	88	- .24
FISHERY PRODUCTS	77	89	87	102	111	121	112	116	123	133	152	5.46
FOREST PRODUCTS	65	82	51	100	109	122	146	124	113	142	143	5.80
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	94	100	99	104	98	108	109	102	93	98	84	- 1.25
FOOD	99	106	100	102	98	112	105	99	87	53	82	- 2.19
FEED	106	111	106	110	84	116	95	81	88	167	97	- 1.55
RAW MATERIALS	89	85	90	107	103	102	109	96	91	100	87	-
BEVERAGES	85	93	101	105	94	103	118	112	105	108	86	- .26
FISHERY PRODUCTS	74	85	93	95	108	124	152	151	134	140	118	5.31
FOREST PRODUCTS	82	92	106	99	95	103	121	104	80	98	100	- .26
LATIN AMERICA												
AGRICULTURAL PRODUCTS	91	93	100	103	98	103	107	100	104	114	123	2.19
FOOD	91	88	95	107	99	104	109	107	103	120	141	3.68
FEED	75	75	85	103	113	122	128	142	194	262	334	16.52
RAW MATERIALS	90	96	117	100	84	90	87	77	89	79	86	- 2.76
BEVERAGES	95	104	103	96	101	107	110	91	101	102	78	- 1.62
FISHERY PRODUCTS	87	105	91	102	106	104	58	72	80	79	86	- 3.42
FOREST PRODUCTS	79	98	98	98	104	118	136	117	101	113	116	1.93
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	89	89	94	102	104	111	114	85	86	104	93	- .20
FOOD	86	91	107	94	99	114	122	100	92	112	126	1.98
FEED	91	102	102	109	89	108	76	64	60	48	38	-10.60
RAW MATERIALS	91	87	86	106	108	108	111	76	84	102	75	- 1.40
BEVERAGES	63	81	82	102	116	126	138	101	53	66	81	- 3.05
FISHERY PRODUCTS	89	92	94	94	112	159	193	187	86	71	61	- 2.62
FOREST PRODUCTS	70	74	83	105	110	114	118	122	85	75	75	- .78

ANNEX TABLE 8. INDICES OF VOLUME OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1966-77 PERCENT
	-----1969=100-----											
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	90	95	95	98	106	111	113	111	117	139	139	4.42
FOOD	87	91	87	98	115	122	114	120	135	172	180	7.92
FEED	92	103	90	106	104	114	142	128	128	196	164	7.17
RAW MATERIALS	86	96	102	97	101	104	115	107	101	109	104	1.01
BEVERAGES	108	100	100	102	97	96	97	97	108	113	110	1.23
FISHERY PRODUCTS	68	70	84	101	114	143	186	178	215	256	332	17.91
FOREST PRODUCTS	58	76	87	102	111	125	159	132	122	161	162	8.05
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	114	105	104	95	101	112	126	116	111	109	102	-0.84
FOOD	118	107	102	96	102	106	124	117	109	98	89	-0.44
FEED	98	102	107	84	109	80	96	71	71	102	91	-1.98
RAW MATERIALS	103	98	115	91	94	141	142	111	110	141	137	3.64
BEVERAGES	91	96	94	93	113	114	109	129	132	156	164	6.55
FOREST PRODUCTS	63	68	84	94	122	155	131	108	122	135	135	6.42

ANNEX TABLE 9. INDICES OF VALUE OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....969-71=100.....											
WORLD												
AGRICULTURAL PRODUCTS	85	86	90	101	109	126	183	234	251	258	294	16.82
FOOD	84	84	88	100	111	130	188	254	285	273	295	18.01
FEED	77	77	83	101	115	132	264	248	219	295	359	19.65
RAW MATERIALS	94	94	100	101	99	114	165	197	170	198	220	11.17
BEVERAGES	81	87	87	106	107	122	159	167	183	258	393	16.72
FISHERY PRODUCTS	72	78	85	101	114	139	184	208	210	262	300	16.89
FOREST PRODUCTS	72	81	92	102	106	122	179	235	207	248	266	15.62
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	84	84	90	101	108	127	181	218	235	249	282	16.15
FOOD	81	81	88	100	112	132	186	234	267	262	278	17.21
FEED	78	78	84	102	114	133	269	247	216	289	348	19.13
RAW MATERIALS	96	96	102	102	97	113	163	189	161	187	204	9.97
BEVERAGES	80	87	86	106	108	123	162	168	183	261	400	16.95
FISHERY PRODUCTS	72	78	85	100	114	141	187	210	208	262	306	17.04
FOREST PRODUCTS	72	82	93	102	106	123	181	234	203	245	264	15.31
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	85	83	91	100	109	129	180	210	222	234	274	15.41
FOOD	83	80	89	98	113	133	182	222	246	240	267	16.17
FEED	82	80	86	101	113	127	248	219	192	263	317	17.13
RAW MATERIALS	98	96	105	100	95	112	157	180	151	184	198	9.36
BEVERAGES	80	83	86	108	106	126	171	175	189	263	413	17.69
FISHERY PRODUCTS	77	79	87	101	112	128	175	199	195	224	263	14.80
FOREST PRODUCTS	72	79	91	104	105	122	181	250	209	258	270	16.25
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	82	84	85	106	109	133	195	235	326	350	358	20.86
FOOD	85	84	82	107	112	145	218	254	426	460	431	24.81
FEED	64	72	75	101	124	175	374	402	375	436	507	28.00
RAW MATERIALS	85	89	91	108	101	106	150	200	180	174	201	10.73
BEVERAGES	63	71	89	101	111	131	139	176	215	258	370	18.16
FISHERY PRODUCTS	67	66	76	104	120	114	145	200	201	191	164	12.69
FOREST PRODUCTS	71	80	88	102	110	116	145	200	263	249	256	16.01
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	82	91	91	104	104	117	156	196	181	208	244	12.63
FOOD	75	84	90	104	105	120	159	216	193	189	197	11.80
FEED	73	75	91	110	99	118	214	200	194	265	308	16.88
RAW MATERIALS	114	114	116	99	85	99	146	188	165	220	230	10.26
BEVERAGES	86	100	84	106	110	116	153	149	158	248	363	14.52
FISHERY PRODUCTS	72	85	89	101	110	152	170	186	172	235	260	13.72
FOREST PRODUCTS	78	90	100	92	108	134	164	179	171	211	243	12.19

ANNEX TABLE 9. INDICES OF VALUE OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969=100.....											
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	91	84	93	103	105	111	129	223	238	213	279	15.10
FOOD	84	80	85	105	109	117	135	262	339	267	316	19.22
FEED	84	117	77	107	115	88	58	186	111	29	50	- 7.73
RAW MATERIALS	96	82	99	105	95	100	124	224	155	175	199	10.65
BEVERAGES	95	91	98	94	108	118	129	154	188	183	341	13.49
FISHERY PRODUCTS	78	76	84	94	122	124	164	246	223	212	273	16.14
FOREST PRODUCTS	77	82	90	103	108	100	146	203	219	200	229	13.49
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	90	91	90	100	110	121	188	301	318	298	345	19.66
FOOD	92	93	89	100	110	122	195	323	348	310	353	20.43
FEED	56	60	75	93	133	130	193	272	264	391	525	26.54
RAW MATERIALS	84	86	93	97	110	119	175	239	213	254	299	16.29
BEVERAGES	90	89	98	102	99	106	127	160	183	233	325	14.45
FISHERY PRODUCTS	75	79	83	102	114	125	156	191	221	259	259	15.86
FOREST PRODUCTS	68	78	86	101	112	117	164	241	231	267	287	17.37
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	87	84	85	100	115	128	182	288	349	305	376	21.25
FOOD	87	82	84	99	117	131	191	305	373	313	386	22.17
FEED	61	62	73	101	126	109	174	251	215	299	325	20.74
RAW MATERIALS	86	88	85	99	116	138	175	296	290	276	306	18.41
BEVERAGES	95	100	101	108	91	101	118	150	208	258	353	14.85
FISHERY PRODUCTS	83	72	76	108	116	131	163	211	259	350	317	20.24
FOREST PRODUCTS	67	69	84	105	111	104	147	228	234	233	250	16.53
LATIN AMERICA												
AGRICULTURAL PRODUCTS	87	90	93	99	108	124	191	303	279	278	301	17.95
FOOD	89	92	94	99	107	126	199	320	303	290	310	18.61
FEED	51	56	69	77	154	132	249	294	227	340	511	26.70
RAW MATERIALS	85	91	94	96	109	109	140	227	163	196	220	11.65
BEVERAGES	75	75	94	103	103	119	153	194	168	239	299	15.36
FISHERY PRODUCTS	72	79	83	103	115	107	121	149	176	156	155	8.90
FOREST PRODUCTS	69	83	91	104	104	109	128	224	194	193	192	11.79
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	81	81	79	93	128	131	181	410	516	455	540	28.76
FOOD	79	80	75	92	134	132	189	454	575	489	570	30.54
FEED	49	46	55	98	148	146	187	268	246	537	617	32.11
RAW MATERIALS	91	85	96	98	106	129	147	253	324	333	419	21.24
BEVERAGES	98	95	100	102	98	127	139	194	212	266	389	16.59
FISHERY PRODUCTS	80	76	76	103	121	135	199	347	415	506	512	28.17
FOREST PRODUCTS	76	76	86	98	116	143	178	263	378	461	521	26.28

ANNEX TABLE 9. INDICES OF VALUE OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969-71=100.....											
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	100	98	96	100	104	105	172	231	264	260	269	15.52
FOOD	105	101	97	101	102	105	184	251	288	265	257	15.62
FEED	58	64	84	101	115	124	158	266	296	369	500	25.13
RAW MATERIALS	83	92	93	97	110	110	141	180	197	252	302	14.92
BEVERAGES	88	81	100	97	104	74	96	105	131	174	262	10.34
FISHERY PRODUCTS	76	83	87	101	112	130	173	193	211	249	275	15.48
FOREST PRODUCTS	63	77	85	99	115	113	194	244	207	275	307	17.89
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	85	97	90	110	100	137	243	375	257	242	357	18.09
FOOD	86	107	88	116	96	138	231	388	272	234	376	17.87
FEED	114	102	115	92	93	154	173	193	458	787	1182	32.03
RAW MATERIALS	82	72	94	94	111	136	278	345	215	262	304	18.78
BEVERAGES	156	122	101	99	100	116	149	190	125	106	152	3.49
FOREST PRODUCTS	66	74	70	91	139	150	232	308	218	293	293	19.65

ANNEX TABLE 10. INDICES OF VOLUME OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969-71=100.....											
WORLD												
AGRICULTURAL PRODUCTS	90	93	94	101	104	112	120	115	117	127	128	3.76
FOOD	89	91	93	102	105	114	123	119	122	132	137	4.64
FEED	77	80	89	102	110	119	128	122	123	154	156	7.00
RAW MATERIALS	95	99	99	101	100	106	109	101	100	105	102	.42
BEVERAGES	87	95	97	101	102	108	114	109	116	118	108	2.13
FISHERY PRODUCTS	88	96	95	100	105	116	116	118	121	130	131	3.89
FOREST PRODUCTS	79	89	96	102	102	112	126	122	100	119	123	3.06
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	89	92	95	101	104	113	119	111	114	124	121	3.19
FOOD	89	90	93	101	105	115	123	116	119	131	130	4.27
FEED	78	81	89	102	109	119	130	122	121	151	150	6.59
RAW MATERIALS	96	99	99	102	99	105	105	95	94	99	94	.60
BEVERAGES	86	95	96	101	103	109	115	108	117	118	107	2.11
FISHERY PRODUCTS	88	97	96	100	104	117	117	117	118	128	133	3.73
FOREST PRODUCTS	79	89	97	102	101	112	127	121	98	117	120	2.75
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	91	92	96	100	103	110	113	109	111	119	117	2.69
FOOD	91	91	96	99	105	112	115	113	115	122	122	3.27
FEED	82	83	91	101	108	115	122	111	111	141	140	5.21
RAW MATERIALS	97	99	102	100	97	102	101	89	88	98	91	- 1.17
BEVERAGES	86	91	96	104	100	110	118	111	120	120	111	2.73
FISHERY PRODUCTS	92	100	98	99	103	111	104	104	107	113	118	1.74
FOREST PRODUCTS	80	89	98	103	99	109	127	121	93	118	117	2.46
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	85	87	86	106	109	127	143	123	144	158	150	7.01
FOOD	89	88	82	106	112	142	173	130	164	194	179	9.68
FEED	65	74	79	101	120	154	166	192	200	215	211	13.81
RAW MATERIALS	90	95	91	107	102	102	101	104	106	97	101	.61
BEVERAGES	55	64	94	99	106	114	101	113	131	128	119	5.74
FISHERY PRODUCTS	80	91	86	105	108	94	75	93	113	111	89	.78
FOREST PRODUCTS	75	84	91	104	105	104	108	115	129	123	123	4.29
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	92	101	97	101	102	109	113	107	103	115	111	1.42
FOOD	87	93	95	103	102	110	113	108	100	115	113	1.92
FEED	76	77	94	108	98	104	100	104	109	133	134	4.71
RAW MATERIALS	107	116	108	98	94	107	106	105	106	112	117	.64
BEVERAGES	97	114	96	96	108	108	117	107	111	115	103	.69
FISHERY PRODUCTS	90	105	98	104	98	122	118	117	103	120	119	1.83
FOREST PRODUCTS	86	93	100	95	105	121	123	112	94	113	122	2.12

ANNEX TABLE 10. INDICES OF VOLUME OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969-71=100.....											
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	94	92	96	102	102	106	105	126	123	115	120	3.21
FOOD	100	97	93	103	104	107	111	138	149	127	137	4.98
FEED	80	123	80	108	115	88	40	83	63	18	25	-16.24
RAW MATERIALS	90	89	99	101	100	107	98	125	95	107	101	1.19
BEVERAGES	89	87	99	99	102	107	107	111	119	113	123	3.21
FISHERY PRODUCTS	86	89	95	94	110	101	96	123	116	116	139	4.17
FOREST PRODUCTS	84	89	94	102	104	104	128	143	120	98	111	2.61
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	91	95	93	102	105	108	124	131	130	138	156	5.76
FOOD	92	95	92	103	106	108	125	133	132	139	161	6.06
FEED	55	61	80	94	126	123	103	133	152	210	250	14.15
RAW MATERIALS	88	97	97	98	106	107	130	129	128	136	140	4.83
BEVERAGES	90	94	104	102	94	98	100	111	108	123	123	2.70
FISHERY PRODUCTS	84	90	94	100	106	108	104	110	125	135	123	4.04
FOREST PRODUCTS	73	85	90	101	109	110	117	124	115	129	138	4.95
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	91	91	89	101	110	111	119	129	130	137	171	6.57
FOOD	89	88	87	101	112	113	122	131	130	136	177	7.04
FEED	62	65	75	103	122	103	94	119	113	146	144	7.62
RAW MATERIALS	92	103	90	100	110	121	129	160	161	149	154	6.71
BEVERAGES	107	112	107	102	91	91	86	97	115	129	136	2.32
FISHERY PRODUCTS	82	82	83	108	109	116	128	144	144	186	173	9.34
FOREST PRODUCTS	71	68	85	105	110	94	108	127	111	116	123	5.20
LATIN AMERICA												
AGRICULTURAL PRODUCTS	89	95	96	100	104	111	124	147	131	142	157	6.09
FOOD	90	95	96	101	103	111	128	151	137	148	164	6.74
FEED	53	55	72	84	143	122	113	145	120	178	237	13.73
RAW MATERIALS	86	99	93	96	110	105	107	118	101	110	113	1.74
BEVERAGES	84	87	106	97	97	105	111	139	101	122	109	2.67
FISHERY PRODUCTS	83	90	97	99	104	95	78	81	99	83	79	-1.93
FOREST PRODUCTS	75	91	95	106	99	101	99	119	101	95	99	.64
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	83	86	83	97	120	110	112	150	175	185	215	11.19
FOOD	81	84	80	96	125	108	114	155	183	192	228	12.23
FEED	45	49	59	100	141	131	105	114	121	228	241	15.58
RAW MATERIALS	94	95	96	99	105	125	108	136	179	173	185	8.67
BEVERAGES	91	91	100	106	93	110	102	122	112	133	128	3.75
FISHERY PRODUCTS	81	82	85	104	110	125	152	191	248	311	290	17.53
FOREST PRODUCTS	83	80	94	96	110	126	125	131	155	187	206	10.34

ANNEX TABLE 10. INDICES OF VOLUME OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	ANNUAL RATE OF CHANGE 1968-77 PERCENT
	.....1969-71=100.....											
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	99	100	97	102	101	98	118	108	119	130	128	3.35
FOOD	104	100	97	103	100	99	121	109	119	126	122	2.95
FEED	54	64	89	98	113	121	94	132	178	217	252	14.11
RAW MATERIALS	89	104	99	97	104	96	110	102	119	136	138	3.62
BEVERAGES	74	82	103	97	100	95	111	103	117	132	143	4.92
FISHERY PRODUCTS	90	94	95	100	105	111	110	111	120	130	127	3.69
FOREST PRODUCTS	69	87	91	98	111	113	132	122	112	140	153	5.74
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	83	97	93	112	95	124	159	156	113	110	153	4.37
FOOD	82	102	91	118	91	126	148	149	107	100	157	3.51
FEED	109	100	113	96	91	130	91	109	270	330	413	16.80
RAW MATERIALS	84	83	97	98	105	120	190	173	129	136	141	6.55
BEVERAGES	167	129	111	91	96	111	153	180	136	111	122	2.28
FOREST PRODUCTS	74	80	72	87	141	152	174	185	146	163	163	9.96

ANNEX TABLE 11. CARRY-OVER STOCKS OF SELECTED AGRICULTURAL PRODUCTS

Product	Country	Date	1961-65 average	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978 ^{a/}	
. million metric tons														
<u>Wheat</u>														
EXPORTING COUNTRIES														
United States		1 June ^{b/}	30.7	22.2	26.8	22.4	26.8	16.2	9.3	11.8	18.1	30.3	32.0	
Canada		1 Aug.	13.3	23.2	27.5	20.0	16.0	9.9	10.1	8.0	8.0	13.4	12.2	
Argentina		1 Dec.	1.5	0.3	0.8	0.7	0.5	0.1	1.1	1.1	0.7	1.0	0.3	
Australia		1 Dec.	0.6	7.3	7.2	3.5	1.4	0.5	1.9	1.7	2.7	2.1	0.5	
European Economic Community		1 Aug.	6.5	9.1	5.5	5.8	7.5	6.1 ^{c/}	7.3	10.3	8.2	8.4	8.6	
TOTAL OF ABOVE			52.6	62.1	67.8	52.4	52.2	32.8	29.7	32.9	37.7	55.2	53.6	
IMPORTING COUNTRIES														
India ^{d/}		1 April	...	2.3	1.6	2.4	3.4	0.5	0.8	1.0	4.9	11.1	9.1	
<u>Coarse grains</u> ^{e/}														
EXPORTING COUNTRIES														
United States ^{f/}		1 July	62.7	46.0	44.6	32.2	46.6	31.7	21.8	15.4	17.3	30.0	40.1	
Canada		1 Aug.	4.3	6.7	6.9	5.4	6.2	5.8	6.2	5.6	4.4	5.0	7.7	
Argentina		1 April	0.3	0.3	0.3	0.8	0.3	0.3	0.7	0.4	0.1	0.8	0.3	
Australia		1 Dec.	0.2	1.2	1.2	1.6	1.0	0.5	0.5	0.3	0.3	0.2	0.2	
TOTAL OF ABOVE			67.5	54.2	53.0	40.0	54.1	38.3	29.2	21.1	22.7	36.0	48.3	
<u>Rice (milled equivalent)</u>														
EXPORTING COUNTRIES														
Pakistan ^{g/}		31 Oct.	...	...	0.38	0.26	0.38	0.10	0.30	0.58	0.39	0.12	...
Thailand		31 Dec.	...	...	...	0.96	0.70	0.17	0.80	0.96	0.95	0.66	...
United States ^{h/}		31 July	0.25	0.54	0.55	0.62	0.38	0.17	0.26	0.23	1.20	1.32	0.90	
Japan ^{g/}		31 Oct.	-	5.02	6.53	5.34	2.79	1.34	0.80	1.13	2.49	3.67	...	
TOTAL OF ABOVE			...	...	...	7.18	4.25	17.8	2.16	2.90	5.03	5.77	5.30
IMPORTING COUNTRIES														
India ^{g/}		31 Oct.	...	...	1.20	1.56	1.00	0.57	0.47	1.19	4.43	4.36	...
<u>Dried skim milk</u>														
United States			0.18	0.10	0.06	0.04	0.02	0.03	0.14	0.21	0.23	0.32	...	
European Economic Community			0.03	0.41	0.20	0.12	0.29	0.33	0.50	1.11	1.20	1.03	...	
TOTAL OF ABOVE			31 Dec.	0.21	0.51	0.26	0.16	0.31	0.36	0.64	1.32	1.43	1.35	...
<u>Sugar (raw value)</u>														
WORLD TOTAL														
		1 Sept.	14.1	19.2	21.2	18.8	16.9	16.0	16.0	17.5	20.7	25.5	31.0	
<u>Coffee</u>														
EXPORTING COUNTRIES ^{i/}														
			4.30 ^{j/}	4.15	3.92	3.28	3.29	3.35	2.46	3.00	2.61	1.76	...	

a/ Estimated. - b/ 1961-69, 1 July. - c/ Commercial stocks. - d/ Government (or official agency) stocks only; 1968-69, 31 December. - e/ Barley, oats, maize, sorghum, and rye. - f/ Maize and sorghum, 1 October. - g/ Government stocks only. - h/ Including paddy converted to milled rice at 72%. - i/ 1961-69; excludes privately held stocks in Brazil. - j/ 1963-66.

ANNEX TABLE 12. - ANNUAL CHANGES IN CONSUMER PRICES: ALL ITEMS AND FOOD

Region and country	All items						Food					
	1960 to 1965	1965 to 1970	1970 to 1975	1974 to 1975	1975 to 1976	1976 to 1977	1960 to 1965	1965 to 1970	1970 to 1975	1974 to 1975	1975 to 1976	1976 to 1976
..... Percent per year												
<u>Developed countries</u>												
WESTERN EUROPE												
Austria	3.9	3.3 ^{a/}	7.4	8.5	7.3	5.5	4.4	2.1 ^{a/}	6.7	6.3	5.9	6.3
Belgium	2.5	3.5	8.3	12.7	9.2	7.1	2.9	3.5	7.5	11.2	11.8	6.1
Denmark	5.5	7.5	9.5	9.6	9.0	11.1	4.2	7.5	10.7	11.1	10.8	11.6
Finland	5.3	4.6 ^{b/}	2.0	17.8	14.4	12.6	5.9	5.2 ^{b/}	12.4	20.6	16.3	18.6
France	3.8	4.3	8.8	11.6	9.6	9.1	4.3	3.8	9.6	11.4	10.8	11.7
Germany, Fed. Rep. of	2.8	2.4	6.2	6.0	4.5	3.9	2.6	1.3	5.6	5.3	5.1	2.1
Greece	1.6	2.5	13.1	13.4	13.3	12.1	2.5	2.6	14.7	11.8	13.8	14.0
Iceland	11.0	12.8	24.8	48.9	32.2	30.0	15.2	13.3	28.3	50.8	36.0	33.8
Ireland	4.2	5.3	13.0	20.9	18.0	13.7	3.9	4.3	14.3	21.5	16.5	16.4
Italy	4.9	3.0	11.4	17.0	16.8	18.4	4.6	2.2	11.6	18.0	17.1	19.3
Netherlands	3.5	4.8	8.6	10.2	8.8	6.7	4.0	4.3	6.9	8.0	9.9	6.7
Norway	4.1	5.0	8.3	11.7	9.2	9.1	4.5	5.3	8.3	15.0	10.2	8.3
Portugal	2.6	6.4	15.3	15.2	21.0	23.9	2.8	5.2	16.3	23.6	23.3	30.1
Spain	7.0	5.1	12.0	16.9	17.7	24.5	7.7	3.7	12.1	17.0	18.7	23.6
Sweden	3.6	4.5	7.8	9.8	10.3	11.4	5.3	4.5	7.9	11.7	12.9	14.6
Switzerland	3.2	3.4	7.9	6.7	1.7	1.3	2.9	0.9	7.3	6.2	-1.3	1.4
United Kingdom	3.6	4.6	12.3	24.3	16.5	15.9	3.6	4.6	15.1	25.7	19.9	19.0
Yugoslavia	13.6	10.5	19.3	24.3	11.7	15.8	17.3	9.0	19.1	24.5	14.1	20.2
NORTH AMERICA												
Canada	1.6	3.8	7.4	10.8	7.5	8.0	2.2	3.4	11.1	12.9	2.6	8.4
United States	1.3	4.2	6.7	9.1	5.8	6.5	1.4	4.0	9.5	8.5	3.1	6.3
OCEANIA												
Australia	1.8	3.1	10.2	15.1	13.6	12.3	2.0	2.1	9.8	7.5	12.3	11.6
New Zealand	2.7	4.1	9.8	14.7	17.0	14.3	2.4	4.1	9.4	10.6	18.5	17.1
OTHER DEVELOPED COUNTRIES												
Israel	7.1	4.0	23.9	39.3	31.3	34.6	5.6	3.1	25.1	46.1	27.7	41.9
Japan	6.0	5.4	12.0	11.9	9.3	2.1	7.2	6.1	13.0	13.0	9.1	6.7
South Africa	2.1	3.4	9.3	13.5	11.2	11.2	2.6	3.0	11.7	14.9	7.4	10.3
<u>Developing countries</u>												
LATIN AMERICA												
Argentina	23.0	19.4	59.5	182.8	444.1	176.0	23.0	18.3	58.0	187.6	458.6	...
Bolivia	5.1	5.9	23.7	7.9	4.5	8.1	2.1	7.8	27.2	5.3	57.6	8.2
Brazil	60.0	28.0	23.5 ^{c/}	30.2	35.3	40.5	60.0	26.0	25.9 ^{c/}	29.2	34.5	39.1
Chile	27.0	26.0	225.4	374.7	211.9	92.9	30.0	26.0	245.5	359.6	212.8	175.5
Colombia	12.4	10.1	19.5	25.7	17.4	30.0	13.4	9.2	24.0	31.0	16.9	36.3
Costa Rica	2.3	2.5	14.3	17.3	3.5	4.2	2.2	3.8	14.9	16.3	-0.2	4.0
Dominican Republic	2.7	1.0	11.1	14.5	7.8	12.8	2.5	0.1	13.3	17.7	-2.8	9.3
Ecuador	4.0	4.6	13.7	15.3	10.7	13.0	4.9	6.0	18.4	18.6	9.5	15.7
El Salvador	0.2	1.1	8.4	19.2	7.0	11.8	1.1	2.2	8.8	20.6	6.9	8.7
Guatemala	0.1	1.5	2.9	...	10.7	12.6	0.1	1.7	3.3	...	9.6	11.2
Guyana	1.9	1.5	8.2	8.0	9.0	8.2	2.3	2.8	12.2	8.4	13.8	8.5
Haiti	3.7	1.7	13.7	16.7	6.7	6.9	4.1	1.8	15.5	18.5	6.9	7.8
Honduras	2.7	1.6	6.5	6.2	5.1	8.4	3.2	1.8	8.0	7.9	6.0	10.9
Jamaica	2.9	4.3	14.9	17.5	9.7	11.2	2.4	4.7	17.2	17.7	9.0	9.4
Mexico	1.9	3.5	12.4	15.0	15.8	29.1	1.6	3.8	13.9	12.6	12.7	28.6

See notes at end of table

ANNEX TABLE 12. - ANNUAL CHANGES IN CONSUMER PRICES: ALL ITEMS AND FOOD (concluded)

Region and country	All items						Food					
	1960 to 1965	1965 to 1970	1970 to 1975	1974 to 1975	1975 to 1976	1976 to 1977	1960 to 1965	1965 to 1970	1970 to 1975	1974 to 1975	1975 to 1976	1976 to 1977
Percent per year												
LATIN AMERICA (concluded)												
Panama	1.1 ^{d/}	1.6	7.8	5.5	2.3	8.6	1.4 ^{d/}	1.7	9.9	6.8	1.2	5.8
Paraguay	...	1.2	12.6	6.7	4.5	9.4	...	0.3	15.4	4.6	4.2	11.3
Peru	9.4	7.8 ^{e/}	12.1	23.7	33.4	38.1	10.5	7.1 ^{e/}	13.9	32.8	32.1	40.3
Puerto Rico	2.2	3.2	8.8	8.6	2.0	4.4	3.0	4.1	12.6	8.9	-0.6	5.5
Trinidad and Tobago	2.2 ^{f/}	3.8	13.7	17.0	10.3	11.8	2.1 ^{f/}	3.7	17.1	16.7	7.4	6.9
Uruguay	16.2 ^{f/}	60.0	73.4	81.4	50.7	58.1	13.1 ^{f/}	60.0	76.0	70.9	47.6	64.0
Venezuela	1.7 ^{g/}	1.6	5.5	10.2	7.7	7.7	1.7 ^{g/}	0.9	8.5	14.7	8.8	12.4
FAR EAST												
Bangladesh	...	4.0 ^{b/}	39.0 ^{h/}	24.4	-9.6	10.3	...	3.2 ^{b/}	42.0 ^{h/}	20.8	-19.5	10.1
Burma	...	6.4 ^{b/}	17.8	31.6	25.8	-3.8	...	2.9 ^{b/}	21.0	35.8	22.5	-3.0
Dem. Kampuchea	4.3	4.5	100.9	...	...	...	2.7	6.7	112.8	...	...	...
India	6.1	8.9 ^{i/}	13.2	5.6	-7.8	8.4	6.5	9.8 ^{i/}	14.2	4.4	-12.6	9.9
Indonesia	...	100.0	21.3	19.0	19.9	11.1	...	100.0	25.2	20.5	22.1	10.7
Korea, Rep. of	15.4	12.3	14.3	25.4	15.3	10.2	18.3	12.5	16.8	31.9	17.8	11.6
Lao People's Dem. Rep.	38.0	6.0	35.2	84.3	...	...	39.0	4.0	40.9	88.0	...	...
Malaysia (peninsular)	0.5	0.4 ^{b/}	6.7	6.7	2.1	4.7	0.6	0.4 ^{b/}	10.4	7.2	0.8	5.5
Nepal	...	6.2	10.3	11.8	-2.2	7.3	...	7.2	9.8	9.1	-7.5	9.9
Pakistan	2.6	5.6	15.2	20.9	7.2	10.1	3.8	6.0	16.6	22.6	6.0	11.3
Philippines	4.8	3.6 ^{a/}	18.7	9.2	9.2	9.9	6.8	5.2 ^{a/}	20.1	6.8	9.2	9.6
Sri Lanka	1.7	4.2	8.0	6.8	1.2	1.2	1.3	4.9	9.1	7.7	-1.1	0.6
Thailand	1.5	2.5	9.8	4.1	4.9	8.5	2.0	4.2	11.9	4.1	5.5	11.5
NEAR EAST												
Cyprus	0.3	2.9	8.0	4.6	3.8	...	0.2	3.2	10.2	9.2	2.6	...
Egypt	3.2	3.2 ^{j/}	5.8	9.7	10.3	12.7	6.5	6.2 ^{j/}	8.6	12.1	14.8	14.3
Iran	2.0	1.4	9.6	12.8	11.3	27.2	3.1	0.9	10.0	12.2	6.9	18.8
Iraq	...	3.5	11.3	9.4	10.4	7.7	...	3.1 ^{b/}	18.1	13.5	4.5	12.9
Jordan	...	2.8 ^{b/}	6.0	12.0	15.0	31.2	...	3.1 ^{b/}	9.2	15.7	21.9	44.1
Lebanon	...	1.8 ^{e/}	4.5	7.6 ^{j/}	...	...	...	2.0 ^{e/}	-3.5	11.4 ^{l/}	...	...
Libya	...	6.1 ^{a/}	16.4	9.2	5.4	6.2	...	8.3 ^{a/}	15.9	7.2	12.8	12.1
Sudan	3.3	3.4 ^{a/}	11.6	24.0	1.7	16.8	4.2	2.8 ^{a/}	12.0	28.1	1.8	18.8
Syria	1.3 ^{d/}	4.2	16.7	16.1	14.8	...	1.3 ^{d/}	4.7	18.2	18.9	14.1	...
Turkey	3.6	7.1 ^{k/}	6.2	20.1	15.3	28.4	4.8	8.7 ^{k/}	7.7	30.0	17.9	30.6
AFRICA												
Algeria	...	...	5.1	8.3	9.4	11.6 ^{l/}	...	...	7.2	11.3	14.7	14.5 ^{l/}
Cameroon	...	3.3 ^{k/}	10.2	13.5	9.9	14.6	...	4.6 ^{k/}	11.5	16.1	11.2	23.5
Ethiopia	...	3.0 ^{e/}	3.7	6.5	28.5	16.7	...	3.5 ^{e/}	2.7	4.4	41.9	16.8
Gabon	4.4 ^{d/}	3.0	11.4	28.4	28.5 ^{m/}	...	3.3 ^{d/}	2.1	2.7	...	10.4 ^{m/}	...
Gambia	...	...	10.5	26.0	17.0	12.4	...	...	12.8	34.4	19.3	12.5
Ghana	11.8	3.7	17.4	41.2	169.3	87.3 ^{j/}	14.0	2.1	20.3	36.7	64.1	98.8 ^{l/}
Ivory Coast	2.6	4.9	8.2	11.4	12.0	27.4	2.8	5.9	9.3	10.4	7.2	40.0
Kenya	2.0	1.7	13.9 ^{e/}	18.4	10.9	10.3	1.9	2.0	14.7	21.0	6.3	11.8
Liberia	...	4.4	12.1	13.6	5.6	6.2	...	3.4	13.7	15.4	-0.6	9.9
Madagascar	...	2.3	9.7	8.3	5.0	3.0	...	2.2	12.0	6.8	3.8	1.4
Malawi	...	2.0 ^{b/}	8.9	15.5	4.3	4.2	...	3.4 ^{b/}	10.7	19.1	2.3	1.7
Mauritius	1.0 ^{d/}	3.0	13.1	14.7	11.4	9.2	0.6 ^{d/}	3.0	14.7	16.0	6.3	18.6
Morocco	4.0	0.6	5.4 ^{n/}	7.9	8.5	12.6	4.6	0.1	7.2 ^{h/}	7.6	10.2	13.8
Mozambique	1.9 ^{e/}	3.7	10.5	3.3	4.5	...	0.7 ^{e/}	4.7	11.1	11.7	8.3	...
Niger	...	3.8	7.9	9.1	23.6	23.3	...	4.4	10.6	8.2	25.9	26.7
Nigeria	3.2	5.6	11.5	31.7	21.8	21.1	2.0	8.8	13.1	42.9	25.2	33.4
Senegal	...	...	13.0	30.3	2.7	9.6	...	...	16.5	3.9	-	11.9
Sierra Leone	3.9 ^{n/}	4.3	8.4	19.9	17.1	8.3	0.6 ^{n/}	4.8	11.0	23.2	17.4	7.3
Somalia	7.4	2.5 ^{e/}	7.5	19.3	14.1	10.6	7.5	2.8 ^{e/}	9.1	20.8	18.4	13.2
Swaziland	...	2.7 ^{b/}	9.3	12.1	6.4	16.5	...	2.5 ^{b/}	9.8	12.0	5.9	18.9
Tanzania	1.2	3.7	13.1	26.1	6.9	11.6	1.2	2.5	17.7	30.6	-0.2	13.9
Togo	...	2.1 ^{e/}	8.9	18.3	11.6	21.3	...	2.6 ^{e/}	9.7	24.6	11.8	27.3
Tunisia	4.5	2.9	4.8	9.5	5.4	6.7	4.8	3.1	5.2	9.5	6.4	5.0
Uganda	5.4	4.0	23.4	17.0	58.9	...	7.3	3.5	24.3	20.7	65.7	...
Zaire	15.6 ^{p/}	23.0 ^{k/}	18.6	27.6	63.3	65.4	19.0 ^{p/}	22.0 ^{k/}	21.2	30.6	67.0	70.3 ^{l/}
Zambia	2.4	8.7 ^{k/}	7.1	10.0	18.9	21.3 ^{j/}	2.4	8.8 ^{k/}	7.4	11.3	22.5	20.0 ^{l/}

Source: International Labour Office, *Bulletin of Labour Statistics*, Geneva, third quarter, 1978.

a/ 1965-69. - b/ 1967-70. - c/ 1972-75. - d/ 1962-65. - e/ 1966-70. - f/ 1960-62. - g/ 1962-65. - h/ 1973-75.
i/ 1965-68. - j/ January-June. - k/ 1968-70. - l/ January-August. m/ January-July. - n/ 1970-74. - o/ 1961-65.
p/ 1963-65.

ANNEX TABLE 13. - PER CAPUT DIETARY ENERGY SUPPLIES IN RELATION TO NUTRITIONAL REQUIREMENTS, SELECTED DEVELOPING COUNTRIES AND AREAS

	Average 1969-71	Average 1972-74	1970	1971	1972	1973	1974	Requirements
. Percent of requirements								Kilocalories per caput per day
AFRICA	92	91	92	92	91	90	91	2 340
Algeria	78	86	77	79	84	86	88	2 400
Angola	85	85	85	86	85	84	86	2 350
Benin	96	89	97	95	92	87	87	2 300
Botswana	91	87	90	94	89	87	85	2 320
Burundi	99	101	99	99	101	102	99	2 330
Cameroon	104	103	103	105	104	102	102	2 320
Central African Empire	96	103	97	99	102	104	102	2 260
Chad	88	74	89	83	76	72	75	2 380
Congo	99	102	97	101	106	103	98	2 220
Ethiopia	93	90	94	93	92	89	82	2 330
Gabon	97	97	95	97	97	96	98	2 340
Gambia	97	97	98	97	96	96	98	2 380
Ghana	99	100	99	99	100	99	101	2 300
Guinea	90	86	90	90	88	87	84	2 310
Ivory Coast	113	114	114	113	113	113	115	2 310
Kenya	97	92	98	99	93	92	91	2 320
Lesotho	96	97	95	97	90	99	100	2 280
Liberia	84	86	84	85	84	86	87	2 310
Madagascar	108	104	108	107	105	102	105	2 270
Malawi	101	104	103	104	104	105	103	2 320
Mali	88	75	88	88	75	74	75	2 350
Mauritania	86	81	87	85	79	82	82	2 310
Mauritius	105	107	106	108	109	105	108	2 270
Morocco	102	107	102	105	107	107	108	2 420
Mozambique	86	85	86	85	84	87	84	2 340
Niger	85	79	83	82	79	81	78	2 350
Nigeria	89	88	89	91	90	85	88	2 360
Rhodesia	100	104	96	102	103	99	108	2 390
Rwanda	94	91	96	95	91	91	90	2 320
Senegal	94	92	91	94	84	94	97	2 380
Sierra Leone	100	98	100	100	99	98	97	2 300
Somalia	81	83	80	83	86	84	79	2 310
Swaziland	89	91	90	94	93	92	89	2 320
Tanzania	85	84	88	83	82	85	86	2 320
Togo	94	94	94	96	95	92	96	2 300
Tunisia	93	99	93	96	99	98	102	2 390
Uganda	96	92	97	96	95	91	90	2 330
Upper Volta	78	73	80	73	71	70	78	2 370
Zaire	91	83	92	87	82	83	85	2 220
Zambia	86	87	84	87	87	85	89	2 310
FAR EAST	94	92	94	95	93	90	93	2 220
Bangladesh	84	84	85	82	82	83	88	2 310
Bhutan	89	90	89	89	90	90	90	2 310
Brunei	108	113	108	110	113	113	114	2 240
Burma	101	99	101	101	93	100	103	2 160
Democratic Kampuchea	100	94	97	100	99	99	85	2 220
Hong Kong	114	114	113	118	114	116	111	2 290
India	92	89	92	94	93	85	89	2 210
Indonesia	91	94	92	91	88	95	99	2 160
Korea, Rep. of	115	117	117	121	119	117	115	2 350
Lao People's Dem. Rep.	95	94	96	93	92	94	94	2 220
Malaysia								
Sabah	120	125	119	120	124	125	127	2 230
Sarawak	114	113	115	113	113	113	113	2 230
Peninsular Malaysia	111	113	113	110	111	114	115	2 240

ANNEX TABLE 13. - PER CAPUT DIETARY ENERGY SUPPLIES IN RELATION TO NUTRITIONAL REQUIREMENTS, SELECTED DEVELOPING COUNTRIES AND AREAS (concluded)

	Average 1969-71	Average 1972-74	1970	1971	1972	1973	1974	Requirements
	. . . . . Percent of requirements							Kilocalories per caput per day
FAR EAST (concluded)								
Nepal	93	92	94	90	87	93	95	2 200
Pakistan	93	92	93	93	93	91	92	2 310
Philippines	86	86	85	85	85	87	87	2 260
Singapore	118	123	119	122	122	124	123	2 300
Sri Lanka	104	94	107	100	95	94	91	2 220
Thailand	103	104	103	104	102	104	107	2 220
Viet Nam, Socialist Rep. of	105	106	106	106	105	107	105	2 160
LATIN AMERICA	106	107	106	106	106	106	107	2 380
Argentina	126	124	128	124	122	121	128	2 650
Bolivia	76	78	76	77	79	77	77	2 390
Brazil	105	106	103	104	106	107	105	2 390
Chile	115	112	113	117	115	106	116	2 440
Colombia	93	93	92	94	93	92	94	2 320
Costa Rica	110	112	111	112	112	111	113	2 240
Cuba	115	118	115	119	119	119	117	2 310
Dominican Republic	90	95	88	90	94	95	98	2 260
Ecuador	90	91	91	88	90	91	93	2 290
El Salvador	80	82	79	82	82	81	84	2 290
Guatemala	92	91	92	91	91	91	91	2 190
Guyana	104	103	104	103	100	106	104	2 270
Haiti	87	90	87	87	90	90	90	2 260
Honduras	96	91	99	94	92	90	90	2 260
Jamaica	111	118	112	116	122	113	119	2 240
Mexico	114	116	115	114	114	116	117	2 330
Nicaragua	107	106	107	106	107	104	106	2 250
Panama	111	101	109	111	99	99	105	2 310
Paraguay	120	118	121	120	119	117	118	2 310
Peru	98	99	99	99	98	99	100	2 350
Uruguay	113	112	114	109	108	112	115	2 670
Venezuela	97	97	97	97	96	97	98	2 470
NEAR EAST	98	99	98	98	99	99	100	2 460
Afghanistan	80	82	78	77	80	83	83	2 440
Cyprus	118	119	116	120	122	122	113	2 480
Egypt	107	105	106	106	106	104	105	2 510
Iran	90	97	90	88	95	97	98	2 410
Iraq	95	99	95	97	98	99	101	2 410
Jordan	94	90	92	93	93	87	90	2 460
Lebanon	100	101	100	101	101	101	101	2 480
Libya	108	114	108	108	111	115	117	2 360
Saudi Arabia	98	100	97	98	96	100	102	2 420
Sudan	89	88	90	91	89	87	88	2 350
Syria	99	102	98	101	101	101	104	2 480
Turkey	112	112	112	114	112	112	113	2 520
Yemen Arab Republic	76	82	71	81	82	83	82	2 420
Yemen, People's Dem. Rep. of	92	85	94	88	85	85	85	2 410

SOURCE: FAO food balance sheets.

ANNEX TABLE 14. - MAIN FEATURES OF CURRENT DEVELOPMENT PLANS

Region and country	Average annual growth rate (from UN/FAO reference data)		Duration and Scope of Plan ^{a/}	Targets indicated in national development plan												
				Planned growth rate of:						Planned investment ^{b/}						
				GDP	Total employment	Agricultural production		Fertilizer consumption	Export earnings		Share of total investment in GDP	Share of public investment in total investment	Share of agriculture in:		Share of expenditure in land and water development in total investment ^{c/}	Share of external resources in total plan outlay
						Total	Cereals		Total	Agriculture			Total investment	Public investment		
LATIN AMERICA				Percent per year												
Bolivia	2.5	5.0	1976-80C/AS	7.7 ^{i/}	2.9	7.4	6.8	9.2	...	17.9	26.0 ^{g/}	70.0 ^{h/}	9.6	10.1	...	31.0
Brazil	2.9	4.7	1975-79C	10.0	3.5	7.0	8.4	14.1	20.0	8.5	25.0 ^{g/}	19.0	6.0	3.5	...	...
Chile	1.8	0.9	1975-80A&E	6.6 ^{f/}	4.0 ^{i/}	4.8 ^{i/}	7.5	...	...	11.8	13.0 ^{g/}	47.0	...	...	...	...
Costa Rica	2.8	4.1	1974-78C	5.0-6.5 ^{h/}	5.3	4.7	...	...	9.6	9.1	27.0 ^{g/}	27.9	15.0	...	...	24.8
Dominican Rep.	3.3	5.6	1976-79AS	...	...	5.2	...	...	...	4.2	...	...	...	...	...	...
El Salvador	3.2	3.2	1977-82C/AS	7.5	3.6	5.5	4.9	8.4	7.1	5.1	24.0	41.9	...	...	14.0	...
Guatemala	3.0	4.6	1975-79C	9.1	3.1	5.0	4.7	13.2	7.0	3.7	13.6 ^{g/}	44.0	...	13.2	...	28.1
Haiti	1.5	2.6	1976-81C/AS	5.0	...	3.0	4.7	...	9.3	8.0	19.9 ^{g/}	67.0	15.0	18.8	29.0	50.0
Honduras	3.5	3.2	1974-78C	7.0	6.1 ^{i/}	8.1	5.7	...	...	7.9	...	33.6	13.8	11.2	...	25.8
Nicaragua	3.3	3.6	1975-79PS	6.1	1.7	6.5	...	...	...	...	...	...	...	...	...	...
Panama	2.9	4.1	1976-80PS	7.0	2.5	5.7	3.7	14.0 ^{g/}	7.2	9.5	16.0 ^{g/}	54.4	4.9	7.6	...	28.0
Peru	3.0	4.9	1975-78C	6.5 ^{f/}	2.5	4.5 ^{g/}	...	...	15.6	...	18.5 ^{g/}	50.0	6.4	12.8	7.1	16.0
Venezuela	3.0	2.7	1976-80PS	8.2	0.5	9.6	10.6	18.0	25.4	11.0	25.0	53.0	9.0	7.0	3.0	...
FAR EAST				Percent per year												
Bangladesh	1.7	2.5	1973-78C	5.5 ^{f/}	3.0	4.6	6.4 ^{g/}	6.0	7.5	...	12.8 ^{g/}	87.5	23.8	26.3	...	40.0
Fiji	2.1	...	1975-80C	7.0	3.0	4.6	13.4 ^{g/}	...	8.5	8.6	22.7 ^{g/}	54.0	...	21.8	16.8	...
India	2.5	1.9	1974-79C	4.4	...	3.9	3.6	...	8.3	...	18.2	61.0	...	12.0	...	8.4
Indonesia	2.6	5.0	1974-79C	7.5 ^{f/}	...	4.6	4.4	...	23.5	...	21.1 ^{g/}	44.0	...	19.1	...	22.0
Korea, Rep. of	2.0	4.5	1977-81C	9.0 ^{f/}	3.1	4.0	3.3	...	16.0	...	25.4 ^{g/}	...	11.2	...	...	...
Malaysia	2.8 ^{g/}	3.0	1976-80C	8.5	3.3	7.3	...	...	13.4	...	27.8	40.3	10.7	25.5	5.9	12.8
Thailand	3.3	4.8	1977-81C	7.0	2.3	5.0	...	...	14.0	...	11.1	41.9	15.5	36.9	10.5	12.8
NEAR EAST				Percent per year												
Afghanistan	2.4	3.3	1976-83C	6.2	2.1	4.7	...	...	8.2	...	19.1	84.7	18.2	24.7	...	65.8
Iran	3.0	4.7	1973-78C	25.9	3.0	7.0	9.0	22.6	...	...	26.0	66.0	11.4	12.8	...	0.0
Libya	4.1	4.8	1976-80C	10.7	6.5	15.8	9.0	...	7.9	...	30.5	87.0	12.0	12.0	...	0.0
Saudi Arabia	3.0	5.5	1975-80C	10.2	7.8	4.0	...	...	...	...	30.0	...	8.0	...	...	0.0
Somalia	2.6	2.3	1974-78PS	...	...	...	...	...	...	...	...	...	...	40.0	22.0	66.0
Sudan	3.1	3.5	1977-83C	7.5	...	6.5	...	...	11.0	11.0	22.0	58.0	26.0	30.0	...	52.0
Syrian Arab Rep.	3.3	4.9	1976-80C	12.0	4.9	8.0-10.0 ^{h/}	9.7	...	7.0	...	29.0	83.0	3.5	4.3	20.0	...
Turkey	2.5	3.5	1973-77C	7.9	6.2	4.6	3.4	15.6	9.4	2.8	24.2	56.3	11.7	52.7	5.0	3.6
Yemen Arab Rep.	3.0	4.5	1976-80C	8.2	1.7	5.5 ^{g/}	5.2	31.0	12.3	...	47.0	48.3	14.2	12.7	56.7	41.2
Yemen, People's Dem. Rep. of	2.9	1.8	1975-79C	13.4	7.2	10.8	8.6	...	20.0	...	21.4	99.0	36.8	37.0	29.4	55.0
AFRICA				Percent per year												
Burundi	2.4	2.1	1973-77C	...	...	...	...	...	...	...	...	...	39.0	...	...	80.5
Cameroon	1.9	2.6	1976-81C	7.1	6.2	...	...	...	...	...	19.5	70.7	17.3	16.6	...	...
Congo	2.5	3.3	1975-77C	...	...	...	...	...	...	...	29.0	100.0	15.0	...	...	0.0
Gabon	1.0	4.3	1976-80C	5.5	6.7	3.5	...	...	3.7	...	49.0	68.0	3.5	4.5	...	...
Gambia	1.9	4.3	1975-80C	...	...	4.7	7.0	...	...	...	...	...	14.9	...	...	...
Ghana	2.7	5.1	1975-80C	5.5	...	...	...	...	2.0	...	...	...	...	...	...	...
Guinea	2.4	2.5	1973-78C	...	...	...	...	...	...	...	...	34.4	3.6	9.4	...	...
Ivory Coast	2.5	3.6	1976-80C	8.7	...	6.9	10.7	...	8.3	5.6	32.0	51.9	13.6	26.2	...	...
Kenya	3.3	1.8	1974-78C	8.0	3.2	5.2	7.0	...	7.0	2.2	26.3	31.6	...	22.3	...	15.2
Lesotho	1.9	...	1976-80C	7.9	2.1	6.5	2.3	...	22.0	...	13.5	...	...	32.6	5.0	...
Liberia	2.3	2.8	1976-80C	6.8	3.0-3.5	...	...	...	13.0	...	9.0	...	19.3	19.3	...	60.5
Madagascar	3.0	2.3	1973-77C	3.2	...	3.0	...	...	6.0	...	15.0	61.5	23.2	31.1	...	30.0
Malawi	2.4	6.3	1971-80C	8.2	...	5.4	...	...	10.0	9.0	23.8	36.7	8.2	19.3	...	...
Mali	2.5	5.4	1974-78C	7.1	...	4.5	...	...	8.1	...	36.0	...	33.7	...	...	85.0
Mauritius	1.8	2.8	1975-80C	6.9	4.7	...	...	...	...	...	28.0	...	...	...	...	32.0
Niger	2.7	-1.2	1976-78C	...	...	...	...	...	...	...	64.7	...	21.7	33.6	...	60.0
Nigeria	2.7	2.9	1975-80C	9.5	2.6	5.0	5.0	...	5.0	0.6	26.6	66.7	8.3	6.5	...	0.0
Senegal	2.9	0.5	1977-81C	5.8	2.2	...	...	12	...	...	...	...	...	...	...	...
Sierra Leone	2.7	...	1975-79C	6.2	2.0	4.6	6.5	...	8.2	9.1	22.9	45.6	15.5	25.6	5.9	33.1
Swaziland	2.4	1.4	1973-77C	5.0	...	...	...	...	...	...	...	...	...	19.0	...	83.6
Togo	2.8	0.4	1976-80C	8.0	...	5.2	...	...	...	...	33.0	88.4	21.8	...	...	35.1
Tunisia	2.3	7.1	1977-81C	7.5	4.0	3.6	3.5	...	10.0	4.7	25.0	43.0	15.8	26.2	...	10.0

^{a/}C = comprehensive; PS = public sector; AS = agricultural sector. - ^{b/} Where possible, data refer to net investment. In many cases, however, no distinction is made in the plan, and data may refer to gross investment or may include some elements of recurrent expenditure. The agricultural sector includes animal production, fisheries, forestry, irrigation, land reclamation, community development and agricultural extension. - ^{c/} Land and water includes land reclamation and land clearance, irrigation, drainage and flood control projects and dams and dikes which are part of these projects; establishment of perennial pastures; preparation and initial stocking of fish ponds. However, the country data available do not always correspond entirely to this definition. - ^{d/} Share of public investment in GDP. - ^{e/} Total food production. - ^{f/} GNP. - ^{g/} Share of total investment in GNP. - ^{h/} Total investment does not include private investment in agriculture and technology development. Data on investment refer to 1979 only. - ^{i/} Employment in agriculture only. - ^{j/} Not including fisheries, which is planned to grow at an annual rate of 16.9%. - ^{k/} Low and high hypotheses. - ^{l/} 27% of GDP in 1978. - ^{m/} Not including fisheries, which is planned to grow at an annual rate of 9.6%. - ^{n/} Average annual rate 1973-85. - ^{o/} 1975-76. - ^{p/} The planned annual growth rate of total food production is 2.7%. - ^{q/} Peninsular Malaysia only. - ^{r/} Growth rate refers to agricultural GDP.

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