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ASSESSMENT OF THE CURRENT WORLD FOOD SECURITY SITUATION AND OUTLOOK

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I. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

1. Following the worst drought in half a century in the United States and Canada and poor harvests in a number of other countries, world production of staple foods in 1988 fell below aggregate consumption for the second consecutive year. As a result, global cereal stocks, which were drawn down in 1987/88, are being drawn down further. By the end of 1988/89 global cereal carry-over stocks are forecast to fall below the minimum level considered necessary for safeguarding world food security.

2. As a result of good harvests in a number of developing countries in 1988, average per caput consumption of staples will increase for developing countries as a whole. However, 44 food-deficit developing countries of which 25 are low-income, will nevertheless experience declines in their per caput staple food consumption.

3. Some countries, particularly in Africa, will import less cereals owing to larger domestic harvests. However, aggregate cereal imports by developing countries are expected to increase by about 4 million tons to 120 million tons in 1988/89 reflecting higher purchases by some countries for rebuilding depleted stocks, and by several others to meet current consumption requirements. Despite declines in per caput production and increased import requirements, cereal imports by many developing countries will remain unchanged and may even decline in some cases. The capacity of these countries to increase imports is limited by the recent rise of cereal prices, which will raise their cereal import bill by some 37% in 1988/89, as well as balance-of-payment problems arising from the burden of mounting external debt and weak demand for primary exports in part due to protectionism. Moreover, food aid in cereals is expected to decline by about 3.4 million tons to 9.7 million tons in 1988/89, the lowest level in six years.

4. With world cereal stocks drawn down to compensate for production declines in the last two years, the world will begin the 1989/90 season with very little cushion against crop shortfalls. World food security will thus depend more heavily on the outcome of the coming harvests than at any time since the world food crisis of 1972-74.

5. Some governments have already taken measures to increase production in 1989, and modified policies which tended to reduce output in recent years, while the prevailing higher prices are also expected to encourage plantings in many countries. However, at the beginning of 1989 crop conditions were unfavourable for winter grains in several important producing areas of the northern hemisphere while summer crops of coarse grains in parts of the southern hemisphere were affected by poor rains. As the bulk of 1989 crops were not yet planted, however, it was too early for even a preliminary assessment of the harvest outlook.

6. An increase in cereal output in 1989 of some 200 million tons - the volume needed to restore trend consumption and rebuild stocks to a more adequate level - could only be realized if production in the major developing as well as developed countries, especially exporting countries, increased substantially. Although such a scenario for 1989 is possible, the more likely outcome is for a smaller increase in cereal production.

7. The implications of this outcome for world food security are several: both food and feed consumption of staples would probably remain below trend; depending on the extent to which stocks were replenished, world cereal prices could remain at current levels or could even increase; with low stocks and high prices food aid shipments would likely not recover to their earlier levels unless donor budget allocations were raised. Continued high prices for cereals are likely to have a number of consequences. They may well improve the profitability of the farming sector in some countries and reduce government expenditures on agricultural income support programmes in others, particularly the large exporters. High prices in the long-run could also contribute to making domestic food production in food deficit developing countries more attractive, provided appropriate policy frameworks and institutional and infrastructural facilities are developed to encourage production in line with the World Food Security Compact. However, in the short-run, higher cereal prices would increase pressure on the balance-of-payments position of many importing countries, which already face debt problems, stagnation in export earnings and deteriorating terms of trade.

8. The likely prospects for 1989 crops and the serious implications for world food security of the continuation of relatively tight supplies in the world cereal market, bring into focus the importance of pursuing and implementing recent policy changes to increase output. Furthermore, as the response to such policy changes may not be adequate to replenish stocks during 1989, there may be a need to continue this effort in 1990 and even beyond, until the food supply situation returns to a more comfortable position.

9. However, in spite of the need for increased food output in the short term, caution is required in the ways by which this is achieved and what it would imply for world food security in the medium and longer term. The large cereal stocks up to 1987 were mainly concentrated in a few major exporting developed countries and were largely an unintended result of agricultural support programmes in these countries. However, concentration of unwanted and expensive stocks in a few countries makes world food security largely dependent on the policies in these countries to deal with these stocks, costs of which they alone have to bear.

10. In view of the present precarious food security situation and the uncertain prospects for the near future, and considering some unfavourable trends in the food sector of many developing countries, as well as a continuation of an adverse external environment, there is an urgent need to achieve the objectives of the World Food Security Compact. The principles laid down in the Compact re-affirm the moral commitment to achieve the ultimate objective of ensuring that all people at all times are in a position to produce or procure the basic food they need. At a time when world food security has become fragile, this moral commitment needs to be translated into a set of concrete actions. To this end, the Committee may wish to consider the following recommendations:

A. As regards **short-term** actions:

(i) In the light of the current tight supplies in the world market all efforts should be made to increase food output in 1989 with a view to restoring consumption to trend levels and replenishing stocks.

(ii) In view of the low levels of global stocks, especially of wheat and rice, it is particularly important to keep the global production and stock situation under close review. In this connection, the Global Information and Early Warning System should make a special effort during the coming year to keep members informed of movements in world cereal production, price and stock levels, particularly those of rice and wheat.

(iii) Food aid donors, in spite of reductions in surplus food stocks and increases in food prices, should make all efforts to maintain food aid shipments, including both low-income and other food-deficit countries where production shortfalls and financial constraints on imports would otherwise mean sharp declines in per caput consumption.

(iv) In this connection, and in view of the existence of exportable surpluses in several countries in Africa, donors should make greater use of such surpluses through their support of triangular transactions, swap arrangements and local purchases.

B. As regards **longer-term** actions:

(i) In view of the heavy drawdown of world stock levels of cereals, efforts and policy changes to accelerate the growth in output should be maintained until global stocks increase to a comfortable level.

(ii) In particular, there is a need for concerted action by the major cereal producing countries to ensure that their stock policies take into account the needs of world food security.

(iii) At the same time, care should be taken to ensure that the output over the medium term does not lead to a situation of unwanted surpluses and depressed markets.

(iv) As called for in the World Food Security Compact, governments of developed countries should continue to seek more effective ways of helping low-income food-deficit countries to secure their imports of essential food supplies in times of difficulty. Donor countries should also consider increasing technical and financial assistance to enable developing countries which generate occasional food surpluses to take full advantage of such surpluses in terms of meeting their own food needs and those of neighbouring countries in years of production shortfalls.

(v) Food-deficit developing countries should continue to give high priority in their national development plans to their agricultural and food sectors. In particular, policies both at the macro level and within the food and agriculture sector should provide adequate incentives to farmers in accordance with the World Food Security Compact. Also, the share of agriculture in investment expenditure needs to be increased, giving particular attention to the needs of small farmers and women in agriculture in terms of appropriate technologies, provision of marketing facilities, inputs and credit. Greater attention also needs to be given to increasing the effectiveness and efficiency of institutions for the agricultural and food sectors and to incentive pricing policies conducive to growth in these sectors.

(vi) International financial institutions supporting stabilization and structural adjustment programmes which require extensive reforms in the agricultural and food sectors should take full account of the pivotal role of these sectors in the economy of the developing countries and ensure that the adjustment programmes do not hinder but contribute to the development of these sectors. There is also need for enhanced efforts by the international community to take appropriate measures to ensure that the debt problems of developing countries do not hamper the performance of the agricultural and food sectors. Furthermore, efforts to reduce protectionism and liberalise trade under the auspices of GATT, especially on commodities exported by developing countries, including tropical products, should be intensified in the framework of the Uruguay Round negotiations.

II. THE GLOBAL FOOD SECURITY SITUATION IN 1988/89

2.1 World production of staple foods below consumption for the second consecutive year

11. World production of staple foods in 1988 is estimated to have fallen both below the past 12-year trend and below aggregate consumption requirements for the second year in succession. Production of coarse grains, which declined by 31 million tons (4%) in 1987, fell even more sharply by 72 million tons (9%) in 1988. Production of wheat declined slightly from its 1987 level to about 29 million tons below the record harvest obtained in 1986. Production of staples other than cereals (pulses, roots and tubers) also declined by about 4 million tons (2%). By contrast world production of paddy increased by 19 million tons to a record of 484 million tons in 1988. In aggregate, world production of staple foods fell by 3.1% or 62 million tons in 1988, following a 2.9% decline in 1987 (Table 1).

12. Staple food production (rice in milled terms) in the developed countries in 1988 amounted to 841 million tons, a decline of 94 million tons or about 10%. This mainly reflected poor grain harvests in two major exporting countries - the United States and Canada - where severe drought, following some reduction in planted area brought about by low prices and policy measures, resulted in sharply lower harvests of wheat, maize and other grains. In the United States the winter wheat crop, which normally accounts for 75% of total wheat production, was affected by the drought only slightly, but the damage to the spring wheat crop and coarse grains was considerable. Consequently, total wheat output in the United States fell by 14% and coarse grains by 31%. In Canada the wheat harvest was reduced by 40% and the coarse grains harvest by 23%. Grain production also decreased or remained unchanged in some smaller exporting countries in response to policy measures to restrict growth of production and to conserve environment. However, larger cereal harvests were obtained by the other two major cereal exporters, namely the EEC, owing to favourable weather in a number of countries, and Australia. Rice production in the United States also increased. Aggregate cereal production in the developed importing countries declined, mainly reflecting a reduction in barley production in the U.S.S.R., and in several Eastern European countries.

13. In the developing countries as a whole aggregate staple food output (rice in milled terms) in 1988 is estimated at 928 million tons, 25 million tons or 3% higher than in the preceding year. Nevertheless, the increase in per caput production was less than one percent following a 2.8% decline the previous year (Figure 1).

14. Cereal production, which accounts for about 88% of total staple food output in developing countries, grew at a rate of 4% from 1987 to 1988. In the low-income food-deficit countries it increased by the same percentage, resulting in a 2% increase in per caput terms. In other developing food-importing countries, the increase amounted to just 1.6%, not enough to maintain output in per caput terms (Section III). By contrast, in the net cereal exporting developing countries, cereal production increased significantly in 1988, by about 8.6%. This increase reflects better harvests in many countries in this group, with the exception of Argentina whose wheat output declined owing to prolonged dry weather earlier in the planting season. In Thailand rice production increased substantially in response to higher international prices as well as to favourable weather conditions; maize output also improved following government measures to stimulate output. In Zimbabwe, grain production in 1988 recovered to nearly 3 million tons from the drought affected harvest of about 1.3 million tons in 1987. Some increase in cereal output is also estimated for Burma and Pakistan.

15. The production of roots and tubers in developing countries declined slightly in 1988, reflecting lower production in Africa and in Latin America and the Caribbean. In Africa the production fall was most pronounced in Ghana and Nigeria where bad weather and damage by worms and grasshoppers reduced output by 35% and 14% respectively. Production was also lower in Madagascar, Mozambique and Tanzania where yields of roots and tubers, particularly cassava, were reduced by mealy bug infestation. In Latin America and the Caribbean, the decline in production was mainly because of lower output in Brazil following drought in the major producing areas in the Northeast.

16. The production of pulses in 1988 in developing countries is estimated at 35.5 million tons, 6.6% higher than the low level of 1987, but 4% below the record harvest of 1986.

17. Overall in the developing countries, although many countries harvested larger crops, 34 food-deficit developing countries, of which 20 are low-income, experienced declines in their staple food production in 1988. Moreover, in another 27 food-deficit developing countries, the increase in production was less than the growth in population. Apart from long-term constraints on increases of productivity, the incidence of floods, hurricanes, drought and civil strife has also worsened the food production performance in many of these countries.

2.2 Substantial decline in world cereal stocks

18. As a result of two successive poor harvests in 1987 and in 1988, world cereal stocks are being drawn down substantially. After having been drawn down by 52 million tons in 1987/88, global cereal stocks are expected to decline by a further 111 million tons in the current year - the largest drawdown recorded in a single year, and a cumulative reduction of 36% in two years. Although about three-quarters of this year's stock drawdown will be in coarse grains, the reductions in wheat and rice stocks will also be substantial relative to their levels at the beginning of the year. World cereal stocks at the close of countries' respective crop years in 1989 are forecast at 287 million tons representing only 16% of global cereal consumption in 1989/90, less than the 17-18% minimum considered necessary to safeguard world food security and the lowest percentage since the world food crisis of 1972-74 (Table 2).

19. A large part of the anticipated reduction in world carry-over stocks would be in the major exporting countries, with the United States accounting for about 86% of the global decline. The major exporting countries will hold about 42% of the estimated world cereal stocks by the end of 1988/89 seasons as compared to about 60% in the past three years.

20. Cereal stocks in the developing countries as a whole are also expected to decline. By the end of the 1988/89 crop seasons stocks in these countries would fall by about 2 million tons to about 118 million tons. The largest drawdown is expected to take place in China. Some drawdown in stocks is also anticipated elsewhere, including Bangladesh, Argentina and Mexico, where poor crops have been harvested in 1988. By contrast, sizeable stock increases are expected in Brazil, India, Morocco and Pakistan and some sub-Saharan African countries. Others, however, will be unable to take full advantage of favourable harvests to build up stocks to a desired level because of limited finance and transport and storage constraints.

2.3 World trade in cereals grows in response to production shortfalls

21. World cereal imports in 1988/89 are currently forecast at 206 million tons, 9 million tons above the level traded in the previous year. Wheat trade is expected to decline by about 5 million tons to 98 million tons, while trade in rice would increase by over 1 million tons to about 12 million tons and that in coarse grains by nearly 13 million tons to 96 million tons (Table 1).

22. Aggregate cereal imports by developed countries are forecast at about 86 million tons in 1988/89, about 5 million tons more than the volume in the previous year. Also, total cereal imports by developing countries are anticipated to increase by about 4 million tons to 120 million tons in 1988/89.

23. Despite the sharp decline in production in major exporting countries, export availabilities in 1988/89 are forecast to be sufficient to meet currently forecast world demand, though only through further substantial drawdowns of exporters' stocks (Table 2). Canada is anticipated to export substantially less this year than last year. However, the EEC's exports could be about 10 million tons higher. In Africa some countries including Burkina Faso, Côte d'Ivoire, Kenya, Mali, Niger, Sudan, Tanzania, Uganda, and Zimbabwe are expected to have exportable surpluses of coarse grains, which could be exported directly or through triangular transactions or swap arrangements to meet the food requirements in neighbouring countries.

2.4 Developing countries face further constraints on access to commercial food imports

24. The drawdown of stocks and relatively tight supplies in international cereal markets has resulted in a further strengthening of world cereal prices from the extremely low levels of two years ago, when world cereal stocks were at a record level of 448 million tons. Quoted export prices of wheat had risen by nearly 40% from U.S.$120/ton in November 1987 to U.S.$166/ton in November 1988, and those of maize by about 25% from U.S.$85/ton to U.S.$113/ton. Prices for Thai rice also rose by about 6%, from U.S.$260 to U.S.$275 during the same period.

25. The rise in world cereal prices is reducing the budgetary cost of agricultural support programmes in some major developed exporting countries. However the price increases pose problems for many food deficit developing countries, as their access to food imports is already constrained by the burden of mounting external debt, weak demand for several of their main primary exports and other economic and financial difficulties. Hence, the higher prices in 1988/89 will make it more difficult for some countries to import the quantities required to maintain per caput consumption. The rise in prices will also lead to lower food aid shipments in view of the fact that major donor allocations are budgeted in monetary terms.

26. Macro-economic and external factors also continue to impose serious constraints on the improvement of food security, and particularly on access to food, in many developing countries. These constraints include stagnation or deterioration of per caput incomes, inadequacy of export earnings, large claims on foreign exchange earnings and continued capital outflows as well as the increased costs of food imports.

27. Average per caput income in the developing countries in aggregate, increased for the fifth successive year in 1988, according to IMF estimates. The improvement, however, mainly reflected the relatively good economic performance of a small number of Asian countries. For the other developing regions, the domestic economic situation generally deteriorated. In Africa, total income growth fell short of population growth in 1988 for the seventh year in the present decade. Average per caput income also fell in 1988 in both the Latin America and Caribbean and the Near East regions. Clearly in these circumstances, the scope for improving access to food from domestic resources has been further eroded in many developing countries.

28. The capacity of the developing countries to enhance their food security through trade has generally deteriorated in recent years. However, the situation has differed widely from country to country depending on the compositon of their exports, movements in world prices, market access barriers and their ability to produce for export. Africa and Latin America and the Caribbean have been the two regions most adversely affected by the world trade environment. In each of these regions, the growth of total earnings from exports of all goods fell in real terms and the value of their exports of agricultural, fishery and forestry products declined even in nominal US dollar terms in 1987. Their aggregate trade balances have also reflected these adverse developments: Africa's deficit on merchandise trade increased further and the surplus which had been achieved by Latin America and the Caribbean in earlier years was virtually wiped out in 1987.

29. Fundamental to the foreign exchange and economic problems of the developing countries is the continuing slow growth in their export sector. Although prices of several primary commodities have increased recently, they remain substantially below their 1980 levels. The continuing poor performance of exports of the developing countries, at least in part, reflects protectionist policies in the developed countries and slow growth of import demand coupled with ample supplies.

30. Debt service payments as a percentage of exports of goods and services declined in 1987, and again in 1988, when the debt-service ratio was estimated at about 20%. This decline, however, reflects mainly the improvement in export earnings achieved by developing countries in Asia.

By contrast, the aggregate debt-service ratios of the other developing regions rose. For Africa, the ratio increased in 1988 to over 26% and for Latin America and the Caribbean to almost 43%, the third highest level in the present decade. Moreover, for the third year in succession, developing countries as a whole registered an increasing net outflow of capital.

31. Some alleviative steps have been taken in the past year, including various initiatives in debt cancellation, restructuring and relief. Also, the IMF in August 1988 has established a new Compensatory and Contingency Financing Facility (CCFF) which combines the essential features of the two previous facilities for export fluctuations and for fluctuations in the cost of cereal imports. In addition, the CCFF will provide financing to members with Fund-supported adjustment programmes to help maintain the momentum of adjustment efforts in the event of adverse external shocks including falls in export receipts, increases in import prices and interest rates.

32. However, the prospects for redressing adverse conditions of international trade have been set back. In particular, the Trade Negotiations Committee meeting at Ministerial level in Montreal in December 1988, decided to put "on hold" the results achieved so far in the Uruguay Round of GATT multilateral trade negotiations, due to failure to reach agreement in the areas of agriculture, textiles and clothing, safeguards and intellectual property rights. As a consequence, progress in other areas of the negotiations, including tropical products, has been hampered to the disadvantage of developing countries.

2.5 Lower food aid flows

33. Food aid availabilities of cereals for 1988/89 are expected to decline to 9.7 million tons, about 3.4 million tons less than the previous year and the lowest volume in six years (Table 3). The overall resource position of the International Emergency Food Reserve IEFR is also precarious. As of 12 December 1988, contributions of cereals to the Reserve amounted to only 451 000 tons as compared to about 644 520 tons at the same time in the previous year, although the contribution of 90 260 tons of non-cereal commodities was higher. Delays in donor pledges throughout the year, coupled with rising demand for emergency assistance, particularly for the growing number of refugees, seriously strained the Reserve's capacity. Nevertheless, assistance was provided to some 30 countries which were faced with natural or man-made emergencies during 1988.

34. The cereal food aid requirement in sub-Saharan Africa in 1988/89 is likely to drop by about 1 million tons from the previous year, due to improved harvests in many countries, provided sudden emergencies do not occur. However, an increasing number of both low-income and other food-deficit countries, appear to need increased assistance to finance essential cereal imports because of the higher world market prices and continuing foreign exchange difficultie. In addition, refugees' requirements will be higher in 1988/89 (see box on needs of refugees). In order to meet its food aid commitments under PL480, the United States has this year already released 1.5 million tons from its 4 million ton food security reserve. It is hoped that if unmet consumption requirements are reflected in requests for food aid, including from countries which have not been large recipients in recent years, the necessary donor response would be forthcoming. In that event food aid shipments in 1988/89 could be higher than the current forecast level.

FOOD ASSISTANCE TO REFUGEES AND DISPLACED PERSONS 1/

Emergency assistance to meet the food needs of refugees/returnees and displaced persons is provided mainly through WFP, but also partly from bilateral donations and through UNHCR. Since the total number of refugees and displaced persons in the world has increased from approximately 7 million in 1980 to over 12 million in 1988, the share of emergency resources directed to them has also increased, thereby reducing the availability of resources for responding to other kinds of emergencies. For example, more than 70% of the resources of the International Emergency Food Reserve (IEFR) has been earmarked and used for refugees in recent years. Large concentrations of refugees are presently located in Africa, Asia, and the Near East. However, the largest number of refugee situations requiring material assistance is to be found in Africa, reflecting the effects of political instability and civil strife, exacerbated by drought in some areas of the region.

The food requirements of refugees during 1989 are forecast to increase by about 15% to 1 033 350 tons of cereals and 213 200 tons of non-cereal foods. Of this total, over 80% is expected to be needed for large-scale operations in Ethiopia, the Islamic Republic of Iran, Malawi, Pakistan and Somalia.

In addition to providing emergency relief, food assistance through WFP is also provided to refugees in support of development and quick-action projects. Such assistance is used to support their settlement and integration in the host country (reintegration assistance), the rehabilitation of returnees in the home country (food-for-work projects), and supplementary feeding programmes for vulnerable groups.

1/ Data on numbers of refugees and their food requirements were provided by UNHCR, in consultation with WFP.

2.6 Decline in world utilization of staple food

35. World utilization of staple foods (direct human consumption, animal feed and other uses) is anticipated to decline by about 16 million tons to 1 874 million tons in 1988/89. The decline mainly reflects lower use of grains as animal feed in the developed countries.

36. Direct human consumption of staples is forecast to increase by about 12 million tons to about 922 million tons in 1988/89 although this will be once again below the past 12-year trend. The use of staples for direct human consumption in the developed countries is expected to remain unchanged, with the entire rise taking place in developing countries. Average per caput consumption is expected to decline in developed countries and although it is expected to increase slightly in developing countries, the rate of increase is still below trend. Thus, the situation is still deteriorating for an increasing number of the world's poor (see Section III).

III. IMPLICATIONS OF CURRENT TIGHT SUPPLIES FOR WORLD FOOD SECURITY

3.1 Good harvests provide short-term relief for many low-income food-deficit countries

37. Fortunately for many of the food insecure, 1988 harvests were exceptionally good in a number of developing countries, many of them in the low-income food-deficit group. For low-income food-deficit countries (LIFDCs) as a whole staple food production (rice in milled terms) increased by 2.6 percent to a record of about 672 million tons in 1988. This increase, however, was less than the trend growth rate.

38. In this group of countries in Africa, Latin America and the Caribbean and the Near East, generally excellent production results should prevent a serious food crisis from emerging in 1988/89. Per caput production of staples increased by about 12% for African LIFDCs as a group and by 0.5% for this group in Latin America and the Caribbean and the Near East.

39. Despite localized locust attacks and flood damage to crops (see box on locust situation), in half of the 41 LIFDCs in Africa, production was estimated to have increased; in 15 of these countries the increase exceeded 10 percent. Harvests have also been larger in 5 of the 7 low-income food-deficit countries in Latin America and the Caribbean.

40. In Asia, India's harvest was estimated to have recovered significantly from the drought-reduced level of 1987 and was the highest since 1984. Average to above average crops were also harvested in several other low-income food-deficit countries in Asia. Nevertheless, unsatisfactory cereal harvests in a few large low-income Asian countries, particularly China, will mean a decline in per caput staple food production for Asian LIFDCs as a group. Per caput production of staples in LIFDCs in Oceania will also decline.

THE THREAT TO FOODCROPS FROM DESERT LOCUSTS

The threat to foodcrops in Africa from locusts during 1988 was the most serious for many years. In contrast to 1986 and 1987, when outbreaks of grasshoppers and several species of locusts menaced the Sahel and eastern Africa, the danger in 1988 was primarily from desert locusts.

After unprecedentedly widespread gregarious breeding in West Africa in the 1987/88 winter, large swarms were produced early in the year which invaded northern Africa. Other swarms migrated into the western part of the Sahel. Meanwhile, in eastern Africa, swarms escaped from winter breeding areas on the Red Sea coasts, causing a moderate invasion of the Near East.

Unusually heavy rainfall provided favourable conditions in all the traditional summer breeding areas of the Sahel (Mauritania, Mali, Niger, Chad) and resulted in at least two generations of locusts. Large-scale swarms started to fledge in August and continued to be produced until November. Subsequently, swarms re-invaded the far west of the Sahel and, later, Morocco. Swarms even crossed the Atlantic and reached the Caribbean. Some swarms from the central Sahel moved north into Algeria or Morocco while others invaded Libya with some reaching Syria and Turkey in early December. The migrant population in north-west and north Africa will require significant control measures in 1989, the extent of which is difficult to predict.

In eastern Africa also, breeding conditions were favourable throughout the summer and autumn; numerous swarms were produced in Sudan, and some were produced in Ethiopia. In October, swarms crossed the Red Sea to Saudi Arabia where further breeding occurred and there were small-scale invasions of Kuwait, Iraq, the Islamic Republic of Iran, Bahrein and Qatar, and subsequently Turkey, Lebanon and Jordan. Winter breeding conditions do not appear to be very favourable at traditional sites on the Red Sea coast.

As a result of control measures on an unprecedented scale, extensive losses to foodcrops were largely averted during the year. Although reports of severe localized crop damage were received from a number of countries in western and eastern Africa, particularly in Sudan, Senegal and Mauritania, bumper crops have been harvested in most Sudano-Sahelian countries. However, the past year's success does not mean the desert locust plague has been contained. New generations will continue to breed in large numbers into 1989 and possibly for several years to come; therefore large-scale international emergency control campaigns will need to continue. As in previous years, FAO will coordinate the Desert Locust Campaign through its Emergency Center for Locust Operations (ECLO). The cost of the control campaigns for 1988/89 so far exceeds US$ 200 million.

41. Cereal imports by the low-income food-deficit countries are forecast to increase by only 2 million tons to 57 million tons in 1988/89. Cereal imports by low-income food-deficit countries in Africa are expected to be lower following improved harvests in 1988, whereas they are forecast to increase slightly for this group in Asia, principally for stock re-building in India. While the volume of cereal imports by low-income food-deficit countries is expected to rise only slightly in 1988/89, their commercial import bill for cereals is foreseen to increase by about US$ 2 500 million, 37% above the previous year's level. Hence, even with virtually no increase in the aggregate import volume, the combination of higher prices and reduced food aid availabilities means further economic hardship for low-income food importers.

42. Although aggregate human consumption of staples in the low-income food-deficit countries in 1988/89 is forecast at 564 million tons, 10 million tons higher than in 1987/88, per caput consumption is expected to decline in 25 out of the 69 countries in this group during the current year. In Asia, per caput consumption is foreseen to drop in 4 out of 11 countries; in Africa in 12 out of 41 countries; in Latin America and the Caribbean in 5 out of 7 countries; and in Oceania in 4 out of 7 countries.

43. Problems of food availability are being experienced by many countries, even where supplies have increased in per caput terms. In many countries especially in Africa, inadequate transport infrastructure, lack of spare parts to run transport fleets, inefficient marketing systems and inadequate storage facilities prove to be serious constraints to procuring supplies during favourable harvests and to transporting food from surplus to deficit areas. In many of these countries farm prices are declining to levels which give no incentive to farmers to increase their food output. Currently several countries in Africa, notably Burkina Faso, Chad, Mali, Niger, Sudan and Uganda, are reported to require assistance with procurement and internal movement of food from surplus to deficit areas.

3.2 Difficulties in maintaining consumption levels in other food-deficit developing countries

44. In other food-deficit developing countries aggregate staple food output in 1988 was estimated at about 159 million tons, only slightly higher than in the previous year. Several countries in this group have made notable gains in their food production in 1988, particularly in the Near East. However, harvests were lower in many other countries in this group, particularly in Algeria, Brazil, Mexico and Tunisia. In many of these countries production was affected by unfavourable weather, while in some others production responded to changes in government policies.

45. Amongst this group of 53 countries, cereal imports are foreseen to increase for only thirteen. For the group as a whole, imports are forecast at 60 million tons in 1988/89, unchanged from the previous year. The increase in world market prices for cereals will also affect a number of countries in this group, particularly those with serious foreign exchange constraints. As for the LIFDCs, this group also will face a 37% increase in its food import bill, that is, a little over US$ 2 250 million above last year's cost. For 19 food-deficit developing countries other than low-income, a combination of sluggish production and limited growth in imports is anticipated to lead to declines in their per caput consumption in 1988/89. Hence, in addition to certain LIFD countries facing food security problems, a number of other developing countries with foreign exchange difficulties are clearly not in a position to rely on trade to

meet consumption requirements, even though their higher level of per caput income might otherwise generate increasing demand for imported food.

3.3 Policy measures to expand production in 1989 and rebuild stocks

46. In order to achieve the 1975-88 trend level of consumption in 1989/90 and to replenish stocks to the minimum level required to safeguard world food security, preliminary FAO estimates indicate that global cereal output would need to increase in 1989 by some 200 million tons or 12 percent. Of this increase 180 million tons would be to reach trend consumption and the remainder for rebuilding the "reserve element" of global stocks, i.e. to raise carryover stocks to the minimum of 17 percent of consumption, considered necessary to safeguard world food security. If this outcome is to be achieved without significant increases in imports by developing countries, which most cannot afford, these countries would have to achieve a growth rate considerably above the long term trend growth rate. However, if, as seems more likely, the developing countries at best maintain their trend growth rate, the total increase in global output to maintain per caput consumption at 1988/89 levels and rebuild stocks would require a 10% growth rate for the world as a whole and a 20% increase in developed exporting countries, assuming the entire stock increase is to be achieved by them. Even this represents a highly optimistic, though not impossible rate of recovery, as it would mean that the developed exporters would have to bring production back in one year to the level achieved in 1986, prior to the past two years of decline.

47. Some governments have already taken measures to expand production in 1989. The United States has set the 1989 acreage reduction requirement for wheat and coarse grains at only 10% of the base acreage, sharply lower than in 1988. In addition no land diversion payment is set for 1989. It is also envisaged that, with higher prices and higher expected returns from cereal production, enrollment in the Conservation Reserve Programme, which has been set at about 4 million hectares for 1989, could be lower than in previous years. Also Canada has announced for the 1988/89 crop year higher initial payments on wheat, barley and oats to be delivered to the Canadian Wheat Board. These policy measures are expected to trigger increased plantings in these countries. Plantings could also increase, in response to higher world prices, in Australia, and in Argentina where the government, besides other measures to improve the financial position of farmers, has planned to set support prices in terms of U.S. dollars to minimize the effect of inflation. However, in the EEC, in view of the new policy of stabilizers and set asides, plantings may not be much beyond what is necessary to attain the 160 million tons of the Community's threshold target. Some other exporters such as Austria and Sweden have maintained their long-term policy of restraining the growth of cereal production.

48. Among the major importing developed countries, the U.S.S.R. has introduced what is known as a "law in cooperation", which aims at harnessing the production potential of the rural population through measures for stimulating output and for solving social problems in rural areas. In addition concerted efforts are being undertaken to improve yields under the programme of promoting intensive technology which started in 1985.

49. Many developing countries in line with their long-term objective to enhance national food self-sufficiency also continue to take measures to stimulate domestic food production. For example, in Algeria the government, in addition to raising support prices, has decided to provide

in 1989 such incentives as provision of subsidized high-yielding seed varieties and payment of part of the cost of chemical treatment, irrigation and transport. Similarly the government of Tunisia has decided to provide subsidized seeds and agricultural credit as well as to reschedule certain debts owed by farmers. Several developing countries have also raised producer prices, among other measures to increase production in 1989.

50. As at the end of November 1988, plantings of winter grains had been completed in many places, mostly under favourable conditions. Plantings of winter wheat increased in the United States, however there was concern about the inadequate level of soil moisture in some important wheat growing areas. Following one of the best monsoons for many years, good soil moisture reserves and irrigation supplies had favoured plantings and early development of wheat crops in Asia. In the Southern hemisphere, 1989 coarse grain crops were already planted in several countries; crop conditions were generally satisfactory in Southern Africa and Australia, but in South America the outlook was uncertain.

51. Overall, preliminary information on crop conditions suggests a substantial recovery of world cereal output in 1989. However, as noted above, a large increase in production and the rebuilding of stocks will not necessarily reverse declines in per caput consumption in many countries if the increases are concentrated in only a few major producing countries. Partly for this reason, the FAO Intergovernmental Group on Grains at its meeting in November 1988, while agreeing that cereal production in 1989 would need to increase to meet demand and to avert a potential threat to food security, recognized that the required expansion in output should be undertaken with caution and be finely balanced so that on the one hand the risk of supply shortages is averted and, on the other hand, a return to a situation of surpluses and depressed markets is avoided. Hence, even if weather conditions prove favourable and stocks are replenished from 1989 harvests, the food security situation is likely to become increasingly precarious in many parts of the world unless more is done to secure a more equitable distribution of the needed increase in production and food security stocks. While productivity increases have been a main source of growth in the overall staple food production in developing countries in the 1970's and early 1980's, there appears to have been a general slowing down of growth in both total and per caput production in recent years (Figure 1). Further, concerns about environmental degradation and sustainability of agricultural development may lead to further restraints on the introduction of new, high-yielding technologies in marginal areas until the protection of the natural resource base can be assured. These factors, acting synergistically with the constraints imposed on many countries by their increasing impoverishment, pose a serious threat to food security in the medium-term. Under these circumstances, it is vitally important to renew the call to action contained in the World Food Security Compact, which stresses that governments of developing countries should re-examine and, if necessary, change their national policies so as to stimulate food production and that governments of developed countries should give a specially high priority to helping developing nations where a major effort is being made to overcome the problems of rural poverty.

3.4 Regional Measures to Enhance Food Security

52. In order to improve the food security position of their member countries, and in line with the World Food Security Compact, a number of regional organizations of developing countries have taken additional measures in 1988 to develop food security reserves and establish other

mechanisms to guard against food emergencies. In addition, several other regional groupings such as the Cooperation Council for the Arab States of the Gulf and the South Asian Association for Regional Cooperation have continued efforts begun in earlier years to safeguard food security.

53. Brunei Darussalam has joined the Emergency Rice Reserve of the Association of South-East Asian Nations (ASEAN) which has consequently increased from 50,000 tons to 53,000 tons. The ASEAN Food Security Reserve Board, which is responsible for the management of the Reserve, is also implementing the ASEAN Grains Post-Harvest Programme, to improve the cereal and legume post-harvest system, with the assistance of the Canadian Government.

54. The Cartagena Agreement Board of the Andean Pact, upon the recommendation of the Sixth meeting of Ministers of Agriculture of Member Countries in April 1988, is undertaking a study of the Andean System of mutual food emergency assistance with a view to creating a permanent network of communication and information on emergencies in the sub-region. It is also undertaking a study on the possibility of creating a subregional food security fund for financing food imports to meet serious emergency food shortages.

55. In Latin America and the Caribbean, the Secretariat of the CASAR (Action Committee on Regional Food Security) has begun implementing the Regional Assistance Treaty for Food Emergencies (TAREA) signed in April 1988. Under the TAREA signatory countries have committed themselves to mobilize all their efforts to meet jointly the needs of any of them that may arise from serious food emergencies. The assistance to be provided within the framework of the Treaty may include grants of food or cash, food or currency loans, sale of food and any other modality that may be agreed by the parties concerned.

56. Following a workshop on Food Security and Early Warning Systems convened by the Secretariat of the Inter-Governmental Authority on Drought and Development (IGADD) during April 1988, several project proposals aimed at strengthening food security in IGADD member countries and in the sub-region as a whole, have been financed or are under active consideration by donors. The project proposals which were prepared with the assistance of FAO, include, *inter alia*, (i) study on grain reserves (ii) study on traditional storage methods in the sub-region (iii) formulation of food security strategy for the IGADD sub-region (iv) Early Warning and Food Information System (v) training for senior managers and warehouse staff of grain marketing boards and relief agencies in IGADD countries.

57. The Third Ministerial Conference of the Organization of the Islamic Conference (OIC) at its meeting on food security and agricultural development held during 18-20 October 1988 in Islamabad, Pakistan, agreed to a proposal for establishing an OIC Food Security Reserve and decided that a meeting of interested countries would be called to work out operational details. The reserve would consist of wheat, rice and maize or a combination thereof and would be established if at least ten OIC member countries agree to participate in it. Each participating country would earmark 1% of its annual consumption for the reserve in addition to any national reserves it might already hold. The Conference also called upon member states to take appropriate measures to strengthen their commitment to food security objectives and in this connection recommended that intra-Islamic trade be expanded and that member countries take advantage of the FAO Food Security Assistance Scheme in formulating food security plans.

TABLE 2 - WORLD CARRYOVER STOCKS OF CEREALS

	Crop year ending in:					
	1973-75 average	1983-85 average	1986	1987	1988 estimate	1989 forecast
	(......million tons......)					
Wheat	76.0	136.2	160.5	168.7	145.9	117.3
Rice	27.9	48.3	54.9	51.2	40.8	40.5
Coarse grains	74.6	135.2	204.9	229.9	210.7	128.9
Total cereals	178.5	319.7	420.3	449.8	397.5	286.7
DEVELOPED EXPORTERS	76.5	163.4	246.3	267.0	223.0	120.0
of which:						
Australia	1.9	6.5	6.2	4.2	3.3	3.1
Canada	15.3	14.6	14.4	18.5	13.7	10.5
EEC	17.3	23.1	36.2	31.8	29.3	25.9
USA	35.7	110.2	181.2	203.8	169.4	73.9
DEVELOPING EXPORTERS	5.6	8.4	10.0	11.0	7.6	8.4
of which:						
Argentina	1.1	1.5	0.7	0.7	1.1	0.8
Thailand	1.9	0.9	1.8	1.5	0.9	1.1
DEVELOPED COUNTRIES	115.2	197.2	288.2	317.7	277.6	169.2
DEVELOPING COUNTRIES	63.3	122.5	132.1	132.1	119.8	117.6
of which:						
FOOD-DEFICIT	57.7	114.1	122.2	121.1	112.2	109.3
Low-income 1/	48.4	90.7	96.5	92.9	82.7	80.2
of which:						
China	31.4	57.2	51.5	45.8	46.6	38.3
India	9.0	12.7	17.1	15.2	8.7	13.1
Indonesia	1.6	1.8	2.4	2.1	1.0	1.0
Philippines	1.1	1.4	1.4	1.4	1.8	1.6
Others 2/	9.3	23.4	25.6	28.2	29.5	29.0
of which:						
Brazil	1.0	2.1	2.8	4.4	7.4	8.4
Korea, Rep. of	0.6	2.3	1.8	1.3	1.4	1.3
Mexico	1.0	2.5	4.0	2.6	1.8	1.4
	(......percent......)					
TOTAL STOCKS HELD BY DEVELOPED EXPORTERS:						
- As percentage of world stocks	42.9	51.1	58.6	59.4	56.1	41.9
- As percentage of domestic consumption and exports	15.2	27.1	26.9	39.0	41.3	35.6
Wheat	21.9	31.3	39.0	42.1	39.4	30.0
Rice (milled)	9.1	29.6	32.9	34.1	25.3	16.5
Coarse grains	12.3	24.8	20.8	37.6	42.6	38.9
WORLD STOCKS AS A PERCENT OF APPARENT WORLD CONSUMPTION	14.7	20.6	25.1	26.4	23.3	16.3

1/ Includes all food-deficit countries with per caput income below the level used by the World Bank to determine eligibility for IDA assistance (i.e. with per caput income of US$940 and below in 1987).

2/ Food-deficit developing countries other than low-income.

NOTE: Aggregate stock figures are the sums of national carryover stocks at end of national crop years and should not be construed as representing world stocks levels at a fixed point in time.

TABLE 3 - CEREAL IMPORTS AND FOOD AID FLOWS TO DEVELOPING COUNTRIES

	Total Cereal Imports				Of which: Food Aid				Share of Food Aid in Total Imports			
	1976/77	1986/87	1987/88 (prel.)	1988/89 (forecast)	1976/77	1986/87	1987/88 (prel.)	1988/89 (forecast)	1976/77	1986/87	1987/88 (prel.)	1988/89 (forecast)
	(..........million tons..........)				(..........thousand tons..........)				(..............percent.............)			
TOTAL DEVELOPING	55.6	110.3	115.8	119.7	8586	12472	13088	9700	15.5	11.3	11.3	8.1
FOOD DEFICIT	54.0	109.9	114.3	117.6	8243	11855	12125	9070	15.2	10.8	10.6	7.7
LOW INCOME 1/	26.8	48.3	55.0	57.0	6974	10609	10589	8140	26.1	22.0	19.3	14.3
Africa	9.3	19.9	19.3	17.6	3031	5829	5622	4600	32.6	29.3	29.2	26.0
Far East	16.1	24.1	31.5	33.5	3760	3507	3221	2600	23.3	14.5	10.2	7.8
China	2.3	16.5	20.8	22.2	-	584	347	280	-	3.5	1.7	1.3
India	7.1	0.2	1.2	3.2	1176	208	223	150	16.5	95.4	18.6	4.7
Latin America	0.9	2.3	2.5	2.3	122	1074	1452	740	13.5	47.6	57.5	32.2
Near East	0.3	1.7	1.4	1.4	59	197	295	200	19.4	11.5	21.3	14.3
Oceania	0.1	0.3	0.3	0.3	2	2	-	-	2.0	0.8	-	-
OTHERS 2/	27.3	61.6	59.3	60.6	1271	1246	1535	930	4.7	2.0	2.6	1.5
Africa	3.3	8.2	8.7	9.6	141	423	431	300	4.3	5.2	5.0	3.1
Far East	6.4	12.3	13.4	13.4	702	-	-	-	11.1	-	-	-
Latin America	12.6	17.4	16.6	17.7	121	710	991	540	1.0	4.1	6.0	3.1
Brazil	3.8	5.1	2.2	1.8	5	7	21	5	0.1	0.1	0.9	0.3
Mexico	1.0	3.9	4.9	6.1	-	4	32	5	-	0.1	0.7	0.1
Near East	4.9	23.5	20.4	19.2	294	112	113	90	6.0	0.5	0.6	0.5
Oceania	0.1	0.2	0.2	0.2	13	1	-	-	11.8	0.6	-	-

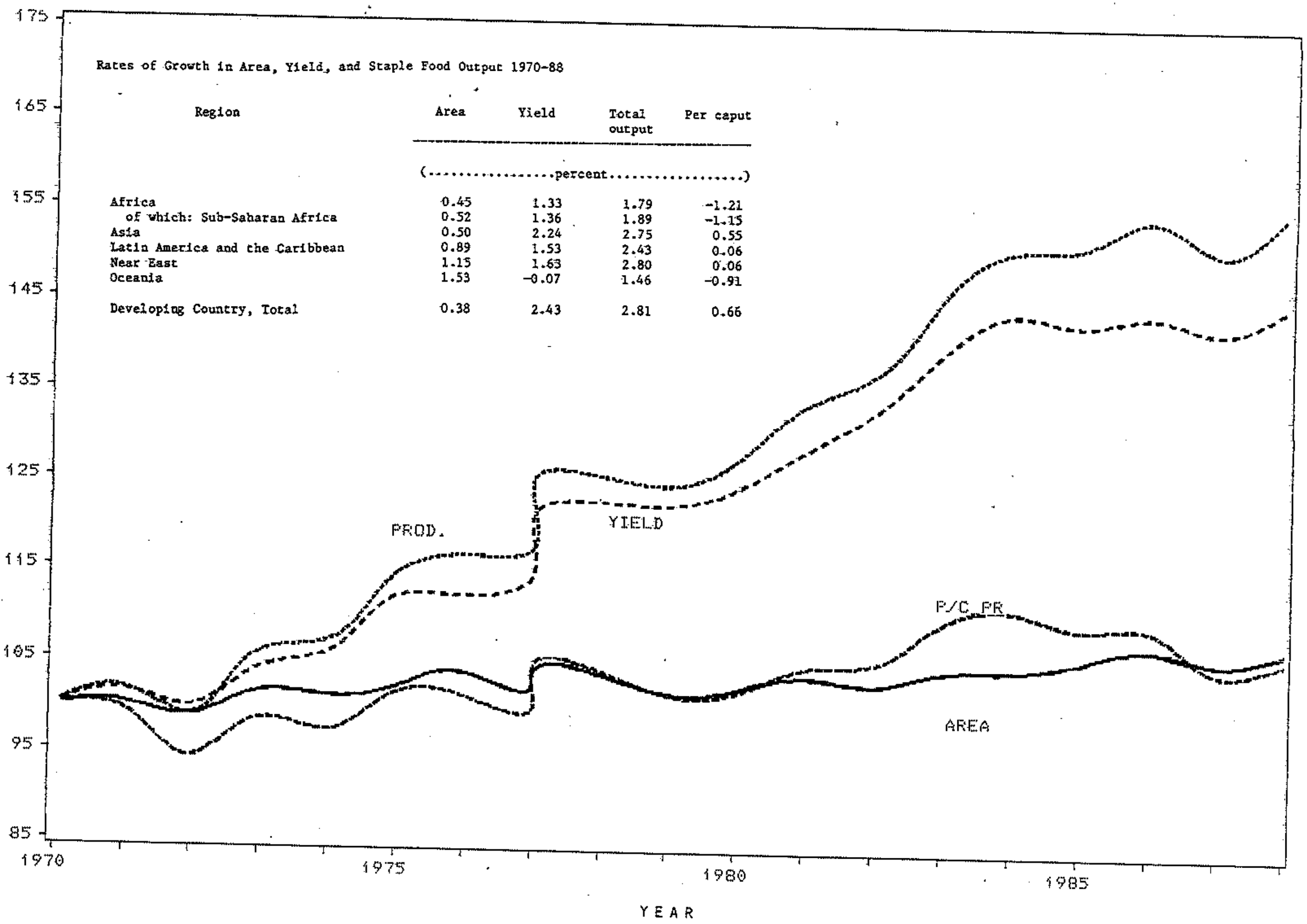
1/ Includes all food-deficit countries with per caput income below the level used by the World Bank to determine eligibility for IDA assistance (i.e. with per caput income of US$ 940 and below in 1987) which in accordance with the guidelines and criteria agreed by the CFA should be given priority in the allocation of food aid.

2/ Food-deficit developing countries other than low-income.

FIGURE 1.

TOTAL PRODUCTION, YIELD, AREA, AND PER CAPUT PRODUCTION OF STAPLES IN DEVELOPING COUNTRIES 1970-88

(INDEX 1970 = 100)



Rates of Growth in Area, Yield, and Staple Food Output 1970-88

Region	Area	Yield	Total output	Per caput
	(..................	..percent..........	....	..........)
Africa	0.45	1.33	1.79	-1.21
of which: Sub-Saharan Africa	0.52	1.36	1.89	-1.15
Asia	0.50	2.24	2.75	0.55
Latin America and the Caribbean	0.89	1.53	2.43	0.06
Near East	1.15	1.63	2.80	0.06
Oceania	1.53	-0.07	1.46	-0.91
Developing Country, Total	0.38	2.43	2.81	0.66